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Organizational Re-engineering And Socio-economic Transformation In Developing Economies:
The Place Of Management Sciences

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Theme:

ORGANIZATIONAL RE-ENGINEERING AND SOCIO-ECONOMIC TRANSFORMATION IN DEVELOPING ECONOMIES: THE PLACE OF MANAGEMENT SCIENCES

1st - 2nd December 2022

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ORGANIZATIONAL REENGINEERING AND SOCIOECONOMIC TRANSFORMATION IN DEVELOPING ECONOMIES: THE PLACE OF MANAGEMENT SCIENCES

Keynote Address/Lead Paper at the 3rd International Academic Conference

Professor Seth Accra Jaja

PhD, FAMN, FCIA, FCAI, FIIA, FCIE, CPA, FNIMN

PROTOCOL

INTRODUCTION

I am most honoured to perform this double-barrel function (Keynote Speaker and Lead paper presentation) in this *Conference of Large Minds*. Large minds because of its prolific objectives - renewal, reconfiguration and refocusing directed at enhancing resilience and human advancement. These are issues at the forefront of organisational reengineering (*ORE)* and socio-economic transformation (*SET)* equation in developing economies (Warner, 2020, Gadd & Oakland, 1995, Senge, 1990). The incontrovertible *siamese-twin* relationship between *ORE* and *SET* has led disciplines in management sciences to occupy the centre-stage of these human actions.

The attainment of any form of improvement in human life is a function of man's understanding of himself, others and the environment (Lovvorn & Chen, 2011, Robert, 2006). For this reason, man at all times desires to understand the environment in which he finds himself. In this sense, man is continually in search of explanation to phenomena which occur around him. He therefore asks questions as to how, when, where, who and why things are happening with a view to accumulating knowledge on the reality of the world (Abanuka, 2011; Barrett, 1994). This exercise is carried out through - agreement and experiential realities. Agreement, because one is authoritatively told that the ideas are real. Experiential, because one has direct life experience. Auguste Comte (1971) while expounding his positive philosophy posited that each of these leading conceptions is an explanation of reality of a phenomenon.

Within the world of man by society, the search for knowledge has historically passed through three stages. The first is the theological faith where knowledge is cultivated from institutions that are socially defined as qualified producers of knowledge. While the second is the metaphysical abstraction which explains that, knowledge is solicited from gods and supernatural authorities through ritualistic ceremonies. And the third is the scientific mode in which knowledge is acquired through the application of standardized procedures which comply with the rules of formal logic (Birden, 2019; Kuczmaski & Kuczmaski, 2010; Jaja, 2004). By extension, thinking and

learning are universal phenomena drawn from enculturation management thought. This orientation is built on feeling of humaneness, caring, sharing, compassion and togetherness (Jaja, 2021; Ferry, 2020; Hao & Yazdanifard, 2015; Ahiauzu, 1999).

Mr. Chairman, Distinguished Ladies and Gentlemen, please permit me at this juncture to congratulate the organizers of this conference on their untiring effort towards promoting academic advancement in the universe. It is therefore not surprising that this conference is holding back-to-back for the third time running. Their effort is in line with Francis Bacon's remarks that, in stabilizing continuity of knowledge, *reading makes a full man, writing makes an exact man, and conference makes a ready man*. I recognize that in this community we have full, exact and ready academic men whose contributions will address the challenges of *ORE* and *SET* in developing economies. I believe therefore that participants in this *Conference* would benefit immensely from the invaluable resource presentations and discourse by the various tracks.

Meanwhile, in leading the lecture-discussion series in this conference, we will focus on: (1) bedrock; (2) arrows of *ORE*; (3) rays of *SET* equation; and (4) variegated *ORE-SET* paradigm shift and lessons for management scientists. The lecture-discussion will end with a conclusion and implications. This is the path we have turned.

BEDROCK OF THE LECTURE-DISCUSSION

The countries of developed and developing economies are spread across the seven continents of the world – Africa, Antarctica, Asia, Australia, Europe, North America and South America. These continents are surrounded by different oceans – Atlantic, Arctic, Indian, Pacific and Southern Oceans. Under this scenario, however, the question of how many countries are there in the world may seem simple, but the answer is quite elusive. The reason being that diverse authorities uphold different indices for determining what qualify a territory to become a country. This provides different figures by different bodies, such as: (1) Countries with at least partial recognition gave the total number as 201; (2) Countries according to Travelers Century Club, 327; (3) *De facto* countries, that is self-declared states, 205; (4) Countries recognized by the Olympic Committee, 206; and (5) Countries according to United Nations, 195 (Peterside, 2021; Jaja & Onoh, 2005; Jaja, Hamilton & Ottih, 2002).

Going by the plurality of criteria for classification of countries, we are persuaded to lean towards the United Nations' figure which used the self-government criteria and pegged the total number of countries at 195. This number comprises 193 countries that are member states of the United Nations and 2 countries that are non-member states - The Holy See/Vatican City and the State of Palestine which are self-ruling territories but not full-fledged countries. Of the 195 countries, 54 are in Africa, 48 in Asia, 44 in Europe, 33 in Latin America and the Caribbean Island, 14 in Oceania and 2 in North America. 137 countries were also classified as developing economies (*https://www.worldometers.info/geography/how-many-countries-are-there-in-the-world/).*

Notwithstanding the existing performance indices of nationhood and countries' scores on: (1) adventure, agility and cultural influence; (2) entrepreneurship, heritage and movers; (3) openness for business and power; and (4)quality of life and social purpose, it must be pointed out that, whether in the developed or developing economies, something is certain, all the countries of the world come in different shapes and sizes (Jaja & Umezurike, 2005; Jaja, 2002; Okwandu & Jaja, 2000).There are: (1) large landmass with large population (China, India and Nigeria); (2) large landmass with small population (Australia, Canada); (3) small landmass with large population (Japan) and (4) small landmass with small population (Fiji and Luxemburg).

By the same token, countries are ranked along some special indices of specific social, economic, cultural, environmental, or administrative lines, such as: (1) environmental performance, failed and fragile states; (2) bribe payers, corruption and inequality reduction; (3) human development, slavery and women leadership initiative; (4) economic freedom, inclusive internet and religion; and (5) press freedom, social progress and soft power (https://libguides.usc.edu/IR).

Irrespective of differences in continents, surrounding oceans, shapes, sizes and rankings certain characteristics are common to all countries of the world, they: (1) embark on *SET* actions; (2) maintain institutions that manage the outcomes of the *SET* actions; (3) gear their effort towards efficient and effective utilization of available resources to accomplish set objectives; and (4) reengineer behaviors, structures, processes and functional areas where gaps exist between the outcomes of *espoused-theory* and *theory-in-use.*

It must be emphasized that *SET* outcomes are understood in terms of income, education, employment, security and social support. The said outcomes are theoretical constructs conceptualized to measure and reinforce the future of humanity and quality of life. When any of these outcomes are not achieved some fundamental questions must be asked: Where are we coming from? Where are we now? Where are we going? To provide answers to these questions, we must rely on Stevenson's (1952) philosophical canon in which he propounded that, *we can chart our future clearly and wisely only when we know the path which has led to the present*.

To properly focus on *ORE*, *SET* outcomes must be clearly defined as determined by the strategies, policies, programmes and practices of responsible agents of governments in the developing economies. The question before us therefore is, to what extent have governments in developing economies (especially those in African countries) set the appropriate targets to enable the various fields of management sciences properly fashion their *ORE* efforts. Literarily, the answer could be yes, they do to a great extent, but realistically, there is no visible evidence that they are serious on this. The situation has triggered the conscience of management scientists in redoubling their efforts in making meaningful contributions toward *SET* in developing economies (Peterside, 2021; Graham, 2018; Rendtorff, 2010; Jaja & Onoh, 2005; Jaja, Hamilton & Ottih, 2002).

ARROWS OF ORGANIZATIONAL REENGINEERING

ORE is the process of reviewing all the different levels of an organization's way of operations and considering how to improve on them (Hammer& Champy, 2013). It has to do with improved competitive advantage and enhancement of the image of the organisation. It requires an organization to closely assess its strengths, weaknesses, opportunities and threats; ask questions where necessary and make changes in the interest of *SET* (Grover & Malhotra, 2017; Davenport & Short, 2010; Champy, 2020). This drive for realizing functional improvement is based on fundamental re-thinking on how to improve customer services, cut operational costs, and adapt

to world-class best management practices (Danvenport, 2021; Jaja 2013).

The implication of the foregoing is that, *ORE* eliminates unproductive activities and rework-errors; accelerates information flows; and clarifies, simplifies and streamlines operations. It is therefore, not static as things will continuously change, adapt and evolve depending on the prevailing situation in the organization (Birden, 2019; Jaja & Umezurike, 2005; Drucker, 1969).

It must be re-emphasized that *ORE* starts with a high-level reassessment of vision, mission, strategic goals, and customer valued needs. It **is required when: (1) c**ustomer complaints and refund requests are rising; (2) work stress, conflicts, and turnover are high; (3) profitability is dwindling; (4) inventory levels are rising; and (5) corporate governance is weak with rising institutional vulnerability. Some further questions asked however, are: (1) Does our vision and mission need to be redefined? (2) Are our strategic goals aligned with our vision and mission? And (3) Who are our customers?

RAYS OF SOCIOECONOMIC TRANSFORMATION EQUATION

SET is the change and innovation actions that meet the needs of the present without compromising the ability of future generations to meet their own needs. Its need goes beyond simply material needs but includes creation of values, relationships, freedom to think, act, and participate. This implies sustainable living - morally and spiritually. It provides multiple benefits for individuals, the organization and society (Peterside, 2021; Jaja, 2014).

SET is about assisting organizations to provide for the human beings what they want without compromising quality of life. In this sense, it requires addressing many fundamental human related issues at local, regional and global levels. The core principle of *SET* therefore is to improve human well-being and sustain such improvements over time (Grover & Malhotra, 2017; Hoa & Yazdanifard, 2015).It is a process where the major contribution to income, output, employment and gross domestic product of the economy is generated from manufacturing, small scale industries, information and communication technology, capital intensive industries and the service sectors (Peterside, 2021; Jaja, 2018).

It is pertinent to point out that a single-value measure of *SET* may lead to loss of useful information during aggregation (Graham, 2018). It is suggested that aggregate transformation should embrace economic, social and *govcological* perspectives. The indices will include:(1) reduced poverty, increased decent and productive jobs; (2) accelerated industrial growth and increased digital literacy; (3) developed infrastructure, electronic payment systems and human resources for quality health and education; (4) strengthened judicial system, undiluted anticorruption mechanism and improved scores for citizen participation in national affairs; and (5) enhanced service delivery, increased number of institutional instruments for prevention and detection of economic and financial crimes (Champy, 2020; Jaja, 2019). Linking the foregoing indicators, it is clear that sustainable *SET* will be guaranteed without undermining human nature.

VARIEGATED PARADIGM SHIFT FOR MANAGEMENT SCIENTISTS

As management scientists, the whole essence of our calling is to research towards promoting policies, practices and formulae that can advance the wellbeing of man and the society at large (Hamilton, 2021; Jaja, 2019). Going by this realization, it becomes pertinent to pinpoint that the quality of *ORE* and *SET* is pivotal to the overall advancement of developing economies (Davis, 2021; Zaini & Saad, 2019; Smith & Hitt, 2009). Activating organizations for reengineering can be achieved through *SET* orientation of government. This is largely achieved through fiscal and monetary policy adjustments capable of creating framework and mechanism that sets the template for organizational strategic choices and operational orientations (Jaja, 2015). Essentially, it draws from the largely touted belief that government's primary role in socioeconomic involvement is the creation of enabling environment.

Organizations *per se* lack capacity either by law or formation to manipulate macroeconomic variables which have remained sole responsibility of government, especially in developing economies with high rate of public sector involvement in driving socioeconomic development. Private sector led economies, though wear the garb of capitalism, their functionality draws largely from the laid down transformational ideologies of government. For instance, governments all over the world have made frantic disposition towards leveraging the huge dysfunctional impact of *COVID-19* on firms through provision of repositioning and resuscitating grants to strategic sectors.

In undertaking this *ORE* and *SET* journey in developing economies, there is need to rely on the results of our earlier study (Jaja, 2015). As we contended in that study, in salvaging a dysfunctional system, the notion of management coconut metaphor should not be ignored. The coconut was likened to *no limit, no boundary* component of man, that is, cognitive, emotive and physical maps. Similarly, the African manager's conscience must be constantly mirrored in order to determine what is morally right and wrong in his actions. The attributes of managerial philosophical equation, false managerial prophets and the challenge of identity crisis must be clear at all times in our minds. The evidence of crumbling behavioural pillars revealed in managerial insanity and corporate doublespeak syndromes must be under our watch. In addition, humane work climate must be created for the operatives, *not for the elephants in the room* (Jaja, 2015). It must therefore be recalled that these are the cornerstone of *ORE* and *SET* in developing economies which must be explored.

CONCLUSION AND IMPLICATIONS

One prerequisite for reducing negative *SET*, and potentially contributing in achieving its goal is *ORE*. *SET* is built on three basic pillars: economic growth, social progress and govcological balance. Our governments must serve our socioeconomic needs and respect boundaries. This is currently not the case in most developing economies. We are on unsustainable path. Our govcological balance in *SET* activities have contributed to societies growing more unequal opportunities across various dimensions; depriving some people from meeting their basic human needs; and putting the political systems under stress. Our future depends on our ability to transform the socioeconomic system – to take on stewardship with our collective goals in mind. This is the turnaround we are calling for.

The major implication of the foregoing is that *ORE* efforts must commence by grinding information from *SET* outcomes in our mental mills. This demands knowing the why, the how, the where and what it is. It extends to knowing what we know, and knowing how we knew it. *ORE* must provide fresh product life and add flavour to quality of life. The consequences of ignoring this in the past have resulted in: (1) producing negative results in all the dimensions of life by wasting valuable resources; ((2) spinning the wheels without getting anywhere and thereby building the managerial incompetence paradise; and (3) reducing the deliverable values by putting our efforts in solving the wrong and non-existing but purported socioeconomic problems. In the spirit of *ORE* and *SET*, therefore, it is advised that management scientists should **do their research and work cross-functionally, support customers' valued needs, and strengthen employee journey tracks.**

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PART A:

ACCOUNTANCY/BANKING AND FINANCE TRACK

CREATIVE ACCOUNTING AND FINANCIAL PERFORMANCE OF FOOD AND BEVERAGES COMPANIES IN NIGERIA

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ABSTRACT

The study examined the relationship between creative accounting practices and financial performance of food and beverage companies in Nigeria. The study was guided by four specific objectives, four research questions and four research hypotheses. The study adopted aggressive earnings management and income smoothing as the dimensions of creative accounting practices while return on asset and return on equity were used as the measures of financial performance. The study was anchored on Ethical theory. The study adopted survey research design. The study adopted survey research design. The population and sample size of the study comprised twenty food and beverage companies in Nigeria that are listed on the Nigerian Stock Exchange as at December 2020 while the simple random sampling technique was used to draw fifty-two (52) accountants, auditors and managers from the sampled food and beverage companies understudy. Structured questionnaire was the data collection instrument used, and frequencies, simple percentages and weighted mean scores were used to analyse the demographic data of the respondents and other items of the questionnaire, while the Pearson Product Moment Correlation was used to test the hypotheses formulated at 5% level of significance by means of Statistical Package for Social Sciences (SPSS) version 21. The results of the study showed that: aggressive earnings management has a positive and significant relationship with return on asset, aggressive earnings management has a positive and significant relationship with return on equity, income smoothing has a positive and significant relationship with return on asset, and lastly, income smoothing has a positive and significant relationship with return on equity of food and beverage companies in Nigeria. The study concluded that creative accounting practices has significant positive relationship with financial performance of food and beverage companies in Nigeria. The study recommended among others that creative accounting practices should be considered as a serious crime while accounting bodies, law courts and other regulatory authorities need to adopt strict measures to stop the practice and punish the offenders.

Keywords: Aggressive earnings, creative accounting, financial performance, foods and beverages firms, income smoothing

INTRODUCTION

The main objective of financial reporting is to provide information about the wealth performance and financial health of a company. Though it is true that financial statements are likely to be the most effective way of conveying information to the public, it should be noted when reading the reports; the figures may not necessarily show a true and fair view and might also be misleading (Ibanichuka & Ihendinihu, 2012). However, the accounting process and regulatory framework prescribed by the different regulatory agencies in the accounting profession gives room for discretionary judgments by the accountants. Trying to resolve conflicts between the competing different approaches in which the results of financial events and transactions are presented, provides opportunity for manipulation, deceit, and misrepresentation. These negatively practiced activities by the less scrupulous elements of the accounting profession are popularly known as creative accounting (Idris, Kehinde, Ajemunigbohun & Gabriel, 2015).

According to Amat and Gowthorpe (2014) creative accounting also known as aggressive accounting is the process that deals with matters of accounting appraisal, conflicts, items and events. This flexibility gives room for manipulation, deceit, and misrepresentation. Hence, the accountants use their knowledge of accounting rules to manipulate the figures reported in the accounts of a business. Creative accounting is also accounting practices that may or may not follow the letter of the rules of accounting standard practices but certainly deviate from those rules and regulations. It may be characterized by excessive complication and using innovative ways of characterizing income, assets and liabilities. It involves the use of accounting knowledge to influence the reported figures, while remaining within the jurisdiction of accounting rules and laws so that instead of showing the actual performance or position of the company, they reflect what the management wants to tell stakeholders (Haruna & Emmanuel, 2017).

On the other hand, the subject of financial performance has received significant attention from scholars in the various areas of business and strategic management. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization's health and ultimately its survival. Financial performance is a subjective measure of how well a firm can use assets from its primary and non-primary modes of business and generate revenues. The term, financial performance, is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Kohlar, 2015).

However, the real causes of creative accounting according to Akenbor and Ibanichuka (2012) lie in the conflicts of interest among different interest groups. Managing shareholders 'interest is to pay less tax and dividends. Investor-shareholders are interested to get more dividends and capital gains. Country's tax authorities would like to collect more and more taxes. Employees are interested to get better salary and higher profit share. Despite this, creative accounting puts one group or two to advantageous position at the expense of others. Notable creative accounting practices variously employed by management or preparers include: deliberate non-recognition of liabilities, aggressive earnings management through the recognition of revenue before they are earned, deliberate recognition of unusual assets, unjustified changes to accounting policies and accounting estimates and profit smoothing through the manipulation of profit figure and off balance sheet financing.

Many terms can be used to describe the practices of changing the facts in accounting, e.g. cooking the books, aggressive accounting, massaging the numbers, window dressing, earnings management etc. The manipulation of financial numbers is prohibited by laws and accounting standards, they are against the spirit of not providing the "true and fair view" of a company that accounts are supposed to. The techniques of creative accounting change over time as accounting standards change (Osemene et al., 2014). Creative accounting is a euphemism for accounting practices that tend to manipulate the rules of standard accounting practices or the spirit of those values. They are characterized by dubious complications and use of 'novel' ways of presenting income, assets and liabilities.

However, creative accounting practice has been increasing in recent years in many firms (food and beverage companies inclusive) in Nigeria to attract unsuspecting investors, or obtain undeserved accounting-based rewards by presenting an exaggerated misleading or deceptive state of financial affairs. It is evident that the extent of window-dressing of firms 'financial statements in Nigeria has greatly violated all known ethical standards of the accounting and auditing profession. Furthermore, there are many reports of price manipulation, profit overstatement, and accounts falsification by some dubious stewards of Nigerian firms which rendered the financial statements ineffective. The business failures of the past decade have also been closely associated with corporate governance failure as a result of creative accounting which involves a number of parties, management board of directors, auditors, and some investors.

Ijeoma (2014) revealed that the major reason for creative accounting practices in the Nigerian firms is to inflate the operating costs to reduce exposure to taxes. It was further revealed that other key reasons for creative accounting practice among firms in Nigeria include: to help maintain or boost the share price by reducing the apparent levels of borrowing, making the company appear subject to less risk and of a good profit trend , to inflate the amount of operating costs in order to reduce exposure to taxes, to report a steady trend of growth in profit, rather than slow volatile profits with a series of dramatic rises and falls, and to effect changes in accounting policies in order to discourage findings faults in the company's accounting system. Furthermore, Brank, Ivo and Ivana (2017) asserted that creative accounting can have a positive impact on a company's business in the short term, but in the long run, it may result in decreased stock prices, insolvency, and even bankruptcy. It is the root of numerous accounting scandals, as well as many accounting reforms, which is why doubts in the transparency and honesty of financial reporting arise. Moreover, Ezeani et al. (2012) found that accountants/auditors indulge in creative accounting through profit eroding mechanisms to attract investors and resources in order to boost their financial performance.

However, most of the related studies on creative accounting focused mainly on the impact of creative accounting on financial reporting as well as on investors' decision in the stock market without highlighting the reasons for such practices. More so, the most of the studies are of foreign origin whose findings may not be compatible with the Nigerian situation considering environmental differences. The few available studies in Nigeria paid less attention to creative accounting practices and its effects on the financial performance food and beverage companies in Nigeria. This creates a gap that this study aims to fill. Based on the above, the point of departure in this study is to fill this existing gap and to provide an empirical investigation of creative accounting and its relationship with financial performance of foods and beverages companies in Nigeria. Specifically, this study intends to examine relationship between:

(i) Aggressive earnings management and return on asset of food and beverage companies in Nigeria.
(ii) Aggressive earnings management and return on equity of food and beverage companies in Nigeria.
(iii) Income smoothing and return on asset of food and beverage companies in Nigeria.
(iv) Income smoothing and return on equity of food and beverage companies in Nigeria.

LITERATURE REVIEW AND HYPOTHESES

Theoretical Framework

This study adopted the ethical theory. Ethical theory was propounded by Ruland in 1984. According to the theory, companies generally prefer to report a steady trend of growth in profit

rather than to show volatile profits with a series of dramatic rises and falls. This is achieved by making unnecessary high provisions for liabilities and against assets values in good years so that these provisions can be reduced, thereby improving reported profits, in bad years. Advocates of this approach argue that it is a measure against the 'short-termism' of judging an investment on the basis of the yield achieved in the immediate following years. It also avoids raising expectations so high in good years that the company is unable to deliver what is required subsequently. Against this is an argument that if the trading conditions of a business are in fact volatile, then investors have a right to know this and that income smoothing may conceal long-term changes in the profit trend. Revinse (1991) considers the problem in relation to both managers and shareholders and argues that each can draw benefits from 'loose' accounting standards that provide manager with latitude in timing the reporting of income. He thinks that the prime role of accounting is a mechanism for monitoring contracts between managers and other groups that provided finance also market mechanisms will operate efficiently, identifying the prospect of accounting manipulation and reflecting the appropriateness in pricing and contracting decisions.

Concept of Creative Accounting

The term creative accounting was first used in 1968 in a film produced by Mel Brooks. Creative accounting according to Wikipedia (2005) is accounting practices that deviate from standard accounting practices. These practices are characterized by excessive compilation and the use of novel ways of charactering income, assets or liabilities. This results in financial reports that are not all dull, but have all the complication of a novel, hence the name “creative”. Creative accounting has led to a number of recent accounting scandals, and many proposals for accounting reform that centred on an updated analysis of capital and factors of production that would correctly reflect how value is added (Osisioma & Enahoro, 2016). Kamal (2002) defined creative accounting as the transformation of financial accounting figures from what they actually are to the prepare desires by taking advantage of the existing rules and/or ignoring some or all of them. From the foregoing definition, Nadim (2013) observed that creative accounting is practiced in order to match the interest among parties. Various parties in the society seek to maximize their own interest. Managers wish to pay less tax possible and to report huge profits so they can earn good bonus. Shareholders interest is to earn good dividend, while employees wish to get improved salary and job security, while government wants to collect taxes.

Richard et al. (2008) therefore concluded that creative accounting is any accounting method that fails to conform to the GAAP or prescribed standards and guidelines. Creative accounting is defined as the practice of recognizing revenue in a way that makes a company look better than it is, while still conforming to the Generally Accepted Accounting Principles (GAAP). Agreeing, Ali et al. (2011) sees creative accounting as the use of accounting knowledge to influence the reported figures, while remaining within the jurisdiction of accounting rules and laws, so that instead of showing the actual performance or position of the company, they reflect what the management wants to tell the stakeholders. It refers to accounting techniques in which financial information is distorted and manipulated in order to present a better financial picture by either increasing or decreasing the profit as the case may be, by giving a misleading appearance of the capital size or structure and by concealing relevant information from existing and potential investors (Idris et al., 2012). Creative accounting refers to the aggressive use of choices available under accounting rules, to present the most fattening view of a company possibly in its financial statement (Ijeoma

& Aronu, 2013).

Amat et al. (2009) see creative accounting as a process whereby accountants, capitalize on their understanding of accounting rules to manipulate the reported figures in books of account of a business. Naser (2003) sees it as the transformation of financial accounting figures to the desire of the preparers from what they actually are by taking advantage of the existing rules and or ignoring some or all of them. In the view of Gowthorpe and Amat (2005), creative accounting is the deliberate distortion of the communication between entities and shareholders by the activities of financial statement preparers who wish to change the content of the message being transmitted. To Sen and Inanga (2005) creative accounting, also called deceptive accounting, is the application of accepted accounting techniques which permit corporations to report financial results that may not accurately reflect the substance of business activities. Succinctly put by Copeland (2008) creative accounting involves the repetitive selection of accounting measurement or reporting rules in a particular pattern, culminating in the reporting of stream of income with a smaller variation from trend than would otherwise have appeared.

Feleaga and Malciu (2012) defined creative accounting as a process through which the accounting professionals use their knowledge in order to manipulate the figures contained in the annual accounts. However, the following description below is the types of creative accounting practice that is currently in use:

a) **Sales and lease back transactions:** In a transaction where third party is involved such as bank, the chances of creative accounting are more. Thus, supposing an arrangement is made to sell an asset to a bank, then lease that asset back for the rest of its useful life. The sale price under such a 'sale and leaseback' can be pitched above or below the current value of the asset, because the difference can be compensated for by increased or reduced rentals.
b) **Amortization of written off development expenditure over the life of asset of a project:** In order to produce desired results, a company can amortize written off development expenditure of related asset of a project, just to transfer the cost to next few years. It has been observed that the life of the assets are determined by managers or organizational concerned department and thus long life assets will show depreciation for long time in books of accounts. These judgments or estimations in deciding for assets life may lead to creative accounting for getting desired results. If managers plan to evade taxes, they may estimate long life of assets of the company to show depreciation at an expense of long term.
c) **Transfer pricing methods in multinational companies:** Tax advantages and tax differentiation in two different countries gives advantage to the companies to shift their profits in low tax regime countries. Companies are free to decide in transfer pricing method and thus high transfer price can be applied in high tax regime units. Such alternatives are important example of creative accounting. It has been critically observed, that the major reason of occurrence of creative accounting, is choices in accounting methods. According to the accounting standards, companies are free to use any of the method laid down in the system, subject to their convenience. For example, there are three broad methods of inventory pricing stated as follows: FIFO (First-in, first-out), LIFO (Last-in, first-out) and AIM (Average inventory method).
d) **Choice in timing of transactions**: Companies are free to record the sales or revenues in a manner to show profits of investment which was costing too low at historic price.

There are various dimensions of creative accounting but the dimensions used in this study are aggressive earnings management and income smoothing.

Concept of Financial Performance

Financial performance can be defined as a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues (Mills, 2008). This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The performance measurement concept indicates that employees can increase the value of the firm by; increasing the size of a firm's future cash flows, by accelerating the receipt of those cash flows, or by making them more certain or less risky (Cadbury, 1992). Carreta and Farina (2010) argue that use of financial performance could still be justified on the grounds that it reflects what managers actually consider to be financial performance and, even if this is a mixture of various indicators like accounting profits, productivity, and cash flow. Financial performance is determined by the following indicators; profit or value added; sales, fees, budget; costs or expenditure and stock market indicators (e.g. share price) and autonomy. In this study, we adopt return on asset and return on equity as measures of financial performance.

Return on Asset formula is a straight forward calculation whose component are easily located on a company's financial statements. The Return on Asset ratio often called the return on total assets is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. Return on Asset is an indicator of how a business manages existing assets when generating earnings. If Return on Asset is low, the management may be inefficient while a high Return on Asset figure shows the business is running smoothly and efficiently (Madura, 2015). According to Shopify (2014) management will look closely at the Return on Asset figure at year end. If the Return on Asset is high, it is a good sign that the business is making the best from what it already has in assets. Combing the Return on Asset with the metric, return on investment may show that further investment is worthwhile and that the business is capable of using new investment efficiently. Examining a low Return on Asset is vital for the efficient running of a business. If the Return on Asset is consistently low it may show that either management are not making enough use of existing assets or that assets within the business are of no longer any use. Falling Return on Asset is always a problem but investors and analyst should bear in mind that the Return on Asset does not account for outstanding liabilities and may indicate a higher profit level than actually derived (Bank of Ghana, 2015). Therefore, Return on Asset is considered as an effective way of measuring the efficiency of manufacturers, but can be suspect when measuring service companies or companies whose main assets are people (Bloomsbury, 2009).

Return on equity on the other hand, measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. The earnings number can come directly from the consolidated statement of earnings in the company's most recent annual filling with the Security and Exchange Commission (SEC). The shareholder's equity number is located on the financial statement position; simply the different between total assets and total liabilities, shareholder's equity is an accounting convention that represents the assets that the business has generated. It is assumed that assets without corresponding liabilities are the direct creation of the shareholder's capital that got the business started in the first place. The usual way investors will see shareholder's equity displayed is as book value – the amount of shareholder's equity per share, or the accounting book value of the business beyond its market value or intrinsic economic value.

Creative Accounting and Financial Performance

Numerous empirical studies on creative accounting and financial performance of firm exist in literature. These includes the study of Olojede et al. (2020) on impact of corporate governance mechanisms on creative accounting practices in listed companies in Nigeria. The stud adopted a longitudinal design for the reason that repeated observation of the same variables (corporate governance mechanisms and creative accounting) over a 13-year period (2005 -2017). The study population was 166 listed companies on the Nigerian Stock, while 70 companies were drawn as sample size, using multi sampling technique. Data was collected from the companies' annual reports and accounts sourced from African Financials, Nigerian Stock Exchange and individual company websites. The study adopted descriptive statistics, correlation, OLS regression, panel fixed effects model (FEM) and panel random effects model (REM) for the analysis and hypothesis testing. The outcome of the study revealed that corporate governance mechanisms jointly have a great significant impact on creative accounting practices (CAP) in Nigeria, but the level of impact differs among individual corporate governance mechanisms. The study recommended the use of both sanctions and moral suasion in compelling compliance with relevant laws, accounting standards and corporate governance codes.

Also, Siyanbola et al. (2020) investigated the effects of creative accounting on investment decision in selected listed manufacturing firms in Nigeria's real sector for the period of 2007 to 2017. The study was empirically carried out by extracting related data from CBN statistical bulletin and NDIC annual reports for the period on which regression analysis was used. The result revealed a positive but insignificant effect of creative accounting on investment decisions in listed manufacturing firms in Nigeria's real sector as it reflects in the adjusted R2 of 0.742983 or 74.30%. The study therefore concluded and recommended that proper corporate governance should be applied to ensure that creative accounting is used for stakeholder's benefits.

Similarly, Ubogu (2019) investigated the effect of creative accounting on shareholders' wealth in business organization: a case study of selected banks in Delta State. The findings revealed a positive and significant relationship between creative accounting and decision making of an organisation. The study submitted that creative accounting affects shareholders' wealth and their various investments decisions because it has a great impact on the share prices of the business organisation. The study suggested that only well and legally audited financial statements should be relied on by shareholders in making important decision.

In addition, Essien and Ntiedo (2018) examined the extent to which creative accounting, accounting reports and disclosures provides shareholders and other interested parties with reliable information to permit informed investment decisions and true valuation of firms has remained in doubts. Using survey method, the study revealed that accounting creativity contributes 90% to unfair reporting of firm's operations. Thus, the creativity in those practices is motivated by greed and intention to deceive the public, potential investors and shareholders and increases the rate of enterprise failures at a decreasing rate. However, the study revealed that the many regulations without adequate checks, punishments and rewards creates conducive conditions for creative accounting in providing the opportunity for fantasize and cosmetic

financial reporting.

Relatedly, Adetoso and Ajiga (2017) examined creative accounting practices among Nigeria listed deposit money banks: curtailing effects of IFRS. Specifically, it examined the effect of IFRS recognition, IFRS measurement and IFRS disclosure requirements on creative accounting practices. The population of the study comprised of all the fifteen (15) listed deposit money banks as at July, 2016, located in Akure, Ondo State. Simple random sampling technique was adopted to select the sample size of ten (10) listed deposit money banks, out of the fifteen (15) listed in Nigeria Stock Exchange (NSE). The study made use of primary data obtained through questionnaire administered to 98 respondents of the ten (10) sampled listed deposit money banks. The said primary data was analysed using quantitative approach through Statistical Package for Social Science (SPSS) Version 21 software. The formulated hypotheses were tested using Multiple Regression Model method. Result showed that in (Ho_1) P-value (0.000) <α(38.342) and F-value (38.342) > the critical value F* (2.829), hence, the hypothesis is rejected. Additionally, it was observed from hypothesis two (Ho_2), that the P-value (0.004) < α (32.871) and F-value (32.871) > the critical value F* (2.829). This means that the hypothesis is also rejected. In respect of hypothesis three (Ho_3), the Pvalue (0.001) < α (42.717) and F-value (42.717) > value F* (2.829). This is an indication that the hypotheses cannot be accepted. The study, therefore, concludes that compliance with IFRS recognition, measurement and disclosure requirements each has significant effects on curtailing creative accounting (manipulation of assets and equity values, income and expenses figures and non-timely recognition of losses) practices among Nigeria listed deposit money banks.

More so, Ahmed (2017) aimed to shed light on the impact of creative accounting ethics techniques on the reliability of financial reporting from auditors and academics point of view. The data was collected through a well-structured questionnaire designed and distributed to a randomly chosen sample of certified auditors and accounting instructors in some universities. Descriptive and inferential statistics were used to generalize the results and conclude on the findings. The result deduced that creative accounting techniques used by management negatively affect the reliability of financial reporting. The statutory auditor plays an important role in promoting creative accounting practice in such way that positively affect the reliability of financial reporting.

In their own study, Umobong and Ironkwe (2017) examined creative accounting and firm's financial performance using secondary data obtained from Nigeria Stock Exchange and tries to ascertain whether food and beverage firms in Nigeria massage income using seasonal trading reports (STR). STR was subjected to Hausmann test for selection of appropriate model and regressed against performance variables return on assets, returns on equity and earnings per share. Test of causality was conducted to determine whether there is causal relationship amongst the variables of study. Result showed STR has no significant relationship with ROA, ROE and EPS and not used to manipulate ROA, ROE and EPS. STR has negative relationships with performance variables. The study concluded that an increase in STR decreases performance.

In another study, Akabom (2017) examined creative accounting earnings management, Professional and ethical issues in creative accounting, and their effects on modern financial reporting. In the light of these, the study defines Creative Accounting, listed the types of Creative Accounting methods, highlighted the impacts of creative accounting on financial reporting and provided some examples of how accounts can be fiddled. The study reiterated the fact that Accountancy profession and practice are faced with the challenges of living up to expectation in the rapid advances in technology and business methods, and often times, the Accounting standards lag behind such growths and development.

In a related study, Nangih (2017) examined empirically the influence of creative accounting practices on the quality of financial statements of oil servicing companies in Nigeria. To achieve the objective of the study, three hypotheses were formulated and stated thus: There is no significant relationship between aggressive earnings management and relevance/verification of financial statements, there is no significant relationship between unjustified changes in accounting policies and estimates and comparability/understandability of financial statements, and there is no significant relationship between profit smoothing and objectivity/faithful representation of financial statements. Survey research design was adopted for the study. Data were collected through well-structured and validated questionnaire and analysed done using ordinary least squares regression technique. Results of the findings revealed that creative accounting practices by oil servicing companies influenced the quality of their financial statements negatively.

Vincent et al. (2016) examined the influence of creative accounting practices on financial performance of companies listed on the Nairobi securities exchange. Quantitative approach through the use of questionnaires was adopted to help in the collection of primary data. Secondary data was collected from NSE handbook, relevant textbooks, finance journals, financial statements and the website of public limited companies that were be sampled The target population of the study was top management of public limited companies that is the CEO, directors, top managers and accountants, while a sample of 30 public companies was drawn using purposive sampling. Logistic linear regression technique was used to analyze the relationship between creative accounting practices and financial performance and the correlation between the variables and financial performance. Statistical Package for Social Sciences Software (SPSS) was used in carrying out the multiple regressions to establish the relationship between creative accounting practices and financial performance and the correlation between the variables and financial performance. Financial performance was measured using earning after tax. The study found that a strong relationship exists between creative accounting practices and financial performance.

Furthermore, Goyal (2016) explored the nature and incidence of creative accounting practices with the reference of unethical and ethical considerations of accounting practitioners. The study also explored several definitions of creative accounting and the potential and the range of reasons for a company's directors to engage in creative accounting. Also, the study considered the various ways in which creative accounting can be practiced and summarizes some empirical research on the nature and incidence of creative accounting. The study found that creative accounting is a devious tool of accounting affect organizational performance.

Based on the review of literature, the following conceptual framework in fig. 1 showing the conjectural relationship among the major variables was designed.

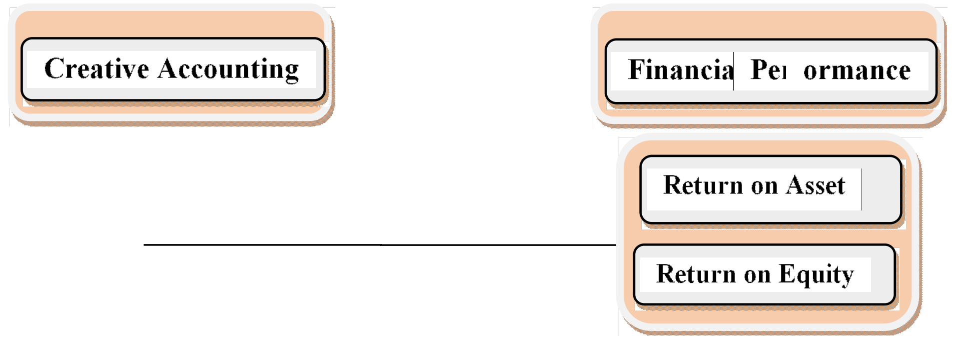

Fig. 1: Operational Framework of Creative Accounting Practices and Financial Performance Food and Beverages Companies in Nigeria

From the conceptual framework, the following Hypotheses were formulated:

Ho$_1$: Creative accounting does not have significant relationship with return on asset of food and beverage companies in Nigeria.

Ho$_2$: Creative accounting does not have significant relationship with return on equity of f o o d and beverage companies in Nigeria.

METHODOLOGY

The study adopted survey research design. The population and sample size of the study comprised twenty food and beverage companies in Nigeria that are listed on the Nigerian Stock Exchange as at December 2020 while the simple random sampling technique was used to draw fifty-two (52) accountants, auditors and managers from the sampled food and beverage companies understudy. Structured questionnaire was the data collection instrument used, and frequencies, simple percentages and weighted mean scores were used to analyse the demographic data of the respondents and other items of the questionnaire, while the Pearson Product Moment Correlation was used to test the hypotheses formulated at 5% level of significance by means of Statistical Package for Social Sciences (SPSS) version 21.

TEST OF HYPOTHESES AND RESULTS

Table 1: Analysis of Aggressive Earnings Management and Return on Asset

		Aggressive Earnings Management	Return on Asset
Aggressive Earnings Management	Pearson Correlation	1.000	.634**
	Sig. (2-tailed)	.	.001
	N	**50**	**50**
Return on Asset	Pearson Correlation	.634**	1.000
	Sig. (2-tailed)	.001	.
	N	**50**	**50**

**. Correlation is significant at the 0.01 Level (2-tailed).

Source: Field Survey, 2022.

Table 1 above reveals that there is a strong degree of positive relationship between aggressive earnings management and return on asset of food and beverage companies in Nigeria. This is because the correlation coefficient (r) is positive and greater than 0.50 i.e. r=0.634. Also, since the significant value (*p-value*) of 0.001 is less than *alpha value* of 0.05, we therefore reject the null hypothesis one (H_{01}) and accept alternate hypothesis one (H_{A1}). The conclusion is that aggressive earnings management has significant relationship with return on asset of food and beverage companies in Nigeria.

Table 2: Analysis of Aggressive Earnings Management and Return on Equity

		Aggressive Earnings Management	Return on Equity
Aggressive Earnings Management	Pearson Correlation	1.000	.672**
	Sig. (2-tailed)	.	.000
	N	**50**	**50**
Return on Equity	Pearson Correlation	.672**	1.000
	Sig. (2-tailed)	.000	.
	N	**50**	**50**

**. Correlation is significant at the 0.01 Level (2-tailed).

Source: Field Survey, 2022.

Table 2 above reveals that there is a strong degree of positive relationship between aggressive earnings management and return on equity of food and beverage companies in Nigeria. This is because the correlation coefficient (r) is positive and greater than 0.50 i.e. r=0.672. Also, since the significant value (*p-value*) of 0.000 is less than *alpha value* of 0.05, we therefore reject the null hypothesis two (H_{02}) and accept alternate hypothesis two (H_{A2}). The conclusion is that aggressive earnings management has significant relationship with return on equity of food and beverage companies in Nigeria.

DISCUSSION OF FINDINGS

The analysis of this study showed that aggressive earnings management has positive and significant relationship with return on asset and return on equity of foods and beverages companies in Nigeria. This finding relates to that of Akabom (2017) who found that creative accounting such as aggressive earnings management has significant positive effect on financial performance of manufacturing organizations as measured by return on asset. The finding also relates to that of Vincent, Florence and Christopher (2016) who found that creative accounting such as aggressive earnings management and artificial transaction shave significant effect on return on equity of public limited companies.

The findings of the study equally indicate that income smoothing has a positive and significant relationship with return on asset and return on equity of foods and beverages companies in

Nigeria. This finding is in accordance with the finding of Ijeoma (2014) who stated that income smoothing directly boosts return on asset Nigerian deposit money banks, and Osemene et al. (2014) who stated that profit smoothing is positively related to return on equity and dividend pay-out of manufacturing firms in Nigeria.

CONCLUSION AND RECOMMENDATIONS

This study has examined the relationship between creative accounting practices and financial performance of foods and beverages companies in Nigeria. The findings that emanated from the data analysis are: aggressive earnings management has a positive and significant relationship with return on asset and return on equity of foods and beverages companies in Nigeria; and income smoothing has a positive and significant relationship with return on asset and return on equity of foods and beverages companies in Nigeria. Based on the finding, the study concluded that creative accounting practices have significant positive relationships with financial performance of food and beverage companies in Nigeria.

Based on the findings that emanated from the study, the following recommendations are made:

1. Mangers of food and beverage companies should take responsibility of bad position of the firms. Auditors should provide good information to shareholders and check all the transactions and can ask from the managers any suspicious account or dubious transactions.
2. Creative accounting practices should be considered as a serious crime and therefore accounting bodies, law courts and other regulatory authorities need to adopt strict measures to stop the practice and punish the offenders.
3. There is the need to restore integrity and public confidence to accounting operations, the accountants should be strengthened to respond quickly to the egregious abuses and malpractice in the world of business and impose sanctions on offenders.
4. Finally, accountants in food and beverage companies and other sectors in general, should hold high ethical standards and maintain integrity in all their professional dealings. They need to ensure that the accounting profession rests on ethical principles and value, commanding national and international respect, stopping the unscrupulous practice of creative accounting.

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ELECTRONIC BANKING AND THE PROFITABILITY OF DEPOSIT MONEY BANKS IN NIGERIA

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ABSTRACT

The study determined the effect of electronic banking on the profitability of deposit money banks in Nigeria. The specific objectives of the study include: To analyze the effect of point of sale on return on asset of deposit money banks in Nigeria, to evaluate the effect of Automated Teller Machine on return on asset of deposit money banks in Nigeria and to determine the effect of mobile payment on return on asset of deposit money banks in Nigeria. The study made use of quarterly data, which ranged from 2012 to 2020 summing up to 36 sample observations. The data used were sourced from Central Bank of Nigeria (CBN) statistical bulletin and Nigerian Stock Exchange (NSE). The profitability of deposit money banks was measured by return on asset while electronic banking was proxied by point of sale, automated teller machine and mobile payment. A model was functionally, mathematically and econometrically specified and this model was estimated by Ordinary Least Square technique of regression. The hypotheses formulated were tested at 0.05 level of significance using t-test. The findings emanating from the study showed that: point of sale has a positive and significant effect on return on asset of deposit money bank in Nigeria, Automated Teller Machine has a positive and significant effect on return on asset of deposit money bank in Nigeria while mobile payment has a positive and significant effect on return on asset of deposit money bank in Nigeria. The study concluded that electronic banking has a significant positive effect on the performance of deposit money banks in Nigeria. The study recommended that deposit money banks should engage frequently with their network providers to ensure that there is twenty-four hours network availability on daily basis in order to improve web based transactions and consequently the performance of deposit money banks.

Keywords: deposit money banks, Electronic banking, mobile payment, point of sale, profitability,

INTRODUCTION

Before the emergence of modern banking system, banking operation was manually done and that solely account for the inefficiency in handling transactions. With the advent of computers and

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electronic communications, a large number of alternative electronic payment systems have emerged. These include debit cards, credit cards, electronic funds transfers, direct credits, direct debits, Internet banking and e-commerce payment systems (Okifo & Igbunu, 2015). According to Bingilar and Bariweni (2019) electronic banking are information communication technology based systems established to facilitate the monetary transactions between parties using bank-based platforms. In Nigeria, the operational electronic banking include Automated Teller Machines (ATMs), Point of Sales (POS) machines, mobile banking and internet (Online) banking platforms. The last two options promise more convenience and wider use as the services can be assessed on electronic devices owned by the individual customers. No wonder the total value of transactions consummated through physical payment system such as cheques have continued to drop in the past few years. The evidence is captured and established in the annual statistical bulletin of the Central Bank of Nigeria.
However, almost every bank in Nigeria currently offers customers online access to their accounts through electronic banking. Majority of banks have offered a variety of services such as ATM cards, mobile banking, fund transfer, Automated cheque sorter (using Magnetic Ink Character Recognition (MICR), Western Union money Transfer, Smart cards, On-line-Real-Time services, etc. (Simone, 2010). For Internet users, banking online is both convenient and time saving compared with the traditional retail banking. The emergence of electronic banking is partly to keep pace with modern technologies applicable to modern banking and more importantly; it is being used as a competitive tool by banks. Conscious of the need to satisfy the sophisticated customer(s), banks have introduced these services in order to reduce human errors. They also aim at reducing the waiting time of customers by reducing human labour and paper work involved before customers are attended to (Okonkwo, 2015).

So, the immediate impact of electronic banking is the reduction of the long queues we used to experience. But it should be realized that electronic banking services is a brain child of Information and Communication Technology (ICT) that made it possible for service providers and their customers in developing economies to enjoy a good semblance of the services enjoyed in the developed societies. Electronic banking services have afforded banks the opportunities to impress customers, which encourage them to keep coming back. Today, it would be difficult to see any bank in the country that does not render one form of electronic banking service or the other, even banks in the most remote parts of Nigeria (Auta, 2015). Electronic banking boast of certain benefits over their non-electronic system counterparts. First is the speed of completing transactions irrespective of the distance between parties notwithstanding. Another benefit is that of convenience as parties can conduct financial transactions from the convenience of their home. Again, electronic banking can handle much larger volumes of transactions given the same time allocation than the physical payment systems.

Furthermore, financial transactions through electronic systems are easier to track making transaction easier to audit and monitor such transactions for fraud or management decision making. Given these benefits, deposit money banks in Nigeria can benefit immensely from adopting electronic banking as a viable replacement for the traditional payment system as this will increase their profit level and overall performance (Bingilar and Bariweni, 2019). In furtherance, Ekwueme (2015) established that electronic banking has significantly increased operational efficiency of Nigerian banks, leading to improvement in their performance. This study is therefore aimed at examining the effect of electronic banking on the profitability of deposit money banks in Nigeria.

STATEMENT OF THE PROBLEM

Nigerian deposit money banks have been investing huge sum of money in ICT and payment system especially electronic payment system in the deployment of Point of Sales (POS), Automated Teller Machine (ATM) and issuance of ATM debit and credit cards towards meeting up with global standards. Customers of banks today are no longer only concerned about safety of their funds and security of payment system transactions but customers demand efficient, fast and convenient services. Lamentably, despite the importance and benefits of electronic banking however, there are some problems militating against Nigerian deposit money banks from reaping the full benefits of electronic payment system. There is persistent system breakdown and inconsistence on the on-line connectivity.

Again, the issue of insecurity and lack of privacy occasioned by the activities of hackers is another problem militating against the banks from milking the full benefit offered by electronic payment system in Nigeria. These could lead to financial and capital losses due to inaccurate processing of transaction, data privacy and confidentiality, decrease in total deposit due to loss of customers, unauthorized access or intrusion of financial institutions' system and transaction, which will in turn, take a toll on their deposit profile and overall performance of deposit money banks. However, a good number of empirical works have been carried out on electronic banking in Nigeria.

To the best of our knowledge however, most of these studies provided mixed results while majority of the studies failed to show combined effects of electronic banking variables (such as Point on Sale, ATM and mobile payment) on the profitability of deposit money in Nigeria. All these create a gap, which this study aims to bridge. To bridge this gap however, this study will determine the effect of electronic banking on the profitability of deposit money banks in Nigeria.

PURPOSE OF THE STUDY

The aim of this study was to examine the effect of electronic banking on profitability of deposit money banks in Nigeria. The following null hypotheses are thus formulated to guide this study:

Ho_1: There is no significant relationship between point of sale and return on asset of deposit money banks in Nigeria.

Ho_2: There is no significant relationship between automated teller machine and return on asset of deposit money banks in Nigeria.

Ho_3: There is no significant relationship between mobile payment and return on asset of deposit money banks in Nigeria.

LITERATURE REVIEW

Concept of Electronic Banking

Electronic banking is the delivery of banking services and products through the use of electronic means irrespective of place, time and distance. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money (Dogarawa, 2005). E-banking uses the internet as the delivery channel to conduct banking activities, for example, transferring funds, paying bills, viewing, checking and savings account

balances, paying mortgages and purchasing financial instruments and certificates of deposits (Auta, 2010). According to Akinyele and Olorunleke (2010) electronic banking means the provision of information about the bank and its product via a page on the internet. Also, Akinyele and Olorunleke (2010) defined electronic banking as the provision of information about the bank and its product via a page on the Internet.

Electronic banking according to Ighoroje and Okoroyibo (2020) consists mobile banking, Internet banking, telephone banking, electronic card etc.; while Moga (2020) identified
The electronic banking in Nigeria as highlighted by Moga (2020) and Kanu et al. (2020) states that electronic banking channels include Automated Teller Machines (ATM), Point-of-Sale Terminal (POS), Mobile Payment, Web Pay.

The benefits of this electronic banking are endless. For this purpose of this study, its benefits to customers, Nigerian economy, government and banks as highlighted by Chemtai (2016) are discussed as follow:

Customers: Electronic banking will lead to increased convenience as well as a variety of service options. Most importantly however, the Policy will promote cross border trade and reduce crime. Moreover, electronic banking offers substantial advantages to the customers in the form of convenience, timesaving and easy access to the banking services. The customers can transact in their account at anytime and anywhere throughout the country or outside the country, there is no time and place restriction. The customers need not to visit the branch to each and every transaction and there is no need to wait in the big queue. By this, it can save time. The customers can avail 24/7 access to the banking service at anywhere with the help of Internet banking, the easy access to the banks will be another advantages to the customers. This Internet banking provides sophisticated services to the customers.

Government and the economy: For the government, it would aid adequate budgeting and taxation, as transactions via electronic systems will leave traces that will enable the government brings more people into the tax web/net than is currently available. Electronic banking will open up the Nigerian economy to increased acceptance of electronic payment (e-payment) systems and channels, which would ultimately move Nigeria to a cashless economy in the 21st century. The Policy will also benefit different stakeholders in diverse ways within the economy.

Banks: For banks, the introduction of mobile money technology for instance will encourage large customer coverage. Successful implementation of the Policy will also reduce the cost of operations for banks. Also, banks can enhance the customer satisfaction through sophisticated services, by providing secured Internet banking service. Also, banks can avoid fraudulent activities and with the help of Internet banking, banks can save time and hence increase the number of transaction and business.

THEORETICAL FRAMEWORK

This study is anchored on Technology Acceptance Model (TAM). Technology Acceptance Model (TAM) is an information systems theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology (such as internet), a number of factors influence their decision about how and when they will use it. The technology acceptance theory was developed by Fred Davis (1985). In his theory, he suggests that the motivation of users of any technology depends entirely on three main factors: perceived ease of use of the technology; perceived usefulness and perceived attitude towards the use of the technology. He further hypothesized that the attitude towards the use of technology such as modern form payment system is influenced by perceived usefulness and perceived ease of use of electronic payment system by the users. However, perceived usefulness is also influenced by perceived ease of use. Sebastian et al. (2011) assert that the technology acceptance theory is the most widely used theory in explaining the acceptance of any information technology by the users, electronic payment system inclusive. Other researchers such as Holden and Kash (2010) have carried out research on the technology acceptance theory and confirm that the behavioural intention of adoption of technology such as electronic payment system is significantly influenced by the perceived usefulness of a technology. The perceived ease of use of electronic payment system for instance also affects either the behavioural intention directly, via the attitude towards the technology or the perceived use, say electronic payment system.

EMPIRICAL REVIEW

Sakanko and David (2019) employed the cross sectional survey research design and the descriptive and ordinary least square regressions to examine the impact of electronic payment systems on the financial performance of microfinance banks and institutions in Niger state, Nigeria. The results of the analysis indicated the presence of electronic payment systems in microfinance banks, which enjoys impressive acceptability, due to its ease of use and convenience. In addition, ATM facility, Internet payment options, e-payment cards, and mobile banking platforms shows a significant positive impact on the financial performance of COE-Minna microfinance bank. The study recommended that there should be improvement and review of e-payment platforms' security so as to attract more users, coupled with the reduction of charges associated with the use of the platforms as well as sensitization of potential users.

Enoruwa et al. (2019) examined the relationship between electronic banking and bank performance in Nigeria adopting data sourced from the Central Bank of Nigeria (CBN) bulletin for the period 2009 to 2017. Regression Analysis was used to test the strength and nature of relationship between the dependent and independent variable. The performance of the Nigerian banking sector was proxied by Total Bank Deposit while transaction values of Automated Teller Machine (ATM Debit Cards), Mobile Banking, Point of Sales (POS) and Web Pay was used as proxy for electronic banking. This study became necessary considering the increasing popularity of e-channel products in Nigerian banks and world over. The correlation results showed that electronic channel products (ATM, POS, Web pay, Mobile Pay) are positively and significantly related to bank performance. The regression result also showed that all the predictors are highly correlated to each other.

Ayinla (2018) examined the effect of adoption of internet banking on performance in the banking industry in Nigeria following the adoption of internet banking in the country which has redefined the way banking transactions are being carried out. Convenience sampling method was adopted, making use of both primary and secondary data. Copies of a questionnaire was distributed among a sample of 156 respondents from six banks out of the population of 22 banks. Descriptive (mean, median, standard deviation and variance) and inferential statistics (ANOVA) were used for the data analysis with the aid of Statistical Packages for Social Sciences (SPSS) version 20. It was observed that the adoption of internet banking does not significantly affect the performance of Nigeria banks as cost of operation has not reduced, profitability has not increased compared to liabilities, level of fraud has been on the increase and influx of customers to the banking hall have also not reduced.

Taiwo and Agwu (2017) investigated the roles mobile banking adoption has played in the

performance of organizations using a case study of deposit money banks in Nigeria. Hence, the objective of the study was to determine the role of e-banking on the operational efficiency of deposit money banks in Nigeria. In pursuance of this objective, primary data were obtained by administering questionnaires to staff of four purposively selected banks (Ecobank, UBA, GTB and First bank). Pearson correlation was used to analyse the results obtained using the Statistical Package for Social Sciences (SPSS) and it was observed that banks' operational efficiency in Nigeria since the adoption of electronic banking has improved compared to the era of traditional banking. This improvement was noticed in the strength of banks, revenue and capital bases, as well as in customers' loyalty. It was concluded that the introduction of new channels into their e-banking operations drastically increased bank performances, since the more active customers are with their electronic transactions, the more profitable it is for the banks.

Ugwueze and Nwezeaku (2016) studied the relationship between electronic banking and the performance of Nigerian deposit money banks. The study became necessary due to the increased adoption of the electronic banking which has redefined the banking service both in Nigeria and internationally. Electronic banking was proxied by value of Point-of-Sale transactions while deposit money banking performance was proxied by customers' deposits. Engle-Granger cointegration model was used to analyse data for the sample period January 2009 to December 2013. The results showed that POS is not cointegrated with both the savings and time deposits but are cointegrated with demand deposits.

METHODOLOGY

For the purpose of this study, ex-post facto research design will be adopted. This approach combines theoretical consideration (a priori criterion) with the empirical observation and extracts maximum information from the available data. It enables the researcher to observe the effects of independent variables on the dependent variables. In ex-post facto design, the elements are usually not under the control of the researcher as the event that is being investigated has already taken place and cannot be manipulated by the researcher.

The population for this study consists of all the 22 deposit money banks in Nigeria that are quoted on the Central Bank of Nigeria official website as at December 2020. A sample is a representative of the overall population under study which will be used for generalization. The time frame considered for this study is 2012 to 2020. Furthermore, the study will sample all the 22 deposit money banks on Central Bank of Nigeria on website. The data used for this study was sourced from secondary sources or published materials. Specifically, quarterly data will be used for this study. The data will be sourced mainly from Central Bank of Nigeria (CBN) Statistical Bulletin and Nigerian Stock Exchange (NSE). These sources of data are considered very reliable and dependable.

This study seeks to determine the effect electronic banking on profitability of deposit money banks in Nigeria. In this study, multiple regression model is adopted. The specification of the model is based on the available information relevant to the study since it always pays to incorporate only what is known from the subject matter into the model building process. Based on this, our model is specified as follows:Functionally, the mode is specified as:

Functionally, the mode is specified as:

$$ROA = f(POS, ATM, MOP) \quad (3.1)$$

Mathematically, the model is specified as:

$ROA = \alpha_0 + \alpha_1 ATM + \alpha_2 POS + \alpha_3 MOP$ (3.2)

Econometrically, the model is specified as:

$ROA = \alpha_0 + \alpha_1 ATM + \alpha_2 POS + \alpha_3 MOP + \mu_t$ (3.3)

Where:

ROA =Return on Asset, ATM =Automated Teller Machine, POS =Point of Sale, MOP =Mobile Payment, α_0 =constant variable, α_1-α_3 = parameter estimates, μ_t= random variables or error term

In this study, Ordinary Least Squares (OLS) method of regression will be used to establish the relationship that exists among the variables. To achieve this, the data extracted from difference sources will be properly arranged and exported to E-views 10 statistical package for appropriate analysis.

DATA ANALYSIS AND INTERPRETATION OF RESULTS

This section analyses the data sourced and presents the empirical results obtained which are econometric in nature. Consequently, the multiple regression model specified in the chapter three i.e. $ROA = \alpha_0 + \alpha_1 POS + \alpha_2 ATM + \alpha_3 MOP + \mu_t$ is estimated in this section through Ordinary Least Square (OLS) technique while the data analysis was carried out by E-views 12 statistical package. The results obtained from our data analysis are presented in table 4.1:

Table 1: Ordinary Least Square Results

Dependent Variable: ROA
Method: Least Squares
Date: 01/08/22 Time: 21:22
Sample: 1 36
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.287679	0.248172	29.36544	0.0000
POS	1.039209	0.33905	3.065061	0.0089
ATM	0.650573	4.449507	3.308028	0.0024
MOP	2.268880	0.449145	5.051547	0.0000

R-squared	0.890505	Mean dependent var	4290.841
Adjusted R-squared	0.865572	S.D. dependent var	1308.310
S.E. of regression	481.4654	Akaike info criterion	15.32311
Sum squared resid	6954267.	Schwarz criterion	15.54530
Log likelihood	-263.1544	Hannan-Quinn criter.	15.39981
F-statistic	55.26398	Durbin-Watson stat	2.111947
Prob(F-statistic)	0.000000		

Source: *Eviews Regression Output (Researcher's Computation)*

Interpretation of the Regression Coefficients:

ROA = 7.287679 + 1.039209POS+ 0.650573ATM+ 2.268880MOP

The coefficient of point of sale (POS) from the regression result as shown in Table 1 is 1.039209. This positive value (1.039209) indicates that point of sale (POS) has a positive relationship with return on asset (ROA). This further indicates that a unit increase in point of sale (POS) will lead to 1.039209 increase in return on asset (ROA) while a unit decrease in point of sale (POS) will lead to 1.039209 decrease in return on asset (ROA). The t-calculated value for point of sale from the regression result as shown in Table 1 is 3.065061while the t-tabulated value from the statistical table is 2.037. However, since the t-calculated value (3.065061) is greater than the t-tabulated value (2.037), we therefore reject the null hypothesis one (H_{01}) and conclude that there is a significant relationship between point of sale and return on asset of deposit money banks in Nigeria.

Also, the coefficient of Automated Teller Machine (ATM) from the regression results as shown in table 4.3 is 0.650573. This positive value (0.650573) indicates that Automated Teller Machine (ATM) has a positive relationship with return on asset (ROA). This further indicates that a unit increase in Automated Teller Machine (ATM) will lead to 0.650573 increase in return on asset (ROA) while a unit decrease in Automated Teller Machine (ATM) will lead to 0.650573 decrease in return on asset (ROA). The t-calculated value for automated teller machine from the regression result as shown in table 4.1 is 3.308028 while the t-tabulated value from the statistical table is 2.037. However, since the t-calculated value (3.308028) is greater than the t-tabulated value (2.037), we therefore reject the null hypothesis two (H_{02}) and conclude that there is a significant relationship between automated teller machine and return on asset of deposit money banks in Nigeria.

In addition, the coefficient of mobile payment (MOP) from the regression results as shown in Table 1 is 2.268880. This positive value (2.268880) indicates that mobile payment (MOP) has a positive relationship with return on asset (ROA). This further indicates that a unit increase in mobile payment (MOP) will lead to 2.268880 increase in return on asset (ROA) while a unit decrease in mobile payment (MOP) will lead to 2.268880 decrease in return on asset (ROA). The t-calculated value for mobile payment from the regression result as shown in table 4.1 is 5.051547 while the t-tabulated value from the statistical table is 2.037. However, since the t-calculated value (5.051547) is greater than the t-tabulated value (2.037), we therefore reject the null hypothesis three (H_{03}) and conclude that there is a significant relationship between mobile payment and return on asset of deposit money banks in Nigeria.

The R-squared value obtained from our regression result as shown in Table 1, is 0.880505. This result indicates that the regression line fits the data well (goodness of fit). This is because the value is significantly higher than 0.5 (0.880505). This also implies that about 88% of the changes in return on asset (ROA) can be predicted or explained by the changes in point of sale (POS), Automated Teller Machine (ATM) and mobile payment (MOP) while the remaining 12% of the changes in return on asset (ROA) is explained by other variables outside the model.

DISCUSSION OF FINDINGS

The study empirically analysed quarterly data sourced with respect to the effect of electronic banking on the profitability of deposit money banks in Nigeria. Ordinary Least Square technique of regression is the econometric technique adopted in this study. Data analysis was carried out by E-views 12 statistical package. Findings emanating from this study showed that point of sale has positive effect on return on asset of deposit money bank in Nigeria. This means that point of sale has a significant positive effect on the profitability of deposit money banks in Nigeria. This finding is in agreement with the finding of Ugwueze and Nwezeaku (2016), which stated that point of sale contributes positively, and significantly to the performance of deposit money bank performance in Nigeria as measured by return on asset and return on equity.
Moreover, the results emanating from this study showed that Automated Teller Machine has positive effect on return on asset of deposit money bank in Nigeria. This means that Automated Teller Machine has a significant positive effect on the performance of deposit money banks in Nigeria. This finding is in agreement with the finding of Ayinla (2018) which stated that ATM is a form of internet banking that plays a significant positive role in increasing return on asset of deposit money bank in Nigeria.

Finally, there is a positive and significant relationship between mobile payments on return on asset of deposit money banks in Nigeria. This means that mobile payment has a significant positive effect on the performance of deposit money banks in Nigeria. This finding is related to the finding of Enoruwa et al. (2019) that mobile payment as an important electronic channel has a positive and significant effect on the performance of banks in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The main objective of this research was to empirically examine the effect of electronic banking on the profitability of deposit money banks in Nigeria. The study was guided by three specific objectives, three research questions and three research hypotheses. Ex-post facto research design was adopted while quarterly data, which ranged from 2012 to 2020 was used. These data were sourced from Statistical Bulletin of the Central Bank of Nigeria (CBN) statistical bulletin and Nigerian Stock Exchange (NSE). Econometric technique adopted in this study includes Ordinary Least Square (OLS) regression technique. Data analysis was facilitated by E-views 12 statistical package. The results emanating from this study are as follows: First, point of sale has a positive and significant effect on return on asset of deposit money bank in Nigeria. Secondly, Automated Teller Machine has a positive and significant effect on return on asset of deposit money bank in Nigeria. Thirdly, mobile payment has a positive and significant effect on return on asset of deposit money bank in Nigeria. Also, changes in mobile funds transfer; Automated Teller Machine and mobile payment contributed about eighty-eight percent to the total variations in the return on asset of deposit money banks in Nigeria. Lastly, mobile funds transfer; Automated Teller Machine and mobile payment have joint significant effect on return on asset of deposit money banks in Nigeria.
This study evaluated the effect of electronic banking on the profitability of deposit money banks in Nigeria. Empirically, the results of the study showed that point of sale; automated teller

machine and mobile payment have individual and joint significant effect on return on asset. Based on the findings, the study concludes that electronic banking has a significant positive effect on the performance of deposit money banks in Nigeria. In line with the major findings and conclusion of this study, the following are recommended:

1. Efficient, error-free and easy-to-use mobile banking applications should be made available to all their customers with internet enabled mobile phones in order to increase mobile payments and return on asset.
2. Deposit money banks should engage frequently with their network providers to ensure that there is twenty-four hours network availability on daily basis in order to improve web based transactions and consequently the performance of deposit money banks.
3. More efficient Automated Teller Machine (ATMs) with twenty-four hours services should be deployed by deposit money banks in Nigeria and these ATMs must be loaded with sufficient cash to dispense so as to reduce customers waiting time at ATM points, increase accessibility to banking services and also improve their performance.
4. Lastly, there should be improvement and review of e-payment platforms' security so as to attract more users, coupled with the reduction of charges associated with the use of the platforms as well as sensitization of potential users.

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EXCHANGE RATE VARIATION AND STOCK RETURN OF FINANCIAL SERVICE INSTITUTIONS IN NIGERIA FROM 1987 – 2020

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ABSTRACT

This study examined the relationship between Exchange Rate variation and stock return of financial service institutions in Nigeria from 1987 – 2020. The general purpose was to examine the relationship between exchange rate variation and stock return of the financial service institutions. Time series data was sourced from Central Bank of Nigerian Statistical Bulletin. Stock return of the financial service institutions was used as dependent variable while Naira exchange rate against United States Dollar, Nigerian Exchange Rate against British Pounds sterling, and Naira Exchange Rate against Japanese Yuen and Naira Exchange Rate against Chinese Yuen. Multiple linear regressions with econometric view were used as data analysis technique. The study employed the properties of Ordinary Least Square such as Co-integration, Augmented Dickey Fuller Unit Root, Granger Causality Test and Vector Error Correction Models. R^2, Beta coefficient, T-statistics and Durbin Watson were used to determine the dynamic relationship between the dependent and the independent variables. From the model the independent variables can explain 34 per cent variation on the dependent variable. Beta coefficient of the variables indicates that all the variables are negatively related to stock return of the financial service sector except exchange rate variation against the United State dollar. The ADF results shows that the variables are all integrated at first difference, the granger causality indicates bivariate relationship running from the independent and dependent variables and independent to dependent. The Johansen Co-integration Test proved long run relationship between the dependent and the independent variables. From the regression summary, the study concludes that there is significant relationship between Naira exchange rate variation and stock return of the financial service institutions. The study recommend the need sustain the central bank's current exchange rate policies, which had resulted in the convergence of rates in the market.

Keywords: Exchange rate variation, stock return, financial service institutions, Nigeria

INTRODUCTION

Foreign rate exchange variation is the appreciation or depreciation of one currency against the other and appreciation or strengthening of a currency as a rise in its value against other currencies. Depreciation is thus a fall in value of one currency against other currencies. Appreciation and depreciation of a currency is what they term as foreign rate exchange fluctuations. It is this changes in exchange rate that give rise to undesirable effects on company's foreign operations (Salvatore, 2004). Real exchange rate is a key relative price which affects the economy through many channels; the effect of real exchange rate changes on economic growth is one of the most important issues of the recent policy debates. Foreign exchange and stock markets in Nigeria experienced large volatilities which might bring about high operational costs hence market risk sometimes referred to as systematic risk. Highly volatile of exchange rate lead to exchange rate risk which lead to investors losing confidence in the operations of the market as

they shy away from trading in that market. The link between exchange rates and equity returns is based on financial theory, exchange rate as an indicator of a currency as a monetary variable that affect the return on stocks in a way similar to inflation variables.

The policy thrust of the Nigerian monetary authorities in the past three decades has been to increase the operational efficiency of the capital market, enhance financial sector deepening and economic growth. The debate on the effectiveness of exchange policy has been a point of departure between the classical and the Keynesians economist and the controversies have deepened as more schools of thoughts emerged over the years.

Cornerstone of neoclassical monetary policy is based on the tenets of classical theory which assumes perfect competition, use of real variables in decision making and application of representative agent models with agents that have the same preferences and act alike in every way. Neoclassical economics with classical monetary model based on quantity equation says less about the transmission channels of monetary policy such as exchange rate policy. The liquidity preference theory is one of the hallmarks that differentiate Keynesian monetary theory from the general family of neo-classical theories which explains why people individually express demands for money and to Keynes; the demand for money is determined by interactions between income and interest rate that is, the price of demand.

Monetary policy variables such as exchange rate and stock market have a close relationship with each other. In short–run, the expansionary monetary policy which helps increasing the money supply has a positive impact on the stock market while tightening monetary policy has the opposite effect. But in the long–run, the stock index responses to monetary expansion in a negative way due to the increasing in the money supply will cause a rise in future inflation, then cause negative impact on the economy and the stock market. Similarly, the last studies revealed that there was a positive relationship between money supply and stock index.

The above illustration between monetary policy and stock market return can better be validated in the financial market of the developed economies where monetary policy is well managed compared with Nigeria where effectiveness of monetary policy is limited by the challenges of the financial market. Factors that determine stock market return has long been a point of departure among scholars in the field of finance. The macroeconomists, blamed volatility of stock price to changes in macroeconomic variables such as changes in interest rate, money supply, inflation rate and other macroeconomic variables while the behavioural school argued that the market might fail to reflect economic fundamentals, under the assumption that, investors are irrational when they do not have correct information concerning the expectations of a company's future performance (Gan, Lee, Yong, & Zhang, 2019). The above has further been deepened by controversies in empirical findings as some scholars found positive while other found negative (Gan, Lee, Yong, & Zhang, 2019; Elly & Oriwo, 2020) therefore this study examined the relationship between exchange rate variation and stock return of financial service institutions in Nigeria.

LITERATURE REVIEW

Exchange Rate

Exchange rate is the value of one currency for the purpose of conversion to another. Exchange rate movements greatly affected the stock market return volatility owing to its information content to the investors. When there are high fluctuations in the exchange rates, the exchange rates movement, there would be high movements of market return volatility. Some studies have concluded that there is a strong relationship between exchange rate movement and stock market returns volatility, while others have not. Specifically, the information content of exchange rate movement would be carried to the securities business.

The U.S. dollar and the Euro are the most traded currencies in the world (BIS, 2013). It has become as main sources for international transactions. On January 2002 the Euro became official and after the introduction the Euro appreciated against the Dollar. Important determinants of the exchange rate are the demand and supply for the currency, inflation, interest rate and the economic and political risk (Shapiro, 2013, Lipsey & Chrystal, 2007). Due to the wide worldwide usage the U.S. dollar and the Euro are accepted as the most important exchanges currencies. Many academics examine the relationship between exchange rate and stock performance for both theoretical and empirical reasons. This paragraph will present the theoretical linkage between exchange rates and stock performance followed by the empirical evidence about this relation.

The large increase in the world trade and capital movements have made the currency value as one of the important factors that influence business profitability and equity prices (Kim, 2003). Exchange rate fluctuations affect the international competitiveness of companies, considering their influence on import and export prices. It influences the value of the company since the future cash flows change together with the fluctuations in the currency values. Economic theory suggests that fluctuations in exchange rates will result in a change in the investments and profitability, reflected in the financial performance.

Consequently, movements in the company's operations affect stock returns (Agrawal et al., 2010). The earlier and frequently cited study by Dornbusch and Fisher (1980) indicate the same with a flow oriented model. They argue that depreciation in the local currency improves the competitiveness of domestic companies and their exports and future cash flows. This will result in increasing stock prices, as a response to the rise in expected cash flows. Conversely, an appreciation in the local currency will decrease the foreign demand of an exporting company. This will lead to a decline in the profit, as would the stock returns. Consistently, for an importing company the sensitivity of the firm value to currency value fluctuations is just the opposite (Yau & Nieh, 2006).

Establishing the relationship between stock prices and exchange rates is important for a few reasons. First, it may affect decisions about monetary and fiscal policy. Gavin (1989) shows that a booming stock market has a positive effect on aggregate demand. If this is large enough, expansionary monetary or contractionary fiscal policies that target the interest rate and the real exchange rate will be neutralized. Sometimes policy-makers advocate less expensive currency in order to boost the export sector. They should be aware whether such a policy might depress the stock market. Second, the link between the two markets may be used to predict the path of the exchange rate. This will benefit multinational corporations in managing their exposure to foreign contracts and exchange rate risk stabilizing their earnings.

Third, currency is more often being included as an asset in investment funds' portfolios. Knowledge about the link between currency rates and other assets in a portfolio is vital for the performance of the fund. The Mean-Variance approach to portfolio analysis suggests that the expected return is implied by the variance of the portfolio. Therefore, an accurate estimate of the variability of a given portfolio is needed. This requires an estimate of the correlation between stock prices and exchange rates.

Exchange Rate Volatility

Exchange rate volatility refers to the tendency for foreign currencies to appreciate or depreciate in value, thus affecting the profitability of foreign exchange trades. The volatility is the measurement of the amount that these rates change and the frequency of those changes. There are many circumstances when exchange rate volatility comes into play, including business dealings between parties in two different countries and international investments. Although this volatility is difficult to avoid in such circumstances, the use of futures to lock in exchange rates can mitigate the effects of price change. Volatility can occur in any security that rises or falls in value. The term is most often used in conjunction with the stock market, but foreign currencies can be volatile as well. When exchange rates are floating exchange rates, as opposed to fixed exchange rates, they are likely to go up and down in value depending upon the strength of the economies involved. As a result, volatility is something that affects any business undertaking involving two different countries.

A weakening currency in the context of this study means a situation where the value of a currency has been depreciating significantly over time against other currencies. The long-term outlook for a weak currency is that it will continue to lose value due to fundamental weaknesses in the nation that issues this currency. A factor which affects the exchange rate of a country is the relative interest rates. Changes in relative interest rates affect investment in foreign securities, which influences the demand for and supply of currencies. If a country's interests rates increases in comparison to the others, then its securities become attractive both for the domestic and foreign investors. This leads to increased demand for the country's currency leading to appreciation of its value and vice versa. A second factor affecting exchange rate is relative income levels. Because income can affect the amount of imports demanded, it can affect exchange rates. The third factor affecting exchange rate is government controls.

The government of foreign countries can influence the equilibrium exchange rate in many ways, this include imposing foreign exchange barriers, imposing foreign trade barriers and affecting macro variables such as inflation, interest rates and income levels. The fourth factor affecting exchange rates is market expectations of future exchange rates. Like other financial markets, foreign exchange markets react to any news that may have a future effect. Investors may temporarily invest in a country if they expect its interest rates to increase. This leads to appreciation of the country's currency in the short run Madura (2000). Exchange rate volatility is affected by many factors including.

(i) Exchange Rate against the US Dollar: This measure the appreciation or depreciation of Nigeria naira against the dollar as independent variable.
(ii) Exchange Rate against the British Pound Sterling: This measure the appreciation or depreciation of Nigeria naira against the pound sterling as independent variable.
(iii) Exchange Rate against the Japanese Yen: This measure the appreciation or depreciation of Nigeria naira against the Japanese Yuan as independent variable.
(iv) Exchange Rate against Chinese: This measure the appreciation or depreciation of Nigeria naira against the Chinese Yuan as independent variable (Akani, 2017).

Stock Market Return

Stock market return is the returns that the investors generate out of the stock market. This return could be in the form of profit through trading or in the form of dividends given by the company to its shareholders from time-to-time. Stock market returns can be made through dividends announced by the companies. Generally at the end of every quarter, a company making profit offers a part of the kitty to the shareholders as dividend. This is one of the source of stock market return one investor expect. The most common form of generating stock market return is through trading in the capital market. In the capital market an investor could earn stock market return by buying a stock at lower price and selling at a higher price.

Stock market returns is not fixed ensured returns and are subject to market risks. It can be positive or negative. Stock market return is not homogeneous and changes from investor-to-investor depending on the amount of risk one is prepared to take and the quality of his stock market analysis. In opposition to the fixed returns generated by the bonds, the stock market returns are variable in nature. The idea behind stock return is to buy cheap and sell dear. But risk is part and parcel of this market and an investor can also see negative returns in case of wrong speculations.

Flow-Oriented Theories of Exchange Rates

Flow-oriented theories were first developed by Dornbusch and Fisher (1980). These theories postulate that stock prices are influenced by changes in exchange rates and future cash flows of companies. Flow-oriented models maintain that a positive causal relationship runs from the exchange rate to the stock prices. In other words, exchange rate movements lead to changes in stock prices. Hence, any phenomenon that affects a firm's cash flow will be reflected in that firm's stock price if the market is efficient as per the Efficient Market Hypothesis (EMH).

Accordingly, flow-oriented theories assume that exchange rates are determined by a country's current account and trade balance performance. In specific, the theory suggests that stock prices are affected by exchange rates in the following ways: firstly, changes in exchange rates will have an impact on international competitiveness and subsequently on actual income of a company. For example, currency depreciation makes exporting of goods cheaper thereby, increasing foreign demand and sales, as well as the value of a firm that export. Moreover, due to transaction exposure, future payables and/or receivables denominated in foreign currency can also be influenced by changes in exchange rates.

Hence, flow-oriented theory considers the capital flows to have an impact on the international competitiveness of enterprises and profits of firms. The profits and international competitiveness of firms will have a direct influence on stock prices. Thus, fluctuation of exchange rate influences the stock prices of both domestic and multinational firms. Saleh (2008) argues that currency movements affect international competitiveness and balance of trade positions and consequently the real output of the country, which in turn affects the current and future expected cash flows of firms and their stock prices. This is because many multinational companies conduct their businesses on the international market hence changes in the exchange rate will have either positive or negative effect on the business operations depending on both the nature of the business and type of transaction.

Choi and Papaioannou (2009) held that an appreciation of local currency under a floating regime may lead to decrease in company's benefit and competitiveness of exporting products and thus its stock price. Joseph (2002) states that foreign exchange rate movements affect the competitiveness of firms through their impact on input and output prices. For example, when exchange rate appreciates, exporting firms will be negatively affected by the appreciation of the currency will cause their goods and services to be dearer on the international market. This will subsequently

cause the demand for their goods and services to decline as they will be seen to be expensive by buyers on the international market. The decline in exports will impact negatively on the firms' profits hence their stock prices on the domestic stock market will decline. Exchange rate changes affect the competitiveness of firms through their impact on input and output prices (Joseph, 2002). When the exchange rate appreciates, exporters will be negatively affected.

An appreciation of the currency will cause their goods and services to be dearer on the international market. This will cause their exports to decline in value as they will be seen to be expensive by buyers on the international market. The decline in exports will negatively impact on their sales volume hence reported profits and this will result in their stock prices decreasing in value. But for importing firms, the appreciation of exchange rate makes imports cheaper hence reducing input costs. The reduction in costs will mean that there would be low prices for the final products and services. This will, in turn, increase the demand for those goods and subsequently sales volume hence profits will increase. When profits increase the firm will be attractive in the domestic stock market.

This will boost the average level of stock prices. Therefore, the direction of the impact on the appreciation of exchange rate depends on whether the firm is predominantly an exporting or importing (Saleh, 2008). The flow-oriented theory identifies exchange rate volatility as an independent variable whose movements will lead to changes in stock prices which in this study represent a dependent variable. Proponents of the flow-oriented theory of exchange rate argue that most empirical studies have used flow-oriented models in explaining the linkage between exchange rate and stock market prices.

Kang and Yoon (2012) concluded that many empirical studies have supported the flow-oriented approach in analyzing the relationship between exchange rates and stock markets. Studies by Ouma and Muriu (2014); Umoru and Asekome (2013); Olugbenga (2012) and, Kisaka and Mwasaru (2012) support the flow-oriented theory, that is, causality runs from exchange rate to stock prices. This implies that the flow-oriented theory might explain the relationship between foreign exchange market and the stock market in Kenya.

Theoretical Foundation of the Study

Stock oriented theories of exchange rates

'Stock oriented' or 'portfolio balance' model was developed by Branson et al. (1977). According to Pilbeam (1998) an obvious problem with the flow-oriented models is that they say nothing about international capital movements. This shortfall in flow-oriented models led to the development of stock-oriented models that stressed the role of the capital account of the balance of payments. Therefore, stock-oriented models put much stress on the role of the financial account (formerly capital account) in the exchange rates determination. In these models, exchange rate equates demand and supply for financial assets (Adjasi et al., 2011).

It follows that expectations of relative currency movements have a significant impact on price movements of financially held assets. Hence, stock price movements may influence and/or be influenced by exchange rate movements in the economy (Agrawal, 2010). Stock-oriented models can be divided into two: the portfolio balance model and monetary model by Gavin (1989). The portfolio balance models postulate a negative relationship between stock prices and exchange rates and come to the conclusion that stock prices have an impact on exchange rates. Hence a rise in domestic stock prices leads to the appreciation of domestic currency through direct and indirect channels.

Empirical Review

Inci and Lee (2014) examined dynamic relations between stock returns and exchange rate changes based on seven advanced economies of France, Germany, Switzerland, the UK, the US, Canada, and Japan using annual data over a period from 1984 to 2009. In terms of their causality analysis, the results show a bidirectional relationship where both exchange rate and stock prices influence each other simultaneously. Hence, the findings imply that both the flow-oriented theory and the stock-oriented theory can sometimes be observed at the same time in the real economy.

Caporale et al. (2014) investigated the linkages between stock prices and exchange rates on six advanced economies namely, the US, the UK, Canada, Japan, the Euro area, and Switzerland using Bivariate GARCH-BEKK models. They reported varied causalities ranging from country to country. Specifically, the study results indicate negative unidirectional causation from stock prices to exchange rate in the US and the UK, positive unidirectional causation from exchange rate to stock prices in Canada, and bidirectional causation in the Euro area and Switzerland.

Tsagkanos and Siriopoulos (2013) investigated the long-run relationship between stock prices and exchange rate in European Union and the USA using both daily and monthly observations." They applied structural nonparametric cointegration regression model. In terms of their causality analysis, results indicate a negative unidirectional relation where causation runs from stock prices to exchange rates in the long-run in the EU and the short-run in the USA. The findings support the stock-oriented model which postulates that stock prices lead exchange rates.

Chkili et al. (2012) investigated the volatilities of stock returns and exchange rates in three European countries using univariate and multivariate GARCH-type models. In terms of causality of variables being investigated, their results show strong evidence of asymmetric reaction to news and that bilateral relationships between stock and foreign exchange markets are highly significant for France and Germany. The bilateral relationship may suggest that there is information transmission between the two markets and both these markets are integrated with each other.

Chkili and Nguyen (2014) applied a regime-switching model approach to investigate the dynamic linkages between the exchange rates and stock market returns for Brazil, Russia, India, China, and South Africa (BRICS) countries. The univariate analysis indicates that stock returns of the BRICS countries evolve according to two different regimes namely: a low volatility regime and a high volatility regime. However, when Chkili and Nguyen (2014) applied Markov switching VAR models they found that stock markets have more influence on exchange rates during both calm and turbulent periods thereby embracing the stock-oriented theory. Their findings are in agreement with those done by Hegerty (2014) who examined exchange market pressure and stock-price spillovers in emerging markets using vector autoregressive (VAR) models. The results by both

Chkili and Nguyen (2014) and Hegerty (2014) suggest that asset-market shocks often spill over to

exchange market pressure. In terms of causality of variables investigated, the results of these studies show negative unidirectional relationship running from stock prices to exchange rate. Hence embracing the stock oriented theory. Mlambo (2013) investigated "Effects of exchange rate volatility on the stock market: a case study of South Africa. The author found a very weak relationship between currency volatility and the stock market.

Umoru and Asekome (2013) investigated Stock prices and exchange rate variability. Granger-Sim causality tests found that whenever there is a change in the exchange rate, stock prices react in tandem. They further established that in Nigeria, there is a bidirectional Granger-causality between stock prices and exchange rate. Hence their findings imply that both the traditional approach and the portfolio approach can sometimes be observed at the same time in the Nigerian economy. However, Umoru and Asekome (2013) findings disagree with earlier studies done by Olugbenga (2012) and Okpara and Odionye (2012).

Olugbenga (2012) examined exchange rate volatility and stock market behaviour in Nigeria using Granger causality test. Results show a significant positive stock market performance to exchange rate in the short-run and a significant negative stock market performance to exchange rate in the long-run. However, Granger causality test shows strong evidence that the causation runs from exchange rate to stock market performance; implying that variations in the Nigerian stock market is explained by exchange rate volatility. Hence Olugbenga's findings support the flow-oriented model.

Bhunia (2012) used Toda-Yomamoto techniques to investigate the relationship between the stock indices and the exchange rates. The results indicate that there is a bidirectional causal relationship between exchange rate and stock market indices. The findings imply that both the flow-oriented approach and the stock-oriented approach can sometimes be observed at the same time in the Indian economy.

Bhunia (2012) found the existence of negative causality from stock market indices to exchange rate. Bhunia's results are in agreement with earlier findings by Agrawal (2010) who found that stock returns in India clearly Granger-cause exchange rates. However, Bhunia's findings do not agree with those by Hussain and Bashir (2013) whose results indicate that there is no causal relationship between exchange rate and stock returns volatility in India. These differences for Indian economy might be due to different tools used in the analysis of their data. While Hussain and Bashir (2013) used GARCH and Johansen Cointegration tests (Bhunia, 2012) used Toda-Yomamoto techniques. Further, both studies failed to explain factors that contribute to this scenario.

By the application of Markov-Switching EGARCH method, Chkili *et al.* (2011) explored the dynamic relationship between exchange rate movements and stock returns for four emerging countries namely, Hong Kong, Singapore, Malaysia and Mexico. The authors found that stock price volatility responds asymmetrically to events in the foreign exchange market. The results support the flow-oriented model of exchange rate which postulates that share prices of companies are influenced by changes in exchange rates. In addition Chkili *et al.,* (2011) results embrace the efficient market hypothesis (EMH) which stresses the importance of information transmission from one market to another.

Diamandis and Drakos (2011) investigated the long run relationship and short-run dynamics between exchange rates and stock prices as well as the impact of exogenous shocks on four countries: Argentina, Brazil, Chile, and Mexico using Cointegration techniques and Granger-causality tests. They found no significant long-run relationship between stock prices and exchange rates for each country. Their findings are in contrast with those observed in later studies by Chkili and Nguyen (2014).

Katechos (2011) employed Smooth Transition Autoregressive (STA) method to analyse the underlying causality between exchange rate market and stock market using weekly data over a period 1999 – 2010. The study found evidence for negative unidirectional causality running from stock prices to exchange rates thereby embracing the stock oriented model. This finding was later supported by Chkili and Nguyen (2014) who found that stock markets have more influence on exchange rates in key emerging countries including China. In the same year, using Hiemstra Jones non-linear causality tests for Japanese economy Alagidedea, Panagiotidi and Zhang (2011) confirmed the findings of studies done by Katechos (2011).

Ouma and Muriu (2014) investigated the impact of macroeconomic variables on stock market returns. They found that money supply, exchange rates and inflation rate affect the stock market returns in Kenya. The study established that money supply and inflation are significant determinants of the returns at NSE. In addition, they found that exchange rates have a negative impact on stock returns, while the interest rate is not important in determining long-run returns in the NSE. The current study introduced central bank rate, exchange rate volatility, and inter-bank lending rate into the explanatory variables.

Kisaka and Mwasaru (2012) examined the causal relationship between exchange rates and stock prices in Kenya for the period November 1993 to May 1999. In terms of causality between variables being investigated, their results indicate a positive unidirectional relationship from exchange rates to stock prices. The study by Kisaka and Mwasaru (2012) covers the period when Kenya had just liberalized the foreign exchange market in October 1993.

Kisaka and Mwasaru (2012) utilized NSE 20 Share Index while the present study utilized average market capitalization (NASI) as a measure of stock prices. Further, in testing for the presence of unit root in the data, Kisaka and Mwasaru (2012) applied error correction and Cointegration tools while the current study applied more superior and advanced approach such as KPSS hence avoided testing for Cointegration. These reasons together with recommendations by Gertz (2008) are the main contributors why the present study was undertaken. Further, the current study incorporated additional explanatory variables using data from different timeframe.

Musyoki, Pokhariyal and Pundo (2012) examined the impact of real exchange rate volatility on economic growth: Kenyan evidence. The results indicate that Real Exchange Rate (RER) volatility has a negative impact on economic growth in Kenya. The current study borrowed the approach from Musyoki *et al.,* (2012) on the computation of exchange rate volatility. Further, while Musyoki *et al*., (2012) used economic growth as the dependent variable, this study focused on the stock prices of companies listed in NSE.

Chirchir (2014) examined how changes in exchange rates and stock prices are related to each other

for Kenya over the period November 1993-April 2011. The empirical results indicate that there is a bi-directional negative relationship between exchange rates and share prices. Hence, Chirchir (2014) findings imply that both the traditional approach and the portfolio approach can sometimes be observed at the same time in the Kenyan economy. However, Chirchir (2014) results disagree with studies done in the same year by Kisaka and Mwasaru (2012) whose findings show that exchange rates Granger-cause stock prices in Kenya. The differences noted by both Chirchir (2014) and, Kisaka and Mwasaru (2012) contributed to the gap for further studies hence the reason why the current study was undertaken to fill the gap.

Muhammad and Rasheed (2011) conducted a study on the relationship between stock prices and exchange ratesin four South Asian countries; Pakistan, India, Bangladesh and Sri- Lanka, for the period January 1994 to December2000. The study employed cointegration, vector error correction modeling technique and standard Granger causality tests to examine the long-run and short-run association between stock prices and exchange rates. Results of the study showed no short-run association between the variables for all four countries. There was no long-run relationship between stock prices and exchange rates for Pakistan and India as well. However, for Bangladesh and Sri- Lanka, there appeared to be a bi-directional causality between these two financial variables.

Olugbenga (2012)examined the long-run and short-run effects of exchange rate on stock market development in Nigeria over 1985:1–2009:4 using the Johansen cointegration tests. Results showed a significant positive stock market performance to exchange rate in the short-run and a significant negative stock market performance to exchange rate in the long-run. Empirical literature investigated by the study showed that that there are mixed views on the link between the two variables.

Doukas (2003) Used unconditional and conditional multifactor pricing model and found exposure but not to the lagged exchange rate changes, it was time varying and priced in Japanese stock markets. Tai (2010) using MGARCH found that in the unconditional model, exposure was only significant at 10% level, but with the conditional model they found 10 industries were exposed. They also found that exposure was time varying but not priced in Japanese stock market. Miao et al. (2013) using panel model with both fixed and random effects found significant exposure in seven of sixteen industries that was also evident in non-exporters. They also found size asymmetry and time-variation in exposure in the new exchange rate regime.

Pilinkus (2009) investigated the short-run relationship between stock market prices and macroeconomic variables in Lithuania. One of their macroeconomic variables was exchange rate. The Augmented Dickey Fuller test was employed to check the stationary of the selected time series since a spurious regression may occur if a time series is not stationary. The study used the Impulse response function to test the existence of the short- run relationship between stock market prices and macroeconomic variables. As the results of the Impulse response function are reliable only with a stationary time series the data was turned into stationary after the second difference. The results of the study clearly indicated that macroeconomic variables are significant determinants for stock market prices in Lithuania. Their study concluded that unemployment rate, exchange rate, and short-term interest rates negatively influence stock market prices.

Flannery and Protopapadakis (2002) examined the influence of macroeconomic factors on aggregate stock returns using the US data. They found that stock market returns are significantly correlated with inflation and money growth. They could not establish the impact of real macroeconomic variables on aggregate equity returns as they suspect that their effects are neither linear nor time invariant. They estimated daily equity returns using GARCH model and found six candidates for priced factors namely CPI, PPI, a monetary aggregate, balance of trade, employment report, and housing starts. The authors did not include index of industrial production or GNP in their study.

Morales (2007) examined the dynamic relationship between exchange rates and stock prices in four Easter European markets, Czech Republic, Hungary, Poland and Slovakia, using stock price and exchange rate data from these countries, as well as stock prices from the United States, Germany and the United Kingdom. The data set consisted of daily data over a 7 year period from 1999 to 2006. Both the long-run and the short-run association between these variables were analyzed. The study employed the Johansen co integration technique, Vector Error Correction Modeling and the standard Granger causality test to analyze the relationship between these two financial variables. The findings of the study showed that there is no evidence of stock prices and exchange rates moving together either in the long-run or in the short-run, with the exception of Slovakia, where co integrating relationships were found.

Rahman (2009) investigated the interactions between stock prices and exchange rates in three emerging countries of South Asia namely Bangladesh, India and Pakistan. Their study considered average monthly nominal exchange rates of US dollar in terms of Bangladeshi Taka, Indian Rupee and Pakistani Rupee and monthly values of Dhaka Stock Exchange General Index, Bombay Stock Exchange Index and Karachi Stock Exchange All Share Price Index for period of January 2003 to June 2008 to conduct the study. Empirical result showed that exchange rates and stock prices data series are non-stationary and integrated of order one. They also applied the Johansen procedure to test for the possibility of a co integrating relationship. Result showed that there was no co integrating relationship between stock prices and exchange rates. Finally they applied Granger causality test to find out any causal relationship between stock prices and exchange rates. Outcome showed there was no causal relationship between stock prices and exchange rates in the countries.

Ahmadi (2012) investigated whether stock returns are affected by exchange rate volatility in different industries of Tehran stock exchange using GJR-GARCH (1, 1) model. They found a strong evidence of exposure both in first and second moment. Demirhan (2013) Studied exposure of textile and leather firms in Istanbul stock exchange from 2005 to 2011 using Jorion (1990) and GARCH analysis. They found 40% of the firms were exposed to both US Dollar and Euro. They also found that Dollar exposure did not change even after the crisis but Euro exposure dropped.

Ozair (2006) and Vygodina (2006) worked with US data. While Ozair proved no causal linkage and no Co integration between these two financial variables, the latter claimed causality from large-cap stocks to exchange rates. (Kurihara, 2006) takes Japanese stock prices, U.S. stock prices, exchange rate, Japanese interest rate etc.(period March 2001-September 2005). The results showed that exchange rate and U.S. stock prices affected Japanese stock prices. Consequently, the quantitative easing policy implemented in 2001 has influenced Japanese stock prices.

Pan et al. (2007) employed data of seven East Asian countries over the period 1988 to 1998, proving bidirectional causal relation for Hong Kong before the 1997 Asian crises and unidirectional causal relation from exchange rates and stock prices for Japan, Malaysia, and Thailand and from stock prices to exchange rate for Korea and Singapore. During the Asian crises, only a causal relation from exchange rates to stock prices is seen for all countries except Malaysia.

Brooks (2010) Undertook an analysis on foreign exchange rate exposure of Australian firms and found that a greater part of firms experienced positive foreign exchange rate exposure than negative one. The strongest degree of exposure was observed in the energy, materials and industrial sectors. Australian firms illustrated irregularity and time variation in exchange rate exposure with varying results in different sectors.

Otuori (2013) studied the determinant factors of exchange rates and their effects on the performance of multinational firms listed in the NSEs in Kenya. The study selected a sample of 27 multinational firms listed in the NSEs, primary data collected using questionnaires and multiple linear regression analysis used. The results showed that interest rate and external debt had positive and significant effects on performance while inflation rate and external debt had negative and significant effects on performance. The study concluded that higher levels of: interest rate lead to higher profitability; inflation rate result in lower profitability; external debt result in lower bank profitability; and exports and imports lead to higher profitability in multinational firms listed in the NSEs.

Litali (2013) undertook a similar research study to investigate the relationship between the foreign exchange rate and the performance of the stock market. The study analyzed the relationship between the exchange rate between Kenya Shilling and the Euro, dollar, Sterling pound and the NSE 20-share index monthly closing averages. The study used monthly time series data for a six year period between January 2006 and December 2012. Explanatory research survey was used to explore the relationship between the variables. Empirical analysis employed the Johansen Co-integration test to determine the long run relationship between the variables, Granger causality test to determine any causal relationship between the stock returns and forex rate and VAR model to determine the response of stock returns to a shock on the exchange rates. Empirical results show that there is no co-integrating relationship between the stock returns and the exchange rates, meaning that there is no long term co-movement between the two variables and none of the variable is predictable on the basis of past values of the other variable. Results of Granger causality test indicate that there is no two way causal linkage between the two variables. Lastly, results show a weak relationship between the stock market and the forex market as indicated by the VAR model.

METHODOLOGY

Ex-post facto research is systematic empirical inquiry in which the researcher does not have direct control of independent variables because their manifestations have already occurred. This approach combines theoretical consideration (a prior criterion) with the empirical observation and extract maximum information from the available data. This study employed secondary data sourced mainly from the Central Bank of Nigeria (CBN) statistical bulletin, Nigerian Stock Exchange Factbook, Business Journals, websites, seminar papers and Federal Ministry of Finance (FMF) Publications and other related books of readings. The data for the study comprise of

Nigeria capital market turnover and Nigeria capital market liquidity as dependent variable while the independent Naira exchange rate per US Dollar, British Pounds, Japanese Yen and Chinese Yuan. Nigerian Naira exchange rates are chosen from the above countries due to the various investments and bilateral treaties between Nigeria and the specified countries.

Model Specification

The study adapted the models specified by Akani (2017) on Monetary Policy and fundamentals of Nigeria capital market: The original model was specified as;

SRFSI = f (EXR/US+ EXBP + EXR/JY + EXR/SF) (1)

Transferring equ (1) into a testable form, we obtain the following regression equation;

SRFSI = $\beta_0 + \beta_1$EXR/US+ β_2EXBP + β_3EXR/JY + β_4EXR/SF+ μ (2)

Where:

SRFSI	=	Stock return of the financial service institutions
EXR/US	=	Nigerian Naira Exchange Rate per US Dollar
EXBP	=	Nigerian Naira Exchange Rate per British Pounds Sterling
EXR/JY	=	Nigerian Naira Exchange Rate per Japanese Yen
EXR/CY	=	Nigerian Naira Exchange Rate per Chinese Yuan
β_1-β_4	=	coefficient of independent variables to dependent variables
β_0	=	Regression Intercept

Therefore, a priori expectation ($\beta_1>\beta_2>\beta_3>\beta_4>0$) 3.7

The main tool of analysis is the Ordinary Least Squares (OLS) using the multiple regression method for a period of 33 years, annual data covering 1987– 2020. Statistical evaluation of the global utility of the analytical model, so as to determine the reliability of the results obtained were carried out using the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test.

(i) **Coefficient of Determination (r^2) Test:** This measure the explanatory power of the independent variables on the dependent variables.R^2 gives the proportion or percentage of the total variation in the dependent variable Y that is accounted for by the single explanatory variable X. The higher the R^2 value the better. For example, to determine the proportion of financial market penetration through capital fundamental in our model, we used the coefficient of determination. The coefficient of determination varies between 0.0 and 1.0. A coefficient of determination say 0.20 means that 20% of changes in the dependent variable is explained by the independent variable(s).Therefore, we shall use the R^2 to determine the extent to which variation in capital market fundamentals variables are explained by variations in monetary policy transmission mechanism using various transmission channels.

(ii) **Correlation Co-Efficient (R):** This measures the degree of the relationship between two variables x and y in a regression equation. That is, it tries to establish the nature and magnitude of the relationship when two variables are been analyzed. Thus correlation co-efficient show whether two variables are positively or negatively correlated. That is, it takes the value ranging from – 1, to + 1.

(iii) **F-Test:** This measures the overall significance. The extent to which the statistic of the coefficient of determination is statistically significant is measured by the F-test. The F-test can be done using the F-statistic or by the probability estimate. We use the F-statistic estimate for this analysis.

(iv) **Student T-test:** measures the individual statistical significance of the estimated independent variables. This is a test of significance used to test the significance of regression coefficients (Gujurati, 2003).Generally speaking, the test of significance approach is one of the methods used to test statistical hypothesis. A test of significance is a procedure by sample results are used to verify the truth or falsity of a null hypothesis (Ho) at 5% level of significance.

(v) **Durbin Watson Statistics:** This measures the colinearity and autocorrelation between the variables in the time series. It is expected that a ratio of close to 2.00 is not auto correlated while ratio above 2.00 assumed the presence of autocorrelation.

(vi) **Regression coefficient:** This measures the extent in which the independent variables affect the dependent variables in the study.

(vii) **Probability ratio:** It measures also the extent in which the independent variables can explain change to the dependent variables given a percentage level of significant.

Stationarity (Unit Root) Tests

The study investigates the stationarity properties of the time series data using the Augmented Dickey Fuller (ADF) test. According to Nelson and Plosser (1982), Chowdhury (1994) there exist a unit root in most macroeconomic time series. However, the statistical analysis of time series data differs in some respect from that of cross-sectional data, especially due to the effect of time and other variables on the data. Thus, test for stationarity is also called test for integration. It is also called unit root test. Stationarity denotes the non-existence of unit root. We shall therefore subject all the variables to unit root test using the augmented Dickey Fuller (ADF) test specified in Gujarati (2004) as follows.

$$\Delta y_t = \beta_1 + \beta_2 + \delta y_{t-1} + \alpha i \sum_{i-1}^{m} \Delta y_{t-1} + Et \qquad 3.8$$

Where:

Δy_t	=	change time t1
Δy_{t-1}	=	the lagged value of the dependent variables
${}_t\Sigma$	=	White noise error term

If in the above δ=0, then we conclude that there is a unit root. Otherwise there is no unit root, meaning that it is stationary. The choice of lag will be determined by Akaike information criteria.

Integrated of order 2 or I (2)

Given that the original series is differenced twice before it becomes stationary (the first difference of the first difference), then the original series is integrated of order 2 or 1(2). Therefore, given a time series has to be differenced Q times before becoming stationary it said to be integrated of order Q or I (q). Hence, non-stationary time series are those that are integrated of order 1 or greater.

The null hypothesis for the unit root is: Ho: a = 1;

The alternative hypothesis is Hi: a < 1.

We shall test the stationarity of our data using the ADF test.

This approach is based on conducting unit root test on residual obtained from the estimated regression equation. If the residual is found to be stationary at level, we conclude that the variables are co-integrated and as such as long-run relationship exists among them.

$$SRFSI_t = w_O + \sum_{i=1}^{i} \vartheta_t EXR/US_{t-i} + \sum_{i=1}^{j} \varpi_i EXR/BP_{jt-i} + \sum_{i=1}^{j} \varpi_i EXR/JY_{jt-i} + \sum_{i=1}^{j} \varpi_i EXR/CY_{jt-i} + \mu_{1t}$$

Granger Causality Test

Granger causality test according Granger (1969) is used to examine direction of causality between two variables. Causality means the impact of one variable on another, in other-words; causality is when an independent variable causes changes in a dependent variable. The null hypotheses is rejected if the probability of F* statistic given in the Granger causality result is less than 0.05. The pair-wise granger causality test is mathematically expressed as:

$$Y_t \pi_o + \sum_{i=1}^{n} x_1^{\,y} \; Y_{t-1} \sum_{i=1}^{n} \pi_1^{\,x} \; x_{t-1} + u_1 \qquad 3.16$$

and

$$x_t dp_o + \sum_{i=1}^{n} dp_1^y \; Yt-1 \sum_{i=1}^{n} dp1^x x_{y-1} + V_1 \qquad 3.17$$

Where x_t and y_t are the variables to be tested white u_t and v_t are the white noise disturbance terms. The null hypothesis $\pi_1^y = dp_1^y = 0$ for all I's is tested against the alternative hypothesis $\pi_1^x \neq 0$ and $dp_1^y \neq 0$. if the co-efficient of π_1^x are statistically significant but that of $dp1y$ are not, then x causes y. If the reverse is true then y causes x. however, where both co-efficient of π_1^x and dp_1^y are significant then causality is bi – directional.

Vector Error Correction (VEC) Technique

The presence of co-integrating relationship forms the basis of the use of Vector Error Correction Model. E-views econometric software used for data analysis, implement vector Auto-regression (VAR)- based co-integration tests using the methodology developed by Johansen (1991,1995). The non-standard critical values are taken from Osterward Lenun (1992).

ANALYSIS AND DISCUSSION OF FINDINGS

VRAIBLE	ADF	1%	5%	10%	PROB	Order of integ	Remark
SRFSI	-2.021218	-3.653730	-2.957110	-2.617434	0.2767	1(0)	Accept H_0
EXR_BP__	1.477700	-3.653730	-2.957110	-2.617434	0.9989	1(0)	Accept H_0
EXR_CY__	1.276112	-3.653730	-2.957110	-2.617434	0.9980	1(0)	Accept H_0
EXR_JY__	1.490639	-3.653730	-2.957110	-2.617434	0.9989	1(0)	Accept H_0
EXR_US_	2.299670	-3.653730	-2.957110	-2.617434	0.9999	1(0)	Accept H_0

Test of Unit root at first difference

VRAIBLE	ADF	1%	5%	10%	PROB	Order of integ	Remark
SRFSI	-6.211010	-3.661661	-2.960411	-2.619160	0.0000	1(I)	Reject H_0
EXR_BP__	-8.070372	-3.670170	-2.963972	-2.621007	0.0000	1(I)	Reject H_0
EXR_CY__	-5.108783	-3.661661	-2.960411	-2.619160	0.0002	1(I)	Reject H_0
EXR_JY__	-4.237083	-3.670170	-2.963972	-2.621007	0.0024	1(I)	Reject H_0
EXR_US_	-7.270946	-3.670170	-2.963972	-2.621007	0.0000	1(I)	Reject H_0

Source: Extract from E-vies 2022

Stationarity test or unit root test is one of the conditions to be satisfied in time series data analysis to ensure accuracy and to avoid spurious regression. A time series is said to be stationary when its

mean and variance do not vary systematically over time (Gujarati 2004). A Unit root test was carried out to check for stationarity. In order to avoid problems of autocorrelation as may arise from using Dickey-Fuller test, the researcher used Augmented Dickey- Fuller Unit root test.

The Null hypothesis is that, Unit root is present in the variable under test. Alternative hypothesis is that there is No unit root. The critical value at 5 percent is the base for guideline on unit root test. When the absolute value (not considering the sign) of the Test statistics is higher than the absolute value (ignoring the sign) of the critical value at 5 percent, we reject null hypothesis, we instead accept alternative hypothesis that there is no unit root. The results performed using E-view version 9.0, as shown above. The first Unit root test conducted was Augmented Dickey-Fuller Test at Level for each variable. And the results as shown in the table above indicate that the variables are stationary, because all the absolute values of the Test statistics, regardless of their signs were above than the values of the 5% critical value. Therefore, the variables are stationary at first difference. We reject the null hypothesis of non stationarity and conclude that there is stationarity at first difference.

Table 4.4 Cointegration test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.734164	78.20021	69.81889	0.0092
At most 1*	0.452632	47.12902	37.85613	0.0015
At most 2*	0.286853	28.44734	19.79707	0.0032
At most 3	0.182165	7.967256	15.49471	0.4689
At most 4	0.054379	1.733305	3.841466	0.1880

Source: Extract from E-vies 2022

From the lag selection criteria, the most appropriate lag was lag 2 due to inadequate number of observations. Two equations were used, but with similar model. This was so to avoid the problem of multicollinearity of variables. The two dimensions were put in a separate equation. In the entire model the Trace statistics indicate that the variables are cointergrated. The Maximum Eigen value shows cointergration. Null Hypothesis: There is no cointegration among variables (Hypothesis zero) Alternative hypothesis.

Table 4.6 Error Correction Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.452869	10.34159	0.817367	0.4257
D(SRFSI (-1))	0.691866	0.397579	1.740197	0.1010
D(SRFSI (-2))	0.033526	0.224632	0.149249	0.8832
D(EXR_BP__(-1))	-1.882984	1.121088	-1.679605	0.1125
D(EXR_BP__(-3))	-0.095097	0.543575	-0.174948	0.8633
D(EXR_CY__(-1))	-0.109137	0.548209	-0.199079	0.8447
D(EXR_CY__(-2))	-1.304508	0.575855	-2.265343	0.0377
D(EXR_CY__(-3))	-0.072599	0.702230	-0.103384	0.9189
D(EXR_JY__(-1))	-31.74189	59.31665	-0.535126	0.5999
D(EXR_JY__(-2))	-5.342968	45.83427	-0.116571	0.9087
D(EXR_JY__(-3))	18.79838	64.29056	0.292397	0.7737
D(EXR_US_(-1))	3.012866	1.425148	2.114072	0.0406
ECM(-1)	-1.624460	0.481259	-3.375439	0.0039
R-squared	0.627485	Mean dependent var		4.577931
Adjusted R-squared	0.348098	S.D. dependent var		39.63108
S.E. of regression	31.99830	Akaike info criterion		10.07109
Sum squared resid	16382.26	Schwarz criterion		10.68401
Log likelihood	-133.0308	Hannan-Quinn criter.		10.26305
F-statistic	2.245939	Durbin-Watson stat		2.197637
Prob(F-statistic)	0.066021			

Source: Extract from E-vies 2022

From table 4.6 , the Error correction term is positive which is contrary to expectation, that is to say it has a positive sign, implying that the error obtain has high possibilities of moving much further away from the equilibrium path as time goes on and on. Also the ECM (-1) coefficient shows that 162 per cent of the error produced in the previous period are corrected in the current period. The error term however is statistically significant ECM (-1) is speed of adjustment towards equilibrium or error correction term. From the model the independent variables can explain 34 per cent variation on the dependent variable. Beta coefficient of the variables indicates that all the variables are negatively related to stock return of the financial service sector except exchange rate variation against the United State dollar.

Table 4.7: Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
EXR_BP__ does not Granger Cause SRFSI	31	5.84344	0.0080
SRFSI does not Granger Cause EXR_BP__		2.59142	0.0941
EXR_CY__ does not Granger Cause SRFSI	31	3.83840	0.0346
SRFSI does not Granger Cause EXR_CY__		1.00357	0.3803
EXR_JY__ does not Granger Cause SRFSI	31	3.61866	0.0411
SRFSI does not Granger Cause EXR_JY__		0.24070	0.7878
EXR_US_ does not Granger Cause SRFSI	31	4.51741	0.0207
SRFSI does not Granger Cause EXR_US_		1.84854	0.1776

Source: Extract from E-vies 2022

The results of the Granger Causality test are summarized as follows:

i. There is a causal relationship between EXR/BP and SRFSI, reject the null hypothesis but there is no causal relationship between SRFSI and EXR/BP, accept the null hypothesis.
ii. There is a causal relationship between EXR/CY and SRFSI, reject the null hypothesis but

there is no causal relationship between SRFSI and EXR/CY, accept the null hypothesis.
iii. There is a causal relationship between EXR/BP and SRFSI, reject the null hypothesis but there is no causal relationship between SRFSI and EXR/BY, accepts the null hypothesis.
iv. There is a causal relationship between EXR/BP and SRFSI, reject the null hypothesis but there is no causal relationship between SRFSI and EXR/BP, accept the null hypothesis.

DISCUSSION OF FINDINGS

The study found that naira exchange rate variation against British pound sterling, Naira exchange rate variation against Japanese yen and naira exchange rate variation against Chinese Yun have negative and no significant effect on the stock return of the financial service sector such that further depreciation in the currencies lead to 1.8, 0.1 and 31.7 percent decrease in the stock return of the financial service sector. The negative effect of the variables contradicts our a-priori expectations and the objectives of various exchange rate policies such as the floating exchange rate. The findings of the study confirm the findings of Inci and Lee (2014) whose the results show a bidirectional relationship where both exchange rate and stock prices influence each other simultaneously, Caporale et al. (2014) whose study indicated negative unidirectional causation from stock prices to exchange rate in the US and the UK, positive unidirectional causation from exchange rate to stock prices in Canada, and bidirectional causation in the Euro area and Switzerland, Tsagkanos and Siriopoulos (2013) whose study indicated a negative unidirectional relation where causation runs from stock prices to exchange rates in the long-run in the EU and the short-run in the USA, Chkili et al. (2012) whose findings show strong evidence of asymmetric reaction to news and that bilateral relationships between stock and foreign exchange markets are highly significant for France and Germany, Chkili and Nguyen (2014) whose findings indicated that stock returns of the BRICS countries evolve according to two different regimes namely: a low volatility regime and a high volatility regime. The negative effect of the variables on stock market return of the financial service sector could be traced to uncertainties in the in the financial market.
However the study found that there is positive and significant relationship between naira exchange rate variations against United State dollar and stock return of the financial service institutions such that further depreciation of Nigeria naira add 3 percent to stock return of the financial service sector within the periods of this study. The finding confirms our a-priori expectations and objectives of the reforms in the foreign exchange market and the financial sector at large. The negative relationship confirm the findings of Dickson and Andrew (2013) on the negative effect of Nigerian exchange rate depreciation on non-oil export, it is also in line with the findings of Bohara (2001). It also confirms the findings of Cheong et al., (2002) but contrary to the findings of Aristelous (2001).

CONCLUSION AND RECOMMENDATIONS

The study found that the variables are stationary at first difference. We reject the null hypothesis of non stationarity and conclude that there is stationarity at first difference. The study found the presence of long run relationship between the dependent and the independent variables base on the cointegration test. The Error correction term is positive which is contrary to expectation, that is to say it has a positive sign, implying that the error obtain has high possibilities of moving much further away from the equilibrium path as time goes on and on. From the model the independent variables can explain 34 per cent variation on the dependent variable. Beta coefficient of the variables indicates that all the variables are negatively related to stock return of the financial service sector except exchange rate variation against the United State dollar.
There is no significant relationship between naira exchange rate variations against British pound

Source: Extract from E-View 12.0

sterling and stock return of the financial service institutions, that there is no significant relationship between naira exchange rate variations against British pound sterling and stock return of the financial service institutions and that there is no significant relationship between naira exchange rate variations against Chinese Yun sterling and stock return of the financial service institutions. Thus, the study recommends that:

i. The central bank should sustain its current exchange rate policies, which had resulted in the convergence of rates in the market. The recommendation was that there is the need for sensible coordination of macroeconomic policies in Nigeria. Policy a maker in Central bank needs to make such policies that help to stabilize the exchange rate.
ii. Nigerian government should ensure naira dollar exchange rate stability; ensure Nigeria balance of trade and investment with United State of America. The study found positive and significant relationship between naira exchange rate against US Dollar and Nigerian capital market activities. This study therefore recommends that the monetary authority should devise measures of managing the depreciating naira exchange rate against Dollar to enhance Nigerian trade relationship.
iii. The negative relationship between the naira exchange rate against the British Pounds Sterling negate the traditional theory, therefore Nigerian should redefine her bilateral and trade and investment relationship with the British government and the exchange rate policy should be well integrated to enhance Nigerian trade relationship.
iv. The negative relationship between naira exchange rate against Japanese Yen indicates that better bilateral relationship cannot facilitate realization of financial relationship. Therefore this study recommends that Nigerian bilateral and investment relationship with Japan should be reexamined and the exchange rate well structured.

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FINANCE AND ECONOMIC TRANSFORMATION: A MULTI-DIMENSIONAL STUDY FROM NIGERIA ECONOMY

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ABSTRACT

This study examined the Effect of Finance on Economic Transformation in Nigeria. Time series data were sourced from Central Bank of Nigeria Statistical bulletin and publications of Nigeria Bureau of Statistics from 1990 to 2021. Industrial Output and Infrastructure financing were used as dependent variables while credit to Private Sector as percentage of gross domestic product, Money supply as percentage of gross domestic product, Real interest rate, Money Market Development, Capital expenditure as percentage of gross domestic product, Capital market Development, Financial market openness and External debt as percentage of gross domestic product were used as explanatory variable. Ordinary least square methods of data analysis was employed. Model one found that 83.1 percent of the total variations that occurs is attributed to the explanatory variable, Model two found 86.5 percent of the total variations, Model three found 92.2 percent of the total variations while model four found 76.4 percent of the total variations in the dependent variables. From the findings, the study conclude that finance have significant effect on economic transformation in Nigeria. The study recommends that Enforceable policies and efforts should be directed to enhancing the operational efficiency of the financial market as a panacea to increasing savings mobilization and investment as the prerequisite for economic transformation.

Keywords: Economic transformation, finance, multi-dimensional study, Nigeria economy

INTRODUCTION

The opinion that money matter in the economy can be traced to the classical monetary policy theories such as Milton Friedman. It was later deepened by the 20th century economists such as Schumpeters in 1911 who argued that the creation of credit through the banking system was an essential source of entrepreneurial capacity to drive real growth. Financial intermediaries emerge to lower costs of researching potential investments exerting corporation, controls, managing risks, mobilizing savings and conducting exchange. Reforms in the financial system have always been to reposition the financial intermediation of the financial institution for the purpose of economic transformation.

A developed financial market provides critical services to reduce transaction costs and increase the efficiency of intermediation. It mobilizes savings, identifies and funds good business projects, monitors the performance of managers, facilitates trading and the diversification of risks and fosters exchange of goods and services. Agbetsiafa, (2003) observed that these services result in more rapid accumulation of physical and human capital, and faster technological innovation, thus inducing faster long-term economic growth. In addition, Ohwofasa and Aiyedogbon (2013) argued that the Supply-Leading hypothesis centres on the assumption that well-functioning financial institutions have the capacity to drive total economic efficiency, create and expand liquidity, mobilize savings, enhance capital accumulation, transfer resources from non-growth

sectors to more modern growth inducing sectors, and also promote competent entrepreneurs in the various sectors of the economy.

Economic transformation is the process of moving labour and other factors of production across sectors with different productivity. McMillan and Rodrik (2011) highlighted the potential for aggregate productivity change by enabling the shift of labour from agriculture to manufacturing. Financial sector enables mobilization of savings and allocation of credit for production and investment, Among its other functions are supplying transaction and portfolio management services and providing payment services, and source of liquidity for the firms. Financial sector also monitors borrowers, matches illiquid assets with liquid liabilities, and integrates credit and liquidity provision functions.

The classical approach to structural transformation is best exemplified by the Lewis model, which explicitly recognizes the importance of structural change and inter-sectoral flows of labour in the process of economic development (Sumner, 2019). Lewis argued that the key driver of capital accumulation was a sectoral movement of labour, which was the factor of production abundant in low- and middle-income countries, from traditional sector to the modern sector. Here, the traditional sector could be taken to be the low-productivity subsistence agricultural sector, while the modern sector could be taken to be the manufacturing sector, which tended to be more productive than the agricultural sector, at least in the initial stages of economic development. The reason for this was the existence of surplus labour in the traditional sector.

Economic transformation involves moving labour from low to higher productive activities. This includes between sectors to higher value activities (for example, from agriculture to manufacturing) and within sectors (for example, from subsistence farming to high-value crops). It is widely accepted that poverty reduction and economic growth cannot be sustained without economic transformation and poverty but, despite this obvious point, the development community has traditionally paid relatively little attention to these long-term determinants of development. The Keynesian theory of financial deepening asserts that financial deepening occurs due to an expansion in government expenditure.

In order to reach full employment, the government should inject money into the economy by increasing government expenditure. An increase in government expenditures increases aggregate demand and income, thereby raising demand for money Mckinnon (1973). Robinson (1952) posited that it is the necessity for high economic growth that creates demand in the financial sector. Thus, in these views, it is the improvements in the economy that drive higher demand for the use of money, which consequently promotes financial development. Financial markets develop and progress as a result of increased demand for their services from the growing real sector. Hence, causality is believed to run from economic growth to financial development, given that an increase in economic growth causes a rise in demand for financial services and this consequently leads to the expansion of the financial sector. Nigeria's economic trajectory has been relentlessly veering off its potential, facilitating poverty, insecurity, inequality, unemployment, debt and fiscal unsustainability amongst many issues. More studies have focused on finance and economic growth, this study focused on finance and economic transformation.

LITERATURE REVIEW

Finance Transformation

The concept of money and its effect on the economy was a controversial issue among the mainstream economists such as the classical, Keynesians and the neoclassical economists (Lucky & Uzah, 2017). To the classical economists, money is insignificant and does not matter. To the

Keynesians, money have indirect effect on the economy through interest rate, while to the neo-classical economist, money is the only thing that matters in the economy (Ezirim, 2005). The importance of financial institutions especially banks in generating growth within the economy has been widely discussed in literature (Nwaeze et al., 2014). Several economists have argued that the role of intermediation which banks play help in providing linkages for different sectors of the economy as well as encouraging high level of specialization, expertise, economies of scale and creating a conducive environment for the implementation of various economic policies of government.

Schumpeter (1912, as cited in Zakaria, 2008) argued that financial intermediation through the banking system plays an essential role in economic development by affecting the allocation of savings, thereby improving productivity, technical change and the rate of economic growth. He acknowledged that efficient savings through identification and funding of entrepreneurs is vital to achieving desired objectives. Thus, one of the activities of financial institutions involves intermediating between the surplus and deficit sectors of the economy. The availability of credit function positively allows the fruition of this role and is also important for growth of the economy (Nwaeze et al., 2014).

Finance is required for different purposes by different organizations, individuals and other economic agents. In order to provide the needed finance, there are varieties of institutions rendering financial services. Such institutions are called financial institutions. Commercial banks are among such institutions that render financial services. They are mainly involved in financial intermediation, which involves channeling funds from the surplus unit to the deficit unit of the economy, thus transforming bank deposits into loans or credits. In the primitive stages before evolution for financial intermediation, anyone who wanted to spend more than he could himself provide would have to look for a wealthy person or persons from whom he could borrow. This is known as a system of direct or un-intermediated finance.

Afolabi (1998) posits that as crude as this system was, it probably satisfied the need of that time because financial requirements then were limited to such personal uses like marriages, burial ceremonies and minor commercial activities like farming. He further argued that at that time, intermediation was neither necessary nor sufficient for capital formation to take place (Nwaeze et al, 2014). Financial intermediation will thus, not be necessary for instance, if the lender and the borrower can come into direct contact and would in fact not be necessary if there is no deficit or surplus sector.

However, modern economic transactions will be difficult, if not impossible, with un-intermediated finance as the business world of today is much more complex and financial requirements are too large. Even without considering the complexity of modern times, un-intermediated finance has its inherent problems such as high tendency for subjectivity, unattractive interest rates, method of security was too crude and at times inhuman, repayment periods were usually too short for any meaningful long-term use, such that it became difficult for long-term projects to be financed from money raised from such medium, amongst others. According to Bencivenga and Smith (1991), in the absence of banks such as financial intermediation, too much investment is self-financed and long delays exist between investment expenditure and receipts of profits from capital invested. They further argued that the absence of intermediary sector results in a composition of savings that is unfavourable to capital formation.

Economic Transformation

Economic transformation refers to the continuous process of moving labour and other resources from lower- to higher-productivity sectors and raising within-sector productivity growth. It is a process where the major contribution to income, output, employment and gross domestic product of the economy is generated from sectors other than agriculture, such as manufacturing, small scale industries, information and communication technology, capital intensive industries and the service sectors.

Theoretical Foundations

Financial intermediation theory

According to Akoto and Nabieu (2014) the effectiveness of financial intermediation reposes in how successfully surplus funds are matched against deficit funds, or how well surplus funds are used to make up for deficit funds. Kolb and Rodriguez (1993) argued that a financial intermediary, such as a commercial bank, eliminates mismatches between the firm and savers by performing four types of intermediation, which are: size intermediation, maturity intermediation, risk intermediation, and information intermediation. Kindleberger (1984), however, identifies three aspects of financial intermediation: borrowing at retail and lending at wholesale, lending long and borrowing short, and diversification of risks.

Commenting on the intermediation fee for banks, Ngugi (2001) maintains that since the receipts of deposits and loans are not synchronized, intermediaries incur certain costs. They charge a price for the intermediation services offered under uncertainty and set the interest rate levels for deposits and loans. The intermediary costs are described as the difference between the gross borrowing costs and the net return on lending. The efficiency of the intermediation process is also proxied by the wedge between lending and deposit rates. Unlike Kolb and Rodriguez (1993) and Brownbridge (1998), who believe that the size of the interest rate spread is determined by the risk of a bank's deposits and loans, Ngugi (2001) believes that the form of business (perfect or imperfect) is a contributing factor.

Current financial intermediation theory builds on the notion that intermediaries serve to reduce transaction costs and informational asymmetries (Diamond, 1984). As developments in information technology, deregulation, deepening of financial markets, etc. tend to reduce transaction costs and informational asymmetries, financial intermediation theory shall come to the conclusion that intermediation becomes useless. This contrasts with the practitioner's view of financial intermediation as a value-creating economic process. It also conflicts with the continuing and increasing economic importance of financial intermediaries. From this paradox, we conclude that current financial intermediation theory fails to provide a satisfactory understanding of the existence of financial intermediaries.

Supply Leading Hypothesis

This theory was authored by Schumpeter (1911) and later adopted by scholars such as McKinnon (1973); Shaw (1973); Gupta (1984); Fry (1988); Greenwood and Jovanovich (1990) and Bencivenga and Smith (1991). This theory postulates that financial development in any country causes economic growth. In an economy with no friction in the transaction, information and monitoring costs, no financial intermediaries are needed. According to the theory, if transaction, information and monitoring costs are sufficiently high, then, no exchange among economic agents is necessary. These desires led to the emergence of financial institutions and markets that make up the financial sector. According to this theory, a well-developed financial sector will ensure reduced transaction, information and monitoring costs thereby increasing the efficiency of intermediation. The theory postulates that a well-developed financial intermediary facilitates the development of the economy through mobilization of savings, facilitation of trading and the diversification of risks among others. These important services lead to efficient allocation of resources; a more rapid accumulation of physical and human capital; and a faster technological innovation which eventually leads to a faster and long-term economic growth (Schumpeter, 1911). This theory fits this study since it provides one of the possible explanations of how development in the financial sector affects the disbursement of credits to the private sector and drives economic growth.

Demand Following Hypothesis

Moving away from the neo-classical state equilibrium analysis, to a highly developed financial system, consisting of financial intermediaries, leads to a demand following phenomena (Patrick, 1960). Under this, in response to the demand from real economy, there are the development of modern financial institutions, their financial assets and liabilities, and related financial services. This model postulates that the developments of the real economy will in itself induce increase in demand for financial services. The increase demand for financial services will spontaneously generate or lead to the introduction of new financial institutions and markets which will satisfy that increased demand for financial services.

This Theory is important to this study as it provides a different view that the developments in financial deepening does not necessarily lead to economic growth. It also provides an alternative explanation suggesting that economic growth drives deepening of the financial sector. The evolutionary development of the financial system is a continuous result of the pervasive, widespread process of economic development. The financial system is influenced by economic environment, institutional framework and also by individual motivations, attitudes, tastes and preferences.

The demand for financial services is a function of growth of real output, commercialization, monetization of agriculture and other traditional subsistence sectors. The faster the growth in real national income, the greater will be the demand for external funds by enterprises. According to this theory, financial intermediation therefore plays a vital role, as internal funds generated are not sufficient for firms to finance expansion. The theory is thus applicable in this study since it postulates that finance intermediaries are important but only as a passive and permissive to growth process.

The demand-following view of the deepening of the financial markets is merely a lagged response to economic growth (growth generates demand for financial products). This implies that any early efforts to develop financial markets might lead to a waste of resources which could be allocated to more useful purposes in the early stages of growth. As the economy advances, this triggers an increased demand for more financial services and thus leads to greater financial deepening. The demand-following pattern should be expected to establish a causality that runs from growth to finance at a later stage of development. More advanced economies may accordingly be expected to exhibit this direction of causality (Agu & Chukwu, 2008).

Empirical Review

Karimo and Ogbonna (2017) examined the direction of causality between financial deepening and economic growth in Nigeria for the period 1970–2013. The study adopted the

Toda–Yamamoto augmented Granger causality test and the results showed that the growth-financial deepening nexus in Nigeria follows the Supply-Leading hypothesis. This means that it is financial deepening that leads to growth and not growth leading to financial deepening. Among others, the study recommended that policy efforts should be geared towards removing obstacles that undermine the growth of credit to the private sector and restore investors' confidence in the stock market.

Bakang (2016) analysed the effects of financial deepening on economic growth in the Kenyan banking sector using quarterly time series data from 2000 to 2013. In the study, financial deepening was measured by four alternative indicators such as liquid liabilities as ratio to nominal GDP; credit to private sector as ratio to nominal GDP; banks' assets as ratio to banks' plus central banks assets and banks' deposits as ratio to nominal GDP. On the other hand, economic growth was measured by real GDP. The study revealed that the banking sector in Kenya has been an important source of economic growth. The empirical results specifically revealed that liquid liabilities, credit to the private sector, central bank assets and other banks' deposits have positive and statistically significant effects on GDP. The study therefore recommended improvements to the existing policies in order to encourage the public save more money with banks so as to stimulate the deepening of the financial system.

Agbelenko and Kibet (2015) empirically examined the relationship between financial development and economic growth in the West African Economic and Monetary Union (WAEMU) for the period 1981-2010. Using the General Moment Method (GMM), the study found a positively and statistically significant effect of financial development on economic growth and the causality was bidirectional. In addition, the variables of foreign direct investment and real exchange rate contributed positively to economic growth in the region while inflation and openness discouraged economic growth in the region. The study suggested that policy makers should pursue targets of macroeconomic policies that may attract foreign direct investments while controlling inflation and trade openness.

Chinweze (2017) investigated the impact of financial deepening in reducing poverty in Nigeria. Human Development Index was used as proxy for reducing poverty due to its multi-dimensional nature while the ratios of credit to the private sector, broad money supply and market capitalization to GDP were used to proxy financial deepening. Data sourced from Central Bank of Nigeria Statistical Bulletin (2015) and World Development Indicators published by the World Bank from 1981 to 2015 were used to analyse this relationship by adopting the multi-linear econometric model and using the Error Correction Model. Unidirectional causality running from financial deepening to poverty reduction was observed. The study concluded that financial deepening was beneficial in reducing poverty in Nigeria. the study therefore recommended policy makers to embark on policies enhancing financial inclusion and financial intervention programmes in Nigeria.

Oya (2019b) and Oya and Schaefer (2019) focused on the labour market impact of Chinese employers in Angola and Ethiopia. Through a selective survey of the available literature on labour practices in Chinese firms in Africa, Oya (2019b) founds that Chinese firms have generally high localisation rates (the share of local workers to total workforce). In terms of structural transformation, this indicates a movement towards higher-productivity sectors (especially construction and manufacturing).

Benhassine et al. (2018) examined whether efforts to formalize informal firms are worthwhile, both in terms of firm efficiency and revenue to government. They used a randomised experiment with about 3,600 informal businesses in Benin and econometric techniques to make their analysis. The results show that firms who were encouraged to formalize did not necessarily experience higher sales or business profits. Furthermore, they find that the government costs of encouraging formalization at a general level may exceed any added tax revenue that may be expected. The implication of this is that specific programmes to promote formalization of small businesses should be considered carefully on the balance of the expected benefits. Benhassine et al. (2018) do suggest that the best firms to target for formalisation are those that are already close to being formal anyway, since the costs of formalization efforts in these cases would be relatively cheap.

Fu et al., (2018) examined the role of innovation in productivity of the formal and informal sectors in Ghana. They analyse data from a survey of 501 manufacturing firms. They find that at a base level, though formal firms were not inherently more productive than informal ones, technological innovation occurred more frequently in formal than in informal firms (whereas non-technological innovation diffused evenly among firms). From the statistical analysis, technological innovation was found, in general, to affect firms' productivity, while the role of innovation on productivity tended to be greater for formal firms.

Akani and Uzah (2018) examined micro financing and macroeconomic stability in Nigeria from 1992-2015. The objective was to investigate the relationship between micro finance lending operation and Nigerian macroeconomic stability. The required data were sourced from Central Bank of Nigeria (CBN) Statistical Bulletin and Stock Exchange Annual Report. The study modeled Nigeria real gross domestic product as a function of micro finance lending to agricultural sector, mining and quarrying, manufacturing sector, transport and communication, real estate and micro finance other lending. The Ordinary Least Square multiple regressions with econometric view were used as data analysis techniques. Cointegration test, Granger Causality Test, Augmented Dickey Fuller Test and Error Correction Model were used to examine the variables and its relationship to the dependent variables. The study found that microfinance lending to the various sectors of the economy have positive but insignificant effect on Nigerian macroeconomic stability except lending to agricultural sector and mining and quarrying. The stationarity test proved presence of stationarity at first difference, the cointegration test indicates the presence of long run relationship and the granger causality test prove no causal relationship among the variables. The study concludes that microfinance operation does not significantly affect Nigerian macroeconomic stability.

Akani et al. (2016) examined the effect of banking sector development on Nigerian capital formation. The objective is to investigate the extent to which various banking sector reforms affect Nigerian capital formation. Time series data was collected from the publications of Central Bank of Nigeria statistical bulletin from 1980-2014. The study has Nigerian Capital Formation (CF) as the function of Percentage of Bank credit to Gross Domestic Product (BC_GDP), Percentage of Bank investment to Gross Domestic Product (BI_GDP), Percentage of Bank deposit to Gross Domestic Product (BD_GDP), Percentage of Bank Total Assets to Gross Domestic Product (BTA_GDP) and Prime Lending Rate (PLR). The study used the Ordinary Least Square (OLS) Method of cointegration test, Augmented Dickey Fuller Unit Root Test, Granger causality test in a Vector Error Correction Model setting to examine the relationship between the dependant and the independent variables. The study revealed that in the static regression result that all the independent variables have positive relationship with the dependent variable except prime lending rate. The Unit Root Test shows that the variables are non-stationary at level but stationary at difference. The cointergration result indicates long run relationship between the dependent

and the independent variables. The granger causality test shows multivariate relationship running from the independent variables to the dependent variable and from the dependent variable to the independent variables while the vector error correction result shows adequate speed of adjustment to equilibrium. The study conclude that banking sector development have significant effect on Nigerian capital formation.

Akani et al. (2016) examined the relationship between Nigeria financial sector development and macroeconomic stability from 1980 – 2014. The objective is to investigate the extent and the direction of relationship between various components of financial sector development and macroeconomic stability in Nigeria. Time series data were sourced from Central Bank of Nigeria (CBN) statistical bulletin. The study modeled percentage of Nigerian Gross Domestic Product to Balance of Payment (GDP/EXT) as our dependent variable total commercial banks credit to Gross Domestic Product (TCBC/GDP), Broad Money Supply to Gross Domestic Product (M2/GDP), Credit to Core Private Sector to Gross Domestic Product (CPS/GDP), Stock Market Capitalization to Gross Domestic Product (MKT/GDP) and Total savings to Gross Domestic Product (TS/GDP) as our independent variables. The study employed Cointegration Test, Augmented Dickey Fuller Unit Root Test, Granger Causality Test and Vector Error Correction Model were used to examine the extent to which the independent variables affect dependent variable. The static regression result shows that all the independent variables have positive effect on the dependent variables. The Augmented Dickey Fuller result shows non stationarity at level and stationarity at first difference. The cointegration result shows long run relationship, the Granger Causality Test shows multivariate relationship running through the independent to the dependent variable and the dependent to the independent variables. The vector error correction result shows adequate speed of adjustment to equilibrium. The study conclude that Nigerian financial sector development have significant relationship with macroeconomic stability.

Akani and Momodu (2016) examined whether there is a dynamic long run relationship between financial sector development and Nigeria National Savings in addiction to determining the direction of causality among the variables. Time series data were sourced from Central Bank of Nigeria (CBN) Statically Bulletin from 1980 – 2014. The study modeled Gross National Savings as the percentage of Gross Domestic Product (GDP) as our dependent variable while our independent variables were Commercial Banks Credit as percentage of GDP (CBC/GDP), All Share Price Index as the percentage of GDP (ASPI/GDP), Broad money supply as a percentage of GDP (M2/GDP) to captured the level of financial deepening, Interest Rate (INTR), Exchange Rate (EXR) and Inflation Rate (INFR) were used. The study employed the Johansen. Cointegration Test, Augmented Dickey Fuller Unit Root Test, Granger Causality Test and Vector Error Correction Model were used to examine the relationship between the dependent and the independent variables. The empirical results demonstrate vividly that there is a long run dynamic and significant relationship between financial sector development proxy by national savings and a negative long run relationship between national savings and inflation rate in Nigeria. The static regression result indicates that all the independent variables except inflation rate have positive effect on National Savings. The Unit Root Test indicates non-stationarity at level. The study concludes that financial sector impact significantly to Nigerian total saving. It therefore recommends for financial sector deepening and well management Strategies to enhance National Savings in Nigeria.

Tang (2019a) focused on knowledge transfer between Chinese companies and Ethiopian firms, institutions and individuals in the manufacturing sector in Ethiopia. The research finds that workers acquire skills on the job within firms, but that these are limited to 'shop floor' skills, and there is limited evidence of larger and more established skill-building initiatives. Tang also finds evidence of intra-firm learning through competition, forward and backward linkages, and joint ventures. Furthermore, there was evidence of improved institutional management of the industrialization process, with the Ethiopian government's policies and capacities increasingly supporting sectors, learning the demands and characteristics of enterprises. Looking specifically at the leather sector in Ethiopia, Tang (2019b) found that Chinese investments have contributed to both exports and employment. The study stresses how, beyond technology, one important contribution brought by foreign investors is in building upstream and downstream supply connections between Chinese and Ethiopian enterprises, which helps production and the creation of markets.

METHODOLOGY

This study adopts the ex-post facto research design approach in analyzing data. Ex-post facto research is systematic empirical inquiry in to a research problem which the researcher does not have direct control of the independent variables because their manifestations have already occurred. Onwumere, (2005) opine that the ex-post facto research design is appropriate when the researcher does not intend to control the variables and as such those variables must have been in existence and had already existed in published form. This study employed secondary data sourced mainly from the Central Bank of Nigeria (CBN) statistical bulletin.

Model Specification

IOP = f (CPS, MS, RIR, MMD) (1)
IOP = f (CAPEX, CMD, FMO, EXD) (2)
IF = f (CPS, MS, RIR, MMD) (3)
IF = f (CAPEX, CMD, FMO, EXD) (4)
IOP = $_{i}eMMDRIRMSCPS+++++_{4321}\beta\beta\beta\beta\alpha$ (5)
IOP = $_{i}eEXDFMOCMDCAPEX+++++_{4321}\beta\beta\beta\beta\alpha$ (6)
IF = $_{i}eMMDRIRMSCPS+++++_{4321}\beta\beta\beta\beta\alpha$ (7)
IF = $_{i}eEXDFMOCMDCAPEX+++++_{4321}\beta\beta\beta\beta\alpha$ (8)

Where
IOP = Industrial output as percentage of GDP
IF = Infrastructural finance as percentage of capital expenditure
CPS = Credit to private sector as percentage of GDP
MS = Money supply as percentage of GDP
RIR = Real interest rate
MMD = Money market development
CAPEX = Capital expenditure as percentage of GDP
CMD = Capital market Development
FMO = Financial market openness
EXD = External debt as percentage of GDP α_0 = Intercept $\alpha_{1-7}a$ = coefficient of independent variables to the dependent variable.
et = error term

Prior Expectation of the Result

The a-priori expectation of the variables proposes that an increase in the explanatory variables

lead to increase in the dependent variables. Therefore it can be mathematical stated as follows: - $a_1, a_2, a_3, a_4 > 0$.

Data Analysis Procedure

The main tool of analysis is the Ordinary Least Squares (OLS) using the multiple regression method for a period of 34 years, annual data covering 1990– 2021. Statistical evaluation of the global utility of the analytical model, so as to determine the reliability of the results obtained were carried out using the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test.

(i) **Coefficient of Determination (r^2) Test:** This measure the explanatory power of the independent variables on the dependent variables. R^2 gives the proportion or percentage of the total variation in the dependent variable Y that is accounted for by the single explanatory variable X. The higher the R^2 value the better. For example, to determine the proportion of monetary policy to private sector funding in our model, we used the coefficient of determination. The coefficient of determination varies between 0.0 and 1.0. A coefficient of determination says 0.20 means that 20% of changes in the dependent variable is explained by the independent variable(s). Therefore, we shall use the R^2 to determine the extent to which variation in finance variables are explained by variations in socio-economic transformation variables over the periods covered in this study.

(ii) **Correlation Co-Efficient (R):** This measures the degree of the relationship between two variables x and y in a regression equation. That is, it tries to establish the nature and magnitude of the relationship when two variables are been analyzed. Thus correlation co-efficient show whether two variables are positively or negatively correlated. That is, it takes the value ranging from – 1, to + 1.

(iii) **F-Test:** This measures the overall significance. The extent to which the statistic of the coefficient of determination is statistically significant is measured by the F-test. The F-test can be done using the F-statistic or by the probability estimate. We use the F-statistic estimate for this analysis.

(iv) **Student T-test:** measures the individual statistical significance of the estimated independent variables. This is a test of significance used to test the significance of regression coefficients (Gujurati, 2003). Generally speaking, the test of significance approach is one of the methods used to test statistical hypothesis. A test of significance is a procedure by sample results are used to verify the truth or falsity of a null hypothesis (Ho) at 5% level of significance.

(v) **Durbin Watson Statistics:** This measures the collinearity and autocorrelation between the variables in the time series. It is expected that a ratio of close to 2.00 is not auto correlated while ratio above 2.00 assumed the presence of autocorrelation.

(vi) **Regression coefficient:** This measures the extent in which the independent variables affect the dependent variables in the study.

(vii) **Probability ratio:** It measures also the extent in which the independent variables can explain change to the dependent variables given a percentage level of significant.

ANALYSIS AND DISCUSSION OF FINDINGS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPS	-4.232847	1.418468	-2.984099	0.0073
MS	2.202098	1.275412	1.726577	0.0997
RIR	1.257387	0.976471	1.287684	0.2126
MMD	0.654558	0.590693	1.108119	0.2810
C	1.152505	5.958269	0.193430	0.8486
R-squared	0.865089	Mean dependent var		0.253462
Adjusted R-squared	0.831362	S.D. dependent var		73.10048
S.E. of regression	30.01914	Akaike info criterion		9.840721
Sum squared resid	18022.97	Schwarz criterion		10.13105
Log likelihood	-121.9294	Hannan-Quinn criter.		9.924326
F-statistic	25.64927	Durbin-Watson stat		1.963910
Prob(F-statistic)	0.000000			

Source: E-Views output

Analysis and Discussion of Results

F-Test: The F-calculated value is 25.64927 results while the P-value of F-statistic are 0.000000 at 5% level of significance, considering the P-value, the chosen level of significance α =0.05 [5%] is less than the P-value of F-statistic. It is concluded that the regression model is statistically significant. This means that the joint influence of the explanatory variables on the dependent variable is statistically significant.

Coefficient of Multiple Determinations (R^2): The computed coefficient of multiple determinations of 0.831362 shows that 83.1 percent of the total variations in the industrial output is accounted for, by the explanatory variables while the remainder is attributed to variable that is influenced by other factors not included in the regression model.

Durbin Watson statistics (DW): The computed DW is 1.963910 shows that at 5% level of significance with explanatory variables. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation.

Regression Coefficient and T-Statistics: The t-statistics shows that credit to private sector have negative and significant effect, money supply have positive and significant effect wile real interest rate and money market development have positive but no significant effect on industrial sector output.

$$IOP = \alpha + \beta_1 CAPEX + \beta_2 CMD + \beta_3 FMO + \beta_4 EXD + e_i$$

Table 2: Finance and Industrial Output:

Source: E-Views output

Analysis and Discussion of Results

F-Test: The F-calculated value is 27.90191 results while the P-value of F-statistic are 0.000000 at 5% level of significance, considering the P-value, the chosen level of significance α =0.05 [5%] is less than the P-value of F-statistic. It is concluded that the regression model is statistically significant in explain the effect of finance on socio economic transformation. This means that the joint

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPEX	-2.150571	0.620148	-3.467835	0.0026
CMD	0.327132	0.514093	0.636329	0.5322
FMO	0.122771	0.386120	0.317961	0.7540
EXD	0.436232	0.315350	1.383327	0.1826
C	-0.285339	0.549820	-0.518968	0.6098
R-squared	0.898075	Mean dependent var		0.245385
Adjusted R-squared	0.865888	S.D. dependent var		7.314307
S.E. of regression	2.678594	Akaike info criterion		5.033265
Sum squared resid	136.3225	Schwarz criterion		5.371984
Log likelihood	-58.43245	Hannan-Quinn criter.		5.130804
F-statistic	27.90191	Durbin-Watson stat		1.924371
Prob(F-statistic)	0.000000			

influence of the explanatory variables on the dependent variable is statistically significant.

Coefficient of Multiple Determinations (R^2): The computed coefficient of multiple determinations of 0.865888 shows that 86.5 percent of the total variations in the industrial output are accounted for, by the explanatory variables while the remainder is attributed to variable that is influenced by other factors not included in the regression model.

Durbin Watson statistics (DW): The computed DW is 1.924371 shows that at 5% level of significance with explanatory variables. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation.

Regression Coefficient and T-Statistics: The t-statistics shows that capital expenditure have negative and significant effect while other variables in the model have positive but no significant effect on the output of the industrial sector.

Table 3: Finance and Infrastructural Financing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPS	7.816849	1.679241	4.654989	0.0006
MS	5.534553	1.524213	3.631088	0.0034
RIR	4.448405	1.352291	3.289532	0.0065
MMD	3.534768	1.158799	3.050373	0.0101
C	0.485505	0.630578	0.769937	0.4562
R-squared	0.955999	Mean dependent var		-0.548636
Adjusted R-squared	0.922998	S.D. dependent var		10.45439
S.E. of regression	2.901010	Akaike info criterion		5.270950
Sum squared resid	100.9903	Schwarz criterion		5.766878
Log likelihood	-47.98045	Hannan-Quinn criter.		5.387776
F-statistic	28.96896	Durbin-Watson stat		2.016619
Prob(F-statistic)	0.000001			

Source: E-Views output

Analysis and Discussion of Results

F-Test: The F-calculated value is 28.96896 results while the P-value of F-statistic are 0.000001 at 5% level of significance, considering the P-value, the chosen level of significance α =0.05 [5%] is less than the P-value of F-statistic. It is concluded that the regression model is statistically significant in explain the effect of finance on infrastructural financing. This means that the joint influence of the explanatory variables on the dependent variable is statistically significant.

Coefficient of Multiple Determinations (R^2): The computed coefficient of multiple determinations of 0.922998 shows that 92.2 percent of the total variations in infrastructural financing are accounted for, by the explanatory variables while the remainder is attributed to variable that is influenced by other factors not included in the regression model.

Durbin Watson statistics (DW): The computed DW is 2.016619 shows that at 5% level of significance with explanatory variables. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation.

Regression Coefficient and T-Statistics: The t-statistics shows that the independent variables have positive and significant effect on infrastructural financing in Nigeria.

Table 4: Finance and Infrastructural Financing

Variable	Coefficient		Std. Error	t-Statistic	Prob.
CAPEX	3.796574		0.740048	5.130171	0.0000
CMD	2.074288		0.630759	3.288559	0.0034
FMO	1.307258		0.467578	2.795805	0.0105
EXD	0.760269		0.335693	2.264776	0.0337
C	-0.335910		1.014385	-0.331146	0.7437
R-squared	0.800495	Mean dependent var			-0.088889
Adjusted R-squared	0.764221	S.D. dependent var			10.71104
S.E. of regression	5.200964	Akaike info criterion			6.301141
Sum squared resid	595.1007	Schwarz criterion			6.541111
Log likelihood	-80.06541	Hannan-Quinn criter.			6.372497
F-statistic	22.06824	Durbin-Watson stat			2.127331
Prob(F-statistic)	0.000000				

Source: E-Views output

Analysis and Discussion of Results

F-Test: The F-calculated value is 22.06824 results while the P-value of F-statistic are 0.000001 at 5% level of significance, considering the P-value, the chosen level of significance α =0.05 [5%] is less than the P-value of F-statistic. It is concluded that the regression model is statistically significant in explain the effect of finance on infrastructural financing. This means that the joint influence of the explanatory variables on the dependent variable is statistically significant.

Coefficient of Multiple Determinations (R^2): The computed coefficient of multiple determinations of 0.764221 shows that 76.4 percent of the total variations in infrastructural financing are accounted for, by the explanatory variables while the remainder is attributed to

variable that is influenced by other factors not included in the regression model.

Durbin Watson statistics (DW): The computed DW is 2.127331 shows that at 5% level of significance with explanatory variables. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation.

Regression Coefficient and T-Statistics: The t-statistics shows that the independent variables have positive and significant effect on infrastructural financing in Nigeria.

The positive effect of the variables confirms the expectations of the study in line with theories. The positive effect of the variable confirm the findings Akani and Uzah (2018) that micro finance lending to the various sectors of the economy has positive but insignificant effect on Nigerian macroeconomic stability except lending to agricultural sector and mining and quarrying, the findings of Akani et al. (2016) that in the static regression result that all the independent variables has positive relationship with the dependent variable except prime lending rate, the findings Akani et al. (2016) that all the independent variables has positive effect on the dependent variables.

The findings of Akani and Momodu (2016) that there is a long run dynamic and significant relationship between financial sector development proxy by national savings and a negative long run relationship between national savings and inflation rate in Nigeria. The findings of Hao (2006) that bank, as an indicator of financial development, is significant but negatively related to growth, Romeo-Avila (2007) that financial intermediation impacts positively on economic growth through three channels. The findings are also supported by the opinion of Schumpeter (1911) on the importance of bank in promoting per capital income in Kenya. The finding confirms the policy objective of the banking sector reform and the economy.

CONCLUSION AND RECOMMENDATIONS

This study examined the effect of Finance on Economic Transformation in Nigeria using time series data sourced from Central Bank of Nigeria Statistical Bulletin. The study formulated four regression models. Model one found that 83.1 percent of the total variations in the industrial output is accounted for, by the explanatory. Model two found that 86.5 percent of the total variations in the industrial output are accounted for, by the explanatory variables while the remainder is attributed to variable that is influenced by other factors not included in the regression model. Model three found that 92.2 percent of the total variations in infrastructural financing are accounted for, by the explanatory variables while the remainder is attributed to variable that is influenced by other factors not included in the regression model while model four found 76.4 percent of the total variations in infrastructural financing are accounted for, by the explanatory variables while the remainder is attributed to variable that is influenced by other factors not included in the regression model. From the findings, the study conclude that finance have significant effect on economic transformation in Nigeria. The study recommends that:

i. Enforceable policies and efforts should be directed to enhance the operational efficiency of the financial market as this have the capacity to increase savings mobilization and investment as the prerequisite for economic transformation.
ii. Nigeria Government must identify national priorities, decide how best to sequence the various initiatives within each area or sector of focus, assess which activity delivers the greatest impact within the prioritized initiatives, and direct the bulk of resources to a few strategic interventions of high value

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FINANCIAL INTERMEDIATION AND PROFITABILITY OF INSURANCE COMPANIES IN NIGERIA

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ABSTRACT

This study examined the effect of Effect of Financial Intermediation on the Profitability of Insurance Companies in Nigeria. Panel data were sourced from financial statement of the quoted insurance firms and Central Bank of Nigeria Statistical Bulletin. Return on equity was modeled as the function of Insurance Claims, Insurance income, Insurance intermediation ratio proxy by total insurance assets to gross domestic product and Insurance claim payment. Panel data methodology was employed while the fixed effects model was used as estimation technique at 5% level of significance. Fixed effects, random effects and pooled estimates were tested while the Hausman test was used to determine the best fit. The study found that 88.2 percent and 70.1 percent changes in return on equity of the quoted insurance firms can be traced to changes in the independent variables; the model is statistically significant from the F-statistics and probability while the Durbin Watson indicates the absence of serial autocorrelation among the variables within the time scope covered in the study. The variable coefficient indicated that insurance income have positive but no significant effect, insurance claims have negative effect, insurance assets have negative effect while insurance claim payment have positive effect on return on equity of the insurance firms. From the findings, the study conclude that insurance intermediation have significant effect on the profitability of the quoted insurance firms. We recommend that management of the listed insurance firm in Nigeria should focus more on increasing premium income than expenditure.

Keywords: Financial intermediation, profitability, insurance companies

INTRODUCTION

Insurance involves the transfer of loss exposures to an insurance pool and the redistribution of losses among members of the pool. Certainty of financial compensation for loss from a pool with adequate resources and accurate predictability of losses are the hallmarks of the insurance business. Risk management includes hedging and diversification. Hedging involves investing in an asset with a payoff pattern that offset one's exposure to a particular source of risk in a portfolio while, diversification controls portfolio risk by investing in a wide variety of assets so that the exposure to the risk of any particular security is limited, (Bodie et al., 1999).

Insurance companies in Nigerian were established to provide insurance cover for life insurance and nonlife insurance. The life insurance companies provide cover for individual life, group life, pension and health risks, while non-life insurance activities include those in respect to fire, general accident, motor vehicle, marine and aviation, oil and gas, engineering, bond credit, guarantee and surety ship and miscellaneous insurance. Moreover, reinsurance companies in Nigeria were established to provide cover for insurance companies in Nigeria. The reinsurers also provide technical security and capacity for the insurance companies and do not supply insurance directly to the consumers (Hamadu & Majekwu, 2010).

Insurance companies provide sound financial services for growth and development in Nigeria. Such specialized financial services range from the underwriting of risks inherent in economic entities and the mobilization of large amount of funds through premiums for long term investments. The risk absorption role of insurers promotes financial stability in the financial markets and provides a sense of peace to economic entities. The insurance companies" ability to cover risk in the economy hinges on their capacity to create profit or value for their shareholders. A well-developed and evolved insurance industry is a boon for economic development as it provides long- term funds for development (Charumathi, 2012; (Ahmed et al., 2010; Akani & Momodu, 2016; Agiobenebo & Ezirim, 2002).

Financial intermediaries such as insurance companies are credited with improving fund allocation, mobilization and allocation of savings promoting financial intermediation managing risk through risk transfer and indemnification, investing and mitigating the negative financial consequences that random shocks contingent losses have on investments or businesses (financial stability) in the economy (Ward & Zurbruegg, 2000; Akani et al., 2016, Skipper, 2001). Financial intermediation facilitates the savings and investment process through the mobilization of savings from the surplus economic unit and channeling same to investment by the deficit economic unit. In serving as an accelerator to economic growth, insurance companies seek to perform the basic function of financial intermediation.

Profitability is one of many different measures to evaluate how well a firm is using its resources to generate income. Good examples of profitability include operating income, earnings before interest and taxes, and net asset value (Ngui, 2010; Akan et al., 2016). Assessment of profitability take into account many different measures as there are several factors that determine the performance of economic organization including asset base, leverage, performance of the loan book, corporate governance and the quality of staff and regulations in the industry. The essence of profitability measurement is to provide the organization with the maximum return on the capital employed in the business (Ngui, 2010). It measures the financial soundness and health of the organization in monetary terms and thus, can be used to compare the performance of different corporations within any particular industry or between the industries.

Insurance business is seen as the backbone of any country's risk management system, since it ensures financial security, serves as an important component in the financial intermediation chain, and offers a ready source of long term capital for infrastructural projects in Nigeria (Augustine & Nwanneka, 2011, Akani & Lucky, 2014, 2015, 2020; Kenn-Ndubsis & Akani, 2015). Similarly, insurance business plays a vital role in the Nigerian economy through risk bearing, employment of labour, payment of tax, providing vehicle for investors and other financial investment services, (Hamadu & Mojekwu, 2010; Lucky et al., 2015; Akani & Uzobor, 2015; Toby & Akani, 2014). Therefore, it is important to ensure that insurance companies in Nigeria are performing efficiently and significantly. Insurance companies are the sellers and suppliers of insurance product in Nigeria. According to the Nigerian Insurance Act 2003, there are two broad categories of insurance business in Nigeria: life insurance business; and non-life (General) insurance business. It is permitted under the Nigerian laws for an insurance company to engage in both, life insurance and non-life insurance activities.

The insurance industry is a vital part of the entire financial system. Apart from commercial banks, insurance companies contribute significantly to financial intermediation of the economy. As such, their success means the success of the economy; their failure means failure to the economy (Ansah-Adu et al., 2012; Akani & Akani, 2020l; Agiobenebo & Ezirim, 2002). Despite the fact that insurance companies are vital part of Nigerian financial system, Nigerian insurance companies have been struggling to meet up with their objective of enhancing sound financial intermediation efficiency.

Identifying the key success indicators of insurance companies can help in facilitating the design of policies that may improve the profitability of the insurance industry. Hence, the determinants of insurers' profitability have attracted the interest of investors, researchers, financial markets analysts and insurance regulators. The overall financial intermediation performance of insurance companies in Nigeria is not adequately worthwhile except for some companies which accomplished some revenues. While there are many studies on the effect of insurance intermediation, most of the studies focused on insurance intermediation on economic growth. This study focuses on the relationship between insurance intermediation on profitability of quoted insurance firms in Nigeria.

LITERATURE REVIEW

Financial Intermediation

Financial Intermediation is the process of mobilizing funds from the surplus economic unit to the deficit economic unit. In other words, financial intermediation is the process of mobilizing financial resources from the ultimate saver to the ultimate user. Andrew and Osuji (2013) stated that financial intermediation involves the transformation of mobilized deposits liabilities by banks into banks assets or credits such as loans and overdraft. This means that financial intermediation is the process of taking in money from depositors and lending same to borrowers for investments which in turn help the economy to grow. Efficient financial intermediation causes high level of employment generation and income which invariably enhances the level of economic development.

According to Blum (2002) financial intermediation is the process of transferring the savings of some economic units to others for consumption or investment at a price. For financial intermediation to take place there must be instruments and financial institutions operating together with the objective of bringing about economic growth of the country. Mahmood and Bilal (2010) opined that the rising magnitude of financial intermediation costs have adverse implications on the development of Nigerian economy because in the absence of developed capital market, the private sector which contributes a greater percentage to economic development in Nigeria will primarily depend on bank credit, insurance claim as a source of financing which will lead to economic development. This means that the constant rise of financial intermediation discourages potential savings due to low returns on deposits. Financial intermediation is an institution that facilitates the channeling of funds between lenders and borrowers indirectly. That is, savers (lenders) give funds to an intermediation institution (such as a bank, insurance companies, NDIC), and that institution gives those funds to spenders (borrowers).

Intermediation refers to the process of mobilizing resources from the surplus units for the use of the deficit units for investment purposes. The process bridge the gap between the ultimate users

of the funds and ultimate savers of the funds. The institutions that serve as a link between those units those are in excess of funds and those in need of funds for economic activities are referred to financial intermediaries.

Efficiency of financial intermediation, otherwise known as interest rates spreads have been widely researched upon on regional basis as well as on country basis. Ho and Saunders (1981) empirically tested their model when analyzing the determinants of bank interest margins. It was argued that one of the best known models of bank behavior is the Hedging Hypothesis which views the bank as seeking to match the maturities of assets and liabilities in order to avoid the reinvestment or refinancing risks arising from inadequate assets or excess assets. This model assumes that the major portfolio risks emanates from interest rate fluctuation. Dougall and Gaumitz(1975) argued that the model indeed explained many aspects of actual bank portfolio behavior. Its weakness, however lies in the fact that its proponents usually fail to tie hedging behavior to the underlying objective of the decision maker. Nevertheless, Sharpe, (1967) infer an implicit assumption that the bank hedges in order to minimize the risks of shareholders wealth.

Insurance in Nigeria

Insurance is generally defined as the pooling of funds from the insured (policy holders) in order to pay for relatively uncommon but severely devastating losses which can occur to the insured. Insurance as a contract is between two parties where one party called the insurer undertakes to pay the other party called the insured a fixed amount of money on the occurrence of a certain event. Obasi (2010) defines it as a contract between the person who buys insurance and an insurance company who sold the policy. He opines that “by entering into the contract, the insurance company agrees to pay the policy holder or his family members a predetermined sum of money in case of any unfortunate event for a predetermined fixed sum payable which is in normal term called insurance premiums.

The types of insurance products available in Nigeria include, motor insurance; general accident insurance; fire insurance; marine, aviation and transit insurance; life insurance; oil and gas insurance; health insurance; among others. Insurance industry is generally seen as the backbone of any country's risk management system, since it ensures financial security, serves as an important component in the financial intermediation chain, and offers a ready source of long term capital for infrastructural projects. Babalola (2008) argues that the insurance industry “mitigates the impacts of risks and positively correlates to growth as entrepreneurs cover their exposures, otherwise risk-taking abilities are hampered. Insurance also promotes the growth of small and large firms as it provides stability 20 Repositioning Insurance Industry.

The Nigerian Case by allowing large and small businesses operates with a lesser risk of volatility or failure. Insurance is also very important to the financial system. In collecting relatively small premium from the insured in the economy, insurers are able to pull together a large pool of funds that could be invested for short and long term periods (Obasi, 2010). Such long-term funding of the economy is very critical for economic growth, and the deepening and broadening of the domestic financial system. Thus, a strong and competitive insurance industry is a compelling imperative for Nigeria's economic development and growth. The insurance industries globally are experiencing a daunting task of sustained profitability in the face of capital constraints and volatile assets value. In Nigeria, there are wide ranges of challenges facing the insurance industry.

Apart from the risk management functions, insurance policy such as life and whole life is an aspect that provide savings plans and in direct completion with the investment in other financial institutions such as the deposit money banks, savings associations, mutual funds and real estates and other real and financial investments (Ezirim and Muoghalu, 2002). Insurance plays financial intermediation function, a major source of long-term capital and facilitate the growth of the capital market (Catalan *et al.,* 2000). Hence monetary and macroeconomic shocks can affect positively or negatively insurance investment. Nigerian government over the years has embarked on monetary and macroeconomic reforms to enhance real and portfolio investment in the financial sector. For instance the deregulation of interest rate and the financial sector in the last quarter of 1986, the reforms in the foreign exchange market to attract foreign real and portfolio investment, the establishment of National Insurance Commission (NAICON) in 1997.

The enactment of the insurance Act 2003 which increase the capital base of the categorized insurance businesses to N15m for life insurance, N200m for general insurance and N350m for reinsurance and the recapitalization policy in 2005 which further increase the capital base to N2billion life insurance, N3billion non-life and N10billion reinsurance which reduce number of insurance companies from 104 to 49, reinsurance from 4 to 2 (Fatula, 2007) with the objective of consolidating in the sector maximize investment returns and to attract foreign capital infusion (Ayeleso, 2010). However, the extents to which these reforms have affected investment in the insurance industry remain a matter of research interest as investment in the industry continues to decline. Record revealed that only 10% of Nigerian have insurance policy of any type (Mordi, 1990, Wilson, 2004).

Insurance in the Financial Market

Insurance companies especially the life insurers are exposed to the interest rate environment because they sell long-term products whose present value depends on interest rates. On a fundamental level, the products satisfy two objectives for customers. The first objective is that insurance customers want protection from adverse financial consequences resulting from either loss of life (by buying life insurance policies) or exhaustion of financial resources over time (by buying annuity policies). The second objective is to allow customers to save (generally in a tax-advantaged way) for the future. Because customers are expected to receive cash from their policies years after they have been issued, life insurers face the challenge of investing the customers" payments in such a way that the funds are available to satisfy policyholders in the distant future. This feature generally leads life insurers to invest in a collection of long-term assets, mostly bonds (Berends et al., 2013)

Insurance companies use various tools and techniques to curb the risk of persistence low interest rates in the market. First, if they anticipate that the interest rates will be dwindling in future, they can extend and ensure that the period in which the assets invested in is prolonged so that to ensure a better periodic match between their assets invested and liabilities. Second, insurers can alter the conditions of the new policies by lowering guaranteed rates and thus lowering their liabilities, while pension-plan sponsors could close down the plan and offer less attractive terms to new employees. Third, in the case of Defined Benefit pension funds, pension-plan sponsors and where relevant, plan members could increase contributions to the pension fund. Fourth, and as a last resort, insurers and pension funds may be able to renegotiate or unilaterally adjust existing contracts (Berends et al., 2013).

Insurance is an important intermediary in the financial market and also plays a very vibrant role in the economy by mobilizing savings and supplying long term capital for economic growth and as an asset allocator. Ngugi (2001) describes interest rate as a price of money that reflects market information regarding expected change in the purchasing power of money or future inflation. In a competitive insurance market, competition among the insurers increases productivity. A strong insurance industry promotes a developed contractual saving sector which contributes to a more resilient economy that would be less vulnerable to interest rate and demand shocks while creating a more stable business environment, including macroeconomic stability.

Investment and Intermediate Functions

The role of the financial sector is to channel resources from savers to investment projects. The financial sector (1) improves the screening of fund seekers and the monitoring of the recipients of funds, thus improving resource allocation; (2) mobilizes savings; (3) lowers cost of capital via economies of scale and specialization; (4) provides risk management and liquidity (Wachtel, 2001). Insurance companies play a major role in these functions and thus should also play a major role in economic growth. In analogy to other financial sectors (Blum et al 2002), the link between the insurance and the real sector can be classified in terms of causality with respect to five possible hypotheses: (1) no causal relation; (2) demand following, e.g. economic growth leads to a rise in demand for insurance; (3) supply-leading, e.g. growth in insurance smoothens short-term economic volatility and thus induces economic growth in the long run, plus growth in investment by insurance companies induces economic growth; (4) negative causal link from insurance to growth (e.g. growing insurance causes more reckless behaviour (moral hazard), resulting in a less efficient and more volatile economy; (5) interdependence.

The major functionality of the insurance on the client side is risk transfer. Usually the insured pays a premium and is secured against a specific uncertainty. By reducing uncertainty and volatility, insurance companies smoothen the economic cycle and reduce the impact of crisis situations on the micro and aggregate macro level. First of all, there is demand for protection against losses of life and property caused by natural disaster, crime, violence, accidents, etc. Purchase, possession and sale of goods, assets and services are facilitated by the indemnification of the insurance. Therefore the assured safety of the property for example enhances trade, transportation and capital lending and many sectors are heavily reliant on insurance services. Besides relieving the fear of risk-averse individuals in buying cars or real estate and hence increasing national consumption, insurance aid companies to resist threats accruing from their business activity, like receivables, equipment break down, transport risk and more, which all represent loss of property.

The saving substitution effect of the insurance sector is most clearly linked to life insurance. Within the market for intermediated savings, mainly the life insurance companies gained ground and reduced the market share of the banks (Van den Berghe, 1999; Allen & Santomero, 1999). So insurance companies also try to exploit this effect to gain market share from neighbor in market competitors, thus by coordinating insurance and investment elements, insurers use the attractiveness of the saving message to acquire new clients or increase premium income. The entry in complementary markets involves services such as bank type, finance and investment activities and as a consequence thereof includes all positive and negative side effects. Especially life insurers and pension funds are substitute saving vehicles and hence also increase competition in the investment and banking sector. The metamorphosis of both banks and insurances sometimes include quite revolutionizing steps, since the client's image of the company has to be altered quite heavily. This involves new distribution channels focusing on client advice and service and setting up additional branches.

Insurance Premium

To measure the growth of life insurance Company, the base will be premium. The variable of growth indicates the premium growth of life insurance companies which vary year to year. The premium growth is the comparison of new premium collected in the previous year and new premium collected in a particular year. The differentiate change in the amount of base year and the current year will identify the change in growth in the respective year.Premium growth measures the rate of market penetration. Empirical results showed that the rapid growth of premium volume is one of the causal factors of insurers' insolvency (Kim et al. 1995). Being too obsessed with growth can lead to self-destruction as other important objectives may be neglected.

Insurance Claim

Krishnan (2010) pointed out what the underlying claims management procedure involved. The first stage starts with the verification of occurrence of loss. The second stage is the verification of proof of loss to make sure that the loss occurred accidentally and it was insured. The third process is the negotiation stage to find out. The funding viewpoints, the volume and allocation of claims are assessed. Whereas, the operational deals with the operating features of a Claims settlement Procedure, like processing capacity, claims quantity and outstanding claims register, are assessed. The helpfulness of this analysis for efficient and effective organization and management of the claims handling function is obvious. Claims handling procedures is a tool that allows analysis and predictions of the handling procedures.

Theoretical Review

Agency theory

The principal-agent theory is an agency model developed by economists that deals with situations in which the principal is in position to induce the agent, to perform some task in the principal's interest, but not necessarily the agent's (Health and Norman, 2004). Firms that separate the functions of management and ownership will be susceptible to agency conflicts (Lambert, 2001). They show that regardless of who makes the monitoring expenditures, the cost is borne by stake holders. Debt holders, anticipating monitoring costs, charge higher interest. The higher the probable monitoring costs, the higher the interest rate and the lower the value of the firm to its shareholders all other things being the same. There are three types of agency costs which can help explain financial performance. Asset substitute effect: as debt to equity increases, management has an increased incentive to undertake risky projects. This is because if the project is successful, shareholders get all the upside, where as if it is unsuccessful, debt holders get all the downside. If the projects are undertaken, there's a chance of firm value decreasing and a wealth transfer from debt holders to shareholders. Underinvestment problem: if debt is risky, the gain from the project will accrue to debt holders rather than shareholders. Thus, management has an incentive to reject positive net present value projects, even though they have the potential to increase firm value.

Managerial Theory of Firms

Managerial theory of firm was developed by Bumole in the year 1967 in his book called business

behaviour, value and growth and as well used by Sangosanya (2011). This theory is based on the complex nature of the modern financial sector. The theory states that the reason why managers are hired is for revenue maximization and not for profit maximization. This theory believes that for the economy to grow faster through industrialization, the country needs to increase its public expenditure so as to facilitate the developmental processes of their economies. The theory emphasizes that a firm's decisions whether to grow or not depends on the level of fiscal policy because the firm grows through government expenditure on industrialization. This is the theories of which this research is based.

Market Power Theory

Market power theory emanated from Bain (1951). This theory stresses that an increase in market power results to a monopoly, profits (Athanasoglou et al., 2005). The theory is based on the premise that concentration of the market is a best measure for market power since more concentrated markets exhibit superior market imperfections facilitating various entities to set prices for their products and services at levels which is less favourable to their clients or customers (Punt & Rooij, 2001). The theory also affirms that companies with a large market share and sound differentiated products and services can easily earn monopolistic profits and succeed or win against their competitors (Nkegbe & Yazidu, 2015). The market power theory assumes that extra profits results from a higher market concentration which allows commercial banks to collude and earn supernormal profits which arise due to the firms portfolio of differentiated products that also increases the market share and market power in determining prices for products (Mirzaei, 2012).

Efficiency Theory

The efficiency theory was formulated by Demsetz (1973) as an alternative to the market power theory. The efficiency theory presupposes that better management and scale efficiency results to higher concentration thus greater and higher profits. Accordingly, the theory posits that management efficiency not only increases profits, but also results to larger market share gains and improved market concentration (Athanasoglou et al., 2005). The efficiency theory also states that a positive concentration profitability relation may be a sign of a positive connection relating to efficiency and size. The theory postulates that positive association between the concentration and profit arise from a lower cost which is mainly achieved through production efficient practices and increased managerial process (Birhanu, 2012). The efficiency theory supports that the most favorable production can be attained through economies of scale. Thus, maximum operational efficiency in the short run is achieved at a level of output where all economies of scale available are being employed in an efficient manner (Odunga et al., 2013). Additionally, the efficiency theory explains that attaining higher profit margins arises from efficiency which allows banks to obtain both good financial performance and market shares (Mirzaei, 2012).

Application of Theory

This study is built on agency theory because the principal-agent theory is an agency model developed by economists that deals with situations in which the principal is in position to induce the agent, to perform some task in the principal's interest, but not necessarily the agent's (Health and Norman, 2004). Firms that separate the functions of management and ownership will be susceptible to agency conflicts (Lambert, 2001). They show that regardless of who makes the monitoring expenditures, the cost is borne by stake holders.

Empirical Review

Oyedeko and Zubairu (2019) examined financial intermediation and corporate performance with an emphasis on insurance companies. Time series data collected over a successive point in time and ex post -facto research design. The population the study comprises all the insurance companies operating in Nigeria as at December 2018 without limitation to their area of operation in insurance business. The study adopts purposive sampling technique. Thus, the sample of the study covers the period of thirty-six years spanning from 1981 to 2016. The data to be used for the study are extracted from secondary sources only. The secondary data were sourced from Central Bank of Nigeria statistical bulletin, Bureau of statistics reports, the National Pension Commission Annual Reports, Text books and academic Journals. The study adopts vector autoregressive models such as vector error correction mechanism, autoregressive distributed lag and Toda and Yamomoto VAR approach to cointegration. The study found that insurance investment, insurance claim and insurance premium exhibit dynamic effect on insurance companies' growth, profitability and penetration. The study concluded that insurance intermediation operations have effect on corporate performance of insurance companies in Nigeria. In line with the conclusion, the study recommends that management of insurance companies should ensure that optima combination of assets should form their portfolio. Kaguri (2013) conducted a study on moderating effect of firm characteristics (size, diversification, leverage, liquidity, age, premium growth and claim experience) on financial performance of life insurance companies in Kenya. The study findings indicated that the variables were statistically significance to influencing financial performance of life insurance companies as indicated by the positive and strong Pearson correlation coefficients.

Daniel and Tilahun (2013) investigated the determinants of performance in Ethiopian insurance companies using a panel data set consisting of financial data of nine insurers over the period of 2005 to 2010. The results of regression analysis reveal that insurers' size, tangibility and leverage are statistically significant and positively related with return on total asset; however, loss ratio (risk) is statistically significant and negatively related with ROA. Thus, insurers' size, Loss ratio (risk), tangibility and leverage are important determinants of performance of insurance companies in Ethiopia. But, growth in writing premium, insurers' age and liquidity have statistically insignificant relationship with ROA.

Eze and Victor (2013) examined the impact of insurance practice on the growth of Nigerian economy. The study used insurance premium income, total insurance investment and income of insurance development as determinants of insurance practice. The study observed that the insurance premium has significantly impacted on economic growth in Nigeria and that there is causal relationship between insurance sector development and economic growth in Nigeria.

Muhaizam (2013) investigated the determinants of financial performance with an emphasis on general Takaful and insurance companies in Malaysia using panel data over the period of 2004 to 2007, using investment yield as the performance measure. The study found that size of the company; reinsurance dependence and solvency margin are statistically significant determinants of the investment performance of the general Islamic insurance companies in Malaysia. For conventional insurance, all factors are statistically significant determinants of investment performance, except for equity returns.

Mwangi and Iraya (2014) investigated the determinants of financial performance of general

insurance underwriters in Kenya. The study found that financial performance was positively related to earning assets and investment yield. Financial performance was negatively related to loss ratio and expense ratio. Growth of premiums, size of underwriter and retention ratio were not significantly related to financial performance. Lee (2014) investigated the relationship between firm specific factors and macroeconomics on profitability in Taiwanese property-liability insurance industry using the panel data over the1999 through 2009-time period. The results showed that underwriting risk, reinsurance usage, input cost, return on investment (ROI) and financial holding group have significant influence on profitability in both operating ratio and ROA models. The study concluded that insurance subsidiaries of financial holding group compared with other insurance companies have lower profitability.

Yusuf and Ajemunigbohun (2015) studied the effectiveness, efficiency, and promptness of claims handling process in the Nigerian insurance industry. The study found that managing claims effectively and efficiently had significantly affected operational process in claims management and thus, promptness in claims handling processes does essentially assist in fraud detection and prevention. Angima and Mwangi (2017) conducted study on effects of underwriting and claims management on performance of property and casualty insurance companies in East Africa. The findings showed that there is a significant positive relationship between underwriting and claims management practices employed by the firms and non-financial performance, but the relationship with financial performance was insignificant. From the literature reviewed, it is explicit that most to studies concentrated on firm specific factor as determinant of financial performance but few of the study examined insurance intermediation operations on performance of insurance companies.

Wabita (2013) sought to establish the determinants of financial performance of insurance companies in Kenya. He established that; growth of the insurance industry positively affects financial performance, leverage of the insurance industry negatively affects financial performance, and the amount of tangible assets held by the industry positively affects financial performance. Demiurgic-Kunt and Levine (1996) using data from 44 countries for the period 1986 to 1993 found that different measures of stock exchange size are strongly correlated to other indicators of activity levels of financial, banking, non-banking institutions as well as to insurance companies and pension funds. They concluded that countries with well-developed stock markets tend to also have well-developed financial intermediaries.

Agbamuche (2012) employed Chi-square model in his study on Investment of insurance funds in the Nigerian Capital market, and find out that; (i) the insurance industry invest substantial parts of its funds in the capital market. This implies that the surplus funds of the insurance companies after claims to policyholders have been paid out is then invested in the capital market in the form of government securities, corporate funds, real estate, mortgages etc. (ii) that the investments of insurance funds contributes to the socio economic growth of the country. This implies that as insurance contributions increase, economic growth would also increase hand in hand, (iii) that the insurance industry contributes positively to the growth of the capital market. This implies that the insurance industry is also a center of capital formation, mobilization and allocation of resources within the economy because it deals with long term securities and it enables the funding of other deficit sectors of the economy. This finding shows that the major source of funds available to the insurance industry is through premium incomes; however other incomes come in the form of issuance of shares and other investment returns, (iv) that the insurance industry is a relevant sector of the economy. This would suggest that a direct or positive relationship exists between the insurance industry, insurance contribution and economic growth in the country. Ultimately a relevant and formidable insurance sector would help greatly in boosting overall economic growth in Nigeria.

Marijuana et al. (2009) empirically examined the relationship between insurance sector development and economic growth in 10 transition European Union member countries in the period from 1992 to 2007. Eze and Okoye (2013) examined the impact of insurance practice on the growth of Nigerian economy. Insurance premium income, total insurance investment and income of insurance development was used as determinants of insurance practice. They employed unit root tests, Johansen co-integration test and error correction model in data analysis to determine the short and long run effect of the model. The study observed that the insurance premium capital has significantly impacted on economic growth in Nigeria; that the level of total insurance investment has significantly effected on economic growth in Nigeria; and that there is causal relationship between insurance sector development and economic growth in Nigeria. Their findings implied that insurance industry would contribute meaningful to the growth of Nigeria economy in the long run. The study concluded that there is a significant positive effect of insurance practice on the growth of Nigerian economy. They recommended that, having seen that there is long-run relationship between insurance industry practice and economic growth in Nigeria. They further advised that more efforts should be made to increase transparency and efficiency in insurance industry through adequate legislation and policy formulation targeted at providing institutional improvement, especially in risk management and product innovations in Nigeria insurance industry.

Eze and Okoye (2013) examined the impact of insurance practice on the growth of Nigerian economy. The study observed that the insurance premium capital has significantly impacted on economic growth in Nigeria; that the level of total insurance significantly affected on economic growth in Nigeria; and that there is investment has sign causal relationship between insurance sector development and economic growth in findings implied that insurance industry would contribute meaningful to Nigeria. There, the growth of Nigeria economy in the long run. They recommended that, having seen that there is long-run relationship between insurance industry practice and economic growth in Nigeria. They further advised that more efforts should be made to increase efficiency in insurance industry through adequate legislation and transparency and effect policy formulation targeted at providing institutional improvement, especially in risk management and product innovations in Nigeria insurance industry.

Mojekwu et al. (2011) examined the impact of insurance contributions on economic growth in Nigeria. The study covered the period between 1981 and 2008.This study used dynamic factor model which described a number of methods designed to analyze a functional relationship between the volume of insurance contribution and economic growth in terms of underlying but unobservable random quantities called factors. The factor loadings indicated which common trend is related to which set of the series. The study found a functional positive relationship between the volume of insurance contributions and economic growth in Nigeria.

Pagach and Warr (2010) studied the effect of adoption of ERM principles on firms' long-term

performance by examining how financial, asset and market characteristics change around the time of ERM adoption. Using a sample of 106 firms that announced the hiring of a CRO, they found that firms adopting ERM experience a reduction in stock price volatility. Similarly, firms hiring CROs when compared to similar, non-CRO appointing firms in their industry group, exhibit increased asset opacity, a decreased market-to-book ratio and decreased earnings volatility. In addition, these researchers found a negative relationship between the change in firms' market-to-book ratio and earnings volatility

Hameeda and Al Ajmi (2012) carried out a study on conventional and Islamic banks in Bahrain. The objective of the study was to find out the risk management practices of these banks. Their study found out that banks in Bahrain had a clear understanding of risk and risk management and also had efficient risk identification, risk assessment analysis, risk monitoring and credit risk analysis. In addition, they established that credit, liquidity and operational risk were the most important risks facing both conventional and Islamic banks in Bahrain. The risk management practices were determined by the extent to which managers understood risk and risk management, efficient risk identification, risk assessment analysis, risk monitoring and credit risk analysis. From the study, Islamic banks were found to be significantly different from their conventional counterparts in understanding risk and risk management. Islamic banks were found to have significantly higher risks than conventional banks.

Ongore and Kusa (2013) conducted a study on the determinants of financial performance of commercial banks in Kenya. The authors used linear multiple regression model and Generalized Least Square on panel data to estimate the parameters. They found out that the financial performance of commercial banks in Kenya was driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution. They found out a weak relationship between financial performance risk management. The empirical review is not clear on the relationship of risk management and financial performance. This study sought to determine the relationship existing between risk management and financial performance among insurance companies in Kenya.

METHODOLOGY

This study employed ex-post facto research design using secondary data. The target population for this study comprises of all the 25 insurance companies quoted on the floor of Nigeria Stock Exchange. The Insurance companies are part of financial markets that transmits the monetary policy. The researcher adopted random sampling techniques to select insurance firms that are in existence. Secondary data were sourced from the financial statement of the quoted insurance firms.

Data Analysis Technique

This study adopted both descriptive and inferential statistical analysis. The statistical tool adopt is regression analysis. The regression analysis result will enable the researcher to explain and predict the linkage between the variables. This method will be used to test the hypotheses, solve research questions and to determine the relationships among the dependent and independent variables. The descriptive statistics examine the means and standard deviations of regression variables.

Regression Analysis

Regression analysis will be adopted for this study as it was most suitable for analysis that involved space and time dimensions. In this study, the data for the selected insurance firms' will be collected over ten years for the purpose of analysis. Also, panel data measure repeated observations on the same cross-section, typically of individual variables that are observed for several periods. (Pesara, Shin, and Smith (2000); Wooldvidge, (2003); Baum, (2006) as cited by Uwuigbe (2011). It is a combination of time series and cross-section data otherwise called longitudinal data, that is, a study of time of a variable or group of subjects. It is basically event history analysis which is most suitable for this work as it depends immensely on secondary data of the selected firms. The panel data regression models make use of three basic estimators; these are Pooled regression, fixed effects estimator and Random effect estimator. Hausman specification test to determine the most appropriate for the hypothesis testing.

Model Specification

The study adopt the following regression models which examined monetary policy variables and performance of insurance firms with the aim of attending to various research questions put forward by the study.

Functional Relationship

ROE= f (INC, INI, IIR, ICP) (1)

$ROE = Y_0 + Y_1 INC + Y_2 INI + Y_3 IIR + Y_3 ICP + \epsilon it$

Where i' stands for the individual firms, t' denotes time (years in this work) while ϵit is the error term or residuals. The models are semi-logged to eliminate the possibility of inconsistent results due to differences in data. In addition, this action helps to normalize the series. The models can be estimated using pooled, fixed effects and random effects estimators. A pooled estimator assumes that the intercepts (α's) and the residuals are constant across s and time. With this assumption, the models can be estimated using the ordinary Least Square (OLS). When fixed effects are assumed, then the error becomes: $\epsilon it = \mu i + \upsilon it$

Where:

μi is the unobserved individual- specific effects which do not vary with time and υit is the remaining error term. When a random effect estimator is employed, μi now becomes random.

$\upsilon i + \mu it$ Where $\upsilon i$is individual effects which is fixed through time but varies across firms and μit is the error term.

Where

ROE = Return on equity

INC = Insurance Claims proxy by net premium income

INI = Insurance income proxy by profit after tax to expenditure

IIR = Insurance intermediation ratio proxy by total insurance assets to gross domestic product

ICP = Insurance claim payment to profit after tax

A-priori Expectations

These are the expectations about the nature of the relationship between the independent variables and the respective dependent variables, that is, how monetary policy variables relate to the financial performance of insurance. Theoretically, a high interest rate will reduce residual income available to firm. The variables are expected to relate positively with profitability of insurance firms.

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Correlated Random Effects - Hausman Test

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		1.653775	4	0.7991
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
INI	-0.018581	-0.077607	0.002643	0.2509
INC	0.002510	0.007592	0.000027	0.3293
IIR	-0.003542	-0.002081	0.000006	0.5408
ICP	0.003265	0.002443	0.000005	0.7209

Source: Computed from E-view 9.0, 2022

Hausman specification test has been used to determine which one of the alternative panel analysis methods (fixed effects model and random effects model) among the 3 panel regression models should be applied. With regard to this, H_0 hypothesis claims that random effects exist and H_1 hypothesis claims that "random effects do not exist. The results of the Hausman specification show that random effect model was appropriate. Table 4.1 presents results on the cross sectional differences between random and fixed effect models. Results proved that there are significant difference between the random effect and the fixed effect models.

Table 2: Descriptive Statistics

	ROE	INI	INC	IIR	ICP
Mean	3.966400	7.292600	39.84200	60.85516	142.0190
Median	4.220000	7.710000	39.65000	59.50500	132.4200
Maximum	6.900000	14.72000	72.10000	98.63000	370.4100
Minimum	1.250000	0.000000	12.90000	20.91000	3.290000
Std. Dev.	1.172445	4.452898	14.34610	23.02532	119.4862
Skewness	-0.124086	-0.225375	0.074806	0.093764	0.472443
Kurtosis	2.723089	1.975256	2.468783	1.855314	1.987829
Jarque-Bera	0.288062	2.610993	0.634533	2.803069	3.994377
Probability	0.865861	0.271038	0.728137	0.246219	0.135716
Sum	198.3200	364.6300	1992.100	3042.758	7100.950
Sum Sq. Dev.	67.35675	971.5868	10084.72	25978.10	699570.5
Observations	50	50	50	50	50

Source: Computed from E-view 9.0, 2022

Descriptive measures involved mean, maximum, minimum, standard error of estimate, skewness and kurtosis. Mean is a measure of central tendency used to describe the most typical value in a set of values. The standard error is a statistical term that measures the accuracy within a set of values. Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the center point. Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution

(Cooper and Schindler 2008). The results showed that return on equity had a mean of 3.966400 with a minimum of 1.250000, a maximum of 6.900000, skewness 0.124086 and kurtosis of + 2.723089. Comparatively, insurance net premium income had a mean of 7.292600, minimum of 0.000000, maximum of 14.72000, skewness of -0.225375 and kurtosis of 1.975256.

Table 3: Presentation of Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Presentation of Pooled Effect Model				
INI	-0.096820	0.042618	-2.271811	0.0279
INC	0.009728	0.012409	0.783932	0.4372
IIR	-0.000797	0.008794	-0.090669	0.9282
ICP	0.002451	0.001589	1.542781	0.1299
C	3.985337	0.830648	4.797866	0.0000
R-squared	0.144204	Mean dependent var		3.966400
Adjusted R-squared	0.068133	S.D. dependent var		1.172445
S.E. of regression	1.131799	Akaike info criterion		3.180134
Sum squared resid	57.64364	Schwarz criterion		3.371336
Log likelihood	-74.50335	Hannan-Quinn criter.		3.252945
F-statistic	1.895656	Durbin-Watson stat		1.669080
Prob(F-statistic)	0.127693			
Presentation of Fixed Effect Model				
INI	-0.018581	0.072031	-0.257952	0.7979
INC	0.002510	0.013528	0.185566	0.8538
IIR	-0.003542	0.009023	-0.392570	0.6970
ICP	0.003265	0.003009	1.085329	0.2850
C	3.753686	0.939796	3.994150	0.0003
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.680027	Mean dependent var		3.966400
Adjusted R-squared	0.556148	S.D. dependent var		1.172445
S.E. of regression	1.077025	Akaike info criterion		3.217778
Sum squared resid	41.75938	Schwarz criterion		3.753145
Log likelihood	-66.44445	Hannan-Quinn criter.		3.421649
F-statistic	7.697464	Durbin-Watson stat		2.270662
Prob(F-statistic)	0.000020			
Presentation of Random Effect Model				
INI	-0.077607	0.050454	-1.538168	0.0310
INC	0.007592	0.012485	0.608082	0.5462
IIR	-0.002081	0.008701	-0.239142	0.8121
ICP	0.002443	0.001937	1.661310	0.0137
C	4.009544	0.862165	4.650555	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.542766	0.2025
Idiosyncratic random			1.077025	0.7975
Weighted Statistics				
R-squared	0.882802	Mean dependent var		2.632694
Adjusted R-squared	0.701274	S.D. dependent var		1.049240
S.E. of regression	1.048572	Sum squared resid		49.47764
F-statistic	1.015621	Durbin-Watson stat		1.907822
Prob(F-statistic)	0.409493			
Unweighted Statistics				
R-squared	0.138854	Mean dependent var		3.966400
Sum squared resid	58.00400	Durbin-Watson stat		1.618124

Source: Computed from E-view 9.0, 2022

The study found that 88.2 percent and 70.1 percent changes in return on equity of the quoted insurance firms can be traced to changes in the independent variables; the model is statistically significant from the F-statistics and probability while the Durbin Watson indicates the absence of serial autocorrelation among the variables within the time scope covered in the study. The variable coefficient indicates that insurance income have positive but no significant effect on return on equity of the quoted insurance firms, insurance claims have negative effect, insurance assets have negative effect while insurance claim payment have positive effect on return on equity of the insurance firms.

DISCUSSION OF FINDINGS

The estimated model found that insurance income and intermediation have negative and no significant effect on the return on equity of insurance firms. the study found the if the variables are increase by 1 percent, return on equity of the insurance firms will fall by 0.077 and 0.002 percent over the periods of this study. The negative effect of the variables does not correspond with the objectives of the study and fail to correspond with theories such as financial intermediation theory as well as management efficiency theory. The negative effect of the variables could be traced to poor performance and penetration of the insurance market in the emerging financial markets like Nigeria. Empirical evidence has shown that while the assets of commercial banks are 70-90 percent of gross domestic product per year that of insurance is less than 10 percent per year.

Empirically, the negative effect of the variables contradict the findings of Oyedeko and Zubairu (2019) that insurance investment, insurance claim and insurance premium exhibit dynamic effect on insurance companies' growth, profitability and penetration, Francis and Butler (2010), Scott (2015) return on equity and return on investment, anything within 10% and 14% are considered desirable. The term investment may refer to total assets or net assets, Kaguri (2013) that the variables were statistically significance to influencing financial performance of life insurance companies as indicated by the positive and strong Pearson correlation coefficients, Daniel and Tilahun (2013) that insurers' size, tangibility and leverage are statistically significant and positively related with return on total asset; however, loss ratio (risk) is statistically significant and negatively related with ROA, Eze and Victor (2013) that the insurance premium has significantly impacted on economic growth in Nigeria and that there is causal relationship between insurance sector development and economic growth in Nigeria, Muhaizam (2013) that size of the company, reinsurance dependence and solvency margin are statistically significant determinants of the investment performance of the general Islamic insurance companies in Malaysia.

The estimated model also found that insurance net premium and claims payment have positive and significant effect on the return on equity of insurance firms. the study found the if the variables are increase by 1 percent, return on equity of the insurance firms will fall by 0.75 and 0.02 percent over the periods of this study. The positive effect of the variables does correspond with the objectives of the study and correspond with theories such as financial intermediation theory as well as management efficiency theory. Empirically, the positive effect confirms the findings of

Mwangi and Iraya (2014) that financial performance was positively related to earning assets and investment yield. Lee (2014) that underwriting risk, reinsurance usage, input cost, return on investment (ROI) and financial holding group have significant influence on profitability in both operating ratio and ROA models.

Our findings also align with the finding of Yusuf and Ajemunigbohun, (2015) that managing claims effectively and efficiently had significantly affected operational process in claims management and thus, promptness in claims handling processes does essentially assist in fraud detection and prevention, the findings of Angima and Mwangi (2017) that there is a significant positive relationship between underwriting and claims management practices employed by the firms and non-financial performance, but the relationship with financial performance was insignificant, Mwangi (2013),Wabita (2013) hat; growth of the insurance industry positively affects financial performance, leverage of the insurance industry negatively affects financial performance, and the amount of tangible assets held by the industry positively affects financial performance and the findings of Agbamuche (2012).

CONCLUSION

The Hausman test of the validity of the model found that random effect model is significant. From the random effect model the study found that 88.2 percent and 70.1 percent changes in return on equity of the quoted insurance firms can be traced to changes in the independent variables. The model is statistically significant from the F-statistics and probability while the Durbin Watson indicates the absence of serial autocorrelation among the variables within the time scope covered in the study. The variable coefficient indicates that insurance income have positive but no significant effect on return on equity of the quoted insurance firms, insurance claims have negative effect, insurance assets have negative effect while insurance claim payment have positive effect on return on equity of the insurance firms.

From the findings, the study concludes that there is significant relationship between insurance claim payment and return on equity of quoted insurance companies in Nigeria. The study concludes that there is no significant relationship between insurance claim payment and return on equity of quoted insurance companies in Nigeria. The study concludes that there is no significant relationship between insurance income and return on equity of quoted insurance companies in Nigeria. The study concludes that there is significant relationship between insurance expenditure and return on equity of quoted insurance companies in Nigeria.

RECOMMENDATIONS

i. The management of the listed insurance firm in Nigeria should focus more on increasing premium income than expenditure. The current level of their net claim to premium is contributing negatively to their performance measured by return on equity at insignificant level.
ii. The management of listed insurance firm is advice to see how they can the level of insurance penetration as this can increase the rate of financial intermediation thereby increasing the level of profitability.
iii. The management of listed insurance firms in Nigeria should increase their marketing strategies to encourage premium growth and invest idle cash in more profitable investment to increase their return on asset position.
iv. The management of insurance companies should ensure that optima combination of assets should form their portfolio and should involve in diversification of investment from riskiest sector to some risky free sector in order to enhance their performance.
v. Management should devise a control mechanism to enhance flexible payment of premium for the policies holders and develop new products to increase the market share of insurance companies in Nigeria as well as their performance among the non-financial institutions.

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FINANCIAL RE-ENGINEERING AND PERFORMANCE OF QUOTED SMALL AND MEDIUM SCALE ENTERPRISES

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ABSTRACT

This study examined the effect of financial re-engineering on the performance of quoted small and medium scale enterprises. Panel data obtained from 10 quoted small and medium scale enterprises firms from 2012 - 2021 obtained from the Nigerian Exchange Fact book and annual reports of the quoted firms. Return on equity as the function of Innovated life insurance investment, Option transactions, Innovated preference securities, Innovated common stocks, Common equity, Leverage buyout, Venture capital, Assets Based funds and Financing mix. Panel data methodology is employed while the fixed effects model is used as estimation technique at 5% level of significance. Fixed effects, random effects and pooled estimates were tested while the Hausman test was used to determine the best fit. The estimated models found that 41.1 percent and 55.1 percent variation in the return on equity of the quoted small and medium scale enterprises. Coefficient of the variables found that electronic transactions have positive and significant effect, innovative life insurance investment have positive but no significant effect, options have positive but no significant effect, preference stock capital and common stocks have positive and no significant effect on return on equity of the quoted small and medium scale enterprises. Furthermore, the study conclude that equity capital, leverage buyout, venture capital and assets based financing have positive but no significant effect while financing mix have negative and significant effect on return on equity of the quoted small and medium scale enterprises within the periods of the study. From the findings the study conclude the impotence of financial re-engineering on in determining performance of quoted firms and recommend proper application of financial re-engineering variables as operational philosophy of the quoted firms.

Keywords: Financial re-engineering, performance, small and medium scale enterprises

INTRODUCTION

There are an estimated 37,067,416 million Micro, Small and Medium Enterprises in Nigeria, out of which over 36,994,578 million are micro-enterprises, 68,168 are Small and 4,670 are medium (SMEDAN 2013). Micro, Small and Medium Enterprises represent 96% of the businesses in Nigeria and contribute 84.02% of national employment. In nominal terms, the sector contributes an estimated 46.54% to the nation's Gross Domestic Product (NEPZA 2013). Thus growth in the Micro, Small and Medium Enterprises sector is directly linked with growth in the Nigerian economy and in the level of employment. The total number of persons employed by the small and medium scale enterprises as at December, 2017 stood at 59,741,211, representing 84.02% of the total labour force. This implies the relevant of small and medium scale enterprises to the economy.

Change has become a general phenomenon of business environment in this age of globalization where business transactions are dynamic. Management is compelled to adapt to the change to be

profitable, remain liquid, grow and at the same time survive. The markets are competitive and if once the enterprise is rejected by the market, it is hardly possible for the enterprise to recover instantly. The small and medium scale enterprises (SMEs) of the world are facing this situation like the large firms (Mason *et al.*, 2008). Blackwell (2012), warned that SMEs could well lose contracts in both the domestic and international markets if they remain slow in grasping and adopting financial models as a transformative technology and process. Small and medium enterprises performance forms an important part of the Nigerian economy.

Financial re-engineering involves the design, the development, and the implementation of innovative financial instruments and processes, and the formulation of creative solutions to problems in finance. The term innovative is used here to describe a solution that is non- trivial (Revathy & Santhi, 2008). Innovative financial solutions may involve a new consumer type financial instrument, new security, such as money market preferred stock; a new process, such as the shelf registration process; or a creative solution to a corporate finance problem, such as the design of customized security arrangements for a project financing or a leveraged buyout. The definition of corporate financial reengineering distinguishes three types of activities.

The first, securities innovation, involves the development of innovative financial instruments, including those developed primarily for consumer-type applications such as new types of SACCO accounts, new forms of mutual funds, new types of life insurance products, and new forms of residential mortgages (Onduko, 2013). Innovative financial instruments also include those developed primarily for corporate finance applications such as new debt instruments; options, futures, and other new risk management vehicles; new types of preferred stock; new forms of convertible securities; and new types of common equity instruments (Batiz & Woldesenbet, 2006). The second branch of corporate financial engineering involves the development of innovative financial processes. These new processes reduce the cost of effecting financial transactions and are generally the result of legislative or regulatory changes (for example, the shelf registration process), or technological developments (electronic security trading). The third branch involves creative solutions to corporate finance problems. It encompasses innovative cash management strategies, innovative debt management strategies, and customized corporate financing structures such as those involved in various forms of asset-based financing.

Studies of financial reengineering and corporate performance have been well documented in literature (). However, significant proportion of the study are studies carried out in foreign business environment which results cannot be applied in the emerging business environment like Nigeria where the financial market is characterized with information asymmetries and the degree of market imperfection, therefore, this research examined the effect financial re-engineering and performance of quoted small and medium scale enterprises in Nigeria.

LITERATURE REVIEW

Theoretical Framework

Managerial theory of firms

Managerial theory of firm was developed by Bumole in the year 1967 in his book called business behaviour, value and growth. This theory is based on the complex nature of the modern manufacturing sector. The theory states that the reason why managers are hired is for revenue maximization and not for profit maximization. This theory believes that for the economy to grow faster through industrialization, the country needs to increase its public expenditure so as to facilitate the developmental processes of their economies. The theory emphasizes that a firm's decisions whether to grow or not depends on the level of fiscal policy because the firm grows through government expenditure on industrialization. This is the theories of which this research is based.

Market power theory

Market power theory emanated from Bain (1951). This theory stresses that an increase in market power results to a monopoly, profits (Athanasoglou, Brissimis and Delis, 2005). The theory is based on the premise that concentration of the market is a best measure for market power since more concentrated markets exhibit superior market imperfections facilitating various entities to set prices for their products and services at levels which is less favourable to their clients or customers (Punt and Rooij, 2001). The theory also affirms that companies with a large market share and sound differentiated products and services can easily earn monopolistic profits and succeed or win against their competitors (Nkegbe & Yazidu, 2015). The market power theory assumes that extra profits results from a higher market concentration which allows commercial banks to collude and earn supernormal profits which arise due to the firms portfolio of differentiated products that also increases the market share and market power in determining prices for products.

Efficiency theory

The efficiency theory was formulated by Demsetz (1973) as an alternative to the market power theory. The efficiency theory presupposes that better management and scale efficiency results to higher concentration thus greater and higher profits. Accordingly, the theory posits that management efficiency not only increases profits, but also results to larger market share gains and improved market concentration (Athanasoglou, Brissimis and Delis, 2005). The efficiency theory also states that a positive concentration profitability relation may be a sign of a positive connection relating to efficiency and size. The theory postulates that positive association between the concentration and profit arise from a lower cost which is mainly achieved through production efficient practices and increased managerial process (Birhanu, 2012).

Agency theory

The Agency theory serves as an appropriate approach for board diversity and its effects on business performance in one-tier and two-tier systems (Berle and Means, 1932; Jensen and Meckling, 1976). The board of directors or the management board and supervisory board within listed public companies represent the agents of the shareholders (principals) because they adopt and execute business management and monitoring on behalf of the shareholders (Yermack, 1996; Daily et al., 2003). The major problems of the agency theory are information asymmetries due to hidden characteristics, hidden information, hidden action and hidden transfer. Therefore, the risks of adverse selection and moral hazard increase (Jensen and Meckling, 1976). Furthermore, conflicts of interests between the corporate administration and the capital market rise. The corporate administration ideally operates in the investors' interests by considering the shareholder value-policy. Through monitoring and bonding, which also causes agency costs, hidden actions are supposed to be reduced.

Empirical Review

Thakkar (2017) examined financial engineering as a factor leading to growth of financial market in India with the major aim of understanding the concept of financial engineering, the functions carried out by it and also factors that can affect financial engineering. It was stated in the study that financial engineering involves itself with the designing, development and implementation, processing and also formulation of creative solution to financial problems. These solutions are carefully examined and created and applied to financial market problems that will provide already processed solutions, these processes was used to hedge against future risks some of which are elements of forward, future options and swaps and foreign currency risks. The study concluded that financial engineering is one of the basics of a good financial system that is the life blood of an effective and efficient system. Financial engineering and its innovative products have played an important role in expanding sources of finance and meeting investors and issuers" requirements which can also help managers abreast of their rivals, controlling volatility, risk management and reduce stock risk.

Sanjo and Ibrahim (2017) studied the effect of international business on SMEs growth in a competitive environment, using Nigeria as a case study. This study adopted ordinary least square method of data analyses. And it was discovered from the findings of the study that trade openness as a proxy of competitiveness and FDI has no significant effect on SMEs growth in Nigeria. However, findings revealed that the exchange rate has a significant effect on SMEs growth in Nigeria, and the extent at which exchange rate affects SMEs growth is relatively high. It was further revealed that the exchange rate has a negative coefficient indicating that, as the exchange rate reduces SMEs growth increases.

Shinozaki (2014) conducted a research on how capital market financing for SMEs can needs to grow in Asia. The study was conducted with the aim of exploring the potential of capital market financing for SMEs in emerging Asia and also reviewing the challenges of existing SME capital markets and assessing demands on SMEs, regulators, policy makers, market organizes, securities firms and investors for developing an SME market. It stated that due to the emerging Asias rapid growth, it has ensured that the SMEs long term funding needs and require robust capital markets as an alternative channel for providing their capital growth. The study concluded that SME capital market can raise demand creation focusing on target segments such as social enterprises and women-led SMEs with designing a low cost structure for SME access to capital market, establishment of investor base that provides initial risk capital for potential growth-oriented SMEs with fostering the venture capital industry, facilitate measures for access to an SME market backed by a comprehensive policy support framework and strengthen market literacy for potential SME issuers and investors.

Nwanyanwu and Ogbonnaya (2018) worked on the budgetary control and financial performance of small and medium sized enterprises in rivers state with the major aim of determining if any relationship exists between budgetary control and financial performance. The study which has a population of 74 companies who are manufacturing, construction, engineering and related services was finally slimmed down to 63 through Taro Yamani formula for which copies of questionnaire were administered to the management of the sampled companies. The findings showed that there is a significant relationship between budgetary control and financial performance and also budgetary control can be used to drive growth and sustainability of small and medium sized enterprises in Rivers State. At the end of the study, it was recommended that the Trade Association and organized private sectors like the Port Harcourt Chamber of Commerce, Mines and Industries, Manufacturers Association of Nigeria and other related associations should periodically organize sensitization workshops for small and medium-sized enterprises on the benefits of implementing budgetary control in their businesses.

Katarzyna (2017) examined how the impact of training on employees motivation in SMEs industry. It was stated categorically that micro, small and medium sized enterprises constitute the dominant form of business organizations in all countries of the European Union. Using figures, 23 million representing 99% of enterprises in the European Union are SMEs and this shows the importance of the SME to those countries involved. It stated that training are in four stages which are adaptive (acquiring new knowledge and skills needed by the organization), Modernization (continuous improvement of the already gained knowledge and skills in order to respond to changes in the organization), innovation (creating the right conditions for development) and social (integration of members of the organization with each other). 70 copies of questionnaire were administered to employees of different organization and the results showed that forms of trainings are most effective and indicate what the expectations for the future on how to conduct trainings. Organizations are also advised to pay attention to useful trainings because in greater extent they motivate employees. The Securities and Exchange Commission (SEC) of Nigeria conducted a research in 2016 on how capital market financing for SMEs can strengthen then and also boost their possibility of survival. They identified that micro, small and medium enterprises face a financing gap that restricts their economic success. The SEC is now coming into the discussion on how the SMEs can raise capital from the capital market. It was stated in the report that SMEs that are not well structured and with no strong financial ground will continue to have high staff turnover due to the fact they may not have the financial strength to keep their staff. Also, as part of the reports recommendation, it was stated that is it important for regulators to set up training and education initiatives in order to promote SMEs compliance with the SEC regulations. If SMEs can invest carefully and efficiently on their staff, they will be able to explore opportunities available to them not just from the capital market alone but every other forms of raising finance not common to the general public.

Gervasoni *et al.* (2018) opined that the value of a company has important implications for a successful differentiation strategy. This was stated in their study on the analysis of differentiation strategy and profitability of business auto parts industry in Brazil. The study aimed at investigating how costs and expenses explain profitability of companies" most especially statistical analysis of differentiation strategy in product quality. Data were obtained from 10 companies in the auto part business through questionnaire and interview. This study which was first discussed by Porter in 2004 concluded that expenses are directly or indirectly goods or services consumed for obtaining revenue thus this shows that cost and expenses explains the profitability of the company with emphasis on generic strategy of differentiation in product quality.

Shafiwu and Mohammed (2016) examined the effect of product differentiation on profitability in the petroleum industry of Ghana. The study stated that firms differentiate their products to avoid various competitions but performance depends critically on the degree of location. 15 oil marketing companies in Ghana were carefully examined for this study with questionnaires and interviewed used in obtaining information for the purpose of the study. At the end of the research,

it was discovered that there exist a positive relationship between product differentiation and profitability in the companies examined. These figures are low due to the fact that the petroleum industry as not really benefited from differentiation compared to other industries. It was recommended to the companies under review that more products should be differentiated in order to increase their profitability and also existing product should be improved and awareness should be created for them.

Mugori (2012) sought to determine the effects of access to microfinance on the financial performance of small and medium enterprises owned by youths in Nairobi Kenya by examining how venture capital can influence the performance of SMEs owned by youth financing in Nairobi, Kenya. A sample of 100 youths" owned SMEs was selected from a population of over 235,000 SMEs using a simple random sampling technique. The study found that most SMEs borrow investment capital with few inheriting their business from their parents or guardians. The empirical results further revealed that loan had the largest significant effect on the financial performance of small and medium enterprises with a beta coefficient of 0.309 followed by savings mobilization with a beta coefficient of 0.210 and training in micro enterprise investment had the least but significant effect with a beta coefficient of 0.048. Based on the findings, the study concluded that provision of microfinance services has a significant effect on the financial performance of the youths" owned enterprises in Kenya.

Revathy and Santhi (2008) assessed the financial reengineering effect on State Bank of India. The purpose of this study was to evaluate the state bank's economic performance. The secondary analysis data is the Balance Sheet (2008 to 2012). In order to analyze the data, the researcher applied ratio analysis. Based on the results of the data analysis, some suggestions have been provided. The study infringed that the bank could make a long way to better serve its stakeholders and can enhance it through the implementation of the suggestions of restructuring the financial department activities and operations.

Terziovski, Fitzpatrick and O'Neill (2003) conducted a research on the business process reengineering in the financial sector in Australia. A cross-sectional research report based on a survey questionnaire forwarded to BPR-implementing strategic business units within the Australian Financial Services sector. The study focused on the pro-active application of BPR as part of the organization's business strategies, together with the focus on key business processes for BPR's clients. The implications of these findings are that managers need consumers to re-engineer their core operations. The paper asserts that attitudes and culture change, extensive communication and resistance against change from middle management are the key obstacles for successful implementing BPR.

Khuzaimah (2011) aimed at assessing the impact of reengineering on corporate performance and finding out how business process reengineering can assist organizations implement innovative and strategic administrative changes in Malaysian Banks. Data from the primary source, evaluated through basic percentage analysis and regression analysis, were collected for this current research. The paper concludes that reengineering of business processes has become the instrument used to improve their current organizational performance by any corporate organization that seeks to achieve cost management strategies in its business and the environment. They proposed that reengineering processes remain effective tools that enable organizations to operate as effectively and efficiently as practicable. In order to achieve successful performance and long-term strategy for organization's growth and performance, organizations' should reengineer business processes.

Revathy and Santhi (2014) did a study of financial reengineering in Ashok Leyland Ltd in Hosur. Secondary data was collected between year 2009 and 2013 from the financial reports. Financial restructuring is becoming a key component of the world's financial and economic system. In the context of management decisions, government policies, and foreign direct investment policy, as well as for public policy implementation, industrial reorganisation has been important. In India, since 1991, domestic and international competition, competitiveness and the implementation of the Liberalisation Privatisation and Globalisation (LPG) have become increasingly subjected to Indian industries. Through capital recycling, businesses have now restructured their operations into their core business activities. However, this study was done in Ashok Leyland in India.

Shin and Jemella (2002) investigated during this study the most suitable BPR approaches for financial institutions. The case study involved the collection of primary data for the analzsis. Based on the case study of Chase Manhattan Bank, it was found that at providing guidance for BPR projects in financial institutions led to achievement of significant gains in efficiency. Chase BPR projects include four phases involving a broad range of activities: stimulation, concentration, inventing and initiation. Such efforts resulted in new products or services in addition to dramatically higher sales and operational costs, as can be seen in Chase BPR initiatives like e-fund disbursement cards and service charge reengineering. Aregbeyen (2011) focused on the effect of business reengineering on the performance of First Bank in Nigeria. The performance was assessed in form of growth, profitability and financial development. The data was collected from the year 1986 to 2008. The regression analysis was done on the data. The results revealed that the process of reengineering the projects have a positive significance on the improvement of performance of except for its growth factor. The obliteration of the outdated practices and starting over in the practices in the bank processes was impactful to the development of the bank.

Eniola and Entebang (2015) aimed to assess the financing strategies of SME in Nigeria. The article conceptualized their financing challenges, sources of funding, the ways for exploiting innovative ways of improving funding through crowd-funding, and the need to provide an environmental regulatory framework that supports the growth and promotion of SMEs. One way of fostering economic development in Nigeria for small and medium-sized enterprising businesses to become increasingly important and irreplaceable is by boosting funding by crowdfunding. Nonetheless, it needs to be the government which will help crowd funding in Nigeria in a regulatory environment.

Ngure (2017) did an assessment on the effect of financial innovation on the performance of SACCOs. As of December 31, 2013, the population of the study was 56 SACCOs working and active in Nyeri County. The study employed a cross-sectional survey design and stratified methods used to evaluate the sample of 30 SACCOs. The study concludes that financial developments and the efficiency of SACCOs have an important relationship with telephone banking and internet banking as key drivers of the SACCO financial performance. The report recommends more development in mobile and Internet banking since the two-boost profitability in comparison with ATM banking. Nyathira (2012) conducted a research with the goal to examine

over a four-year period the effects of financial restructuring on the performance of commercial banks as key actors in the banking industry. Study results suggest that financial development actually contributes to the competitiveness of the banking sector, in particular that of the commercial banks. This is also positively linked to profitability in Kenya, as of 30 June 2012. The higher utilization of more efficient financial systems to replace less effective traditional systems is further supported.

Muteke, (2015) conducted a research study to examine whether SACCOs ' financial performance in Mombasa County is influenced institutional innovation, process innovation and product innovation. This research aimed to collect and analyze data on the financial performance of SACCOs in Mombasa Country on the basis of financial restructuring variables. The study populated 165 SACCOs in the county of Mombasa. A representative sample of 36 SACCOs was used in the study. The determination index demonstrated that 23.2% of SACCOs in Mombasa County were influenced by financial innovation. The study found that the financial advancement of the SACCOs in Mombasa County is a predictor of the financial performance. The SACCOs in Mombasa County have made great use of all kinds of financial innovation and all have had a positive effect on their financial results. The study suggested that SACCO Management Boards introduce more product innovation because this had the highest effect of process innovation on financial performance.

Wangui and Muturi (2016) did a study on the financial factors affecting performance of deposit - taking savings and credit co-operative societies in Kiambu County. The study focused on 14 Sacco's licensed by SASRA the regulatory body in Kiambu County by the end of 2015. The study was based on data from the annual Sacco audited reports covering a period of 5 years between 2011 and 2015. The study found that the financial performance of Saccos was positively affected by dividends and investment policy, while the financial performance was impaired by loan policies. The Commission also recommended that Sacco grant default loans to minimize the failure to perform the loan. In order to expand the investment portfolio to provide a sustained way of paying the dividend, the Sacco can aim to educate its Members to increase their savings.

METHODOLOGY

Quasi-experimental research design was used to study the effect of financial reengineering on the performance of quoted small and medium scale enterprises. The population of interest in these study constitute 10 small and medium scale enterprises quoted on the Nigeria Stock Exchange for the period of ten years from 2012 to 2021. Due to the small nature of the population, the study adopted purposive sampling method; therefore the 10 quoted small and medium scale enterprises form the sample size. The study used Secondary data extracted from annual financial reports of the listed small and medium scale enterprises for the period of 2012 to 2021. The Financial reports were obtained from the Nigeria Exchange Reports firm's publications and websites.

Model Specification

In order to achieve the objectives of this study and test of the hypotheses, a functional relationship in form of multiple linear regression model consisting of dependent and independent variables will be formulated. The regression models are presented as follows;

Pooled regression model specification.

$$ROE = \beta_0 + \beta_1 ET_{it} + \beta_2 LI_{it} + \beta_3 OP_{it} + \beta_4 PS_{it} + \beta_4 CS_{it} + \mu_{it}$$

$$ROE = \beta_0 + \beta_1 EC_{it} + \beta_2 LB_{it} + \beta_3 VC_{it} + \beta_4 ABF_{it} + \beta_4 FMIX_{it} + \mu_{it}$$

Fixed Effect Model Specification

$$ROE = \alpha_0 + \alpha_1 ET + \alpha 2LI + \alpha_3 OP + \alpha 4PS + \alpha 4CS + \sum_i^9 = 1\alpha_i idum\varepsilon 1_{it} \quad (4)$$

$$ROE = \alpha_0 + \alpha_1 EC + \alpha 2LB + \alpha_3 VC + \alpha 4ABF + \alpha 4FMIX + \sum_i^9 = 1\alpha_i idum\varepsilon 1_{it} \quad (5)$$

Random effect model specification

$$ROE = \alpha_0 + \alpha_1 ET + \alpha 2LI + \alpha_3 OP + \alpha 4PS + \alpha 4CS + \mu i + \varepsilon 1_{it} \quad (6)$$

$$ROE = \alpha_0 + \alpha_1 EC + \alpha 2LB + \alpha_3 VC + \alpha 4ABF + \alpha 4FMIX + \mu i + \varepsilon 1_{it} \quad (7)$$

Where:

ROE= Return on Equity
LI = Innovated life insurance investment
OP = Option transactions
PS = Innovated preference securities
CS = Innovated common stocks
EC = Common equity
LB = Leverage buyout
VC = Venture capital
ABF = Assets Based funds
FMIX = Financing mix
1ε= Stochastic or disturbance/error term.
t = Time dimension of the variables
α0 = Constant or intercept.

Prior Expectation of the Result

The a-priori expectation of the variables that an increase in the explanatory variables lead to increase in the dependent variables corporate value, therefore it can be mathematical stated as follows:- $a_1, a_2, a_3\ a_4 > 0$.

Technique for Data Analysis

In order to determine the best choice of analysis technique, the study run three types of regression; Ordinary Least Square (OLS), Fixed Effect and Random Effect regression. All these method have various assumptions and conditions that must be fulfilled in order to achieve efficient estimates. However, the best technique was decided by the Hausman Specification test (either fixed effect or random effect regression) and LagrangianMultiplier Test (either random effect or OLS). The random effect has the advantage of accounting for the panel effect in the data as opposed to OLS, which pools the data and treats it as if it were obtained from a single entity.

In order to achieve reliability of the result, robustness tests like Multicolinearity test, Hausman test, Lagrangian multiplier test for random effect and Heteroscedasticity test will be conducted(Gujirati, 2003). The t-test was used to test the hypothesis that a particular coefficient is significantly different from zero or whether the estimated coefficient value occurred by chance in

equation (2). The tests were performed at both 95% and 99% levels of confidence. The F-statistic is important to test the hypothesis that the whole relationship provided by the equation (2) is significantly different from zero, i.e. whether the independent variables' characteristics scores explain the variation in growth indicators for each of the individual firms. The test will be performed at both 95% and 99% levels of confidence. Change The R-squared (R^2) value ranging from '0' to '1' or the 'corrected R-squared' (R2) which is adjusted for degrees of freedom indicates the explanatory power (goodness of fit) of the model.

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Presentation of Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$ROE = \beta_0 + \beta_1 ET_{it} + \beta_2 LI_{it} + \beta_3 OP_{it} + \beta_4 PS_{it} + \beta_4 CS_{it} + \mu_{it}$				
ET	0.514564	0.054727	9.402402	0.0000
LI	0.962503	1.595850	0.603129	0.5480
OP	0.253975	1.011177	0.251167	0.8023
PS	0.010024	0.570453	0.017572	0.9860
CS	1.278024	10.94221	0.116798	0.9073
C	0.363235	0.442944	0.820049	0.4135
Effects Specification				
			S.D.	Rho
Cross-section random			0.178862	0.6528
Idiosyncratic random			0.130448	0.3472
Weighted Statistics				
R-squared	0.622017	Mean dependent var		0.170850
Adjusted R-squared	0.411941	S.D. dependent var		0.129041
S.E. of regression	0.129809	Sum squared resid		2.426467
F-statistic	0.648371	Durbin-Watson stat		1.740432
Prob(F-statistic)	0.663178			
Unweighted Statistics				
R-squared	0.223500	Mean dependent var		0.760241
Sum squared resid	6.442992	Durbin-Watson stat		0.673671
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		1.693729	2	0.1175
$ROE = \beta_0 + \beta_1 EC_{it} + \beta_2 LB_{it} + \beta_3 VC_{it} + \beta_4 ABF_{it} + \beta_4 FMIX_{it} + \mu_{it}$				
Random Effect Results				
EC	0.114602	0.430470	0.266225	0.7902
LB	0.067847	0.142748	0.475290	0.6349
VC	0.137636	0.109757	1.254013	0.2107
ABF	1.185500	1.737644	0.682246	0.4955
FMIX	-1.094525	0.055900	19.58022	0.0000
C	-0.910730	0.050429	-18.05965	0.0000

Effects Specification				
			S.D.	Rho
Cross-section random			0.178862	0.6528
Idiosyncratic random			0.130448	0.3472
Weighted Statistics				
R-squared	0.757073	Mean dependent var		0.375000
Adjusted R-squared	0.551575	S.D. dependent var		9.961794
S.E. of regression	7.377277	Sum squared resid		21247.17
F-statistic	8.137453	Durbin-Watson stat		1.948412
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.553397	Mean dependent var		0.375000
Sum squared resid	21247.17	Durbin-Watson stat		1.948412
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		2.8139842	5	0.2816

Source: Computed by Researchers from E-view 9.0

DISCUSSION OF FINDINGS

The results in the table found that the random effect model was used for the study. The estimated models found that 41.1 percent and 55.1 percent variation in the return on equity of the quoted small and medium scale enterprises was explained by variation in the financial reengineering variables as formulated in the model. From the two models all the explanatory variables are found to have positive effect on the return on equity of the quoted firms except financing mix. The positive effect of the effect of the variables confirm our a-priori expectations and in line with management efficiency theory. The findings is in support of Revathy and Santhi (2014), Shin and Jemella (2002), Aregbeyen (2011) that the process of reengineering the projects have a positive significance on the improvement of performance of except for its growth factor, Eniola and Entebang (2015), Ngure (2017) that financial developments and the efficiency of SACCOs have an important relationship with telephone banking and internet banking as key drivers of the SACCO financial performance. The report recommends more development in mobile and Internet banking since the two-boost profitability in comparison with ATM banking, the findings of Nyathira (2012) that financial development actually contributes to the competitiveness of the banking sector, in particular that of the commercial banks. This is also positively linked to profitability in Kenya, as of 30 June 2012, Muteke, (2015) that the financial advancement of the SACCOs in Mombasa County is a predictor of the financial performance. the findings also supports the empirical findings of Wangui and Muturi (2016) that the financial performance of Saccos was positively affected by dividends and investment policy, while the financial performance was impaired by loan policies, Ngure(2017) that financial innovations in Kirinyaga County have a positive relation to the financial performance of SACCOs, Revathy and Santhi (2008), Khuzaimah (2011) Aregbeyen (2011), Muteke (2015), Wangui and Muturi (2016), Ngure (2017), Revathy and Santhi (2014), Shin and Jemella (2002), Eniola and Entebang (2015), Muteke (2015) Wangui and Muturi (2016). .

CONCLUSION AND RECOMMENDATIONS

This study examined the effect of financial reengineering on the return on equity of quoted small and medium scale enterprises in Nigeria. The estimated models found that 41.1 percent and 55.1 percent variation in the return on equity of the quoted small and medium scale enterprises was

explained by variation in the financial reengineering variables as formulated in the model. Beta coefficient of the variables found that electronic transactions have positive and significant effect, innovative life insurance investment have positive but no significant effect, options have positive but no significant effect, preference stock capital and common stocks have positive and no significant effect on return on equity of the quoted small and medium scale enterprises. Furthermore, the study conclude that equity capital, leverage buyout, venture capital and assets based financing have positive but no significant effect while financing mix have negative and significant effect on return on equity of the quoted small and medium scale enterprises within the periods of the study. Consequently, the study recommends that:

i. Operators of small and medium scale enterprises should adopt financial reengineering strategies in order to enhance performance growth which is sustainable though the adoption of financial reengineering strategies small and medium scale enterprises owners should ensure they offer products and services which have distinguishable features from that of their competitors.
ii. Management of the quoted small and medium scale enterprises should also implement the use of technology in their processes process in order to improve the efficiency and reduce cost of their operations this in turn boost sales and liquidity growth.

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FISCAL ALLOCATIONS AND SOCIO-ECONOMIC TRANSFORMATION: A TIME SERIES STUDY FROM NIGERIA

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ABSTRACT

This study looked the effect of fiscal allocations on the socio-economic transformation in Nigeria. The purpose was to ascertain the effect of fiscal allocation on the socio-economic transformation. Time series data were sourced from Central Bank of Nigeria Statistical Bulletin from 1990-2021. Poverty rate, industrial sector output, infrastructural development and unemployment rate were modeled as the function of federal, state and local government fiscal allocations. The ordinary least square methods was adopted as data analysis techniques. Model one found that 69.4 percent variation in the level of poverty in Nigeria could be traced to fiscal allocations. The study found that federal fiscal allocation and state fiscal locations reduces poverty rate by 1.7 and 0.6 percent over the periods while local government fiscal allocation increased poverty rate by 0.6 percent. The estimated model two found that 90.5 percent variation in output of Nigeria industrial sector could be traced to variation in fiscal allocation of the three tiers of government. The regression parameter found that fiscal allocation of the three tier of government added 3.5, 1.7 and 1.3 percent to the output of the industrial sector within the periods of the study. From model three, the study established that 76.7 percent variation in infrastructural development in Nigeria was traced to variation in fiscal allocations of the three tiers of government. The study found that federal location reduces infrastructural development by 5.6 percent while state and local government allocations added 3.9 and 3.1 percent infrastructural development while model four found that fiscal allocations of the three tiers government explained 86.1 percent variation in Nigeria unemployment rate. The regression model was statistically significant by the value of the f-statistics and probability. The study found that federal allocations reduces Nigeria unemployment rate by 1.5 percent while state and local government allocation added 0.55 and 0.47 to Nigeria unemployment rate. The study concludes that fiscal allocations determine social economic transformation in Nigeria. We recommend that government at all level should ensure well utilization and accountability of allocated funds.

Keywords: Fiscal allocations, socio-economic transformation, federal allocation, state allocation, local government allocation

INTRODUCTION

There are four sectors of the economy as formulated in the nation's income accounting model and shown in the circular flow of income and products. These are the government, the firm, the household and the external sector. Each of these sectors has significant role in achieving macroeconomic goal of full employment, price stability, economic growth and external balance (Ohale & Onyema, 2014). Government has the function of formulating policies, making laws and providing conducive business environment in return for tax from other sectors of the economy. The intervention policy of government through fiscal policy as advocated by the Keynesian economists was to bridge deficiencies of the market system (Gbosi, 2005).

Prior to the Keynesians revolution of the 1930s, monetary policy was the only instrument used in

fine-tuning the economy to achieve sets macroeconomic goals. However, the failure of monetary policy to provide solution to the great depression gave birth to the Keynesian fiscal policy that remedied the great depression. From the Keynesian prospective, government intervention is justified in financing of direct investment which the private sector would not provide an adequate quantity, the efficient supply of certain public services which are necessary to ensure the basic conditions to display the economic activities and long-term investment and the financing of public activities so as to minimize the distortion from the market system (Nurudeen and Usman, 2010).Socio-economic transformation is commonly defined as a process in which an increasing proportion of economic output and employment are generated by sectors other than agriculture.

The conventional wisdom of the Classical economists has been that fiscal variables such as taxation and the level of public expenditure can affect the level of income but have no impact on the rate of economic growth in the long-run (Folster & Hmekson, 2012). The Keynesian economists opposed this view and assigned significant role to the government fiscal policy and its positive long and short- run effect to economic growth. Fiscal allocation is a process by which money generated internally is shared among the different levels of government of a country. However, the definition contradicts the existence of sharing formats of those selected countries which results in unending conflicts among the tiers of government (Athanasius, 2018). Revenue allocation in a Federation involves two distinct strands. First is the vertical allocation of revenue between the three tiers of government i.e. Federal, State and Local Governments and second is the revenue sharing horizontally among the component States and the Local Governments. The various Fiscal Commissions based their recommendations for changes in the revenue allocation system on some principles. Socio-economic transformation is commonly defined as a process in which an increasing proportion of economic output and employment are generated by sectors other than agriculture.

Nigeria practiced federal system of government with 36 states, federal capital territory and 774 local governments. Federalism has emerged as one of the most preferred form of government based on itsintegrative capability to approximate the heterogeneous political life of multi-ethnic and multi-linguisticsocieties. However in the Nigerian situation, the practice of federalism has remained a forebodingnightmare due to the skewed nature of federal practice which has led to serious contestations among theconstituent nationalities thus resulting in endless tinkering and attempts at dissolution. The attraction for federalism in Nigeriaborders on its perceived integrative tendency,which makes it capable of servingheterogeneous societies. In the words of Roberts (2018) when socially and culturallydistinct people find themselves together inthe same polity through circumstance ofhistory, to live peacefully together andgovern together, they have to strike abalance, which must be acceptable to all theparties involved. This paper examined the effect of fiscal allocations and socio-economic transformation in Nigeria.

LITERATURE REVIEW

Theoretical Foundation

Theory of federalism

Federalism can be described as a system of government in which the indications of social, political and economic development are pursued by a coordinated effort of both central and other incorporated units of government. The theory was propounded by K.C. whereas in 1953; who is generally regarded as the father of contemporary federal theories. He defined federalism or federal government, in his Famous book; Federal Government, as the method of dividing power so that general and regional governments are each within a sphere co-ordinate and independent (Danjuma, 2018). Federalism in the words of government Where is an appropriate form of government to offer to communities or states of distinct, differing nationalities that wish to form a common government and to behave as one people for some purposes, but wish to remain independent and, in particular, to retain their nationality in all other aspects.

This portrays federalism as an effective political and constitutional design useful for managing complex governmental problems associated with ethnic and cultural diversity (eg. Nigeria). There are other Scholars of the contemporary period like Ricker (1964), Living Stone (1971) Elazar (1966, 1973) and Friedrich (1963) but K.C. Wheare (1964) work is mostly adopted as the reputed father of (modern) federalism (Akindele, 1995b). Daniel Elazar concurred by defining federalism as a system of political organization uniting separate states or other units in such a way as to allow each to remain a political entity. Contribution to federalism which, as recently noted by Jacob andKehinde (2020) was based in its entirety on the American federal model now forms the bedrock of all federal policies. His doctrine of federalism which, while recognizing the inevitability of conflicts among the components of the federation or any federation, prescriptively advocates mechanism for constitutionally dealing with such conflicts include the following:

i. The division of governmental responsibilities between levels of government.
ii. A written constitution spelling out this division and from which federal and state authorities derive their powers.
iii. A judiciary independent of both levels of government that acts as an arbiter in cases where there are conflicts over the jurisdictions.
iv. The federal arrangement emphasizing co-equal supremacy of the various levels each in its respective field of operation, the citizens of the federation being concurrently under two or more authorities and owning loyalties to them (Akume, 2017). Put together, where views federalism as a form of government with 'the federal principles

Concept of Socio-Economic Transformation

This process of transformation connotes the shift from agricultural based societies to urban, industrial and/or service-based economies with sustained high gross domestic products growth rates. Gross domestic products growth combined with a reduction in the population's growth rate resulting from improvements in educational access and quality increases gross domestic products per capita, which, in turn, reduces poverty. Socioeconomic sustainability could be understood as the ability to ensure economic growth without undermining humans' interests and to meet their needs without harming nature. The concept of sustainable and inclusive socioeconomic transformation has, since 2010, been increasingly used in policy-making, research and media to point at that small adjustments of present production patterns, habits, technologies and policies does not suffice to meet the economic, social, environmental, climate and sustainable development goals.

Fiscal Allocation

Revenue allocation is conceived as the transfer of financial resources from one tier of government to another tier of government, in the same country, under pre-determined criteria or in any agreement to which all the benefiting units have subscribed. In Ikeji's (2011) view revenue allocation involves manner of distributing centrally generated revenue amonglevels of government as well as how each level shares the allocated amount to its component parts.It

connotes a practice whereby one level of government turns over a portion of the revenue it generates from taxation and other sources to another government level which is usually a lower level of government (Sherif, 2018).

In Nigeria, revenue allocation refers to the practice where the centrally generated and controlled revenues are shared among federal, states and local governments as stipulated by the constitution without determining how the fund should be used. It is a statutory distribution of revenue from the Federation Account among the different levels of government (Report of the Political Bureau, 1987). So conceived, the implication is that there are at least two different levels of governmental authorities in the political unit or country and that there may even be more levels or tiers of government. Another implication is that there exists an agreement acceptable to all the tiers of government as to how the sharing is to be done and that such agreement exists (pre-determined) even before the revenue is available to be shared. When it follows normal course, revenue sharing makes for a better relationship between the federal and the federating units. It is the starting point for decentralization of government powers and restoration of balance among all tiers of government (Sherif, 2018).

Constitution and Fiscal Allocation

Tom and Ataide (2021 $RNA_t = f(NPN_t\, LSL_t\, LTA_t)$ in a federal system contains pre-determined rules for the collection, custody and disposal of revenues as well as spell out to each level of government the sources from which it can lawfully derive independent revenue (Ubok-Udom & Ndiyo 2004). is normal for such collection to be $RNA_t = \alpha_0 + \beta_1 NPN_{t-1} + \beta_2 LSL_{t-2} + \beta_3 LTA_{t-3} + \mu_{it}$ t is coordinating the activities of the component units in order to generate confidence among the units (Taiwo, 1999). Where revenue is shared before it is collected –that is where sources of revenue are allocated to each tier of government –the understanding is that each tier will keep within the limits of the resources allocated and not seek directly or indirectly to collect revenues from sources not allocated to it (Imeh, 1994). The constitution at times contains and often includes an agreement on how to allocate revenue and revenue sources to each unit but notthe size of revenue. Once the conditions of sharing have been determined, it is in the interest of all tiers to work to increase the size of revenue because what each unit gets depends on the size of revenue available to be shared.

There are statutory provisions for revenue sharing and powers to generate revenue through specific sources (Tom & Ataide, 2021). The 1979 and 1999 Constitutions of the Federal Republic of Nigeria, established the type of fiscal relationships that would exist among the various levels of government. For example, section 149(2) of the 1979 Constitution or section 162(3) of the 1999 Constitution stipulates that any amount standing to the credit of the Federation Account shall be distributed among the federation, state governments and the local government councils in each state on such terms and in such manner as may be prescribed by the National Assembly. Similarly, the 1999 Constitution provided for states-local government financial relationship under section 162 sub-sections. This section states the amount standing to the credit of the local government councils of a state on such terms and in such manner as may be prescribed by the House of Assembly of a state. Apart from the constitutional provisions of external revenue to local government, Model Financial Memoranda for Local Government (1991) and section 45 of Decree 19 No 36 of 1998 and the 1999 Constitution as contained in the fourth schedule provide for internal sources of revenue generation by Nigerian local governments.

Despite all these constitutional provisions, other tiers of governments almost invariably depend in part and sometimes very heavily upon transfers from federal governments to finance the services for which they are responsible (Omelle, 2004). This is due to the fact that in most countries whether formally federal or not, there is clearly vertical competition between levels of government for revenue and perhaps because as a rule local government have access only to those revenue sources that higher levels of government do not want for themselves.

Tom and Ataide (2021) noted that under section 149 of the outdated 1979 constitution, provision is made for the creation of "Federation Account" from which allocations of revenue are made to the three tiers of government. The 1999 constitution makes a similar provision in section 162. But whereas the 1979 constitution left it for the National Assembly to determine the principles to be employed in allocating revenue to each tier and to state or local government councils, the 1999 constitution went further to provide the principles which the government should consider thus leaving it to the National Assembly to determine only the weights which should be attached to each principle. In the 1979 constitution both the principles and weight were to be determined by the National Assembly.

The president, upon receiving advice from the Revenue Mobilization Allocation and Fiscal Commission, shall place before the National Assembly proposals for revenue allocation from the federation account and in determining the formula, the National Assembly shall take into account the allocation principles especially those of population, equality of states, internal revenue generation, land mass, terrain as well as population density. In addition to these provisions section 162 (2) of 1999 constitution even provides that at least 13% revenue should be allocated on derivation principle that is to say that the weight attached to the principle of derivation is at least 13% thus trying to assuage oil producing states that have been complaining about the allocation of 1.5% from derivation before now. It should be noted that this provision is not in respect of oil mineral alone but it applies to all other minerals and natural resources which contribute directly to the federation account.

It is also provided that the principle of derivation shall be constantly reflected in any approved formula as being not less than thirteen percent of the revenue accruing to the Federation Account directly from any natural resources. The bases or principles upon which revenue is to be distributed to the three tiers of government in Nigeria and among states and local government areas as provided by the1999 constitution include derivation, population, equality of states, internal revenue generation, land mass, terrain and population density.

The constitution does not, however, compel the National Assembly to use the above principles only but merely says that whatever principles are prescribed by the National Assembly should include these ones. It would be unlawful for vertical allocation to be made to any beneficiary other than the federal, states and local governments although provision must be made for derivation. There is nothing in the 1999 constitution which forbids the National Assembly from allocating funds for these and other National needs through appropriate Acts of the Assembly provided such provision are not made directly from the federation account. The current vertical allocation sharing formula is as follows:

1. Federal Government-52.68%
2. State Government-26.72

3. Local Government-20.60

It is pertinent at this point to note that derivation is not based on the total amount in the federation account but on that part of it which is derived from mineral resources –example crude oil. It is presumed that the derivation allocation is set aside before vertical allocation as indicated above is made.

There are allocations that are mandatory by the constitution. Such allocations are judiciable. That is to say that they are enforceable in law if the president or anyother authority fails to make them. When the Obasanjo administration, for example, failed to release the allocation for Lagos State Government as required by the constitution, the Lagos State Government went to the Supreme Court to demand for it. The Supreme Court ordered the release of the funds. There are however, some allocations which the president can make to states which are not enforceable in law. To such, is discretionary allocation; they are made often from the contingency fund in time of natural disasters at the discretion of the president who determines the nature and size of the transfer, if he decides not to do transfer, the beneficiary cannot compel him to do so. Furthermore, section 164 (1) of the 1999 constitution empowers the president to make grants to state government under terms approved by the National Assembly and such grants are discretionary and not mandatory.

The 1999 Constitution as Omelle (2004) notes is a refurbishment of the 1979 Constitution, modeled after the American presidential system without the required political will to address the geo-political structure of the Nigerian federation, as did Canada, Australia and the U.S.A itself.Omelle (2004) observes that the above three federations, there is hardly any federating component (state) or region as helplessly dependent financially on the centre as we have it in Nigeria. In the United States, for instance, some states pay higher wages on their workers than some federal staff doing similar jobs. In Canada, the region of Quebec is almost independent of the federal treasury, owing to its resourcefulness and Canada's formula of revenue allocation.
Before the 1979 constitution it was common for government to institute ad-hoc fiscal commissions to study and advise them whenever the need arose to alter the fiscal arrangements in the country. At least nine of such ad-hoc commissions had been established besides other extant laws.

Empirical Review

Onwughalu et al. (2018) undertook a study titled "the nature of the Nigerian state and challenges of its constitutional provisions skewed in favour of the federal government as evidenced in the Exclusive Legislative List". It argued that this present arrangement inhibits the pace of development in the country. The study was qualitative in approach and gathered data through secondary sources that were content analyzed using the Structural Functional approach developed by Almond as framework of analysis. Because federal ascendancy defines the nature of intergovernmental relations in Nigeria's federation, the observable functional cooperation is only a vertical pattern of relationship between the federal and state governments on the one hand, and amongst the federal, state and local governments on the other. It found out that in spite of the existence of informal structures like Nigeria Governors' Forum (NGF), Conference of Speakers of State Legislatures of Nigeria (CSSLN) and Association of Local Government of Nigeria (ALGON), that should provide platforms for horizontal partnerships and co-operations between or amongst states and between or amongst local government councils, there is no evidence of such functional collaborations in any sphere which is one of the links that is missing in the inward approach to development in the face of challenges posed by the country's constitution. In conclusion, the recently founded South-East/South South Governors Forum is a further expansion of horizontal co-operation and integration of states and local government councils in the two regions, which is a potential viable platform for rapid development and transformation of states in the zones if pursued with sincerity of purpose. It recommends functional partnerships, collaborations and co-operation between or amongst states and between or amongst local government councils in the following areas: tinkering with provisions of the 1999 constitution that are antithetical to development processes within its jurisdiction, recruitment of leaders, infrastructural development, capacity building, resource sharing.

Chukwuemeka and Aniche (2016) carried out a study titled "inter-governmental relation and the performance of local government in Nigeria". The study adopted survey design, specifically descriptive research was adopted. Data was collected using questionnaire, focus group discussion. Secondary data was generated from government records and Central Bank of Nigeria. The findings revealed among others things that intergovernmental relation has to an extent helped to reduce tension among the three tiers of government in Nigeria. Also the imperfection of 1999 constitution has hampered fiscal relation in the three tiers of government in Nigeria. The study recommended among other things that effort should be made to ensure that all tiers of government should adhere to fiscal transparency, accountability and constitutional provisions on fiscal relations.

Azu (2017) carried out a study titled "fiscal relationship between the Abia State government and the local governments existing within its jurisdiction". The objective was to find out whether the performance crisis of local governments in Abia State in the area of primary health care delivery is associated with the structure of state-local government fiscal relations. The study adopted the coordinate authority model of intergovernmental relations in explaining the dynamics of interactions between the Abia State government and its local governments. A descriptive survey research design was used to obtain primary data using questionnaires, interviews, researcher's observation and focus group discussions. Secondary data were obtained from published works and organizational archives. Data was analyzed using simple percentage, frequency tables and Chi-square. Findings showed that the Abia state government has deviated from its monitoring role of local government finances, and assumed absolute control of local government funds, making it difficult for local governments to access their federal allocation and perform their primary duties. The study concludes that the major reason for establishing local government is to extend governance and development to the grass roots. However, until the lingering issues identified in this work are addressed, local government cannot be strategic in promoting any meaningful national development agenda.

Taiwo (2016) undertook a study titled "competing perspectives on the beleaguered nature of intergovernmental relations in Nigeria". Tracing the evolution of intergovernmental relation in Nigeria and espousing its legal, political and governance antecedents, the paper hazarded the undercurrent for the lingering conflicts between the center and the component units. The article also critically analyzed the impacts of the erstwhile British colonial strategy of division into regions as a means for administering the country and exploration of the mineral endowments in the 1950s on the composition and the current nature of predatory power that the center currently wields, much to the detriments and underfunding of the component units in the federation. The paper found evidences to showcase that because the British colonialists unduly queered the political pitch by allocating more seats to the North than to each of the other two regions at the center, intergovernmental relations in Nigeria has been quite contentious. If anything, a mutual

suspicion between the North-dominated Federal Government and the Southern component units became a logical end. They concluded, among others, that notwithstanding the ample provisions in the 1999 Constitution for veritable intergovernmental relations in Nigeria, there are still the intricate issues of regional domination of the center, leading to lack of political will to induce proper constitutional implementations.

Nwatu and Okafor (2008) rightly observed that in the present democratic dispensation, the local governments are assigned roles and functions to partake in the inter-tier relations which hitherto prevail only between the central, state or regional governments alone. At the end of the reform of the local government, Annual Conferences of Chairmen of Local Governments in Nigeria was created and also the Bi-Annual Conference of Commissioners for Local Governments was established to promote inter-tier relations in the country.

Silk et al. (2019) focused on a topic titled "influence of inter-governmental relations, specifically, in terms of relations between the federal and state governments on road maintenance in Nigeria". The motivation for the study was the deplorable condition of several Nigerian roads which has been largely attributed to role conflicts between the two tiers of government. The influence of three types of inter-governmental relation (Partnership, Principal/Agent and Dual Functionalism models) on road maintenance was examined. The study conveniently drew its sample from staffs of federal and state ministry of works as well as staffs of the Federal Road Maintenance Agency (FERMA) in Enugu State. Data were collected using a five-point Likert scale questionnaire. The reliability of the instrument was ascertained by means of Cronbach Alpha which gave a coefficient of 72 percent. The data obtained were analyzed using frequency, percentages and multiple linear regression analysis. The findings revealed that the partnership model and functional dualism model of intergovernmental relations significantly influence road maintenance in Nigeria. It was recommended that all levels of government should strive to adopt the partnership or functional dualism model of intergovernmental relations. This would enable them to cooperate rather than compete, knowing that they are all partners in national progress.

Osuagwu (2013) dealt on topic titled "inter-governmental relations and the performance of local government in Imo State, Nigeria". The research was carried out through the use of secondary data collected from the review of textbooks, journals, magazines, internet materials, while the primary data collection was through questionnaires administered to 270 respondents, made up of thirty staff from each local government council drawn from nine (9) local governments, three of which were selected from each senatorial zone. The study found out that inter-governmental relations ensure the effective and efficient utilization of human and material resources among the different levels of government. It recommended that the irregularities found in the delivery of essential services can be tackled by having elected officials serve in the local governments (as opposed to selected or appointed officers), practicing true federalism, applying the principle of rule of law, constitutional specification of the areas of jurisdiction for each of the levels of government and granting local governments autonomy to operate freely within the scope of their constitutional responsibilities.

Chukwuemeka and Aniche (2016) examined a topic titled "inter-governmental relation and the performance of local government in Nigeria". The study adopted the survey design and descriptive research method. Data was collected using questionnaire and focus group discussions (FGD). Secondary data was generated from government records and Central Bank of Nigeria. The findings revealed among others things that intergovernmental relations, have loan extent, helped to reduce tension among the three tiers of government in Nigeria despite the fact that the imperfection of 1999 constitution has hampered fiscal relations among the three tiers of government in Nigeria. The study recommended among other things that effort should be made to ensure that all tiers of government should adhere to fiscal transparency, accountability and constitutional provisions on fiscal relations

Farouq et al. (2017) focused on a topic titled " road maintenance management of Kano metropolitan roads and the possible ways of improving it". The authors examined the types of road defect on Kano metropolitan roads, the factors that contribute to the road defects, the road user's satisfaction on the maintenance works carried out by Kano road maintenance management agency (KARMA) and analyzed the problems on road defect reporting system in KARMA. The study was conducted using questionnaires, interviews and maintenance reports available at the KARMA. For data collection, questionnaires administered on staff of KARMA, Kano Urban Planning and Development Authority (KNUPDA), Federal Ministry of Works (FMW) and the road users. Data collected were analyzed using SPSS and Average Index. From the study, the types of road defect found on Kano metropolitan roads are potholes, patching and utility cut, patching/reinstatement of utility openings (electricity, water and telecommunication) and edge cracks. The factors identified as contributing to the road defects are structural failure (due to poor design and construction), inadequate maintenance policy and standards, and the traffic load/volume on the roads. Overall, the road user's satisfaction on the maintenance works carried out by KARMA are came out negative while the road defect reporting system and documentation in KARMA was adjudged unsatisfactory.

Onwughalu et al. (2018) examined a topic titled "the nature of the Nigerian State and challenges of its constitutional provisions skewed in favor of the federal government as evidenced in the Exclusive Legislative List". It argues that this present arrangement impedes the pace of development in the country. The study was qualitative in nature and gathered data through secondary sources that were content analyzed using the Structural-Functional framework. Findings from the study revealed that federal ascendancy defines the nature of intergovernmental relations in Nigeria, therefore, the observable functional cooperation is only a vertical pattern of relationship between the federal and state governments on the one hand, and amongst the federal, state and local governments on the other. It found out that in spite of the existence of informal structures like Nigeria Governors' Forum (NGF), Conference of Speakers of State Legislatures of Nigeria (CSSLN) and Association of Local Government of Nigeria (ALGON), that should provide platforms for horizontal partnerships and cooperation between or amongst states and between or amongst local government councils, there is no evidence of such functional collaborations in several spheres which indicates a missing link in the inward approach to development and integration, especially in the face of challenges posed by the defects in the 1999 constitution

METHODOLOGY

This study is designed to structurally ascertain the effect of fiscal allocations on socio-economic transformation and thus will adopt an ex-post factoresearch design. Ex-post factoor after the fact design attempts to identify a natural impetus for specific outcomes without actually manipulating the independent variable (Onwumere, 2009), ex-post factoimplies after the event. This implies that the event investigated had already taken place. Basically, the nature and source of data for the analysis of this work will be secondary data and gather from the publications of

Central Bank of Nigeria.

Model Specification

$$PR = f(FFA, SFA, LGFA) \quad 1$$
$$ISO = f(FFA, SFA, LGFA) \quad 2$$
$$ID = f(FFA, SFA, LGFA) \quad 3$$
$$UR = f(FFA, SFA, LGFA) \quad 4$$
$$PR = \alpha_0 + \beta_1 FFA + \beta_2 SFA + \beta_3 LGFA + \varepsilon_t \quad 5$$
$$ISO = \alpha_0 + \beta_1 FFA + \beta_2 SFA + \beta_3 LGFA + \varepsilon_t \quad 6$$
$$ID = \alpha_0 + \beta_1 FFA + \beta_2 SFA + \beta_3 LGFA + \varepsilon_t \quad 7$$
$$UR = \alpha_0 + \beta_1 FFA + \beta_2 SFA + \beta_3 LGFA + \varepsilon_t \quad 8$$

Where:
PR = Poverty rate
ISO = Industrial sector output
ID = Infrastructural development
UR = Unemployment rate
FFA = Federal fiscal allocation
SFA = State fiscal allocation
LGFA = Local government fiscal allocations $_0\beta$ = Intercept of the regression, $_1\beta$, $_5\beta$, = coefficient of the Regression ε = the error term capturing other explanatory variables not explicitly included in the model.

A priori Expectation
The a-priori expectation is $\beta_1<0$, $\beta_2<0$ & $\beta_3<0$ Model I
The a-priori expectation is $\beta_1>0$, $\beta_2>0$ & $\beta_3>0$ Model II
The a-priori expectation is $\beta_1>0$, $\beta_2>0$ & $\beta_3>0$ Model III
The a-priori expectation is $\beta_1<0$, $\beta_2<0$ & $\beta_3<0$ Model IV

Methods of Data Analysis
In order to have a proper analysis of the data sourced, the use of multiple regression and E-View shall also be used. In addition, in order to test the appropriateness of our model, the following statistics would be tested.

Coefficient of determination (R^2) test
This measures the explanatory power of the independent variables on the dependent variable. To determine the proportion of real sector into our model we use the coefficient of determination, which varies between 0.0 and 1.0.

F-test. This measures the overall significance:
Decision Rule (F-Test) If f* > f0.05 we will reject the Null hypothesis and accept the alternative. But If f* < f0.05 we will accept the null hypotheses.

The beta also known as the standardized coefficient
It is used to measure the individual contribution of the independent variables to variation in the dependent variable

Student T-test
This measures the individual statistical significance of the estimated independent variables at

0.05 level of significance, we accept null hypotheses for tests with probability estimates lower than 0.05 and conclude that they are statistically significant. On the other hand, we reject when probability estimate are above 0.05 and we conclude that there is no overall statistical significance.

RESULTS AND ANALYSIS OF FINDINGS

Table 1: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Fiscal Allocations and Poverty Rate				
FFA	-1.682670	0.276577	-6.083902	0.0000
SFA	-0.614952	0.223522	-2.751187	0.0109
LGFA	0.608358	0.148493	4.096877	0.0004
C	-0.201982	2.589952	-0.077987	0.9385
R-squared	0.727624	Mean dependent var		-0.299655
Adjusted R-squared	0.694939	S.D. dependent var		25.22730
S.E. of regression	13.93363	Akaike info criterion		8.233929
Sum squared resid	4853.648	Schwarz criterion		8.422522
Log likelihood	-115.3920	Hannan-Quinn criter.		8.292994
F-statistic	22.26165	Durbin-Watson stat		2.371349
Prob(F-statistic)	0.000000			
Fiscal Allocations and Industrial Sector Output				
FFA	3.543930	0.759119	4.668480	0.0001
SFA	1.726272	0.614002	2.811506	0.0108
LGFA	1.394355	0.443618	3.143140	0.0051
C	0.946943	2.757918	0.343354	0.7349
R-squared	0.924734	Mean dependent var		1.683077
Adjusted R-squared	0.905918	S.D. dependent var		45.73810
S.E. of regression	14.02917	Akaike info criterion		8.319328
Sum squared resid	3936.350	Schwarz criterion		8.609658
Log likelihood	-102.1513	Hannan-Quinn criter.		8.402933
F-statistic	49.14502	Durbin-Watson stat		1.725197
Prob(F-statistic)	0.000000			

Source: E-view 9.0

Model one found that 69.4 percent variation in the level of poverty in Nigeria could be traced to fiscal allocations, the model is statistically significant when judged from the f-statistic and probability while the Durbin Watson found no autocorrelation among the variables within the time periods.The study found that federal fiscal allocation and state fiscal locations reduces poverty rate by 1.7 and 0.6 percent over the periods while local government fiscal allocation increased poverty rate by 0.6 percent. The negative effect of federal and state fiscal allocation on poverty reeducation confirmed our a-priori expectations of the study while the positive effect of local government fiscal allocation contradict our a-priori expectations and could be blamed on poor fiscal management of the local governments in Nigeria.

The estimated model two found that 90.5 percent variation in output of Nigeria industrial sector could be traced to variation in fiscal allocation of the three tiers of government.The model is statistically significant when valued by the f-statistic and probability while the Durbin Watson found no autocorrelation among the variables within the time periods. The study established that fiscal allocations of the three tiers of government have positive and significant effect on the the output of the industrial sector in Nigeria. The regression parameter found that fiscal allocation of the three tier of government added 3.5, 1.7 and 1.3 percent to the output of the industrial sector

within the periods of the study. The positive effect of the variables confirms the expectations of the study and in line with opinions of the Keynesians economists.

According to Adeyemo (2011) the 1999 constitution of Nigeria is written, rigid, federal, presidential, and recognized the states and local governments as second and third tier government respectively (Ibeanu 2008). The jurisdiction of the state government is spelt out in Part II of the Second Schedule which contains the Concurrent Legislative List over which both the federal and state governments have concurrent powers. Where there is inconsistency between federal and state laws on the Concurrent List, section 4 (5) provides that 'the law made by the National Assembly shall prevail, and that other law shall, to the extent of the inconsistency be void.

Table 2: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Fiscal Allocations and Infrastructural Development				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FFA	-5.689190	1.385578	-4.106005	0.0008
SFA	3.938993	1.266430	3.110312	0.0067
LGFA	3.166381	1.100959	2.876022	0.0110
C	0.040910	0.356933	0.114617	0.9102
R-squared	0.838400	Mean dependent var		0.081250
Adjusted R-squared	0.767700	S.D. dependent var		3.610825
S.E. of regression	1.740329	Akaike info criterion		4.207227
Sum squared resid	48.45991	Schwarz criterion		4.599911
Log likelihood	-42.48672	Hannan-Quinn criter.		4.311406
F-statistic	11.85854	Durbin-Watson stat		1.592999
Prob(F-statistic)	0.000028			
Fiscal Allocations and Unemployment Rate				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FFA	-1.546459	0.408976	-3.781296	0.0018
SFA	0.552250	0.355114	1.555135	0.1408
LGFA	0.479143	0.322323	1.486531	0.1579
C	-0.089215	0.119664	-0.745541	0.4675
R-squared	0.909823	Mean dependent var		0.238333
Adjusted R-squared	0.861729	S.D. dependent var		1.412653
S.E. of regression	0.525293	Akaike info criterion		1.830275
Sum squared resid	4.138990	Schwarz criterion		2.272045
Log likelihood	-12.96330	Hannan-Quinn criter.		1.947477
F-statistic	18.91745	Durbin-Watson stat		2.403032
Prob(F-statistic)	0.000002			

Source: E-view 9.0

From model three, the study established that 76.7 percent variation in infrastructural development in Nigeria was traced to variation in fiscal allocations of the three tiers of government. The regression model was statistically significant by the value of the f-statistics and probability. However, the study found that federal location reduces infrastructural development by 5.6 percent while state and local government allocations added 3.9 and 3.1 percent infrastructural development of the country within the periods of this study. The positive effect of the variables confirmed our a-priori expectations and justifies relevant theories such as the Keynesians fiscal policy theories while the negative effect of federal fiscal allocations contradict the expectations of the study in can be blamed on poor fiscal management of the federal government.

The formulated model four found that fiscal allocations of the three tiers government explained 86.1 percent variation in Nigeria unemployment rate.The regression model was statistically significant by the value of the f-statistics and probability. The study found that federal allocations reduces Nigeria unemployment rate by 1.5 percent while state and local government allocation added 0.55 and 0.47 to Nigeria unemployment rate. the positive effect of state and local government fiscal allocations on unemployment rate contradict our a-priori expectations while the positive effect of federal allocation on unemployment rate confirm the expectations of the study in line with expectations of the study.Section 4 (7) (a) also provide that the state legislate over 'any matter not included in the Exclusive Legislative List set out in Part 1 of the Second Schedule.' The Fourth Schedule of the Constitution contains the functions of a local government. In reality, even if the local government councils have legislative powers over certain matters provided for in the constitution, such powers are subsumed under the legislative powers of the House of Assembly of States (Lloyd 2008).

The 1999 Constitution, according to Onah (2004) was drafted at a time that the agitation for decentralized federalism reached a crescendo. The underlying principle of federalism requires that, within the framework of a central government, matters of local concern should be managed by the state government (Nwabueze 1982 in Chukwuemeka&Uche 2005). This, therefore, explains the constitutional provision restoring to the states the power to create local governments. Hence, section 7 (1) of the Constitution prescribes that; The system of local government by democratically elected local government councils is under this constitution guaranteed; and accordingly, the government of every state shall, subject to section 8 of this constitution, ensure their existence under a law which provides for the establishment, structure, composition, finance and functions of such councils.

CONCLUSION AND RECOMMENDATIONS

This study examined the effect of fiscal allocations on the socio-economic transformation in Nigeria. From model one the study conclude that federal and state allocation reduces poverty rate while local government fiscal allocation have positive effect on poverty rate. From model two the study concludes that fiscal allocations of the three tiers of government have positive and significant effect on industrial sector output. From model three the study conclude that state and local government fiscal allocations have positive effect while federal government fiscal allocations have negative effect on infrastructural development while model four concludes that federal fiscal allocation affects positively unemployment rate while state and local government negatively affect unemployment rate. The study recommends that:

i. The negative effect of the variables on socio-economic transformations could be blamed on poor fiscal management among the three tiers of government, therefore the study recommend that government all level should ensure proper utilization and accountability of fiscal allocations to enhances socio-economic transformation.
ii. There is need for fiscal discipline from the government and relevant sections of Fiscal Responsibility Act 2007 should be implemented as this can enhances proper utilization and accountability of public funds.

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STOCK MARKET LIQUIDITY AND CAPITAL FORMATION IN NIGERIA

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ABSTRACT

This study empirically examined the effect of stock market liquidity on capital formation in Nigeria. The study covered a period of thirty-six (36) years from 1985 to 2020. The study was guided by four research questions and four research hypotheses. The study was anchored on Financial Intermediation theory and Efficient Market Hypothesis (EMH). The study proxied stock market liquidity (independent variable) by market capitalization, turnover ratio, total value traded ratio and all share index while capital formation (dependent variable) was measured by gross fixed capital formation. The study adopted ex-post facto research design. The study made use of time series data which were sourced mainly from Central Bank of Nigeria (CBN) and Nigerian Stock Exchange (NSE). Furthermore, techniques of data analysis adopted in this study include regression technique, Unit Root Test, Cointegration Test and Granger Causality Test. The hypotheses of the study were tested at 5% level of significance using t-test. The data analysis was facilitated by E-views 10. The findings of the study revealed that: there is a positive and significant relationship between market capitalization and Gross Fixed Capital Formation (GFCF) in Nigeria, there is a positive and significant relationship between turnover ratio and Gross Fixed Capital Formation (GFCF) in Nigeria, there is a positive and insignificant relationship between total value traded ratio and Gross Fixed Capital Formation (GFCF) in Nigeria while there is a positive and insignificant relationship between all share index and Gross Fixed Capital Formation (GFCF) in Nigeria. The study concluded that stock market liquidity plays a significant role in increasing capital formation in Nigeria. The study recommended that a reliable regulatory framework should be put in place by the government that could actively carry out the surveillance of the stock market. This will go a long way in encouraging Nigerians and foreigners to trust the services of the stock market and thus invest their money in the stock market.

Keywords: Capital formation, stock market liquidity

INTRODUCTION

Financial markets, especially stock market has grown considerable in developed and developing countries over the last two decades. As economies develop, more funds are needed to meet the rapid expansion. Thus, stock market serves as a veritable tool in mobilizing and allocating savings among competing users, which are critical to the growth and efficiency of the economy (Ogunleye and Adeyemi, 2015). Stock markets are one of the relevant constituents of the financial system, which help firms or companies to raise capital by issuing their shares and also create an enabling environment, which allows for trading of the shares. Thus, it is obvious that the stock market plays a very critical role in capital formation as well as economic growth and development of any nation. Therefore, the development of stock market is regarded as key and important vehicle in accelerating the growth of economy (Araoye et al., 2018).

According to Salihu and Mohammed (2017) the stock market is a common feature of every modern economy and is reputed, amongst other things, to perform critical capital allocation functions which promote economic growth and stimulate manufacturing sector development. In many advanced countries where stock markets correlate directly with the economy, the stock market is viewed as the primary gauge for the economy's performance (Salihu & Mohammed, 2017). The stock market plays a major role as an economic institution, which enhances the efficiency in capital formation and allocation. It enables both corporations and the government to raise long-term capital, which enables them to finance new projects and expand other operations. In this manner, the performance of the economy is boosted when capital is supplied to productive economic units (Popoola, 2014). Popoola et al. (2017) asserted that the stock market is a medium through which funds can be mobilized and channelled efficiently. It enables the government and industries to finance new and existing projects, expanding and modernizing industrial commercial concern.

Apart from judicious mobilization of idle savings into productive use, the stock market creates an avenue for foreign investment and the influx of foreign capital for developing projects that increase the welfare of citizens. Given the importance of high productivity in the industrial sector in boosting economic growth and the standards of living of the people, the degree of liquidity of the stock market cannot but be of importance to policy makers (Ogunrinola & Motilewa, 2015). Apparently, it is widely known that money or cash in hand is the most liquid asset which can be used immediately to perform economic actions like buying, selling, or paying debts, meeting immediate needs and wants, etc. A liquid market is one whose assets are easily and rapidly sold with minimum loss of value, at any time within market hours. Also, liquid markets are characterized by ready and willing buyers and sellers at all times.

Thus, stock market liquidity is an essential market characteristic whose presence ensures smooth functioning of the market, whereas its absence causes uneasiness in the market. Brennan et al. (2012) referred to stock market liquidity as the ability of the market to absorb a huge volume of securities at a lower execution cost within a short period without having a significant effect on security prices. Stock markets may affect economic activities through the creation of liquidity. Liquid stock markets make available savings for profitable investments that require long-term commitment of capital, thereby leading to capital formation.

Furthermore, the liquidity of stock markets offers a wide range of importance to the economy. First, liquid markets make investments less risky and more attractive. This is because they allow savers to acquire an asset (that is, equities) and to sell them quickly and cheaply. Secondly, liquid stock markets improve the allocation of capital and enhance prospects for long term economic growth through the facilitation of longer term, and more profitable investments. Thirdly, stock market liquidity help provoke the establishment of more investment by making investment less risky and more profitable (Ogunrinola & Motilewa, 2015). According to Osinubi (2014) liquidity of stock markets also facilitates profitable interactions between the stock market and the money

market. In this way, shares become easily acceptable as collateral for bank lending, thereby boosting credit, investment and sufficient capital formation. In line with the foregoing, this study aims to determine the relationship between stock market liquidity and capital formation in Nigeria.

The stock market is a highly specialized and organized financial market and indeed essential agent of economic growth and development because of its ability to facilitate and mobilize saving and investment. In Nigeria today, many businesses still lack sufficient long-term capital. The business sector has depended mainly on short-term financing to finance long-term capital. Moreover, the Nigerian stock market has been faced with some challenges affect its liquidity and efficiency. For instance, in the stock market, there has been a decline in the value of shares resulting from the global financial and economic crisis. This has equally reduced the propensity to invest in the market. The poor functioning of the stock market also deters foreign investors because the markets are illiquid and trading is expensive, thereby adversely affecting capital formation and economic development of the country. Moreover, low market capitalization, delay in delivery of share certificate, double taxation, problem of macro-economic instability, poor public awareness about the workings of the stock market, underdevelopment of the stock market coupled with a high incidence of unethical practices have restricted the role of the stock market in promoting capital formation in Nigeria.

To the best of researchers' knowledge, studies conducted in this area (stock market liquidity and capital formation in Nigeria) are very scanty while the related ones showed conflicting results and this could probably be attributed to adoption of different variables, time scope and methodologies. Also, none of the previous related studies covered up to 2020. This creates a gap in knowledge that this study aims to bridge. It is on this basis that this present study is aimed at ascertaining the relationship between stock market liquidity and capital formation in Nigeria. As a result, this study will cover a period from 1985 to 2020 while the inclusion of 2020 will make this study to be more updated than the previous related studies carried out.

LITERATURE REVIEW

Theoretical Review

A number of theories have been developed to explain the stock exchange. For the purpose of this study, financial intermediation theory and efficient market hypothesis (EMH) are adopted and are explained as follows:

Financial intermediation theory

Financial Intermediation theory advocates that capital or stock market should provide a mechanism for the mobilization and transfer of savings from the fund-owners to investments that promise better and higher returns on investment. Since regulation and quantification of direct the stock market activities of borrowing is difficult, it is expected that financial institutions should mediate between owners and users of funds in the impersonal but formal way like the marketable securities created and traded on the Nigerian Stock Exchange (Gorton and Winton, 2002).

Financial intermediation entails arrangements covering the activities of stock or capital market with respect to providing mechanism for organizing and managing the payment system, mechanism for the collection and transfer of savings, mechanism covering the investment in long-term financial securities and arrangements covering the activities of financial market complementary to the money and capital markets such as the foreign exchange markets and the futures markets (Nzotta, 2004). Financial intermediation refers to a financial framework that provide a medium of exchange necessary for specialization, mobilization and transfer of savings from those who generated the funds to those who use the funds for investment in the economic system where the funds will yield the highest return. This arrangement enhances productive activities and positively influences aggregate capital formation in the economy.

Diamond (1984) showed that reduced monitoring costs are a source of comparative advantage. Diamond posited that intermediaries provide services by issuing secondary financial assets to buy primary financial assets. If an intermediary provided no services, investors who buy the secondary securities issued by the intermediary might as well purchase the primary securities directly and save the intermediary's costs. Financial market frictions can be the critical mechanism for generating persistent income inequality or poverty traps. These market frictions include information asymmetry and transaction costs and play a central role, influencing key decisions regarding human and physical capital accumulation and occupational choices.

Demirgüç-Kunt et al. (2008) notes that capital accumulation, financial market imperfections determine the extent to which the poor can borrow to invest in schooling or physical capital. Also, financial market imperfections determine the extent to which talented but poor individual can raise external funds to initiate projects. Thus, the evolution of financial development, growth, and intergenerational income dynamics are closely intertwined. Finance influences not only the efficiency of resource allocation throughout the economy but also the comparative economic opportunities of individuals from relatively rich or poor households.

Efficient market hypothesis (EMH)

The Efficient Market Hypothesis (EMH) was developed by Fama in 1965. The Efficient Market Hypothesis, according to Fama (1965) is an academic concept, which provides a framework for examining the efficiency of the stock/capital market. According to EMH, financial markets are efficient or prices on traded assets that have already reflected all known information and therefore are unbiased because they represent the collective beliefs of all investors about future prospects (Olawoye, 2011). EMH states that all relevant information are immediately and fully reflected in a security's market price. In other words, EMH states that at any one point in time, prices reflect all available information. This implies that no amount of data mining can predict future prices. Furthermore, an analysis of past or current data cannot identify undervalued stocks. Applying this to the securities markets, the EMH implies that no trading mechanism can consistently beat the market. Hence, for a given level of risk, speculators cannot earn supernormal returns. Similarly, no betting system can consistently earn super normal returns.

There are varying degrees of market efficiency, with Fama (1965) providing the traditional framework through which the EMH is examined. The weak form simply states that all past information is reflected in current prices. The semi-strong form states that all publicly available information is incorporated in prices, while the strong form, an extension of the first two, states that all information, including insider information, is included in share prices. In practice, market efficiency is categorized by the strength of the efficiency that can be established with respect to a particular information set. Previous test of the Efficient Market Hypothesis have relied on long-range dependence of equity returns. It shows that past information has been found to be useful in improving predictive accuracy. This assertion tends to invalidate the EMH in most developing countries (Nagayasu, 2003).

According to Nyong (2003) equity prices would tend to exhibit long memory or long range dependence, because of the narrowness of their market arising from immature regulatory and

institutional arrangement. Note that, where the market is highly and unreasonably speculative, investors will be discouraged from parting with their funds for fear of incurring financial losses. Situations like the one mentioned above has detrimental effect on economic growth of any country, meaning investors will refuse to invest in financial assets. The implication is that companies cannot raise additional capital for expansion. Thus, it suffices to say that efficiency of the stock market is a necessary condition for capital formation as well as the growth and development economy.

Empirical Review

Adeleye (2018) investigated capital formation in the Nigerian capital market and its effect on economic growth. The study covered a period of twenty-five years spanning from 1990-2014. The econometric methodology adopted is the Ordinary Least square method (OLS). Secondary data was obtained from the Central Bank of Nigeria (CBN) statistical bulletins, Nigerian Stock Exchange (NSE) fact books, Security and Exchange Commission (SEC) market Bulletins and relevant journals. The independent variables are market capitalization, number of quoted companies and traded value and the dependent variable is gross domestic product. Result revealed that the stock market had a significant but weak impact on the Nigerian economy. Absence of an efficient stock market starved economy of long term funds for sustainable growth and development. The study recommended that government should formulate policies that will improve and develop the capital market for accessibility of long term investment funds by the industrial sector. A stricter regulatory environment is recommended for the capital market to curb their nebulous activities and relaxing some of the stringent requirements for viability of the Small and Medium Enterprises (SME's) listing on the stock exchange.

Araoye et al. (2018) examined the impact of the Nigerian Stock market development on the nation's economic growth from 1985 to 2014. The economic growth was proxy by the GDP while the stock market variables considered included; market capitalization and market turnover ratio as proxy for stock market development in terms of size and liquidity. The study utilizes the Johansson's co integration test in establishing if a long run relationship does exist between stock market development and economic growth in Nigeria. The empirical results suggest that the stock market is significant in determining economic growth in Nigeria using the error correlation model and it was found that the stock market has impacted insignificantly on the economic growth. It is recommended that policy makers should ensure improvement in the market capitalization, by encouraging foreign direct investment participation in the market.

Popoola et al. (2017) investigated the short run effect, long run effect and causal relationship between stock market and economic growth in Nigeria. The Augmented Dickey Fuller unit root test, Ordinary Least Squares, Johansen Cointegration test and Pairwise granger causality methods were applied to the variables. The OLS result showed that the all share index had a significant but negative relationship with economic growth; The Johansen cointegration test showed that a long run relationship exists between the stock market performance and economic growth in Nigeria in the long run while the Granger causality test results showed that stock market performance does not granger cause economic growth but economic growth granger causes stock market performance at 5 percent significance level. The study suggested some of the possible reasons for the negative impact of stock market on the Nigerian economic growth and recommended that efforts should be made to improve the stock market performance to have a positive effect on the real gross domestic product of Nigeria overtime.

Osakwe and Ananwude (2017) explored the long run relationship between stock market development and economic growth in Nigeria from 1981 to 2015. Market capitalization ratio and turnover ratio were used to measure the depth of development of Nigerian stock market, whereas growth rate of real gross domestic product facets economic growth. Secondary data were sourced from Nigerian Stock Exchange (NSE) and National Bureau of Statistics (NBS) were analysed using Autoregressive Distributive Lag (ARDL) model. From the analysis performed, the depth of development in Nigeria's stock market has positive but insignificant relationship with economic growth both in short and long run. The granger causality analysis dispelled the adeptness of Nigeria stock market to propel growth. Stock market is growth inducing but in the context of Nigeria, economic growth is independent of stock market operation.

Brown and Nyeche (2017) examined the imperative of stock market on economic performance in Nigeria. The objectives of the study were to examine the relationship between total value traded in the stock market, market capitalization, trade openness, inflation rate and economic growth in Nigeria. The study was basically time series data based relating to market capitalization, total value traded ratio, real GDP per capita, inflation rate and trade openness of the economy. The data was sourced from Nigerian Stock Exchange annual reports, CBN statistical bulletin, the Nigerian Stock Exchange fact book, World Bank database publication and publication from relevant plurals and articles. The study adopted the Ordinary Least Squares (OLS) techniques of multiple regression and co integration test. The E-view 7.1 econometric software was used to run the model. The coefficient of ECM appeared with the right sign and statistically significant at the 5% level. Therefore, it corrects any deviation from long-run equilibrium. Durbin Watson value of 2.3 which is approximately 2.0 suggests a lesser level of autocorrelation. The overall fit is satisfactory with an R-squared of 0.790. The F-statistic of 6.51706 is significant at the 5% level. Moreover, the lag one and two forms of the independent variables (Mcap, TVT and TOP) were positively signed. While the lag one and two forms of the independent variable (INF) are negatively signed

Panshak and Shingil (2016) examined the relationship between capital market liquidity and economic growth in Nigeria using time series data spanning 1981 to 2014. The study employed Autoregressive Distributed Lag Model (Bound Test). The study revealed that there exists a long run relationship between capital market liquidity and economic growth. The extent to which disturbances in the short run are tied up to the long run position is about 84 percent. The empirical result is largely in conformity with several researches on the relevance of an active and liquid stock market in economic growth process. The policy implication of this work is that stock market can be relied upon for advancing growth in Nigeria. A Liquid capital market enhances allocation of funds to desired sectors and projects meaningful for economic prosperity. The research outcome could help policy makers and corporate managers improve resource allocation and decision-making.

Ogunrinola and Motilewa (2015) examined the impact of stock market liquidity on economic growth of Nigeria between the years 1980 and 2012. With the use of EViews 5.0 econometric software, tests for stationarity using the Augmented DickeyFuller approach was carried out while the ordinary least square (OLS) technique was employed to estimate the basic model specified for the study. The result of the analysis of data revealed that variables were stationary at their first difference while the Johansen co-integration approach confirmed the existence of co-integrating relationship at the 5 percent level of significance. The study found, surprisingly, that stock market liquidity was not a statistically significant variable explaining economic growth in Nigeria for the periods under study.

Okonkwo et al. (2015) examined the impact of stock market development and economic growth; and also examined the direction of causality between stock market development and economic growth in Nigeria. This study applied Johansen co-integration model to evaluate the stock market development and economic growth and causal relationship using four measures of stock market development indices: market capitalization, number of deals, all share index and total value of market transaction. The study established the existence of co-integration for all the stock market development measures. Results obtained for all measures of stock market development indices point to the existence of a positive relationship between stock market development and economic growth except for market capitalization and total value of market transaction. The findings from pair-wise Granger Causality test suggest the existence of a unidirectional relationship between stock market development and economic growth. This entails that the state of development of the economy will determine the development and operations of the stock market. This study also reveals that there is correlation between stock market development and economic growth, via all share indexes, market capitalization, number of deals and total market transaction value.

Ogunleye and Adeyemi (2015) examined the impact of stock market development on economic growth between1970 and 2008. Cointegration Analysis and Error Correlation Mechanism were adopted as the estimating techniques to verify the existence of long-run relationship between stock market development and economic growth. Questionnaires were administered to access the investor's confidence in the Nigerian stock exchange and to authenticate the impact of stock market development on economic growth in the period under review. The empirical results revealed that there is existence of long-run relationship between stock market development and economic growth in Nigeria. The findings also showed that there is positive relationship between market capitalization and money supply with economic growth while total value traded, turnover ratio and gross capital formation have inverse relationship with the growth. Market capitalization is highly significant and appears to be the major stock market indicator. Based on these findings, the study recommended that government should address the shortage of investment assets through effective policy measures that enhance the performance of stock market in Nigeria and to restore confidence of the investors.

Rabi'u et al. (2015) investigated the effect of Nigerian stock exchange market development on economic growth using a 20 year time series data from 1990-2010. The method of analysis is ordinary least square techniques. The study measures the relationship between stock market development indices and economic growth. The stock market capitalization ratio was adopted as a proxy for market size while value traded ratio and turnover ratio were used as proxy for market liquidity. The study revealed that market capitalization and value traded ratio have a negative correlation with economic growth while turnover ratio has a strong positive correlation with economic growth. The study recommended that policy makers and other institution relevant should put effort towards tuning market capitalization and value trade ratio into significant positive in the near future, so as to encourage economic growth in line with stock market development.

METHODOLOGY

Ex-post research design is relevant and adopted in this study because it shows the cause-effect relationship between the independent variables and dependent variable with a view to establishing a link between them. It contains a description of methods and procedure employed in data collection, design and validation of test instrument. It x-rays the format employed by the researcher in order to systematically apply the scientific methods in problem investigation. The relevant data for this study will be sourced from Central Bank of Nigeria (CBN) statistical bulletin and Nigerian Stock Exchange (NSE). These sources of data are considered reliable and dependable. The data for the study covers the periods from 1985 to 2020, indicating thirty-six (36) years sample observations.

Model Specification

The model employed for this study is a multiple regression model.

This model is further disaggregated below:

Functional Model

To show the functional relationship, the model can be written as;

GFCF = f(MCAP, TOR, TVTR, ASI) (1)

Mathematical Model: To show the linear mathematical relationship, the model can be written as;

$GFCF = \alpha_0 + \alpha_1 MCAP_t + \alpha_2 TOR_t + \alpha_3 TVTR_t + \alpha_4 ASI_t$ (2)

Econometric Model: Including the stochastic or error term (ε_t) in our econometric model, our model will become;

$GFCF = \alpha_0 + \alpha_1 MCAP_t + \alpha_2 TOR_t + \alpha_3 TVTR_t + \alpha_4 ASI_t + \varepsilon_t$ (3)

Where: GFCF = gross fixed capital formation, MCAP = market capitalization, TOR = turnover ratio, TVTR = total value traded ratio, ASI = all share index, α_0 = Intercept, α_1- α_4 = Coefficients or parameters attached to the independent variables, ε_t = Stochastic or error term which captures the impact of variables that are not included in the model.

Data Analysis Technique

The secondary data sourced for the purpose of this study was analyzed and interpreted using multiple linear regression analysis. However, the Ordinary Least Squares (OLS) method will be used to estimate the parameters of the regression model. The adoption of this technique will be based on the premise that the Ordinary Least Square is assumed to be the best linear unbiased estimator.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Descriptive Analysis of Research Variables

	GFCF	MCAP	TOR	TVTR	ASI
Mean	4661.085	7121.009	61.02842	8.354694	16872.76
Median	652.0400	1062.100	58.09250	4.662000	13595.89
Maximum	18741.50	38589.58	175.5880	42.88100	50424.70
Minimum	10.44000	6.600000	2.479000	0.406000	117.2833
Std. Dev.	6570.550	9621.680	36.65769	9.725723	15201.89
Skewness	1.047244	1.380429	0.657732	1.906618	0.487542
Kurtosis	2.409925	4.408442	3.949391	6.614274	2.112179
Jarque-Bera	7.102598	14.40906	3.947686	41.40561	2.608520
Probability	0.028687	0.000743	0.138922	0.000000	0.271373
Sum	167799.1	256356.3	2197.023	300.7690	607419.4
Sum Sq. Dev.	1.51E+09	3.24E+09	47032.53	3310.639	8.09E+09
Observations	**36**	**36**	**36**	**36**	**36**

Source: Eviews Output

The table above presents the results of the descriptive analysis of the variables covered in this study. These include mean, median, standard deviation, minimum, maximum and so on. The variables covered in this study include market capitalization (IFLR), turnover ratio (TOR), total value traded ratio (TVTR) and All Share Index (ASI) which ranged from 1985 and 2020.

Ordinary Least Square (OLS) Regression Analysis

The multiple regression model specified in the chapter three i.e. $GFCF = \alpha_0 + \alpha_1 MCAP_t + \alpha_2 TOR_t + \alpha_3 TVTR_t + \alpha_4 ASI_t + \varepsilon_t$ is estimated in this section through Ordinary Least Square (OLS) technique while the data analysis is carried out by E-views 10 statistical package. The results obtained from our data analysis are presented in table 2:

Table 2: Ordinary Least Square Results

Dependent Variable: GFCF
Method: Least Squares
Date: 01/15/22 Time: 18:41
Sample: 1985 2020
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.749531	0.047643	15.73228	0.0000
MCAP	0.177229	0.053592	3.307003	0.0024
TOR	0.080535	0.071239	5.398824	0.0000
TVTR	0.164337	0.030439	1.130485	0.2669
ASI	0.024415	0.019516	1.250995	0.2203

R-squared	0.689530	Mean dependent var	1.884237
Adjusted R-squared	0.668179	S.D. dependent var	0.565867
S.E. of regression	0.061525	Akaike info criterion	-2.610504
Sum squared resid	0.117345	Schwarz criterion	-2.390571
Log likelihood	51.98907	Hannan-Quinn criter.	-2.533741
F-statistic	73.24270	Durbin-Watson stat	2.182737
Prob(F-statistic)	0.000000		

Ho: Estimated model is not statistically significant (market capitalization, turnover ratio, total value traded ratio and All Share Index do not have joint significant effect on Gross Fixed Capital Formation).

To determine the joint significant effect of market capitalization, turnover ratio, total value traded ratio and All Share Index on Gross Fixed Capital Formation, the F-calculated value and the F-tabulated value must be derived after which the following decision rule will be applied:

Decision Rule

- Ø If F-calculated value > F-tabulated value ⇒ reject the H_0 at 5% level of significance.
- Ø If F-calculated value < F-tabulated value ⇒ retain the H_0 at 5% level of significance.

From statistical table, F-tabulated value at (4, 31) degrees of freedom and five per cent level of significance i.e. $F_{0.05}(4, 31)$ is 2.64 while the F-calculated value from the regression result in table 4.2 is 73.24270. Since the F-calculated value (73.24270) is greater than F-tabulated value (2.64) i.e.

73.24270 > 2.64, we reject the H_0 and conclude that estimated regression model is statistically significant. The implication of this is that market capitalization, turnover ratio, total value traded ratio and All Share Index have joint significant effect on Gross Fixed Capital Formation.

Testing of Hypotheses

To further examine the effects of stock market liquidity on capital formation in Nigeria, the four hypotheses formulated were tested in this section. The goal of hypothesis testing is to determine the likelihood that a population parameter is likely to be true. For the purpose of this study, t-test was used to test these hypotheses. Five per cent (5%) level of significance with (n-k) degrees of freedom was used in carrying out this test. Where *n* is the number of observation (36) and *k* is the number of parameter (5). From statistical table, t-tabulated value at 31 degrees of freedom and five per cent level of significance is 2.042.

The decision rule for accepting or rejecting the null hypothesis is stated below:

1. *If the t-calculated value is greater than the t-tabulated value, reject the null hypothesis (H_0) at 5% level of significance.*
2. *On the other hand, if the t-calculated value is less than the t-tabulated value, accept the null hypothesis (H_0) at 5% level of significance.*

Hypothesis One

Ho_1: There is no significant relationship between market capitalization and Gross Fixed Capital Formation (GFCF) in Nigeria.

Decision: The t-calculated value for market capitalization from the regression result as shown in table 4.3 is 3.307003 while the t-tabulated value from the statistical table is 2.042. However, since the t-calculated value (3.307003) is greater than the t-tabulated value (2.042), we therefore reject the null hypothesis one (H_{01}) and conclude that there is a significant relationship between market capitalization and Gross Fixed Capital Formation (GFCF) in Nigeria.

Hypothesis Two

Ho_2: There is no significant relationship between turnover ratio and Gross Fixed Capital Formation (GFCF) in Nigeria.

Decision: The t-calculated value for turnover ratio from the regression result as shown in table 4.3 is 5.398824 while the t-tabulated value from the statistical table is 2.042. However, since the t-calculated value (5.398824) is greater than the t-tabulated value (2.042), we therefore reject the null hypothesis two (H_{02}) and conclude that there is a significant relationship between turnover ratio and Gross Fixed Capital Formation (GFCF) in Nigeria.

Hypothesis Three

Ho_3: There is no significant relationship between total value traded ratio and Gross Fixed Capital Formation (GFCF) in Nigeria.

Decision: The t-calculated value for total value traded ratio from the regression result as shown in table 4.3 is 1.130485 while the t-tabulated value from the statistical table is 2.042. However, since the t-calculated value (1.130485) is less than the t-tabulated value (2.042), we therefore accept the null hypothesis three (H_{03}) and conclude that there is no significant relationship between total value traded ratio and Gross Fixed Capital Formation (GFCF) in Nigeria.

Hypothesis Four

Ho_4: There is no significant relationship between all share index and Gross Fixed Capital Formation (GFCF) in Nigeria.

Decision: The t-calculated value for All Share Index from the regression result as shown in table 4.3 is 1.250995 while the t-tabulated value from the statistical table is 2.042. However, since the t-calculated value (1.250995) is less than the t-tabulated value (2.042), we therefore accept the null hypothesis four (H_{04}) and conclude that there is no significant relationship between all share index and Gross Fixed Capital Formation (GFCF) in Nigeria.

DISCUSSION OF FINDINGS

The study examined the relationship between stock market liquidity and capital formation in Nigeria. The estimated coefficient of market capitalization from the regression result is in agreement with a priori sign, which is a positive sign and thus conforms to economic theory. Thus, the study found that market capitalization has a positive and significant relationship with gross fixed capital formation in Nigeria. It can therefore be inferred that market capitalization as a proxy of stock market liquidity has significant positive effect on capital formation in Nigeria. This result is in line with the result of Okonkwo et al. (2015) which stated that market capitalization is an important stock market liquidity variable that is capable of contributing positively and significantly to capital formation in Nigeria.

Secondly, the estimated coefficient of turnover ratio from the regression result is in agreement with a priori sign, which is a positive sign and thus conforms to economic theory. Thus, the study found that turnover ratio has a positive but non-significant relationship with gross fixed capital formation in Nigeria. It can therefore be inferred that turnover ratio as a proxy of stock market liquidity has a non-significant positive effect on capital formation in Nigeria. This result is in line with the result of Alajekwu and Achugbu (2012), which stated that turnover ratio, has a very strong positive correlation with economic growth.

Thirdly, the estimated coefficient of total value traded ratio from the regression result is in agreement with a priori sign, which is a positive sign and thus conforms to economic theory. Thus, the study found that total value traded ratio has a positive and significant relationship with gross fixed capital formation in Nigeria. It can therefore be inferred that market capitalization as a proxy of stock market liquidity has significant positive effect on capital formation in Nigeria. This result conforms to the result of Panshak and Shingil (2016) which established that total value traded positively enhances allocation of funds to desired sectors and projects which are meaningful for economic prosperity.

Lastly, the estimated coefficient of all share index from the regression result is in agreement with a priori sign, which is a positive sign and thus conforms to economic theory. Thus, the study found that all share index has a positive and significant relationship with gross fixed capital formation in Nigeria. It can therefore be inferred that market capitalization as a proxy of stock market liquidity has significant positive effect on all share index in Nigeria. This result conforms to the result of Yakubu, Baba and Ibrahim (2016) which established a significant positive effect of number of deals and all share index on capital formation and economic growth in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The main objective of this research was to empirically examine the effect of stock market liquidity on capital formation in Nigeria. The study was guided by four specific objectives, four research questions and research hypotheses. Ex-post facto research design was adopted while secondary data which ranged from 1985 to 2020 were used. These data were sourced from Statistical Bulletin of the Central Bank of Nigeria (CBN) Statistical Bulletins and Nigerian Stock Exchange (NSE) fact book. Econometric techniques adopted in this study include regression technique, Unit Root Test, Cointegration Test and Granger Causality Test. Data analysis was facilitated by E-views 10 statistical package. The results emanating from this study are as follows:

a) First, there is a positive and significant relationship between market capitalization and Gross Fixed Capital Formation (GFCF) in Nigeria.
b) Secondly, there is a positive and significant relationship between turnover ratio and Gross Fixed Capital Formation (GFCF) in Nigeria.
c) Thirdly, there is a positive and insignificant relationship between total value traded ratio and Gross Fixed Capital Formation (GFCF) in Nigeria.
d) Fourthly, there is a positive and insignificant relationship between all share index and Gross Fixed Capital Formation (GFCF) in Nigeria.

Also, the result of the R-squared for the entire period starting from 1985 to 2020 shows that changes in market capitalization, turnover ratio, total value traded ratio and All Share Index contributed about 69% to the total variations in the Gross Fixed Capital Formation in Nigeria.

Furthermore, the unit root test showed that market capitalization, turnover ratio, total value traded ratio and All Share Index are stationary at first difference.

In addition, the cointegration test result showed that Gross Fixed Capital Formation, market capitalization, turnover ratio, total value traded ratio and All Share Index have long run relationship among them.

Lastly, the Granger Causality test result showed that there is a unidirectional causality between market capitalization and Gross Fixed Capital Formation, there is a unidirectional causality between turnover ratio and Gross Fixed Capital Formation, there is no causality between total value traded ratio and Gross Fixed Capital Formation while there is a unidirectional causality between All Share Index and Gross Fixed Capital Formation.

The study has empirically examined the relationship between stock market liquidity and capital formation in Nigeria. The findings of the study showed that market capitalization, turnover ratio, total value traded ratio and all share index jointly and significantly accounted for a greater percentage of the variation in gross fixed capital formation in Nigeria. Based on the findings, this study concluded that stock market liquidity plays a significant role in increasing capital formation in Nigeria.

Based on the research findings and the conclusion drawn, the following are recommended:

a) A reliable regulatory framework should be put in place by the government that could actively carry out the surveillance of the stock market. This will go a long way in encouraging Nigerians and foreigners to trust the services of the stock market and thus invest their money in the stock market.

b) There should be sustained effort to stimulate productivity in both the public and private sectors. This will thus increase the demand for the services of the stock market thus, encouraging more liquidity of the market.

c) Further, the propensity to trade on stocks can be improved by encouraging low cost of transactions on the trading floors and boosting public confidence in the Nigerian Stock Market. This will go a long way in encouraging more liquidity for stocks traded in Nigeria.

d) For possible positive effects of the liquidity of the stock market to be felt in Nigeria at all, there is the need to give individuals and companies some orientation about the advantages of investing in the stock market.

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TAX AUDIT PRACTICES AND TAX REVENUE GENERATED BY RIVERS STATE INTERNAL REVENUE SERVICE

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ABSTRACT

This study examined the relationship between tax audit practices and tax revenue generated by the Rivers State Internal Revenue Service. Tax audit, the independence variable was proxied by desk tax audit and field tax audit and correlated with personal income tax used to measure tax revenue, the dependence variable. In order to carry out this study, two research questions and hypotheses were developed in accordance with the two specific objectives of the study. The research design employed in the study is the descriptive survey. The research was carried out at the Rivers State Internal Revenue Service. A population of 45 staff was used. The study used both primary and secondary data, however, the responses were obtained using a set of questionnaires. The collected data were analyzed using descriptive and inferential statistics with the aid of Statistical Package for Social Sciences (SPSS). The questionnaire was validated by two experts in taxation and revenue generation. The inferential statistics of t-test was used to test the null hypotheses in the study. The findings of study indicate that there is a significant relationship between desks and field tax audit and personal income tax generated by the Rivers State Internal Revenue Service. The study therefore concluded that the deployment of the professional practices of desk and field tax audit help to check the incidence of tax evasion and tax avoidance which in turn enhances the tax revenue generated by the Rivers State Internal Revenue Service. Finally, the study recommended that the Rivers State Internal Revenue Service should adopt as routine practices desk and field tax audit to check the incidence of tax evasion and tax avoidance in order to enhance the tax revenue generated by the Rivers State Internal Revenue Service.

Keywords: Tax audit, desk tax audit, field tax audit, tax revenue, personal income tax

INTRODUCTION

Governments around the world are into some sort of social contract with the citizenry and to fulfill the terms of this contract, every government and at different levels makes efforts to generate revenue. Among the major sources of revenue government pursue is tax revenue. The word 'tax' is derived from a Latin word 'Taxare'. When translated to English, means to estimate or value. In the words of Amaechina (1998) cited in Akinbobola (2021), tax is a levy which a government imposes on the income of the citizens or corporations in a state for which the government gives no direct benefit to the taxpayer. In other words, there is no *quid pro quo* (something for something) in tax payment. Tax therefore refers to a compulsory payment imposed by the government through its agent on the income of individuals and corporate entities as well as on goods and services for the purpose of raising funds to execute government programs and projects.

Tax is raised through the instrumentality of taxation. According to Adejuwon, (2008), taxation is a system of imposing compulsory levies by the government on the income of the individuals and companies either directly or indirectly for the purpose of generating revenue, redistributing such revenue generated from the surplus to deficit sector of the economy and providing social amenities for the benefit of the entire populace. It is pertinent to point out at this juncture that taxation is different from tax. While the latter pertains to the amount imposed, the former relates to the system of collecting the taxes.

A tax system refers to the interaction among the tax policies, tax laws and tax administration for the purpose of generating revenue for the government. It is these three pillars that constitute a country's tax system. The foundation of these three pillars is the tax policy. It is a general statement of intention that guides the thinking and actions of the various tax stakeholders towards the achievement of the tax objectives. The tax law by which every tax must be backed, represents the various legal instruments put in place to ensure the achievement of the tax policy. Tax administration, the last but not the least of pillars of a tax system, refers to the relevant tax authorities charged with the responsibility of administering the tax law in a country. For instance, in Nigeria, the taxation of a corporation is exclusively administered by the Federal Board of Inland Revenue Service (FBIRS).

Before the introduction of self-assessment policy into the body of the Nigerian tax system in 1998, there existed a tax assessment system that was anchored by the Revenue. This system requires all taxable persons or corporations to be assessed to tax by the relevant tax authorities. However, with the self-assessment system, taxable persons and corporations are now required to file their returns independently with the Revenue. This has increased the incidence of tax evasion and tax avoidance as some taxpayers are bent on reducing their potential tax liabilities. This assessment regime which gives the taxpayers the freedom to compute their chargeable profit and file in their tax returns has also and inevitably created loopholes through which some taxpayers manipulate their chargeable profit and file in inaccurate returns that are not in line with their accounting records as well as the results of their operations. This no doubt has resulted in loss of tax revenue to the government. The government which is always in dire need of funds to execute its projects and programs cannot afford to allow this ugly trend to continue, hence the need for tax audit by the Relevant Tax Authorities (RTA).

A tax audit is an examination of whether a taxpayer has correctly assessed and reported their tax liability and fulfilled other tax obligations (OECD, 2006). Tax audit is the examination conducted by tax officials on the accounting records, documents, books and tax returns filed in by a taxable person or corporation with a view to determining the level of compliance with the provisions of applicable tax laws (Akinbobola, 2021). Tax audit seeks to ascertain whether or not adequate accounting records and books exist for the purpose of determining the taxable profit or loss of the taxpayer and consequently the tax payable with the ultimate aim of enhancing tax revenue generated. Tax audit also aims to determine if the tax computations submitted to the tax authority agrees with the underlying records and also if all applicable tax laws have been complied with. Tax audit therefore contributes to sustaining the confidence and integrity placed in the self-assessment tax systems currently in use (Modugu & Anyaduba, 2014).

Other objectives of the tax audit include to enlighten the taxpayers on tax legislations as well as identifying areas involving tax fraud and recommending same for tax investigation. Though often used interchangeably with tax audit, tax investigation is different from tax audit. Itis a more rigorous exercise that has no time limit for the examination. It is aimed at establishing if the taxable persons or corporations has committed fraud or evaded tax. However, it is important at this point to direct your attention to the fact that the all-important role tax audit plays in improving tax revenue notwithstanding, it is not without some challenges. One of the major drawbacks of tax audit is time constraint. Yet, it is hardly completed within a fiscal year leading to more potential tax liabilities confined in pending tax matters. Other challenges of tax audit

include limited powers and experience. Unlike the tax investigators in the case of a tax investigation, the tax auditors are not specially trained for tax audit purposes. They also operate with limited powers as they cannot forcefully cause a taxable person or corporation to release evidence or accounting records relevant for tax audit purposes, neither can they seal a business premises in discharge of their tax audit duties.
In the light of the above, many scholars have expressed mixed reactions as to whether tax audit has been able to check the incidence of tax avoidance and evasion and thereby contributing to improving tax revenue (Adediran et al., 2013; Modugu & Anyaduba, 2014; Nwaiwu & Macgregor, 2018; Dada & Taiwo, 2020; Oladele et al., 2021).

In Rivers State, not much has been said about the relationship between tax audit practices and tax revenue generation irrespective of the pivotal role of tax audit in enhancing tax revenue. Hence, the need for the present attempt. This study therefore seeks to determine whether there is a relationship between tax audit practices and tax revenue generated by Rivers State Internal Revenue Service.

STATEMENT OF THE PROBLEM

It is believed that there is an empirical connection between tax audit practices and tax revenue generation. The empirical implication of this postulation is that effective tax audit practices by the officials of the tax Authority could improve the tax yield accruable to a government. This empirical relationship was buttressed by the research works of (Oladele et al., 2021; Nwaiwu & Macgregor, 2018; Dada & Taiwo, 2020). These research works were carried out in foreign economies, yet those carried out in Nigeria were conducted outside the shores of Rivers State. As result, much is yet to be said about this relationship as touching the activities of Rivers State Internal Revenue Service. Governments around the world and at different levels need funds to prosecute its activities and fulfil the social contract entered into with her citizenry. Coincidentally, tax revenue, paid by individual and corporate citizens, happens to be one of the major sources of fund with which the governments fulfill these mandates.

Even though citizens expect governments to fulfil their part of the social contract which is largely dependent on the availability of tax revenue, the citizens hardly fulfill their tax obligations to the governments; making it difficult for governments to raise revenue with which to carry out its functions including the provision of basic amenities as well as public goods and services to her subjects. This has left many governments financially stranded. Apart from not been able to implement their budgets, some governments are operating deficit budgets. This no doubt has taken a toll on the rate of development in some economies as some governments struggle to compete in the developmental fronts.

In modern Nigeria, apart from Lagos State, it is said that the rest of the states can hardly survive without oil revenue. Fashola (2013) supports this view point when he boasted during the Lagos State's sixth Taxation Stakeholders Conference in Ikeja that "if they shut down on oil, Lagos State is the only state that can survive. Everything that we have done in the past six years was funded by our taxes", he added. This is to say that some states are yet to put their tax revenue drive agenda on the front burners. This is even more worrisome in the case of the Rivers State, when one recalls that at the advent of this democratic dispensation in 1999, Rivers State operated sizeable budget estimates which was comparable to that of Lagos State.

However, the story is completely different today. Lagos state, a non-oil producing state, has gone far ahead of Rivers and other states in tax revenue generation. According to National Bureau of Statistics (2021), Lagos State has the highest Internally Generated Revenue with N267,232,774,434.06 in H1 2021, followed by the Federal Capital Territory with N69,072,879,664.43 and Rivers State with N57,324,672,372.42. While Yobe State with N4,031,033,046.55 recorded the least amount.

Accordingly, Olisah (2021), also reported that Lagos State House of Assembly has passed into law a budget of N1.758 trillion in 2022 fiscal year. While Rivers and other oil producing states, lagged behind with Rivers State staggering with a budget of N483.173 billion (Chukwu, 2021). This is to say that the soaring financial fortunes of Lagos State is largely attributable to tax revenue. Lagos State has the most organized tax system in Nigeria. Just like other developed and even developing economies and governments of the world with a good tax revenue, Lagos State has in place the most robust and efficient tax policy that encourages voluntary compliance and tax collection including tax audit practices necessary to boost its tax yield.

On the contrary, Rivers State and other states in Nigeria is heading in the opposite direction. This is evident in the rate of growth in their tax revenue. It does not seem promising visa vis the tax statistics of Lagos State over the years. As at today, the difference in budgetary projections between the states is so wide that it has turned a source of concern not only to officials of the Rivers State Internal Revenue Service but also to Rivers State government functionaries. Unfortunately, there seems to be no end in sight about this ugly trend especially if nothing urgent was done about it. It is against this backdrop that this study attempts to pore over whether or not a relationship exists between tax audit practices and tax revenue generated by Rivers State Internal Revenue Service.

CONCEPTUAL FRAMEWORK

The study examines the relationship between tax audit practices and tax revenue generated by Rivers State Internal Revenue Service. The conceptual framework shows the variables of the study. Tax audit practices constitute the independent variable proxied by desk tax audit and field tax audit. While tax revenue is the dependence variable measured with personal income tax.

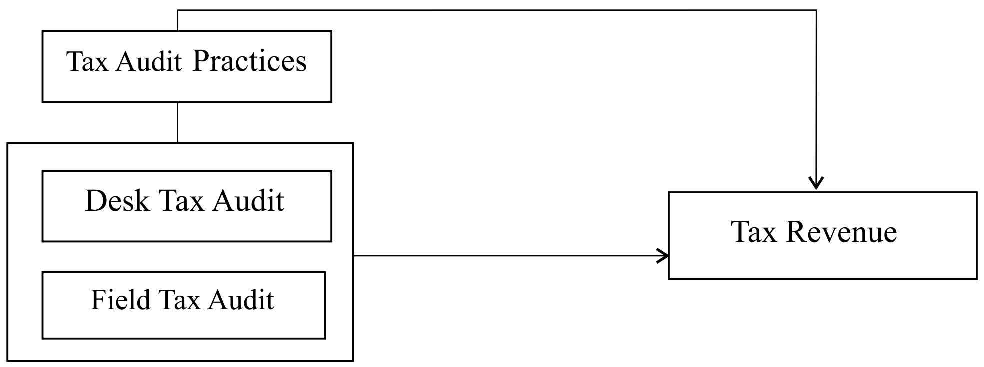

Fig. 1: Conceptual framework of tax audit practices and tax revenue generated by Rivers State internal revenue service.

The general objective of the study is to examine the relationship between tax audit practices and tax revenue generated by Rivers State Internal Revenue Service. Hence, the following specific objectives have been developed to guide the study:

1. To examine the relationship between desk tax audit and tax generated by Rivers State Internal Revenue Service.
2. To examine the relationship between field tax audit and personal income tax generated by Rivers State Internal Revenue Service.

Research Questions

Also, in line with the four specific objectives of the study, the following research questions have been raised for the study:

1. Does desk tax audit relate with personal income tax generated by Rivers State Internal Revenue Service?
2. Does field tax audit relate with personal income tax generated by Rivers State Internal Revenue Service?

Research Hypothesis

The following null hypotheses have been developed for this study:

Ho_1: No significant relationship exists between desk tax audit and personal income tax generated by Rivers State Internal Revenue Service.

Ho_2: No significant relationship exists between field tax audit and personal income tax generated by Rivers State Internal Revenue Service.

REVIEW OF RELATED LITERATURE

Theoretical Framework

Theoretical framework is relevant to a study because it provides the foundation upon which the study is carried out. It helps define and explain the study variables. Therefore, the relevant theory to the study is classical tax compliance theory. The classical tax compliance theory provided the foundation upon which this study is based. It postulates that a tax payer do not pay tax on his own volition. This means that a taxable person/entity pays tax out of fear of penalties. According to Sandmo (2005), the theory further assumes that a taxable person/corporation is constantly weighing the utilities of successful tax evasion against the danger in the possibility of being caught and disciplined by RTA. It is the result of this evaluation that determines whether a taxable person/entity will pay tax or not.

Conceptual Review

Tax Audit

A tax audit is an examination of whether a taxpayer has correctly assessed and reported their tax liability and fulfilled other tax obligations (OECD, 2006). Tax audit is the examination conducted by tax officials on the accounting records, documents, books and tax returns filed in by a taxable person or corporation with a view to determining the level of compliance with the provisions of applicable tax laws (Akinbobola, 2021). Tax audit seeks to ascertain whether or not adequate accounting records and books exist for the purpose of the determining the taxable profit or loss of the taxpayer and consequently the tax payable with the ultimate aim of enhancing tax revenue generated. Tax audit also aims to determine if the tax computations submitted to the tax authority agrees with the underlying records and also if all applicable tax laws have been complied with. Tax audit therefore contributes to sustaining the confidence and integrity placed in the self-assessment tax systems currently in use (Modugu & Anyaduba, 2014).

There are various ways in which tax audit can be carried out. They include back duty tax audit, correspondence tax audit, compliance visit, document matching program, CP 2000 note (under reporter inquiry), mail tax audit, tax compliance measurement program audit, field tax audit and desk tax audit. Desk tax audit is carried out in the tax office to ensure that all returns submitted by the taxpayer are subjected to audit. It is a routine exercise conducted by tax auditors. In this audit, the taxpayer is not notified in advance. Instead, the tax officials simply request the taxpayer to furnish them with relevant documents to enable them resolve any grey areas in the returns submitted to the tax office by the tax taxpayer. This type of audit puts the taxpayer on check. Because of such checks the tax payer attempts to do the right thing the first time. As the taxpayer endeavors to maintain accurate records of the accounts of his operations, ensures that he files in accurate returns that are in tandem with the results of his activities and applicable tax laws. Hence, this audit reduces the possibility of tax avoidance and evasion and by extension contributes to improving the tax revenue.

Unlike desk tax audit, field tax audit is carried out at the premises of a taxpayer. The taxpayer is not only notified before the commencement of the audit but also hinted on the books and documents that will be required for the audit. It is carried out as a follow up to the returns submitted to the tax office and desk tax audit conducted. Here at the taxpayer's office, the tax auditors examine the books of accounts, documents and other evidence necessary to verify the authenticity of returns submitted to the tax office and the outcome of the desk tax audit conducted. By its nature, it is an audit on a corporate taxpayer. It is elaborate and therefore more time taking than the desk tax audit. This is so to enable the tax auditors cover more grounds that is otherwise impossible with the desk tax audit because of its time constraint. It could be carried out as a routine exercise like the desk tax audit or as a fall out of the outcome of the desk tax audit in which case, the scope will depend on the audit risk factors. And usually, more attention is given to cases that have strong potential for high tax yield to encourage not only tax compliance but also to boost tax revenue generation. This audit is normally carried out through a back duty audit.

Tax Revenue

Revenue represents any kind of income to an entity. In the case of government, revenue constitutes all kind of funds generated by government to prosecute its projects and programs. The various sources of revenue to the government include loans, penalties, fines, donations, fees, royalties, proceeds from sales government properties and taxes. Tax is a levy which a government imposes on the income of the citizens or corporations in a state for which the government gives no direct benefit to the taxpayer (Amaechina, 1998 as cited in Akinbobola, 2021). Tax revenue therefore is the total amount of revenue generated from the tax imposed. It is a product of two tax components. That is, tax base and tax rate. It is derived thus: tax revenue = tax base * tax rate. Tax base is the object on which tax is charged or imposed (e.g, the income of the taxpayer) while the tax rate is the proportion of the tax base that is payable as tax to the government. It is expressed as a percentage of the tax base and fixed by the tax law backing the tax (e.g, currently, the rate of VAT

is 7.5%). The amount of tax revenue generated can be affected by the rate of tax compliance which in turn can be influenced by tax audit. Tax revenue is raised from different types of taxes. They include company income tax, petroleum profit tax, capital gain tax and personal income tax.

Personal income tax is the tax on the income of the individuals. The tax imposed on the employees, sole proprietors/traders, partners in partnerships, pensioners, trusts, estates and their executors fall into this category. This tax is backed and regulated by the Personal Income Tax Act Cap P8 LFN 2004 as amended. The personal income tax is imposed on the income of the individuals by both Federal and State governments depending on their type of work and places of residence of those individuals. Individuals resident in FCT, Abuja, personnel of the Nigerian Armed Forces and employees of the Nigerian Foreign Mission have their personal income tax collected by the Federal Government through the FIRS while others pay to the various state governments collectable through their respective SIRS according to the individuals' places of residence. Personal income tax is one of the major sources of tax revenue to the government. Although, mostly deducted from source especially the Pay-As You-Earn (PAYE) system.

Empirical Review

Several empirical studies have been carried out both on the national and international fronts on tax audit and tax revenue generation. Oladele et al. (2021) investigated into the impact of tax audit practices on revenue generation in Nigeria with its specific objectives such as to determine the relationship between tax audit practices dimensions and company income tax. The population of the study consisted of 26 tax offices across South – South, Nigeria with 900 staff of Federal Inland Revenue Service (FIRS). The sample size for the study consisted of 277 staff of FIRS which was determined using Taro Yemane formula for sample size determination. Primary data were collected from respondents using the questionnaire instrument. Pearson Product Moment Correlation Coefficient was also used with the aid of Statistical Package for Social Sciences (SPSS) version 23.0 to test the null hypotheses. The findings of the study reveal that desk tax audit and field tax audit have a positive relationship with company income tax. The study therefore, recommends that tax authorities should not concentrate only on desk tax audit but also on field tax audit so that revenue leakages will be blocked and increase the level of tax payers' compliance. Finally, there should be regular tax audit practices by tax authorities in Nigeria. This will assist in increasing government tax revenue.

Nwaiwu and Macgregor (2018) carried out a study on webometric indices of tax audit and tax revenue generation research in Nigeria. Despite numerous webometric indices of tax audit that were intended to improve the economic and social situation by supporting infrastructure and increasing the quality of public goods provided by the government, the situation in the country still remains fragile, and the country remains among the poor in the world. The core objective of this investigation is to empirically analyze the effect of webometric indices of tax audit and tax revenue generation in Nigeria. Primary and time series data of different variables of tax audit and tax revenue were collected from Federal Inland Review Services, auditor general office, Chartered Institute of Taxation of Nigeria and questionnaire. The data collected were analyzed using ordinary least square linear regression analyses with the aid of SPSS version 22. The results indicate that tax audit has a significant positive effect on tax revenue generation, explaining about 48.3% and 43.9% of the total variation in tax revenue generation of Nigeria. Back duty tax audit were found to have significant effect on personal income tax and company income tax. We therefore conclude that tax audit has the potency to make significant contribution to tax revenue generation and recommends that in order to increase government tax revenue; there should be regular tax audit practice by tax authorities in Nigeria. Tax administrators should not concentrate only on desk tax audit but also on field tax audit and back duty tax audit so as to be able to block all leakages and increase the level of tax payers' compliance. Cost benefit analysis between the cost of carrying out tax audit and the expected tax revenue should be conducted by the tax authorities before embarking on tax audit. This is to ensure that tax collections are more than cost of enhancing compliance. Qualified and competent manpower should be used by the tax authorities to carry out tax audits so as to minimize the tax audit costs. Proper orientation and public enlightenment campaign should be conducted among the tax payers to sensitize them and seek for their co-operation in tax audit exercise.

Dada and Taiwo (2020) conducted a research work on bearing of tax audit on tax compliance and revenue generation in Ekiti state. The paper examined the impact of tax audit on revenue generation in Ekiti State. The data used for this study was gathered using structured questionnaire administered to 312 staff of the Ekiti State Internal Revenue Service. A regression analysis technique was adopted, and the result revealed that certain per cent of the revenue generated in Ekiti State could be explained by the tax audit; It was also discovered that auditing access, auditing officials, an effective tax audit, non-compliance, audit fieldwork, tax audit control, and corruption affect the revenue generation by 1.188, 0.319, 0.596, 0.148, 0.157, 0.125 and 0.002 respectively; the probability value 0.00, 0.01, 0.00, 0.022 and 0.00<0.05 showed that auditing access, auditing officials, effective tax audit and incentive were statistically significant at 5 per cent level; the probability of F-statistic value 0.000< 0.05 revealed that the model was appropriate for determining the impact of tax audit on revenue generation in Ekiti State. Thus, the study concluded that tax audit should be embraced as it maximizes the collection of revenue which enables the government to address developmental projects that will benefit its citizenry and also helps in strengthening the businesses of the taxpayer.

Adediran et al. (2013). This study examines the impact of tax audit and investigations on revenue generation in Nigeria. The aim is to determine if tax audit and investigations can actually increase the revenue base of the government and if it can also stamp out the incidence of tax evasion. Data were collected through the primary sources from four hundred and ten respondents who are staff of the Federal Inland Revenue Service and Edo State Board of Internal Revenue. Hypotheses formulated were tested with Pearson Correlation Coefficient using SPSS output data. The findings are that Tax audit and investigations can increase the revenue base of the government and can also stamp out the incidents of tax evasion in the country. It was recommended that Tax audit and investigations should be carried out more often and as thorough as possible to accomplish its task of increasing the revenue base and stamping out tax evasion in the country.

Modugu and Anyaduba, (2014). This paper examines the impact of tax audit and other qualitative attributes on the tax compliance level of companies in Nigeria. Questionnaires were administered to staff of sampled companies in selected states of the five geo-political zones of Nigeria. Ordered Logistic Regression technique was employed to analyse the responses. The result showed that there exists a positive relationship between tax audit and tax compliance. The result also revealed that the probability of being audited, perception on government spending, penalties and enforcement, the joint effect of tax audit and penalties have a tendency to significantly influence

tax compliance in Nigeria. We therefore recommend that the relevant authorities should seek more pragmatic and effective means of enhancing the impact of tax audits on corporate tax compliance in Nigeria in order to consolidate on government's revenue.

METHODOLOGY

The research design employed in the study is the descriptive survey. The research was carried out at the Rivers State Internal Revenue Service. A population of 45 staff was used. The study used both primary and secondary data, however, the responses were obtained using a set of questionnaires. The collected data were analyzed using descriptive and inferential statistics with the aid of Statistical Package for Social Sciences (SPSS). The questionnaire was validated by two experts in taxation and revenue generation. The questionnaire used was Tax Audit Practices and Tax Revenue generated by Rivers State Internal Revenue Service. Questionnaire (TAPTR). The TAPTR has sections A, B and C. Section A sought information on selected personal data of the respondents, sections B and D consisted of 8 items relevant for answering research questions posed in the study. The response format of TAPTR was a five-point Likert scale of Strongly Disagree, Disagree, Agree and Strongly Agree, with corresponding values of 1, 2, 3, 4 and 5 respectively.

The reliability of the instrument was established by using Cronbach's Alpha reliability method on data collected through a pilot test on 10 respondents selected from staff of Bayelsa State Internal Revenue Service. The reliability coefficient obtained was 0.72, which was high and above the recommended acceptable value of 0.7 for good reliability (Nunnally, 1978). Therefore, the instrument was regarded as reliable enough for use in data collection for the study. A total of 45 copies of the instrument were distributed to the respondents directly by the researcher with the help of two research assistants. All questionnaire distributed were retrieved representing 100 percent return. The descriptive statistics of mean was used to answer the research questions. An item with a calculated mean value equal or greater than 3.50 (3.50 – 5.00) was considered agree, while an item was considered disagree if the mean rating was less than or equal to 3.49 (0-3.49). The inferential statistics of t-test was used to test the null hypotheses in the study. It was decided that where the t-calculated value was equal or greater than the table t-value, it indicates significant difference and the null hypotheses rejected.

RESULTS AND DISCUSSIONS

Table 1: Summary of Responses to Questionnaire Items in Research Question 1

S/N	Relationship between Desk Tax Audit and Personal Income	[redacted]	SD	Remark
1	The practice of DTA by the Revenue officials can be used to check the incidence of tax avoidance of sole proprietors in Rivers State.	3.58	0.96	Agree
2	The use of DTA by officials of RTA can encourage tax compliance behavior of sole proprietors in Rivers State.	3.55	0.90	Agree
3	The use of DTA by the Revenue officials can help reduce the incidence of tax evasion by sole proprietors in Rivers State.	3.57	1.17	Agree
4	The implementation of DTA can boost tax revenue generated by Rivers State Internal Revenue Service.	3.59	0.82	Agree
	GRAND MEAN	**3.57**	**0.92**	**Agree**

The result in Table 1 shows that, respondents have mean range of 3.55 to 3.59, a grand mean of 3.57, and standard deviation range of 0.82 to 1.17 and a grand standard deviation of 0.92. This indicates that all respondents are homogeneous and agree that all items in Table 1 are how desk tax audit relate with personal income tax generated by Rivers State Internal Revenue Service because the grand mean is greater than 3.50.

Table 2: Summary of Responses to Questionnaire Items in Research Question 2

S/N	Relationship between Field Tax Audit and Personal Income	[redacted]	SD	Remark
1	The use of FTA by officials of RTA can encourage tax compliance behavior of sole proprietors in Rivers State.	3.54	0.93	Agree
2	The implementation of FTA by the RTA can lead to higher tax yield in Rivers State.	3.57	0.95	Agree
3	The use of FTA by the Revenue officials can be used to check the incidence of tax evasion by sole proprietors in Rivers State.	3.53	1.07	Agree
4	The use of FTA by the Revenue officials can be used to check the incidence of tax avoidance by sole proprietors in Rivers State.	3.68	0.93	Agree
	GRAND MEAN	**3.58**	**1.07**	**Agree**

The result in Table 2 indicates that, respondents have mean range of 3.53 to 3.68, a grand mean of 3.58, and standard deviation range of 0.93 to 1.07 and a grand standard deviation of 1.07. This indicates that all respondents are homogeneous and agree that all items in Table 2 are how field tax audit relate with personal income tax generated by Rivers State Internal Revenue Service because the grand mean is greater than 3.50.

Table 3: T-test Analysis of mean ratings of responses on the relationship between desk tax audit and tax revenue

Group	N	[redacted]	SD	Df	t-cal	t-cri	Decision	Remark
Staff of RIRS	45	3.57	0.92	44	8.82	1.68	Rejected	Significant

The result in Table 3 shows that t-cal is 8.82 and t-cri is 1.68 at 0.05 significant level. This indicates that t-cal (8.82) is greater than t-cri (1.68). As a result, the stated null hypothesis that no significant relationship exists between desk tax audit and personal income tax generated by Rivers State Internal Revenue Service is rejected at 0.05 level of significant. Therefore, a significant relationship exists between desk tax audit and personal income tax generated by Rivers State Internal Revenue Service at 0.05 level of significant.

Table 4: T-test analysis of mean ratings of responses on the relationship between field tax audit and personal income tax

Group	N	[redacted]	SD	Df	t-cal	t-cri	Decision	Remark
Staff of RIRS	45	3.58	1.07	44	8.86	1.68	Rejected	Significant

The result in Table 4 shows that t-cal is 8.86 and t-cri is 1.68 at 0.05 significant level. This indicates that t-cal (8.86) is greater than t-cri (1.68). As a result, the stated null hypothesis that no significant relationship exists between field tax audit and personal income tax generated by Rivers State Internal Revenue Service is rejected at 0.05 level of significant. Therefore, a significant relationship exists between field tax audit and personal income tax generated by Rivers State Internal Revenue Service is rejected at 0.05 level of significant.

DISCUSSION OF FINDING

The test of hypothesis one (**H_o1**), indicates that there is a significant relationship between desk tax audit and tax revenue as shown in table 3 with the t-cal at 8.82 and t-cri at 1.68 at 0.05 significant level. And because the t-cal (8.82) is greater than t-cri (1.68) at 0.05 level of significant, the stated null hypothesis that no significant relationship exists between desk tax audit and personal income tax generated by Rivers State Internal Revenue Service is rejected. Hence, the conclusion that there is a significant relationship between desks tax audit and personal income tax. This finding agrees with the study of Nwaiwu and Macgregor (2018) who carried out a study on webometric indices of tax audit and tax revenue generation research in Nigeria. This finding indicates that there is a significant relationship between desk tax audit and personal income tax generation, explaining about 48.3% and 43.9% of the total variation in tax revenue generation of Nigeria. Similarly, another study by Samuel and Tyokoso (2014) on an empirical investigation of tax audit and revenue generation in Nigeria also indicated a significant relationship between tax audit and revenue generation in Nigeria.

The test of hypothesis two (**H_o2**), also indicates that there is a significant relationship between field tax audit and personal income tax as shown in table 4 with the t-cal at 8.86 and t-cri at 1.68 at 0.05 level of significant. And given that the t-cal at 8.86 is greater than t-cri at 1.68at 0.05 significant level, the stated null hypothesis that no significant relationship exists between field tax audit and personal income tax generated by Rivers State Internal Revenue Service is rejected. The reason to infer that there is a significant relationship between field tax audit and personal income tax. This finding in line with the work of Dada and Taiwo (2020) who conducted a research work on bearing of tax audit on tax compliance and revenue generation in Ekiti State. The study indicates that, field tax audit relates with personal income tax generated by Rivers State Internal Revenue Service. Also, another study by Stanley (2014) on effective tax administration and institutionalization of accounting systems in small and medium scale enterprises; evidence from Nigeria." The study revealed that lack of effective tax audit undermines the collection of profit tax from the operators of those sectors.

CONCLUSION AND RECOMMENDATIONS

The study which investigated the relationship between tax audit practices and tax revenue generated by Rivers State Internal Revenue Service concluded that the RTA should deploy as a routine the professional practices of desk tax audit and field tax audit to help check the incidence of tax evasion and tax avoidance especially in the face of the current self-assessment tax system in Nigeria that gives the taxpayers the freedom to assess themselves to tax which may lead them to fall to the temptation of manipulating their taxable income in order to reduce their potential tax liability. The study thus recommends that:

1. On the basis of the first specific objective which is to examine the relationship between desk tax audit and personal income tax generated by Rivers State Internal Revenue

Service, the study recommended that more thorough desk tax audit be conducted as a routine to help check the incidence of tax evasion and tax avoidance which will in turn enhance the tax revenue generated by the Rivers State Internal Revenue Service.

2. On the basis of the second specific objective which is to examine the relationship between field tax audit and personal income tax generated by Rivers State Internal Revenue Service, the study also recommended that in dept field tax audit be carried regularly to check the incidence of tax evasion and tax avoidance which will by extension improve the tax yield generated by the Rivers State Internal Revenue Service.

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VALUE CHAIN FINANCING AND COMPETITIVE ADVANTAGE OF SMALL HOLDER FARMERS IN RIVERS STATE

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ABSTRACT

This paper examines the effect of value chain financing on the competitive advantage of smallholder farmers in Rivers State. The researcher focused attention on those smallholders' farmers in four local government areas of Obio-Akpor, Ikwerre, Emohua and Etche in Rivers State. A total number of one hundred (100) of such smallholders' farmers was identified. The data for the study were collected through primary sources such as the questionnaire' and observations. There are two main variables in this study-Value-Chain Financing and Competitive Advantage. Competitive advantage was measured by price insensitivity and product quality, while Value Chain Financing was the independent variable. In testing the hypotheses in the study, a multiple regression analysis was employed, and the findings of the study revealed that, value chain financing has a very strong, positive and significant influence on price insensitivity, and a strong, positive and significant influence on product quality. The study therefore concludes that, value chain financing significantly influences competitive advantage of smallholders' farmers in Rivers State, and recommends amongst others that government should sensitize financiers on the need to adequately fund smallholders' farmers that they may be channeled all the achieve price insensitivity and product quality to attract an efficacious competitive advantage.

Keywords: Competitive advantage, Rivers State, Small holder farmers, Value chain financing.

INTRODUCTION

For a company to survive in highly competitive environment of today, it must at least temporarily achieve a competitive advantage. Barney (2002) articulates that, a company familiarizes with competitive advantage when its procedures in a business or market generate economic value and when a small number of contending companies are involved in analogous procedures. As such, in order for businesses to achieve competitive advantage, it is necessary to create economic values to customers (Barney & Hesterly, 2010).Value chain financing can help a company concentrate its strategy and accordingly realize a competitive advantage (Hansen & Mowen, 2000).

The value chain financing catalogues the generic value-adding actions of firms or industry, given that, primary activities and support activities are acknowledged and the cost and value drivers are determined for respective value action. Thus, value chain financing (VCF) is a viable mock-up to advance right of entry to agricultural finance for smallholder farmers' enhancement in the financial security of the farmers, and spreading out of the agricultural production, which will subsequently pilot to an advanced altitude of food security.

It is imperative for managers to appreciate the financing implication of weighing the performance of their industries based on a value chain analysis standpoint. This is specifically beneficial when it concerns SME-subjugated segments, which houses smallholder farmers. Value chain financing

arrangements and features determine the likelihoods of achievement of small enterprises in an industry where production agents are turning out to the lead businesses (Zhang, 2014). Smallholders' farmers can be categorized under small and medium enterprise, and access to finance remains one of the decisive blockages for economic development and expansion, in particular for small and medium-sized enterprises (SMEs) in developing countries (Baas & Schrooten, 2005; de la Torre et al., 2010). Deficiency of admittance to credit produce constriction at start up (Nichter & Goldmark, 2009), and afterward for investment and improvement (Thorsten & Demirgüç-Kunt, 2006; Beck & Demirgüç-Kunt, 2008).

SMEs ever more rely on bigger firms for their right of entry to markets, and bigger companies find it fitting and cost-effective to subcontract and portion their actions into a chain of many functions carried out by SMEs in different locations. Buyer-supplier set of connections of companies with impenetrable inter-firm value chain linkages are all the time more common outline of industrial business (Giuliani et al., 2005; Navas-Alemán, 2011). Questionably, many SMEs are creditworthy since they expand and become large firms themselves, but it is difficult and expensive for banks to assess the credit-worthiness of SMEs, and SMEs have less collateral.

SMEs are much more credit constrained than larger firms (Atieno, 2009; Schiffer & Weder, 2001; Beck & Demirgüç-Kunt, 2006) and multiple studies have pointed to the problem of deficiency of access to finance existence of credit-constraints in developing markets. Access to credit for SMEs empowers them to scale up their production, acclimatize to new technologies and upsurge cost-effectiveness (Beck & Demirgüç-Kunt, 2008). In value chains, companies at the bottom of the chain require credit to back upgrading strategies so as to become involved in extra value-added actions. Financial institutions require solid, reckonable, confirmable information to evaluate solvency (Biais & Gollier, 1997; Cole *et al*., 2004; De Haas *et al*., 2010) which is characteristically traced from financial statements or credit assessments which several SMEs cannot afford. SMEs then face a rancorous loop: they amass assets gradually due to deficiency of finance; this makes banks unwilling to grant credit to back investment which possibly will oblige as collateral.

However, a critical review of extant literature revealed very scanty empirical studies on value chain financing and competitive advantage. The few available ones are of foreign origin(Tessman, 2020; Navas-Alemán, Pietrobelli & Kamiya, 2015; Akenbor, 2011, Rogan,Nanda & Maharaj, 2010) and therefore their findings are not compatible to the Nigerian situation. It is against this backdrop that this study is being consummated to investigate the impact of value-chain financing on competitive advantage of smallholder farmer in Rivers State of Nigeria.

STATEMENT OF THE PROBLEM

In an ideal world, smallholders' farmers are supposed to enjoy adequate financing to attain competitive advantage in their operations, however, in contemporary times, the smallholder farmers face a quantity of trials in their financing. From a financier's viewpoint, agricultural investment in overall is professed as high risk emanating from price risk, climate risk, and credit risk. Still, the smallholder agricultural segment is likewise pigeonholed by low productivity and low mechanization. As commercial banks make effort to finance smallholder farmers, there is a requirement of collateral from smallholder farmers. Collateral is a crucial constituent in lending, expressly by money deposit banks offering agricultural financing. Conventionally, in agricultural lending, agricultural land is the main procedure of collateral. A transformed focus on value chain analysis is therefore critical as it aids agriculture-led intensification which is effective in plummeting poverty when making use of fitting financing solutions that embrace smallholder farmers and enhance their competitive advantage. This study therefore, examines the impact of value chain financing on competitive advantage of smallholders' farmers in Rivers State of Nigeria.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Network Theory

Network Theory is one of the theories that give emphasis to the significance of sustaining downstream and upstream relationships for the optimization of value within businesses (Heizer & Render, 2014). The theory explicates that for a business to thrive, it must launch a network with other businesses to enhance its value and processes (Katz, Lazer, Arrow & Contractor, 2014). The theory advocates business networking with other businesses will give them an advantage of every one company harmonizing each other particularly in area where one business is deficient of faculty which is obtainable in the other. The Network Theory clarifies that businesses within a network intermingle with other businesses by bartering resources and familiarizing themselves with new procedures that result to added value for these businesses (Daastol & Stensrud, 2016).

Nevertheless, businesses need to put together mutual trust and openness with each other for success (Katz 2014). For businesses to commence a well-built network they must contain shared interests, diverse resource and valuable two-way communication. The Network Theory will be functional in terms of supplying perception for determining the item grouping that can be handled at the money deposit banks' premise. Since the theory suggests that a money deposit bank can institute a functioning relationship with smallholders' farmers there must be mutual trust, shared interest, differing resources, two-way symmetrical communication, and cognitive ties, this theory supports the concept of value chain financing.

Concept of Value Chain Financing

The conjectural concept of value chain was made up by Michael Porter in 1985.Value-chain analysis is a perception from strategic management, initially designated and propagated by Michael Porter in 1985. Value chain is the categorization of actions essential to make a product or deliver a service (Ikwouria & Gate, 2008). Value chain analysis is a mechanism for snowballing customer satisfaction and handling expenses more successfully (Drury, 2008). Value chains outline market admittance for the reason that it categorizes crucial participants, shows them the way inside the chain and empowers vibrant consideration of the "instructions of the desired inclinations (Porter, 1985). Value chain financing therefore, is a connected set of value-creating happenings which improve the access to financing, beginning from elementary raw materials sources for components suppliers through to the eventual end-use product or service transported to the customer.

Value chain financing encompasses the flow of credit between any or all of the agricultural finance providers, products and support services amongst a mixture of value chain actors (Miller & Jones, 2010). Agricultural value chains that function optimally make use of financial products that convene definite needs. The credit risk is additionally considerably condensed by the method utilized to dispense and bring together funds (Oberholster et al., 2015). It is significant for the success of value chain financing that a valuable lead chain actor is acknowledged (Miller, 2010;

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Greenberg, 2010). Smallholders' farmers can take action as a useful lead actor as: they enclose an unmitigated countryside footstep.

Value chain financing focuses on the dynamics of complex linkages within a network, wherein both value creation and value capture occur in a value system that includes suppliers, distributors, partners, and collaborators, thus extending the firm's access to resources and opportunities (Zott et al., 2011).Value chain financing requires the "mapping of the market" to track and analyze the contribution of the different chain actors and the relationships among themselves.

The affiliations among the lead chain actor and the smallholder farmer can play a vital role in facilitating access to financial services (Oberholster et al., 2015). Some of the benefits that an agricultural value chain financing offers to smallholder farmers takes account of the lessening of the cost and risk in financing. It additionally offers a mechanism to improve the access to financing for smallholder farmers that, due to 1) a lack of collateral, or 2) the high transaction costs of securing a loan, may otherwise not be available (Miller & Jones, 2010). This existing study inquiries is about investigating whether value chain interactions can advance access to finance for smallholders' farmers and contribute to their competitive advantage.

Concept of Competitive Advantage

In contemporary times, many firms worldwide are striving to cope with increasing competition and the choices they make affect their competitive stand and profitability. Firm profitability is a function of organizational attractiveness (structure) and the firm's relative stand within the industry. A robust comparative view implies that the firm has a competitive gain that can be unremitting against occurrences by competitors and changes in the industry. Using strategic management and strategic planning which is expected to help the firm position itself against their rivals in the quest for upper hand. Since there are many relations and interdependencies among activities in the value chain of firms, the ability to co-ordinate interrelationships is critical to achieving competitive advantage (Porter, 1985). This is undertaken to help the firm position itself against its competitors in the pursuit of competitive advantage.

The important elements of competitive advantage pertaining to the creation of values to customers were developed by Jones (2003), who invented three generic strategies, which comprise of cost leadership, differentiation, and focus. Such competitive strategies are able to respond to the objectives of businesses effectively and are commonly adopted by businesses. This study in line with Cyprian and Ozuru (2016) and Choi and Pucik (2005 adopts price insensitivity and product quality as the measures of competitive advantage.

Price Insensitivity

Price insensitivity is the evaluation of how customers decide to uninterruptedly buy a product or not based on changes in price of the product. This implies the level at which a customer does not vary his/her buying attitude due to a change in price of product. Cyprian and Ozuru (2016) revealed that price of product plays vital role in determining responses of customers towards the product. Price insensitivity could be related to price elasticity and inelasticity in economics (Cyprian & Ozuru, 2016). Price plays an indispensable role that may touch consumer-producer or supplier relationships and retention rate (Sanzo et al., 2003). Price insensitivity therefore, depends on the nature of the products in question and other variables like customers' income size. The kind of product and amount a consumer has over a time determines the consumer's willingness to forsake price or make considerations.

Product Quality

Product quality is one of the foremost competitive issues when designing and launching new products, not only in domestic markets (Choi & Pucik, 2005), but also in an international context (Calantone & Knight, 2000). Quality has been unsurprisingly detected as a crucial strategic constituent of competitive advantage, and consequently, improving product quality has been a substance of leading concern for firms (Flynn et al., 1995; Yuen & Chan, 2010). Quality is a critical component in the design and manufacturing of products which are considered to be superior to those of competitors (Flynn et al., 1995).In short, product quality linked with brand name influences customers' evaluation toward the strength of that brand (Hilgenkamp & Shanteau, 2010). Customers will not only ponder on essential objective quality in the short term, but in the long term as well. Product quality thus, contributes to a firm's competitive advantage.

Empirical Review

Tessmann (2020) focused on synergies between the commodity-producing and related manufacturing and service sectors in the perspective of the Ivorian cashew industry. Whereas these shared preparations are fundamental for bargaining inter-firm associations beside global value chains. This study discovered minute substantiation that they have kicked off improvement for local industries. As an alternative, the materialization of international buyers as strategic partners for policy-makers has produced openings for these pilot actors to buttress their foremost position, emanating from entrée to finance and technology.

Navas-Alemán et al. (2015) explored inter-firm linkages and SMEs access to finance by means of original enterprise-level data (agro-industry in Argentina, furniture in Brazil and ICT in Costa Rica). The study evaluated sources of value chain finance and talked about the responsibilities of financial apparatuses anchored on 'hard data' and relationship finance. Findings validated the significance of value chain financing and the responsibility of governance in SMEs' access to finance.

Akenbor and Okoye (2011) investigated the influence of value-chain analysis on competitive advantage of manufacturing firms in Nigeria on a population consisting one hundred manufacturing companies quoted in the Nigerian Stock Exchange Factbook of 2009. Data were composed by means of secondary sources such as the companies' Annual Reports of an assortment of years and CBN Statistical Bulletin of 2009. The study adopted the multiple regressions analysis to test the hypotheses confirmed in this study. The outcomes exposed that value-chain analysis has a positive but insignificant influence on competitive advantage of a manufacturing firm in Nigeria.

Rogan et al. (2010) used qualitative value chain analysis to consider the responsibility of market and regulatory formation in the creation of an enabling environment for the supply and promotion of emergency contraception, by means of in-depth and semi-structured interviews with contraception clients, providers, industry respondents, and stakeholders from national and provincial government. Outcomes of the study designated probable rationales for the low use of emergency contraception. A significant finding is that fiscal and structural blockades impede the provision of emergency contraception to public and private health facilities. Value chain analysis

was established to be a supportive implement in examining the industry, predominantly the supply-side constraints.

From the review of literature, the study developed the following research model:

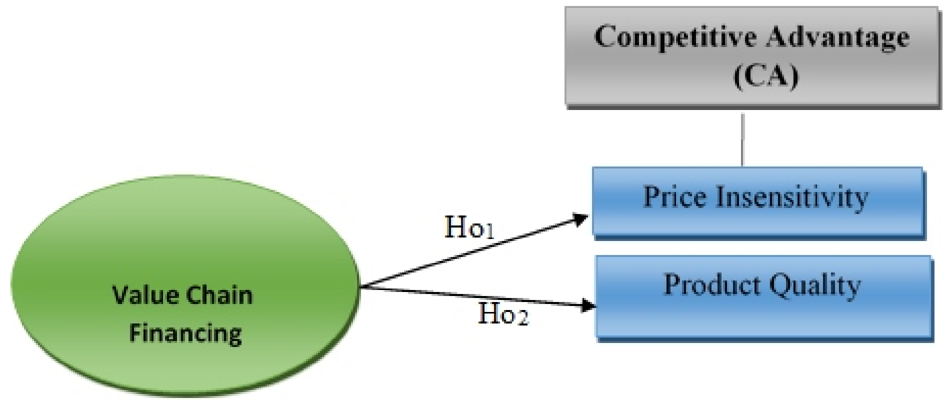

Fig. 1: Research Model of Value Chain Financing and Competitive Advantage
Source: Designed by the Researchers, 2022

From the research model, the following hypotheses were raised:

H_1: Value chain financing does not significantly influence price insensitivity of smallholders' farmers in Rivers State.

H_2: Value chain financing does not significantly influence product quality of smallholders' farmers in Rivers State.

METHODOLOGY

For the purpose of this study, the survey method of research design was employed by the researchers. The choice of this design is because it offers the researchers the opportunity to generate a large volume of data from different organizations and institutions thereby providing a valid generalization of research findings. More so it investigates beliefs, opinions, attitude, preferences or disposition of the population elements without subjecting them to any form of manipulation and control (Akenbor, 2011). In this study, the researchers focused on those small holders farmers in four local government areas in (Obio-Akpor, Ikwerre, Emohua and Etche) in Rivers State. A total number of one hundred (100) of such smallholders' farmers was identified. The data for the study were collected through primary sources such as the questionnaire' and observations.

There are two main variables in this study: value-chain financing and competitive advantage. Value-chain analysis is the independent variable, while Competitive Advantage was measured by price insensitivity and product quality. In testing the hypotheses in this study, a multiple regression analysis was employed, which was computed with the aid of the Statistical Package for Social Science (SPSS) Version 22.0

RESULTS

The influence of value chain financing on competitive advantage is now evaluated. The study sought after ascertaining whether value chain financing had significant effect on competitive advantage of smallholder farmers in Rivers State, and the results are presented next.

Test of Reliability

Reliability Cronbach's α was conducted to examine the internal consistency of multi-item constructs. All constructs prove their reliability. The exact results of the scale reliability analysis are reported in Table 1.

Table 1 shows the reliability measure of Value Chain Financing and Competitive Advantage

Scale	Dimension	Items	Reliability
PI	Price Insensitivity	5	0.866
PQ	Product Quality	5	0.876
CA	Competitive Advantage	4	0.806

Source: SPSS 22.0 Output, based on 2022 field survey data.

Price Insensitivity (PI) and Product quality (PQ) have values of 0.866 and 0.876 respectively. In the interim, Competitive Advantage (CA) attains value of 0.806. All constructs have the values that exceed the normally conventional threshold value of 0.7 and are sufficient for the succeeding phase of multiple regression analysis.

Table 2: Influence of Value Chain Financing on Competitive Advantage (n=100)

Independent Variables		Dependent Variable	Estimate P	Conclusion
Value Chain Financing	==>	Price Insensitivity	.0894(P < 5%)	Supported
Value Chain Financing	==>	Product Quality	.0779(P < 5%)	Supported

Note: *,** Significant at < 0.10 and < 0.05 respectivel

Table 2 shows that for hypothesis one and two, the significant is .000 which is lesser than 0.05; there is a significant, influence of value chain financing on price insensitivity and product quality with the R-square (Coefficient of Determination) that there is 89.4%, and 77.9% direct influence of the value chain financing on price insensitivity and product quality respectively. This shows that the value chain financing can affect price insensitivity and product quality to a high degree.

DISCUSSION OF FINDINGS

A critical examination of a connected set of value chain financing to enhance competitive advantage has been reported by this present study. The results of hypotheses one and two show that value chain financing has a very strong, positive and significant influence on price insensitivity(0.894:0.000<0.05) and a strong, positive and significant influence on product quality (0.779: 0.000<0.05). This points out that value chain financing facilitates competitive advantage of smallholders' farmers in Rivers State. By positioning value chain financing resourcefulness, the smallholder's farmer can investment opportunities to build sustainable competitive advantage and improve its existing programs by putting forward efficient and innovative agricultural programmes to meet societal demand for food supply. Thus, in this study, it was found that, Value-Chain Financing has positive and significant influence on Competitive Advantage of smallholders' farmers in Rivers State. This lends support to previous studies such as Urbig (2003) and Schiebel (2005). Urbig (2003) findings informs that the value chain analysis facilitates companies' executives to control cost drivers better than competitors and thus creating above-average performance in operational efficiency, profitability, market share, customers' satisfaction, innovation, and quality and assets utilization, while the findings of Schiebel (2005) reveal that value-chain financing analysis enhances a firm's competitive advantage.

CONCLUSION AND RECOMMENDATIONS

This study investigated the effect of value chain financing on competitive advantage of smallholders' farmers in Rivers State. The results of regression analysis indicated that value chain financing has significant positive effect on price insensitivity and product quality. This means that, smallholder farmers in Rivers State competitive advantage were as a result of their accessibility to value chain financing. The findings from this study have shown that value chain financing contributes significantly to smallholders' farmers craving to stay productive in their enterprises depending on how they have access to adequate financing, which subsequently lead to their competitive advantage in the industry. The study therefore, concludes that, value chain financing significantly influences competitive advantage of smallholders' farmers in Rivers State, and recommends that:

a) Government should sensitize financiers on the need to adequately fund smallholders' farmers that they may be channeled all the achieve price insensitivity and product quality to attract an efficacious competitive advantage.

b) Training to heighten financial interest possibly should be provided to the smallholder farmers.

c) Government should sensitize financiers to fund smallholder farmers adequately to enable them perform creditably in their agricultural programmes to boost food production in the State.

d) Government should extend assistance in terms of grants accessible for deposits when smallholders' farmers use the funds for agricultural purposes.

e) There should be restriction on the interest rates charged by banks when offering agricultural credit to smallholders' farmers

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IMPACT OF AGRICULTURAL DEVELOPMENT ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

In recent decades, the core and potential contribution of agriculture to economic growth has been a subject of much controversy among development economists. As some contend that agricultural development is a pre-condition for industrialization, others strongly object it and argue for a different path. Taking advantage of ordinary least square method (OLS), the research carried out by means of secondary data and using the independent variables. Agricultural Development (AGD), Capital Formation (CFN) Inflation Rate (INF), and Interest Rate (INT) to re-examine the impact of agriculture on Economic growth in Nigeria. The result gotten from the empirical analysis shows that the productivity in agricultural sector has appreciably impacted positively on the economic growth in Nigeria.

Keywords: agricultural contributions, economic growth and agricultural development in Nigeria

INTRODUCTION

Traditional trade theory emphasizes that free trade based on allocative efficiency, increases social welfare assuming perfect competition. The theory further implies that free trade policies improve welfare of any economy by reducing dead weight loss associated with the characteristics of monopoly or oligopoly. Even though trade theory states that foreign trade increases welfare and economic activities. Some studies show that there is little or no evidence to suggest that foreign trade accelerates agricultural production growth or per capita income. However, there is a substantial levels of empirical evidence confirming that there is a link between trade openness and growth (Andersen & Babula, 2018).

Also some research shows that foreign trade and agricultural productivity as may both feed on each other. Agricultural productivity can be gained from trade openness which results from liberalized trade policies as agricultural products need to be more competitive to get expected agricultural production levels (Mahadevan, 2013). A substantial level of analysis points out that Nigeria may have benefitted from trade policy reforms and increased foreign trade which has enhanced a shift away from protectionism.

Nigeria has been a member of World Trade Organization (WTO) since 1995, and has implemented regional Free Trade agreements since 1995. Sri Lanka expected fast economic growth via increased agricultural output with trade policies with potential of increasing foreign trade. However, Nigeria's agricultural production has been growing at a very low rate in comparison to its government's expectations. Since the commitment of the country to world trade, the agricultural growth rate has remained approximately at an annual average of 4%. Historically, Nigeria has been an agricultural economy where agriculture accounted for more than 50% of the total GDP. Relative contribution of agricultural sector has been decreasing to less than 50% of the total GDP (CBN, 2016). Although relative contribution of the agricultural sector to the total GDP has declined, agriculture still accounted for about 34% of the total labor force and 23% of total exports in 2018 (CBN, 2018). Very few or no studies have exclusively examined the foreign trade effects on agricultural production growth in Nigeria. This empirical research attempts to provide a quantitative assessment of the foreign trade impacts on the agricultural production growth from 1978 to 2021.

Since the advent of oil as a major source of foreign exchange earning Nigeria in 1974 the image has been almost that of general stagnation in agricultural exports. This led to the loss of Nigeria's position as an important producer and exporter of palm oil produce, groundnut, cocoa and rubber (Edwards, 2018). Between the year 1960 and 1980, agricultural and agro-allied exports constituted an average of 60% of total export in Nigeria, which is now accounted for, by petroleum oil export (CBN, 2016).

Furthermore, by 1977, export stood at N7, 881.7million. Between 1960 and 1977, value of export grew by 19%. It should be noted that before 1972, most of the export were agricultural commodities like cocoa, palm produces, cotton and groundnut. Thereafter, minerals, especially crude, petroleum, became significant export commodities. Imports also increased in values during the period. By 1960, import were valued at N432 million. They increased to N758.99 million and N813.2 million in 1970 and 1978 respectively, rising to N124, 162.7 million in 1992 and N681, 728.3 million in 1997. Non-oil GDP recorded a growth rate of 8.9%, compared with 8.5% in 2020. The improved performance in the sector was driven largely by the agricultural sector which grew by 5.7%, underpinned by robust growth in all its components (NPC, 2020).

Even though Nigeria has a high poverty rate, it still has a higher GDP in comparison to other countries of Africa. Till now Nigeria has been trailing behind Western economies. Today, almost fifty years after gaining independence, Nigeria should compete with economies of the world rather than just African economies. The country is rich in natural resources and has identified the fact that taking appropriate measures can speed its economic development.

With this foresight, it crafted the vision 20-20-20 program. This program aims to make Nigeria one of the twenty largest world economies by the year 2020. The seven points in the 20-20-20 program are: power and energy, food security and agriculture, wealth creation and employment, mass transportation, land reforms security and functional education. The country seeks to become a leading economy in Africa and a major player in the world's economic and political affairs and their 20-20-20 plan is their guideline. To become a developed nation, Nigeria needs to speed up its economic growth by focussing on vital economic sectors like education, energy, agriculture and manufacturing.

At this point in Nigeria's development, the best approach is to focus on the agricultural sector. By focusing on agricultural development, Nigeria can speed up its economic growth in the coming decade. The share of agricultural products in import volume has increased while on the export side, the share of agricultural products in total export earnings has declined over the years. With depreciation of the naira, we have increased export prices and lower import prices (that cheap import prices) and overvalued exchange rates. These artificially cheap food imports have progressively created domestic disincentives for domestic substitutes, it has also made policy formulators fail to identify the constraints facing the domestic sector so as to formulate better policies for promoting agricultural production.

There is a false sense of security caused by the cheap food imports which allows for halfhearted execution and abandonment of agricultural projects. Acceleration and completion of projects in the domestic sector has been distorted while focusing solely on the importation of the agricultural products, when these same products can be produced in abundance, which has not fostered the positive movement of agricultural production. Currently, Nigeria has 75 percent of its land suitable for agriculture, but only 40% is cultivated. That indicates there is much room for the county to focus on. This addresses the food security and agriculture component of their plan along with the focus on employment for all.

However, to move forward, the country must increase the low productivity of current agricultural companies, engage competition within the agricultural sector, develop domestic policies and increase funding (Ayodele et al., 2013). In terms of the 20-20-20 plan for agriculture, growth promotion is the first goal. There are also goals in the areas of livelihoods improvement, sustainable development and policy and institutional reforms. This involves conducting agricultural surveys, and establishing smallholder fattening schemes for livestock. It also includes the rehabilitation of irrigation infrastructures and expansion of those structures as well. There is also a call for a 1,000 capacity community farm center; there is also a plan for increasing the effectiveness of fish hatcheries by establishing parent stock programs and there will also be vaccination programs for livestock. There will be a revision of the guaranteed minimum price system for crops and livestock; as well there will also be government training for the first 10,000 new agricultural workers (Ayoola, 2009).

One component in determining how to use agriculture to improve economics in Nigeria is to evaluate the historical efforts in terms of agriculture that Nigeria has engaged in since its independence. This will ensure that the country does not repeat past mistakes. In addition, this evidence will demonstrate whether or not it is feasible for agriculture to be a primary factor in Nigerian economic development. Along with historical factors, there must be an evaluation of both internal and external factors that could impact the Nigerian agriculture market. In addition, it is important to identify the strategies needed to enhance economic growth through the use of agriculture.

The broad Aim of this study is to determine the impact of agricultural development on economic growth in Nigeria. The specific objectives are to determine the impact of agricultural product's importation on the economic growth and on employment creation in Nigeria. The following hypotheses are formulated to guide the study:

Ho_1: Agricultural development has no significant impact on economic growth in Nigeria.

Ho_2: Agricultural development has no significant effect on employment creation in Nigeria.

LITERATURE REVIEW

Conceptual Framework

The essence of engaging in any economic activity is to produce particular product or output. It is also for this reason that people involve in agricultural activities. Agricultural output refers to the products of economic activities and this includes production, livestock, forestry and fishing (CBN bulletin, 2012). Agricultural output can be broadly seen as the output or end products people reap from the series of agricultural activities which they involve in. The Nigerian agriculture has produced a great output over the years which has been instrumental to both the country itself and on the international scene. According to Babalola (2001), Nigeria led the world in the production and export of cocoa, palm produce, groundnuts, rubber and timber. He explains further that the percentage of exports of agricultural products in relation to total exports between 1938 and 1965 varied from 92% to 64% and food imports in 1963 constituted only about 0.1% of the total quantity of food consumption. The CBN (2012) groups agricultural output into four categories;

i. Crop production: This is the cultivation of plants both on land and riverine areas. These are planted, tendered (weeding, fertilizer application, trimming etc) and harvested when due crops usually planted in Nigeria among others include rubber, beans, rice, cocoa, citrus crops, guinea corn, maize, wheat, cassava, palm, yam, kola, tomatoes etc.

ii. Forestry: Nigeria had 2.5% of its GDP contributed by forest resources in 2010 (FAO report 2010).The bulk of the products of the forests are low land rain-wood. The main types of forests and mountain forest.

iii. Fishing: Fishing refers to the water products gained by involving in fishing activities. Nigeria has an enormous fisheries resource. It has over 900KM of coastal waters and another 320km of Exclusive Economic Come (EEC) in the Atlantic Ocean (Babalola, 2002).

iv. Livestock: Livestock entail the rearing of animals for both consumption and commercial purpose. Citing Federal Ministry of Agriculture Survey of 1996.

The enviable position of agricultural output was however short-lived because of the civil war, the 1972 and 1973 and later 1983 drought reduced agricultural productivity (Olunruntoba, 1984). The discovery of oil sadly shifted interest away from agricultural production. By 1975, as explained by Babalola, Nigerian had lost all her major export crops exception of cocoa thereby giving way to importation. There was a mass exodus of people from the farms into urban areas. To cater for this situation, all governments which have led the nation since the decade of the 1970 have put to place several programmes, policies and schemes which are all general towards improving agricultural output which will restore agriculture to its former position as the leading sector and to establish the desire linkage with the rest of the economy.

METHODOLOGY

The study collected secondary data from the Central Bank of Nigeria statistical bulletin which include the variable as follows, Total agriculture output (AGP), Total Government Expenditure on Agriculture (GEA), Deposit Money Loan to Agriculture (DBA) and Gross Capital Formation (GCF) respectively Existing literature indicate that prices, government expenditure in

agriculture, volume of credit to the agricultural sector, nominal interest rate and exchange rate which are indicators of monetary, exchange rate and price policies determine activities in the agricultural sector.

The Engle-Granger two step modeling (EGM) procedure (Engle and Granger, 1987) will be used to test for long-run relationship. That is if there two variables Xt and Yt are individually I (1) processes and there exist a linear combination of this variables that is I(0) process, then Xt and Yt are cointegrated. In analyzing the raw collected data, the researchers were guided by the objectives of the study and the research question as such we intend to employ the descriptive statistical techniques in our analysis to this study.

DATA ANALYSIS AND INTERPRETATION OF RESULTS

The model has the following results $R^2 = 0.986336$

F statistics = 469.2038 Durbin Watson D* = 1.310335 No of observations = 31 **Presentation of Result**

The empirical results are presented in a table which shows the estimated parameters, the

Table 1: Dependent Variable, Real GDP

Variable	Co-efficient	Standard	t-Statistics	Probability
Constant	71628.78	16376.34	4.373918	0.002
AGD	1.677488	0.238463	7.034573	0.000
CFN	0.057177	0.023324	2.451458	0.0213
INF	73.77304	242.7442	0.303913	0.7636
INT	1427.570	1065.479	1.339839	0.1919

Analysis Based on Statistical Criteria (1st Order Test)

Coefficient of multiple determinations (R^2):

From the result, the value of the coefficient of determination R^2 is 0.986336 which implies that 98.6% of the variation in real GDP is explained by the independent variables (Agricultural development, capital formation, inflation rate and interest rate).

Test of Significance of the Parameter (t-test)

The student t-test is used to determine the significance of the individual parameter estimate. To achieve this, we have to compare the calculated t-value in the regression results with the tabulated t-value at n-k degree of freedom (DF) and at 5% significant level

H0: $\beta = 0$ (not significant)

H1: $\beta \neq 0$ (statistically significant)

Note: The null hypothesis assumes equality of the coefficient of the parameter with zero (0) which is not usually significant for the economy as a whole. But the alternative hypothesis (H1) assumes inequality of the coefficient of parameter (β) with zero which is always statistically significance for the economy as a whole.

Decision Rule:

Reject H0 if t-cal > t-tab and accept if otherwise. From the data, n = 31-5 = 26

From statistical table, critical t-tabulated at 5 percent significance level is equal to 2.056.

The result of the regression analysis is summarized in table 4.2.1. Below.

Variable	t-Calculated	t-tabulated	Decision Rule	Conclusion
AGD	7.034573	2.056	Reject	Significant
CFN	2.451458	2.056	reject	Significant
INF	0.303913	2.056	accept	Not significant
INT	1.339839	2.056	accept	Not significant

From the table above the coefficient of Agricultural Development (AGD) and capital formation (CFN) are significant while that of inflation rate (INF) and interest rate (INT) are not significant. We conclude that Agricultural development (AGD) and capital formation (CFN) have significant impact on real GDP while inflation rate (INF) and interest rate (INT) have no significant impact on real GDP in Nigeria in the period under study.

The F-statistics test

The test is conducted to determine if the independent variables in the model are simultaneously significant or not.

k-1 = 5-1 = 4

n-k = 31-5 = 26

t-calculated	t-tabulated	decision rule
469.2038	2.7426	Reject

From the table, since t cal > t-tab i.e. 469.2038 > 2.7426, we therefore reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1) and conclude that all coefficients are not simultaneously equal to zero, i.e. the independent variables are simultaneously significant.

Econometrics Test or (2nd Order Test)

Test for Autocorrelation

This test is aimed at ascertaining if the error terms are correlated. To achieve this, we assume that the values of the random variable (Vi) are temporarily independent by employing the technique of Durbin-Watson (DW) test.

Null Hypothesis	**Decision**	
No positive autocorrelation	reject	$0 < d < d_l$
No positive autocorrelation	no decision	$d_l \le d \le du$
No negative autocorrelation	reject	$4-d_l < d < 4$
No negative autocorrelation	no decision	$4-du \le d \le 4d_l$
No autocorrelation	do not reject	Du < d < 4-du
(positive or negative)		

Where ^{d}l=lowerLimit

du=upperLimit

d or d=DurbinWatson

using n = 31 and k = 5

^{d}l=1.090du=1.025d=1.310335du < d < 4 – du

1.025 < 1.310335 < (4-1025)

1.025 < 1.310335 < 2.975

Decision Rule:

There is no autocorrelation since 1.025 < 1.310335 < 2.975, therefore we accept the null hypothesis.

Heteroskedasticity Test

This test is basically on the variance of the error term. If helps to ascertain whether the variance of the error term is constant or not. ^{H}0=Homoskedasticity ^{H}1=Heteroskedasticity **Decision Rule**

Reject null hypothesis (H0) if the probability of F- statistics is less than 0.05 or accept if otherwise; the result, probability value of f-statistics is 0.017436. Since 0.017436<0.05, we reject the null hypothesis (H0) and conclude that there is Heteroskedasticity in the model.

Normality test

The normality test adopted is the jargue –Bera (JB) test of normality. The J.B. test of normality is an asymptotic or large sample, and it is based on the OLS residuals. This test computes the Skewness and kurtosis measures of the OLS residuals and it follows the chi- square distribution (Gujarati, 2004).

Hypothesis

$H_0 = \beta_1 = 0$ (The error term follows a normal distribution) $H1 = \beta_1 \neq 0$ (The error term does not follow a normal distribution).

The normality test follows chi-square distribution with 2 degree of freedom (df) at 5% level of significance.

Decision Rule:

Reject null hypothesis (H_0) if probability of f-statistics is less than 0.05 and accept if otherwise.

From the result obtained from Jarque-Bera (J.B) test of normality.

J.B = 11.56731

i.e. x^2- cal = 11.56713 x^2- tab = 5.99147

Therefore, we reject H_0 and conclude that the error term does not follow a normal distribution since x^2-cal >x^2-tab.

From the rule of thomb, if correlation coefficient is greater than 0.8, we conclude that there is multi- collinearity but if the correlation coefficient is less than 0.8, there is no multi collinearity.

Conclusion

Multi-collinearity only exist between AGD and GDP, CFN and GDP, CFN and A

SUMMARY AND CONCLUSION

The study examined the impact of agricultural development on economic growth of Nigeria and unemployment rate in Nigeria over the period of 1980 to 2010. The study employs ordinary least square (OLS) method of estimation. The finding shows that agricultural development in Nigeria has positive impact on the economic growth in Nigeria. From the result of this finding, all the variables in the model including the care variable (Agricultural development) proved significant, which show that agricultural development has positively impact on the economic growth in Nigeria over the period under study.

Under normal circumstances, agricultural development provides opportunities for economic growth. From the findings, agricultural development has provided the opportunities for economic growth within this year under study. In conclusion, from the findings, agricultural development impacted positively on the economic growth in Nigeria.

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IMPACT OF MONETARY POLICY ON POVERTY REDUCTION IN NIGERIA

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ABSTRACT

The main objective of this study is to examine the impact of monetary policy on poverty reduction in Nigeria from 1986 to 2021. The properties of the series were first checked using Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests and the result found that the series are integrated of I(1) and I(0) which paved way the used of Autoregressive Distribution Lag (ARDL) model. The findings of the study, revealed that, money supply and real GDP have positive impact on poverty reduction while interest rate has a negative impact on poverty reduction in Nigeria. This means that money supply and real GDP as well as interest rate are the major factors that affect the poverty reduction in Nigeria. Thus, the study recommends that, there is the need for policy intervention in terms of Nigerian government monetary policy and poverty reduction, also this study suggest that money supply has a positive impact on poverty reduction in Nigeria; therefore, expansionary monetary policy should be taken by the government to bring Nigerian ever-growing poverty to a minimal level, so also government should reduce the level of interest rate as it has adverse effect on poverty reduction which may encourage investors to barrow money in the commercial banks and invest which have multiplier effect on employment and reducing poverty in the country.

Keywords: Monetary Policy, Poverty, Real GDP, Autoregressive Distribution Lag (ARDL)

INVESTIGATING THE LIQUIDITY-PROFITABILITY SIMULTANEITY AMONG FIRMS IN THE NIGERIAN CAPITAL MARKET (THE NON FINANCIAL SECTOR)

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ABSTRACT

This paper adopts dynamic panel data methodology to explore the relationship between liquidity and profitability with data on twenty (20) non-financial companies selected from ten sectors in the Nigerian capital market. The results show strong effect of liquidity measures on profitability but weak reverse effect running back to firm liquidity. Among the liquidity variables, only current asset ratio shows evidence of causality with f statistics of 0.09 suggesting reverse effect only at 10% level of significance. The implications are that managers of these companies have in place good liquidity measures that enhance their profitability but not vice versa. It is therefore our recommendation that they should strategize on how best to utilize persistent profits over a period to boost the liquidity of these companies for better organic growth.

Keywords: Profitability, liquidity, simultaneity, non-financial firms, panel data.

INTRODUCTION

Effective liquidity management requires that the firm should maintain sufficient liquid or quick assets for three main reasons viz: (i) to be able to meet its acid test obligations and avoid emergency adjustments, (ii) to take advantage of opportunities for wealth creation and (iii) provide a means for flexible financing. These standards cannot be compromised in the management of both commercial and non-profit making organizations. So corporate managers must therefore put in place adequate measures at all times to ensure that a reasonable degree of the company's assets can easily and speedily be converted into cash without avoidable losses. This will no doubt support the sustenance of its daily operations as well as the stability and solvency of the firm.

On the other hand, the measure of an amount by which a firm's revenue exceeds the relevant expenses over a given period of time best describes its profitability. In contemporary empirical and theoretical finance literature, variables such as returns on investment (ROI), returns on assets (ROA) and earnings per share (EPS) are used as proxies. A graphical view would suggest that the concepts are two ends of a straight line and when you move towards one side, you would have automatically moved away from the other side. It is therefore expedient that mangers should identify a position wherein one is indifferent about both cost and benefits in making business decisions which in corporate finance is referred to as a tradeoff point. In this paper, attempts are made to apply this concept in the management of liquidity and profitability in business.

The remaining part of this study is structured as follows: Section 2 contains both conceptual and empirical literature review. Then the next section which is 3 contains the empirical strategy (data and methods) while section 4 deals with the empirical results and a discussion of the findings thereby providing the basis for us to have a summary and conclusion in section 5.

THEORETICAL FRAMEWORK AND EMPIRICAL LITERATURE

Dvide et al. (2020) maintain that both liquidity and profitability are fundamental concepts in finance showing how daily firm level dividend announcements under the signaling theory are connected to both liquidity status and profitable operations. Secondly, the capital structure theories also have a link with the ability of the firm to maintain adequate cash balances including the latest of them which is the market timing hypothesis which suggests that managers would require cash reserves to time and repurchase equities most appropriately (Baker & Wurgler, 2002). Beyond that, the firm's going concern status hinges on maintaining adequate cash to meet obligations currently and in the future. Above all, the firm's value and performance must be moderated by adequate level of liquidity thereby providing a basis for today's manager to develop strategies that would allow liquidity and profitability measures for interactions in an organized process to achieve corporate goals.

Wang (2002) examines whether liquidity management of a firm has a significant relationship with its operating performance and corporate value for quoted firms in both Tokyo and Taiwan. The findings show that good liquidity management leads to higher operating performance being measured by Tobin Q. Similarly, Martínez-Sola et al. (2013) examine the effect of cash holding on firm value for an unbalanced panel of 472 US industrial firms from 2001 to 2007 using GMM framework. Firm value is measured by both Tobin Q and market to book value ratio, cash holding is measured by the ratio of cash and cash equivalents to total assets. Variables such as intangible assets to total assets ratio (growth), natural logarithm of gross sales (size) and debt to equity ratio (leverage) are used as control factors. They find among others that cash holding has a nonlinear concave relationship with firm value.

In viewing Zainudin (2006), liquidity has implications for the going concern status of the firm. The evidence from his study confirms the theoretical view that firms that maintain adequate availability of funds or cash holdings under conditions that are likely to vary at all times have brighter chances to perform better. In the light of this, it can be argued that liquidity standards are meant to sustain solvency and be able to achieve goals for which such standards are set. This provides the basis to re-emphasize the role which managers have to play in meeting requirements and maintain appropriate levels of liquidity to sustain the growth and survival of organizations.

Miam et al. (2020) study industry level liquidity and find that profitability can affect liquidity through the operating cycle within an economic system. This can stimulate credit expansion and is likely to boost the productive capacity of the real sector and induce bank customers to return sufficient cash which would enhance the liquidity of banks further. This finding though is rare among studies on firm level liquidity but explains the theoretical principle in the literature that profitability provides a link back to firm liquidity.

Gryglewicz (2011) provides new insights relating the impact of liquidity on the financing operations of the firm showing that changes in solvency affect liquidity and vice versa. The study reveals some stylized facts about liquidity which center on the dynamics of investment, financing and cash with some reasonable degree of costs and flexibility. Based on this it is suggestable for firms to develop framework incorporating dynamic cash policy aimed at maintaining reasonable levels of cash reserves to sustain cash flows in order to meet requirements for liquid assets from their day-to-day operations.

A recent study by Boucinha et al (2021) using novel bank survey data and balance sheet information provides evidence that credit supply and demand are both influenced by bank liquidity and resilience. It is noteworthy that the influence is stronger in unconventional times

and these findings are derived after controlling for demand for loans, borrower quality and bank strength.

Hirtle et al. (2020) suggest that there is a direct relationship between the quality of liquidity management and profitability among banks in the United States. After controlling for size and other characteristics, they find a positive effect on profitability and growth from more effective supervision and then a negative effect running to risk from higher quality in management. These results underscore the special role of managerial efficiency which encompasses effective liquidity management in mitigating risk and stabilize the health of an organization.

As argued by Amihud and Mendelson (2008), liquidity decisions of a firm are also among the important determinants of its market value with empirical evidence showing that there is significant effect of liquidity on firm value. Wang (2002) examines whether liquidity management of a firm has a significant relationship with its operating performance and corporate value for quoted firms in both Tokyo and Taiwan. They find that good liquidity management leads to higher operating performance and firm value.

Martínez-Sola et al. (2013) examine the effect of cash holding on firm value for an unbalanced panel of 472 US industrial firms from 2001 to 2007 using the Arellano and Bond's (1991) panel GMM framework. While firm value is measured by both Tobin Q and market to book value ratio, cash holding is measured by the ratio of cash and cash equivalents to total assets. Variables such as intangible assets to total assets ratio (growth), natural logarithm of gross sales (size) and debt to equity ratio (leverage) are used as control factors. They find among others that cash holding has a nonlinear concave relationship with firm value.

Du et al. (2016) use the Pearson correlation analysis to examine the relationship between firm liquidity and corporate value for listed companies in China for the 2013 financial year. Firm liquidity is measured by cash ratio while firm value is measured by Tobin Q. Control variables included in the model are profitability (ROE), size (natural logarithm of total assets), growth, leverage and industry concentration. They find among others that while firm value is positively related to liquidity, it is negatively related to size. These relationships are also statistically significant.

Mule et al. (2015) use the panel data framework to examine the effect of corporate size on both profitability and market value for 53 quoted companies in Kenya with a theoretical view establishing a link between liquidity and size. The sample covers from 2010 to 2014 while the data are observed annually. While firm value and firm size are measured by Tobin Q and logarithm of sales revenue respectively, profitability is measured by both return on assets (ROA) and return on equity (ROE). Further, ownership concentration, financial leverage, firm age, management efficiency and asset tangibility all are modeled as control factors. The results show that while firm size has a negative but not significant effect on firm market value, it has a positive effect of profitability.

Sikes and Verrechia (2015) provide new explanation of the cross-sectional variations in dividends tax capitalization which is traced to gaps between statutory dividends and capital gains tax rates. Their empirical results confirm the theory stipulating that such gaps are the product of weak management and the lower the gap the better the results. Furthermore, it is argued that liquidity provides the impetus needed for growth in expected returns and this is induced by the dividends tax rates through the channel of capital gains as such taxes are recapitalized.

In Nigeria, Owoputi et al. (2014) analyze the determinants of bank profitability between 1998 and 2012 within the panel data framework using the random effects approach. The panel sample consists 150 observations involving 10 deposit money banks. While profitability is proxied by ROA, ROE and net interest margin, the explanatory variables fall into three groups: namely, bank-specific (capital adequacy, asset quality, bank size, liquidity, productivity, operating expenses management and deposits), industry-specific (concentration and industry growth), and macroeconomic variables (economic growth, inflation and interest rate). They find that all the bank-specific variables are significant determinants of bank profitability. However, while the coefficients on inflation and interest rate both are significant and have a negative sign, there is no evidence suggesting that real GDP growth as well as industry-specific variables are significant determinants of bank profitability.

Also, in Nigeria, Ozili (2015) investigates the determinants of bank profitability measured by net interest margin and return on assets. The explanatory factors include four bank-specific variables (capital adequacy ratio, cost to income ratio, asset quality and bank size) and two macroeconomic variables (growth in real GDP and inflation). A BASEL capital regulation regime dummy is also included in the regression models as a control variable. Based on annual panel data comprising 6 banks and 8-year period from 2006 to 2013, he finds, among others, that capital adequacy and asset quality are the main determinants of net interest margin of the sampled banks. However, the results show no evidence that BASEL capital regime has a significant impact on bank profitability.

Again, Sarakiri (2020) examines the relationship between liquidity measured by current ratio and market value of firms using data of 34 Nigerian quoted firms with the result that liquidity has no significant effect on the value of firms.

METHODOLOGY

Data and Variables

We use an unbalanced panel sample comprising 21 listed nonfinancial firms across different sectors of the Nigerian economy to estimate the relationship between liquidity and profitability. The panel data (annual interval) spanning the period from 2009 to 2018 were collected from companies carefully selected with their sectors as presented in Table 1. Firm profitability is measured by earnings per share (EPS), while that of liquidity is measured by current assets ratio to total assets ratio (CAR/TA), current liability ratio to total assets ratio (CLR/TA) and net working capital ratio (net working capital/net assets) to total assets ratio (NWCR/TA). Net working capital is current assets less current liabilities while net assets is total assets less total liabilities. Firm size serves as a control factor and is measured by the natural logarithm of total assets. The three liquidity measures are expressed as ratios of total assets which is an ex post mechanism to regress variables having accounted for possible defects or losses. The data were sourced from the annual reports and accounts of the individual firms accessed from their official websites. Data analysis is performed using EViews version 11.

Table 1: Sampled Companies and their sectors

S/N	COMPANY	SECTOR
1	ACADEMY PRESS	SERVICES
2	UNIVERSITY PRESS	SERVICES
3	A.G. LEVENTIS	CONGLOMERATES
4	ALUMINIUM EXTRUSION IND.	NATURAL RESOURCES
5	BOC GASES	NATURAL RESOURCES
6	CHAMPIONS BREWERIES	CONSUMER GOODS
7	GUINNESS	CONSUMER GOODS
8	NESTLE	CONSUMER GOODS
9	NIGERIAN BREWERIES	CONSUMER GOODS
10	DANGOTE CEMENT	INDUSTRIAL GOODS
11	LAFARGE	INDUSTRIAL GOODS
12	JULIUS BERGER	CONSTRUCTION/REAL ESTATE
13	UDPC	CONSTRUCTION/REAL ESTATE
14	LIVESTOCK FEEDS	AGRICULTURE
15	OKOMU OIL	AGRICULTURE
16	MAY/BAKER	HEALTH CARE
17	MORRISON	HEALTH CARE
18	NCR PLC	ICT
19	TRIPPLE GEE	ICT
20	OANDO	OIL/GAS
21	TOTAL	OIL AND GAS

Empirical Model

We specify our dynamic panel data model as follows:

$$LEPS_{it} = \beta_0 + \delta_i + \beta_1 LEPS_{it-1} + \beta_2 CA/TA_{it} + \beta_3 CL/TA_{it} + \beta_4 NWC/TA_{it} + \beta_5 LTA_{it} + \epsilon_{it} \quad (1)$$

Where L = natural logarithm, EPS = earnings per share, CAR/TA = current asset ratio to total assets, CLR/TA = current liability ratio to total assets, $NWCR/TA$ = net-working capital ratio to total assets, and TA = total assets. Also, β_0 = regression intercept term, δ_i = heterogeneity parameter or unobserved firm-specific factors such as organizational culture, management style etc., and ϵ_{it} = error term.

The model incorporates the lagged EPS as an important explanatory variable so that if β_1 is significantly different from zero, then, firm profitability is persistent and depends on its past value since we argue that contemporaneous profitability (EPS) depends on both lagged profitability and contemporaneous liquidity (LR).

Although, the heterogeneity parameter denoted in this study as δ_i can be estimated and controlled using different approaches, two conventional methods: namely, fixed effects and random effects methods are employed. On the one hand, the fixed effects method treats δ_i as not only an important factor for firm profitability but can also be established as having correlation with the observed explanatory factors such as current asset, current liability and net working capital to total assets all presented in form of ratios in the profitability model. In other words, the fixed effects method assumes that δ_i moderates the profitability-liquidity relationship. In contrast, the random effects method treats δ_i as a random deviation from β_0, which should also be included in the error process. In other words, the random effects method assumes that δ_i does not affect firm profitability, and has no correlation with $CA/TA, CL/TA$ and NWC/TA and LTA. Consistent with previous studies, we employ the Hausman specification test to choose between these alternative approaches. The Hausman test is usually performed under the null hypothesis that δ_i has no correlation with the observed explanatory variables which is consistent with the random effects theory.

In the same vein, we can test the liquidity-Profitability simultaneity using the two equations as presented below:

$$\boldsymbol{EPS_{it} = \alpha + \sum_{k=1}^{K} \beta_k EPS_{it-k} + \sum_{k=1}^{K} \delta_k LR_{it-k} + \gamma_i + \varepsilon_{it}} \qquad \textbf{(2)}$$

$$\boldsymbol{LR_{it} = \alpha + \sum_{k=1}^{K} \theta_k EPS_{it-k} + \sum_{k=1}^{K} \phi_k EPS_{it-k} + \gamma_i + \varepsilon_{it}} \qquad \textbf{(3)}$$

Where LR is the liquidity ratio of t, k is the highest number of lags while other parameters are as defined previously. The liquidity ratio and earnings per share are used since our interest is only on causality between liquidity and profitability. If the lag coefficients on LR are jointly significant, other things being equal, then we can reject the null hypothesis that LR does not Granger cause EPS and conclude that there is unidirectional causality running from Liquidity to Profitability. On the other hand, if the lags of the lag coefficients on $EPS\phi_k$, are jointly significant, other things being equal, then we can reject the null hypothesis that EPS does not Granger cause LR and conclude there is unidirectional causality running from Profitability to Liquidity. Further, if both δ_k and ϕ_k are significant, then we conclude that there is feedback or bidirectional causal relationship between liquidity and profitability. However, if δ_k and ϕ_k are not significant, we can say that both liquidity and profitability measures are independently related.

Empirical Analysis

Panel data results

Table 2 presents the regression results for the relationship between liquidity and profitability. The Hausman test statistic (p-value = 0.0000) is associated with a zero probability; hence, it is highly statistically significant. This formally rejects the random effects theory which states that

the unobserved firm-specific effects have no correlation with the main explanatory variables in the firm profitability model. This implies that the fixed effects method offers the best approach for dealing with the unobserved firm-specific effects such as organizational culture and management style in our dynamic panel data model. Therefore, the data show strong evidence that these latent organizational factors significantly moderate the relationship between firm liquidity and profitability for quoted nonfinancial firms in the Nigerian capital market.

Table 2: Regression Results; p-values in parenthesis

Variables	**Estimated Coefficients**	
	Fixed Effects	**Random Effects**
Constant	4.9979	1.9378
	(0.0000)	(0.0000)
$EPS(-1)$	-0.0141	0.5918
	(0.8817)	(0.0000)
CAR/TA	-0.1850	-0.1759
	(0.2143)	(0.0191)
$NWCR/TA$	-0.0017	0.0806
	(0.9842)	(0.2032)
CLR/TA	0.1300	-0.0202
	(0.4233)	(0.8669)
LTA	-0.0639	-0.0187
	(0.1187)	(0.0084)
R^2	0.5946	0.3430
$\bar{R}^2$	0.5261	0.3234
F-ratio	8.6852	17.544
	(0.0000)	(0.0000)
DW	2.0849	2.1785
Hausman Test Statistic	90.379	
	(0.0000)	

From the fixed effects results, we can see that the coefficient on $EPS(-1)$ (beta = -0.0141, p-value = 0.8817) is negative, economically small and statistically insignificant. This shows that the data on firm profitability are not generated by a dynamic process, hence profit does not persist into results of successive year. Therefore, contrary to our expectation, *apriori*, information about previous profitability cannot be used to predict current profitability of quoted nonfinancial firms in Nigeria.

The results also show that the relationship between firm liquidity and profitability is not statistically significant, with the three liquidity measures: CA/TA (beta = -0.1850, p-value = 0. 2143), NWC/TA (beta = -0.0017, p-value = 0. 9842) and CL/TA (beta = 0.1300, p-value = 0.4233), all having a probability that is much higher than the conventional significant levels. However, the negative sign associated with the coefficients on CA/TA and NWC/TA is consistent with the trade-off theory of liquidity and profitability. This negative relationship implies that both liquidity proxies move in opposite direction with profitability. Therefore, for the sampled nonfinancial firms, profitability is expected to show a declining trend when both current assets and net-working capital are increasing relative to total assets. By contrast, the positive sign associated with the coefficient on CL/TA shows that current liability moves in the same direction as profitability. In other words, there is tendency for profitability to increase following an increase in current liability relative to total assets. However, the size of the estimated coefficients shows that the positive effect of increase in current liability would be counteracted by the negative effect of increase in current asset such that the net effect is negative. Therefore, in agreement with the trade-off theory, maintaining high liquidity level as a way of meeting short-term obligations would be at the expense of profitability.

Further, the coefficient on LTA (beta = -0.0639, p-value = 0.1187) is negative, small, and statistically insignificant, indicating that size is not an important factor in the profitability-liquidity model. Therefore, the reported evidence of trade-off theory holds for all firms irrespective of size, measured by natural logarithm of total assets.

Finally, the coefficient of determination ($\bar{R}^2 = 0.5261$) shows that the estimated fixed effects model has a moderate fit, explaining approximately 53% of the variance of profitability. Also, the F-ratio (p-value = 0.0000), which tests the overall performance of the fitted profitability model, is highly significant, hence, both the included regressors and the unobserved firm-specific factors are jointly relevant, both statistically and economically, in determining the contemporaneous profitability of listed nonfinancial firms in Nigeria. The Durbin-Watson statistic is also approximately 2, which is what one would expect if the estimated residuals are not serially correlated. Therefore, our results are meaningful, reliable and a true reflection of the profitability-liquidity relationship for quoted nonfinancial firms in Nigeria.

Endogeneity Analysis

To determine whether there is endogeneity or simultaneity bias in our econometric model, we conduct the causality test based on Granger's (1969) framework. Since our data are observed at annual frequency, we include one lagged term in the test equation for each variable. An evidence of causality from profitability to liquidity would imply that the reported results in table 2 contains endogeneity or simultaneity bias, hence do not reflect the true dynamic relationship between liquidity and profitability. Accordingly, the Pairwise Causality test is conducted and the results are presented in Table 3.

Table 3: Pairwise Causality between Liquidity Measures and Profitability

Null Hypothesis	F-statistic	p-value
$CAR/TA \rightarrow EPS$	0.0398	0.8421
$EPS \rightarrow CAR/TA$	2.8240	0.0947
$CLR/TA \rightarrow EPS$	0.4930	0.4836
$EPS \rightarrow CLR/TA$	0.4345	0.5107
$NWCR/TA \rightarrow EPS$	1.1482	0.2854
$EPS \rightarrow NWCR/TA$	0.8202	0.3664

From table 3, the results show that at 5% significant level, there is no evidence of causality between liquidity measures and profitability as all the p-values are higher than 0.05. However, there is evidence at 10% level that causality flows from earnings per share to current asset ratio to total assets. This shows that changes in profitability weakly determine changes in liquidity, measured by current assets ratio to total assets. The implication is that quoted nonfinancial firms adjust their current assets relative to total assets in response to profitability shocks. Therefore, while our earlier results for current liability ratio and net working capital ratio are robust, the result for current asset ratio is not. In other words, there is weak evidence of endogeneity bias in our profitability-liquidity model.

SUMMARY AND CONCLUSION

This study examines the dynamic relationship between liquidity and profitability in Nigeria using firm-level unbalanced panel data comprising 21 listed nonfinancial firms over the period from 2009 to 2018. Firm profitability is measured by earnings per share, while liquidity is measured by three accounting ratios: namely, current assets ratio to total assets, current liability ratio to total assets and net working capital ratio to total assets. Firm size (measured by natural logarithm of total assets) is incorporated in the profitability model as a control variable.

There is evidence that the fixed effects method outperforms the random effects method in describing the relationship between firm liquidity and profitability. Hence, unobserved firm-specific effects such as organizational culture and management style play a significant moderating role in the firm profitability model. Also, there is evidence that profitability is not persistent, hence, information about previous profitability is worthless in terms of predicting both contemporaneous and future profitability of the selected listed nonfinancial firms in Nigeria.

Further, there is evidence that for listed nonfinancial firms in Nigeria, the relationship between liquidity and profitability is governed by the trade-off theory, which holds for all firms irrespective of size. Therefore, increasing liquidity as a way of managing short-term obligations would be at the expense of profitability. Finally, there is evidence of a weak causal impact from profitability to liquidity, measured by the ratio of current assets to total assets. However, there is no evidence of causality between liquidity and profitability when the former is measured by either current liability ratio to total assets or net working capital ratio to total assets. Therefore, the dynamic relationship between liquidity and profitability depends on how the former is measured.

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TAX COLLECTION PROCEDURE AND TAX REVENUE IN RIVERS STATE: AN EMPIRICAL EVIDENCE FROM RIVERS STATE BOARD OF INTERNAL REVENUE SERVICE

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ABSTRACT

This study investigated the relationship between tax collection procedure and tax revenue in Rivers State, using the Rivers State Board of internal Revenue Service as a case study. Specifically, the study objectives are to: evaluate the relationship between self-assessment and pay as you earn (PAYE) and value added tax (VAT). Ascertain the relationship between best of judgment (BOJ) and pay as you earn (PAYE) and value added tax (VAT). The study was anchored on the ability to pay theory, made use of expo-factor research design and used Pearson product moment correlation with the aid of SPSS version 21.0 to analyse the data generated via primary source. The result of the analysis revealed a strong positive relationship between self-assessment and PAYE in Rivers State, a strong positive relationship between self-assessment and VAT in Rivers State, a strong positive relationship between best of judgment (BOJ) and PAYE and VAT in Rivers State. Due to the findings, the study concludes that tax collection procedure play a vital role in improving the tax revenue generated in Rivers State. Hence the study recommends that government should train and retrain revenue staff and encourage them to come up with suggestion so as to improve the revenue collection drive in the state. Tax reforms should be carried out regularly to enhance revenue generation in the Rivers State.

Keywords: Best of judgment, pay as you earn, tax revenue, value-added tax

INTRODUCTION

It is an important fact that tax revenue constitutes a major source of income for government in any country both developed and developing ones. Worlu and Emeka (2012) stated that tax revenue is a basis for supporting developmental activities in less developed economy like Nigeria. For developmental projects that is currently going on in Rivers State for instance since the year 2015 that governor Wike came into power, his administration has done a lot with respect to infrastructural development like flyovers across the State, good roads network, security network, stable power supply, provision of healthcare facilities for cancer patient etc, and all this have been achieve through tax revenue that is generated within the state coupled with the oil exploration which is the major source of funding (Ojochogwu & Ojeka, 2012). However, it has been difficult to optimize tax revenue collection particularly in River State due to several inhibiting factors such as self-assessment, best of judgment, taxation at source, enforcement machineries, tax evasions,

corruption, inexperienced personnel, use of third parties as tax collectors just to mention but a few (Tijani and Ogundeji, 2013).

A serious challenges facing tax collection procedure in River State and hindering tax revenue is an issue that is inevitable and cannot be swept under the carpet like that due to its effect on the state revenue. Tijani and Ogundeji (2013), opined that widespread tax collection procedure is reflected in persistent public resistance to pay and is seen as an important part of the issues of raising revenue in Rivers State as well as in other part of the country. As suggested in taxation literature, building a tax collection procedure in the tax system is very important so as to enhance revenue, which is one of the measures which may be used to address the non-compliance problem. The amount of revenue linkage or loss resulting from ineffective tax collection procedure is potentially enormous and devastating in any economy like in Rivers State. Another inhibiting factor to tax revenue in Rivers State is lack of experienced personnel, low return from state value added tax, low PAYE system of tax and that is to say there is strong enforcement procedure and machineries in place (Devos, 2008).

Taxes are one of the major revenue for a country in where taxes are collected from citizens, companies, investors and so on to enhance the economy. There are several impacts of tax collection procedure that if well implemented, it will enhance the tax revenue in Rivers State. The growth of tax revenue in a State like Rivers could be affected by the way the tax collection procedure is done if there is no effective enforcement procedure or if there are no active enforcement machineries and what have you. Tax revenue can be enhanced by the introduction of an effective tax collection procedure that will motivate the economic agents within the State to be more productive so as to pay tax (Bofah, 2003).

Those working in the informal sector of Nigerian economy for instance do not see the need to pay tax whereas they dominate the economy. To them only, civil servants should pay tax on their earnings and this amount to over flogging the willing horse. Besides, the activities of the strong union in the formal sector do not even pave way for a successful tax collection procedure in the formal sector. Even revenue collection officers seem to be lenient or even connive with those in the informal sector during enforcement of tax collection. All this leads to revenue loss. In other to reawaken the consciousness of Rivers State government and citizens on the effectiveness of tax collection procedure as a developmental tool, and examine the effect the tax revenue has so far on the economy; this research work becomes very relevant. (Abiola & Asiweh, 2012). Empirically, based on the outstanding issues that surround this study, reports have shown in the past that not much has been achieved in the area of tax collection procedure and this have brought us to the thrust of this study for us to evaluate how tax collection procedure will influence tax revenue in River State so as to fill the knowledge gap in literature.

STATEMENT OF PROBLEMS

Nigeria state is adjudged as one of the most underdeveloped countries in the world and according to the World Bank survey of 2019, Nigeria was rated the poverty capital of the world. The lack of insufficient funds has enormous challenges ranging from high unemployment and underdevelopment, high mortality rate occasioned by poor healthcare system, poor/lack of educational and critical infrastructures, high inflation rate and insecurity. The presence of all these notable glitches coupled with the persistent drop in the prices of crude oil in the international market due to alternative sources of energy necessitated a review of the sources of revenue for the country and a critical examination of the efficiency of the revenue heads in operation. Among the revenue drivers in the country is taxation. Therefore, in its effort to expand the revenue generation in a state like Rivers out of her oil which is a degenerative asset, the state commenced various tax reforms with a view at expanding the tax base, improve tax machinery efficiency and effectiveness in the administration which included the self-assessment system in 2011 (Ewa, 2021).

Poor contributions of tax revenues to total collection procedure in Rivers State is so alarming in such a way that untrained personnel are been employed to be collecting tax in the State and to an extent, it has been affecting the tax revenue drastically. African states such as Ghana, Tunisia, Morocco, for instance have their tax incomes constituting important share of their entire revenue, and River State being one the giant of Nigeria economy has an important high portion of tax-to-total revenue but the effect of tax revenue generated is not geared towards the welfare of Rivers people but rather it is channelled to infrastructural development like the building of flyover in the capital city (Port Harcourt) and this is thus a problem that this study would want to look into (Ofurum et al., 2018).

This renewed effort in tax revenue generation is necessitated by weak tax collection procedure in the aspect of having an ineffective enforcement procedure, weak enforcement machineries, poor collection of tax at source, weak self-assessment system of tax collection procedure, and poor staff welfare etc (Ironkwe & Ndah, 2016). Therefore, the problem of this study is to empirically investigate the relationship that do exist between tax collection procedure and tax revenue generation in Rivers State so as to fill the lacuna in reviewed literature.

The present study opts to appraise how tax collection procedure would influence tax revenue in Rivers State. Meanwhile, the study employs self-Assessment and best of judgement as indicators of tax collection procedure, while value added tax (VAT) and pay as you earn (PAYE) are used as proxies of tax revenue. The following hypotheses are thus formulated to guide the study:

Ho$_1$ There is no significant relationship between self-assessment and PAYE in Rivers State

Ho$_2$ Self-assessment does not significantly relate to VAT in Rivers State.

Ho$_3$ There is no significant relationship between best of judgment and PAYE in Rivers State.

Ho$_4$ Best of judgment does not significantly relate to VAT in Rivers State.

REVIEW OF RELATED LITERATURE

Theoretical Framework

There are several theories that relates to the study of tax collection procedure and tax revenue in Rivers State. Meanwhile, the theory that is anchored in this study is the ability to pay theory as also opined by Ifere & Eko (2014). Ability to pay theory is synonymous with the principle of equity or justice in tax collection procedure. It posits that citizens should pay taxes to the government in accordance with their ability to pay. In order words, people with higher incomes should pay more taxes than people with lower incomes. It appears more reasonable and just that taxes should be levied on the basis of the taxable capacity of an individual. The major drawback inherent in this theory is the definition of one's ability to pay. However, the main viewpoints advanced in this connection are: ownership of property, taxing on the basis of expenditure and

income. In spite of the challenges associated with the application of this theory, it still remains relevant and one of the most widely used theories of taxation (Ifere & Eko 2014).

According to Akakpo (2009) as cited in Nnubia & Okolo (2018) the theory has the following principles:

i. **Equal sacrifice:** The total loss of utility as a consequence of taxation should be equivalent for all taxpayers so that those who have enough money to pay higher taxes are made to pay higher than those who cannot afford (that is, the rich will be taxed more heavily than the poor)

ii. **Equal proportional sacrifice:** The relative loss of utility as a consequence of taxation should be equivalent for all taxpayers such that the payment of taxation should not deny anybody of what he/she would have beforehand sacrificed.

iii. **Equal marginal sacrifice:** The rapid loss of utility (as measured by the derivative of the utility function) as a consequence of taxation should be equivalent for all taxpayers.

Concept of Tax Collection Procedure

Tax collection procedures comprise all actions for collecting taxes according to the law. The exercise of powers by tax authorities in relation to tax collection procedures is subject to review and judicial appeals to protect taxpayers' rights. This aspect supports a unitary study of tax collection procedures reflecting the links between their administrative and judicial phases. The comparative analysis reveals best practices and core principles shared by various countries. It also exposes inconsistencies, disparities and critical areas arising in the practice of tax collection procedures (George & Bariyima, 2015). According to Newman et al. (2019), taxpayers with adequate formal education and knowledge are expected to have adequate information about tax collection procedure due to their level of education and exposure. It was found that tax collection procedure is an important factor in determining tax revenue in any given state. The dimensions of tax collection procedure adopted in the study are self-assessment system and best of judgement system.

The self-assessment is a system of tax collection procedure whereby the tax payer is granted the right, by law, to compute his own tax liability, pays the tax due (at the designated bank) and produces evidence of tax paid at the time of filing his tax return at the tax office, on due date. On the other hand, the tax authority has the responsibilities of enablement to and checks on the taxpayers to ensure compliance with tax administration process. This means that the self-assessment scheme is characterized by partnership and shared roles and responsibilities between the taxpayer and the tax authority (Appah, 2013). To encourage self-assessment Kiabel and Nwikpasi (2001) listed some incentives attached to self-assessment filers to include; non-payment of provisional tax; installment payment of tax due in not more than six instalments to terminate latest by 30th November in the year of assessment; 1% of tax payable is allowed as bonus; returns (Accounts and computations) can be filed within 8 months (an additional 2 months) of the company's year-end.

Best of Judgment (BOJ) is a tax collection procedure conducted by tax authorities on the accounts of a company. It is usually done where the tax payer does not provide any Audited Accounts or Statement of Net-worth if it is an individual. It can also be conducted if the Tax Authorities have reasons to believe the accounts presented by the tax payer is not sufficient enough to assess their tax liability. That way companies who are fond of under declaring profits can by law be further assessed by the tax authorities and if found wanting will be expected to pay more tax than previously thought. Most people consider B.O.J as a punitive measure because it often times result in a higher tax liability for the tax payer. To avoid B.O. J's, it is advisable to prepare your accounts with the utmost clarity and fairness. Submission of your accounts on time also helps avoids incidence of a B.O.J. (Emmanuel, 2020).

Concept of Tax Revenue

Taxation as defined by Ogundele (1999) is the process or machinery by which communities or groups are made to contribute in some agreed quantum and method for the purpose of administration and development of the society. It can be inferred that the payment of tax will in turn be beneficial to the entire citizenry. This view is similar to the definition of Sayode and Kajola (2006) who defined tax as a compulsory exaction of money by a public authority for public purposes. There is therefore a unanimous conclusion in available literature that tax payers may not receive an equivalent of their contribution but that, they have the benefit of living in a relatively educated, healthy and safe society; the individual contributes in some measure to the fund available for use by government in providing necessary infrastructure for her citizens.

The black law dictionary however, defines tax as "monetary charge imposed by government on persons, entities or properties levied to yield public revenue". In summary, tax is a compulsory levy by a sovereign power on the incomes, profits, goods, services or properties of individual and corporate bodies, trust and settlements. Tax revenue therefore has been defined by the business encyclopaedia as „"the revenues collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership of, and transfer of property and other taxes". In all the definitions offered, taxes have been seen as impositions of burdens to the tax payers with the intention of raising money to support government. The Federal Accounts Allocation Committee (FAAC) Sub Committee on the Road map for the adoption of IPSAS in 2012 issued a manual "Format of General Purpose Financial Statements (GPFS)" to be used by all Tiers of Government in Nigeria (Ironkwe & Ndah, 2016).

Tax revenue can be measured by the following variables as stated by Cornelius et al. (2016):

Pay as You Earn (PAYE): PAYE refers to a repayment or withholding scheme that incrementally makes deductions as pay checks are received. For income tax withholding, employees that elect automatic withholding see pre-payments made to federal and/or state taxing authorities with each pay check. PAYE refers either to a system of income tax withholding by employers, or an income-based system for student loan repayments (Federal Inland Revenue Service. For income tax withholding, employees that elect automatic withholding see pre-payments made to federal and/or state taxing authorities with each pay check. Those who over-withhold get a tax refund at the end of the year. In reference to student loans, PAYE takes out 10% of discretionary income as it is earned, and generally lasts up to 20 years (IMF, 2022).

Value Added Tax (VAT): VAT is a type of indirect tax levied on goods and services for value added at every point of production or distribution cycle, starting from raw materials and going all the way to the final retail purchase. VAT was introduced on April 1, 2005. Under it, the amount of value addition is first identified at each stage, and then tax is levied on the same. Ultimately, the end consumer has to pay the complete VAT while buying goods; buyers at earlier stages of production receive reimbursements of tax they have paid (Tax Foundation, 2022).

Empirical Review

Agwor and Ajinwo (2020) carried out a study to examine the relationship between tax audits with the empirical referents of desk audit, field audit and tax compliance with its measures of taxpayer's registration, filing of tax return and penalties in Rivers State Internal Revenue Service. A tax audit as emerging concepts has suffered from scarcity of empirical evidence in Rivers State. Research hypotheses were formulated to test the relationship between tax audits and tax compliance. Copies of Questionnaire were distributed. The data that was obtained via survey instruments were analyzed using the descriptive statistical method to test for the mean, Rho analysis. Reliability test was conducted using Cronbach Alpha reliability with the scores of the variables of 0.7. The hypotheses were tested using Pearson's Product Moment Correlation (PPMC) and regression analysis. From the analysis, the result shows that there is a significant relationship between empirical referent of tax audits and the measures of tax compliance. The study also found that there is a significant association between desk audits and filing of tax returns. Also desk audit is significantly correlated to penalties. Other results show that there is significant association between field audits and filing of tax returns, field audit and penalties also have a significant association. It was also found that adequate manpower does have mediating influence in the association between tax audits and tax compliance. Consequently, the study concludes thus, organizations prefers desk audits to field audits because field audits reveals more detailed work and encourages the provision of more documents by the taxpayer. The study recommends that tax audits should be carried out on regular intervals, by this compliance rate will increase if tax audit is administered and the revenue realized is judiciously used. Tax audits should include desk audit and field audit.

More so, Ewa (2021) investigated on implementation of self-assessment policy is seen as enhancing tax revenue generation, reducing operational cost and operating in line with international best practices. This study was designed to appraise the self-assessment tax policy in Nigeria by exploring income streams from CIT, PPT, VAT against GDP (at current basic prices) and annual budgets from 2002 to 2019. The study applying Ordinary Least Square statistics revealed the tax streams impacted GDP both in the pre and post self-assessment periods though their impacts varied. The efficiency of the implementation of the self-assessment policy tested using tax to GDP ratio and tax to budget ratio revealed pre self-assessment period performing better than the post self-assessment period as pre self-assessment period tax to GDP ratio is 6.63 per cent as against post self-assessment period tax to GDP ratio of 4.23 per cent. Also, pre self-assessment period tax to budget ratio is 119.62 per cent as against post self-assessment period ratio of 92.18 per cent. This is attributable to decline in performance during the post self-assessment period as a result of reduction in petroleum profit taxes occasioned by decline in taxable profits of companies operating in the petroleum subsector due to slump in global crude oil prices.

Afuberoh and Okoye (2014) examined the influence of tax collection on revenue generation in Nigeria, regarding FCT and some named states in the nation utilizing regression investigation figured with the guide of SPSS form 17.0. The agent applied auxiliary and essential wellsprings of information. The examination uncovered among others that, tax collection has a noteworthy impact to income generation and tax assessment has an important effect on Gross Domestic Product (GDP). Also, Ogbonna and Appah (2012) investigated the impact of tax reforms on economic growth of Nigeria from 1994 to 2009. They used both descriptive statistics and econometric models such as White test, Jacque Berra test, ADF test, Johansen test, Granjer causality and Breusch Godfrey test as analytic techniques. The results from the various tests show that tax reforms are positively and significantly related to economic.

Ngerebo and Masa (2012) used the ability to generate revenue and ability to influence consumption patterns as measurement parameters to appraise the tax system in Nigeria. Their major emphasis was on Value Added Tax (VAT). They found that VAT has been effective but not efficient. Hence, it was recommended that tax authorities should be record/proprietary conscious to enable them cover the cost of collection machinery and the target amount payable to the government.

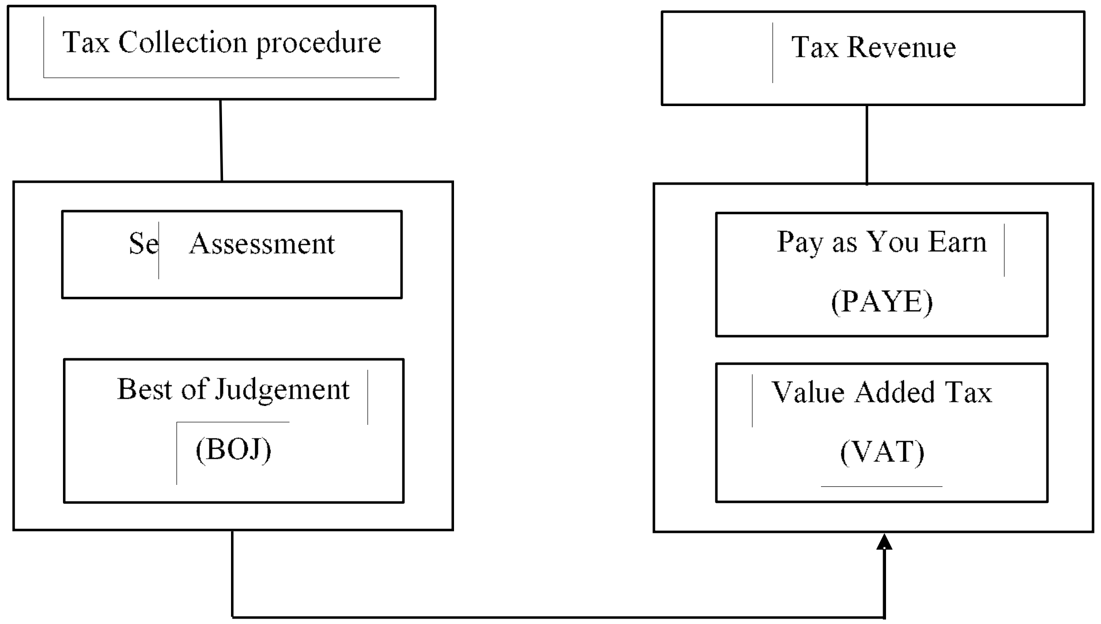

Fig 1: Conceptual Framework of Tax collection procedure and Tax Revenue in Rivers State.
Source: Ewa (2021), Aqwu & Ajinwo (2020), Cornelius et al. (2016) and Afuberoh & Okoye (2014).

METHODOLOGY

Research Design

Research design is concerned with the methods and plans used to collect vital data towards the investigation of research problems. There are three types of research design namely; experimental, survey and quasi experimental research design. Survey research design is adopted in this study through the use of questionnaire, oral interview and personal observation. The research design is justified base on the nature of the data the researcher intends to collect and carry out analysis on (Baridam, 2001). The population of workers in the state board of internal revenue is 125. The questionnaire would be administered on face to face

to the concerned employees of Rivers State Board of Internal Revenue, Rivers State, Nigeria and received on spot. The population for this study comprises of one hundred and twenty-five (125) employees of State Board of Internal Revenue. The sample size of ninety-five (95) was derived the sample size statistically by using Yaro Yamane formula as adopted by Baridam (2001) and also expatiated by (Adebisi, 2013):

$$n = \frac{N}{1+N(e)^2}$$

Where: n = sample size sought for
e = level of significance
N = population

Hence;

$$n = \frac{N}{1+N(e)^2}$$

N = 125

e = level of significant of 0.05

$$n = \frac{125}{1+125(0.05)^2}$$

$$= \frac{125}{1+0.3125}$$

$$= \frac{125}{1.3125}$$

Hence, it is based on the above determination of sample size which is 95, that we distribute the same numbers of questionnaires to the revenue officials that have knowledge about this study. Data was source through primary source and was used which was from the State Board of Internal Revenue Service of Rivers State with the aid of some prepared questionnaires which are differently answered by them. In order to determine the variation in dependent variable (tax revenue) due to variation in the independent variables (tax collection procedure), the Pearson correlation technique is employed. This is because, it is expected to explain the variation in dependent variable due to the variation in the independent variables (Pallant, 2011).

There are two sets of variables covered by this study. These are the dependent and independent and the moderating variables. The dependent variable for this study is revenue generation of the state and it is measured by VAT and PAYE. The independent variable used in this study is tax collection procedure (which is proxies by BOJ and Self-Assessment).

These were measured at ordinal scale indicating the relationship with the dependent variable. The dependent variable – tax revenue is measured by VAT and PAYE. The response mode for measuring the independent variable for hypotheses 1-6 was recorded using the modified five point Likert scales. The modified 5-point Likert scale is an improvement on the old Likert scale and this was used in this study in recording the response mode in some of the question in the questionnaire.

In this study therefore, the test-retest reliability method was adopted. Based on this point, the same research instrument was administered twice to the same individual at an interval of two weeks. The survey instrument therefore was assessed by means of Cronbach alpha coefficients, using the statistical package for social Sciences (SPSS). Hence, only the items that returned alpha values of 0.7 and above were considered. Cronbach's alpha was used for the coefficient. Diagnostic checks carried out on the model include Alpha test (to check whether there is a correlation and reliability among the explanatory variables).

The questionnaires will also be tested using the Alpha model and the at least 60% reliability would be adopted based on the findings and research by Sekaran and Bougie (2010). The data were tested over and over again and same results are obtained, it means the information is very reliable.

RESULT AND DISCUSSION OF FINDINGS

Table 1: Pearson Correlation Analysis of Self-Assessment and PAYE

		Self-Assessment	PAYE
Self-Assessment	Pearson Correlation	1.000	. 715**
	Sig. (2-tailed)	.	.000
	N	80	80
PAYE	Pearson Correlation	.715**	1.000
	Sig. (2-tailed)	.000	.
	N	80	80

**. Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher's Field Survey, 2022.

Table 1 above shows the result of first hypothesis tested. As revealed by the table, the Pearson Correlation coefficient of 0.715 which is positive and greater than 0.5 indicates that there is a strong positive relationship between self-assessment and PAYE. Furthermore, since the significant value (P-value) of 0.000 is less than 0.05, there is sufficient statistical evidence to reject the null hypothesis one (H_{01}) and conclude that there is significant relationship between self-assessment and PAYE in Rivers State.

Table 2: Pearson Correlation Analysis of Self-Assessment and VAT

		Self-assessment	VAT
Self-assessment	Pearson Correlation	1.000	. 730**
	Sig. (2-tailed)	.	.000
	N	80	80
VAT	Pearson Correlation	.730**	1.000
	Sig. (2-tailed)	.000	.
	N	80	80

**. Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher's Field Survey, 2022.

Table 2 above shows the result of second hypothesis tested. As revealed by the table, the Pearson Correlation coefficient of 0.730 which is positive and greater than 0.5 indicates that there is a strong positive relationship between self-assessment and VAT. Furthermore, since the significant value (P-value) of 0.000 is less than 0.05, there is sufficient statistical evidence to reject the null hypothesis two (H_{02}) and conclude that Self-assessment significantly relates to VAT in Rivers State.

Table 3: Pearson Correlation Analysis of Best of Judgment and PAYE

		Best of Judgment	PAYE
Best of Judgment	Pearson Correlation	1.000	. 680**
	Sig. (2-tailed)	.	.000
	N	80	80
PAYE	Pearson Correlation	.680**	1.000
	Sig. (2-tailed)	.000	.
	N	80	80

**. Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher's Field Survey, 2022.

Table 3 above shows the result of third hypothesis tested. As revealed by the table, the Pearson Correlation coefficient of 0.680 which is positive and greater than 0.5 indicates that there is a strong positive relationship between best of judgment and PAYE. Furthermore, since the significant value (P-value) of 0.000 is less than 0.05, there is sufficient statistical evidence to reject the null hypothesis three (H_{03}) and conclude that there is a significant relationship between best of judgment and PAYE in Rivers State.

Table 4: Pearson Correlation Analysis of Best of Judgment and VAT

		Best of Judgment	VAT
Best of Judgment	Pearson Correlation	1.000	. 707**
	Sig. (2-tailed)	.	.000
	N	80	80
VAT	Pearson Correlation	.707**	1.000
	Sig. (2-tailed)	.000	.
	N	80	80

**. Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher's Field Survey, 2022.

Table 4 above shows the result of fourth hypothesis tested. As revealed by the table, the Pearson Correlation coefficient of 0.668 which is positive and greater than 0.5 indicates that there is a strong positive relationship between best of judgment and VAT. Furthermore, since the significant value (P-value) of 0.000 is less than 0.05, there is sufficient statistical evidence to reject the null hypothesis four (H_{04}) and conclude that best of judgment does not significantly relate to VAT in Rivers State.

DISCUSSION OF FINDINGS

The study has analysed the relevant data sourced on the effect of tax collection procedure on tax revenue in Rivers State. To achieve this, frequencies and simple percentages were used to analyse the personal information of the respondents and other questions/items in the questionnaire while Pearson Correlation was used to test the hypotheses formulated at 5% level of significance. The study revealed that there is a positive and significant relationship between self-assessment and PAYE in Rivers State. This result is related to the result of Gabriel and Ezekiel (2019) which stated that self-assessment is an important proxy of tax collection procedure that exert a positive and significant effect on PAYE in Nigeria.

Also, the study revealed that there is a positive and significant relationship between self-assessment and VAT in Rivers State. This result is in agreement with the result of Saibu (2015) which stated that self-assessment is significantly related to VAT in Nigeria and South Africa. In addition, the study found that there is a positive and significant relationship between best of judgment and PAYE in Rivers State. This result is related to the result of Popoola (2009) which established that the impact of tax collection procedure such as best of judgment on PAYE, VAT and market taxes/levies in Nigeria is positively significant. Lastly, the study revealed that there is a positive and significant relationship between best of judgment and VAT in Rivers State. This result is in agreement with the result of Popoola (2009) which established that the impact of tax collection procedure such as best of judgment on the PAYE, VAT and market taxes/levies in Nigeria is positively significant.

CONCLUSION AND RECOMMENDATIONS

This study examined the effect of tax collection procedure on tax revenue in Rivers State. The results of the study showed that tax collection procedure variables such as self-assessment and best of judgment play have positive and significant relationship with PAYE and VAT in Rivers State. Based on these results, the study concludes that tax collection procedure plays a vital role in improving tax revenue in Rivers State. The study thus recommends The government should train and re-train revenue collectors and encourage them to come up with suggestions on how to improve collection drives in the state. Tax reforms should be carried out at regular intervals to effect relevant changes in the Nigerian tax system where necessary. Government should adopt more effective and efficient measures for tax administration in Nigeria to further emphasize the issues of transparency and accountability in the government's performance of its fiscal responsibilities to the people. This will improve tax compliance. Apart from the existing punishment and penalties for tax offenders, efforts should be made such that maximum publicity of cases prosecuted are carried out in order to serve as a deterrent to others. The revenue officials should be adequately equipped to ensure that defaulters are brought to book.

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THE ROLE OF OIL REVENUE IN THE GROWTH OF THE NIGERIAN MONEY MARKET

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ABSTRACT

The oil and gas sector remains the mainstay of the Nigeria's economy considering its contributions to the country's economic growth. This notwithstanding, the role of oil revenue in the financial market, particularly in the money market has not been empirically clarified by researchers most especially in an oil producing developing country such as Nigeria. Thus, this study, using Vector Autoregression (VAR) approach, examined the role of oil revenue in money market in Nigeria for the period 1981 to 2020. Empirical finding of this study is that oil revenue exerts positive significant impact on money market in Nigeria. However, the impact of money market on oil revenue in Nigeria is negative and statistically non-significant. Furthermore, the path of causality inferred from the VAR analysis is that of a unidirectional running from oil revenue to money market in the period of this study. It can be concluded that judicious use of oil revenue is a strong promoter of the growth of the Nigerian money market. There is therefore the need for Nigerian government to earmark certain proportion of the country's oil revenue for investment in the money market and for the development of financial infrastructure targeted at money market development.

Keywords: Oil revenue, money market, vector autoregression, financial market, Nigeria

INTRODUCTION

Money market is a mechanism for managing liquidity in the financial system that facilitates trades and investments and which ultimately promote economic growth and development (Aminu et al., 2017). The market is reputed to carry out certain functions which are provision of funds that are of short-term duration for the use of public and private institutions; provision of opportunity for financial institutions to use their surplus funds profitably for a short period; helps government in borrowing funds at low interest rates on the basis of treasury bills; promotes financial mobility by ensuring the transfer of funds from sector to another; promotes liquidity and safety of financial assets and thus encourages savings and investments; brings about equilibrium between demand for and supply of loanable funds; it helps in economizing the use of cash as the market deals mainly in near money (Jhingan,2011).

Oil was discovered by Shell-BP in Nigeria in 1956 at Oloibiri in the Niger Delta and since then petroleum production and export play a dominant role in Nigeria's economy and account for

about 90 percent of her gross earnings (Udoka & Nkamare, 2016). The Nigerian economy has over the years relied heavily on crude oil export for government revenues and its foreign exchange earnings (Onakoya & Agunbiade, 2020). Nigeria is an oil-dependent country and the sector has remained the mainstay of the country's economy and has since then making moderate contributions to the country's economic growth over time. For instance, the sector is reputed for its capacity to provide gainful employment and contribute to basic services like security, health and education, and servicing of foreign debts in addition to being a viable source of foreign exchange earnings (Babarinde, 2021).

The role of the public sector in the economy of any nation is facilitated by the fiscal muscle of the revenue generated by them. In an oil producing and dependent country such as Nigeria, the oil revenue constitutes a major means for financing government operations and by extension facilitates various institutional reforms, capacity building, implementation of government policies towards the enhancement of real and financial sector growth (Babarinde et al., 2022).

Theoretically, it is expected that government revenue, particularly, oil revenue, should be used to develop both the real and financial sectors of the economy. Despite these contributions, there seems to be little empirical studies on the role of oil revenue in money market in an oil dependent country such as Nigeria.

Therefore, this study is an attempt to fill the gap by examining the connection between oil revenue and money market performance in Nigeria for the period 1981 to 2020. Specifically, this study aims to determine whether or not there is long-run relationship between oil revenue and Nigerian money market and evaluate the impact of oil revenue on the size of the Nigerian money market.

LITERATURE REVIEW

Conceptual Issues

The money market has been conceptualized as a wholesale market for low, highly liquid, and short term debt instruments (Ogbuji, 2021). Money market could also be described as any arrangement and facilities that bring about the exchange of short term funds, and securities and instruments like treasury bills, treasury certificates, certificates of deposits, commercial papers, bankers' acceptances(BAS) and other short term/medium term investments (Babarinde et al., 2021). Money market according to Jhingan (2011), is a wholesale market or network of market consisting of call and notice market, commercial bills market, commercial paper market, treasury bills market, inter-bank market, certificates of deposit market which interact for the purpose of exchange of short-term, highly liquid, easily marketable instruments or financial assets that are close substitutes for money. Central Bank of Nigeria as the regulator of market work together with other institutions to enable the market to perform its functions. These institutions include the Nigerian Deposit Insurance Corporation, Debt Management Office, Federal Ministry of Finance, Deposit Money Banks, Microfinance Banks, Discount Houses and the private individuals.

Money market instruments in the Nigerian money market include treasury bills, treasury certificates, development stocks, certificates of deposits, commercial papers, bankers' acceptances (CBN, 2020). Between 1981 and 2020, the value of money market instruments outstanding in Nigeria stood as N120,203.6billion shared among the various instruments as follows: treasury bills (N36,711.41 billion); treasury certificates (N289.90 billion); development stocks (N83.59 billion), development stocks (N496.61 billion); commercial papers (N2,840.53billion); Bankers acceptances (N819.72 billion); and bonds (N78,961.79billion) (Central Bank of Nigeria, 2020). The most traded instruments in the Nigerian money market in the study period, happens to be bonds (65.69 per cent) and followed by treasury bills (30.54 per cent) while the least traded is the development stocks (0.07 per cent).

Oil revenue refers to the income earned from the sale of crude oil (Akinleye et al., 2021). Oil revenues are revenues from the sale of crude oil and gas exports, receipts from petroleum profits tax as well as royalties and revenue from domestic crude oil sale (Udeh, 2021; Ihendinihu et al., 2014). The total oil revenue realized by the Nigerian government was N99, 516.1billion.

Theoretical Review

This study is anchored on the Keynesian economic theory which is based on the belief that active government intervention in the market place through fiscal policy responsibility was the only method for ensuring growth of the economy. This can be achieved through ensuring efficiency in resources allocation, regulation of markets, stabilization of the economy and harmonization of social conflicts. Keynesian theory states that public expenditures financed by government revenue (like oil revenue) can contribute positively to economic growth by increasing government consumption through increase in employment, profitability and investment. The theory also states that government can reverse economic downturns by borrowing money from the private sector and returning the money to private sector through various spending. This theory regards the economy as being inherently unstable and required active government intervention through spending to achieve real sector growth (Nwanne & Eze, 2019).

Oil revenue as a public resource could either be a blessing or a curse. It is a blessing when it positively impacts the economy and its various indicators, institutions, markets and processes. Conversely, oil revenue becomes a curse when rather than promoting economic growth, it reduces it. The oil blessing hypothesis is based on the premise that increase in oil revenue will increase government capacity for intervention in the economy generally and particularly in the financial market through increased investment in the market, provision of market infrastructure, and provision of public goods and services that can enhance financial market growth. It has been argued also that, increase in oil revenue enhances the foreign exchange earnings of the exporting country. Through the increase in foreign exchange earnings, domestic economy has access to foreign exchange which could be used for importing primary inputs and capital goods, expanding domestic capacity and increasing government expenditure on both social and economic infrastructure and private consumption which are necessary conditions for economic growth from both the demand and the supply side of the economy (Dada & Abanikanda, 2019).

Empirical Review

There is dearth of empirical studies on the link between money market and oil revenue in an oil producing country like Nigeria. Previous studies focused mostly on the role of oil revenue on economic growth while some examined how oil revenue influence capital market and financial market generally as well as some macroeconomic variables. Some of these empirical studies are reviewed hereunder.

In their study, Udoka and Nkamare (2016) investigated the effect of crude oil glut on capital market in Nigeria based ordinary least square regression technique. The study argues that crude oil domestic production exerts a positive but non-significant effect on the market capitalization in the Nigerian Stock Exchange. Further evidence from the investigation is that of a positive impact of crude oil revenue on Nigerian capital market. Relatedly, Aminu et al (2017) examined the contribution of the money market to the economic growth of Nigeria using ordinary least squares method The study indicates that money market have positive and significant impact on the economic growth and development in Nigeria.

In another study, oil revenue's effect on the growth of agricultural sector in Nigeria was determined by Nwanne and Eze (2019). The authors established from their study government's oil revenue has positive and significant effect on agricultural sector contribution to the growth of Nigerian in the short run. Similarly, Dada and Abanikanda (2019) examined the effect of oil revenue on economic of Nigeria. From the threshold regression analysis, the study proved the threshold level of oil revenue in Nigeria that sustain economic growth is 6.17%, such that below the threshold level, oil revenue has positive and significant effect on economic growth but above the threshold level, oil revenue has negative and significant effect on economic growth in Nigeria which affirms the resource curse hypothesis in Nigeria.

Akintola et al. (2020) investigated the impact of the financial sector development on economic growth in Nigeria. The study reveals that financial deepening, banking system liquidity and all share index had positive and significant impact on economic growth in the long-run, unlike exchange rate spread which adversely affect real output growth. Likewise, in their study, Efanga et al (2020) analyzed the impact of oil revenue on Nigeria's economic growth. The results of the study indicate that oil revenue has positive and significant impact on economic growth of Nigeria.

Based on Error Correction model technique and Toda Yamamoto modified Wald's test, Onakoya and Agunbiade (2020) studied the impact of the Nigerian oil sector performance on GDP, exchange rate, interest rate, and inflation rate. The study shows evidence of a positive and significant relationship between oil revenue and lagged GDP with a uni-directional causality flow from oil revenue to the lagged GDP, inflation rate, exchange rate, real interest rate and unemployment rate.

Ogbuji (2021) examined the impact of the money market on economic growth in Nigeria using ordinary least squares (OLS) technique. The long run model result of the study revealed that treasury bills, federal government bonds, and the human capital investment have positive and significant impact on economic growth in Nigeria while monetary policy rate and commercial paper have positive but insignificant impact on economic growth in Nigeria. The result of the study further showed that bankers' acceptance has negative and insignificant impact on economic growth in Nigeria. The study concludes that money market instruments have positive impact on economic growth in Nigeria except bankers 'acceptance.

Akinleye et al. (2021) examined the impact of oil revenue on economic growth in Nigeria using autoregressive distributive lag method. The results of the study show among others, that oil revenue was directly related with the economic growth in Nigeria unlike petroleum profit tax which was found to be inversely related with the economic growth in both the short and long run. This is even as Ilo et al. (2018) examined the relationship between oil dependence and financial development in Nigeria with a focus on the banking sector and capital market forces and based on vector error correction model and granger causality test. The results revealed that oil rent has a short run effect on banking sector development, and the absence of a short run relationship between oil rent and capital market development.

Babarinde et al. (2021) investigated the relationship between money market and economic growth based on Fully Modified Ordinary Least Squares and Granger causality analysis. The study found that money market has positive and significant impact on economic growth in Nigeria with a unidirectional causality flow from money market to economic growth. In a recent study, Babarinde et al (2022) applied Vector Autoregression (VAR) technique to the analysis of the nexus between oil revenue and market capitalization of the Nigerian Stock Exchange. The study concluded that oil revenue exerts no significant impact on capital market performance in Nigeria even though both are positively correlated.

The review of literature reveals the dearth of empirical study on the link between money market and oil revenue, particularly in an oil-dependent, developing economy such as Nigeria. An attempt is thus made in this current study to determine the role of oil revenue in money market in Nigeria based on VAR technique reputed for its advantage of flexibility and dynamic capacity to model various relationship which is not restricted by economic theory.

MATERIALS AND METHODS

This study examines the role of oil revenue in money market for the period 1981 to 2020. The time series data employed in this study being secondary in nature, were analyzed via econometric techniques situated within the Vector Autoregression (VAR) model. After the descriptive statistical tests and Pearson correlation analysis of the nature of relationship between money market and oil revenue, the unit root property of the variables of study were evaluated using the Phillips-Perron (PP) test approach. Engle-Granger Cointegration Test becomes applicable because the variables of study are I(1) series. Selection of an optimal lag length was also carried out due to the sensitivity of Johansen co-integration test to lag length specification. Consequently, five criteria were assessed and tested at 5% level of significance. They are the sequential modified LR test statistic (LR), Akaike information criterion (AIC), Final prediction error (FPE), Hannan-Quinn information criterion (HQ) and Schwarz information criterion (SC). The Vector Autoregression (VAR) model proper was estimated and the model diagnostic tests were also conducted.

Vector Autoregressive (VAR) model is a model for two or more times series where each variable is modeled as a linear function of past values of all variables, as well as disturbances that have zero means given all past values of the observed variables (Wooldridge, 2003). In VAR model generally, considering a two-variable specification, Y and Z, y_t is modelled as a function of its past value, y_{t-1} ; the past value of Z (z_{t-1}); as well as the error term, u_t as represented in equation (1). Similarly, z_t is modelled as a function of its past value, z_{t-1} ; the past value of Y (y_{t-1}); as well as the error term, v_t as represented in equation (2).

$$y_t = ð_0 + Ш_1 y_{t-1} + \alpha_1 z_{t-1} + u_t \quad (1)$$

$$z_t = ß_0 + \Psi_1 y_{t-1} + \gamma_1 z_{t-1} + v_t \quad (2)$$

Table 1: Descriptive Statistics

	OILREV (₦ billion)	MMI (₦ billion)	Correlation	OILREV	MMI
Mean	2487.904	3005.089	OILREV	1.000000	
Maximum	8878.970	14663.34	Probability	-----	
Minimum	7.253000	11.70350	MMI	0.667135	1.000000
Std. Dev.	2712.810	4391.349	Probability	0.0000	-----
Skewness	0.716173	1.412032			
Kurtosis	2.204572	3.635949			
Jarque-Bera	4.473871	13.96629			
Probability	0.106785	0.000927			

Source: Authors (2022)

The average of oil revenue (OILREV) realized in Nigeria between 1981 and 2020 which stood at N2487.904billion is less than the mean value of money market outstanding instruments in Nigeria in the same period (3005.089billion). Oil revenue ranges between 7.253000 and 11.70350 while the corresponding figures for money market instruments are 11.70350 and 14663.34. Both oil revenue and money market instruments are positively skewed with their respective standing as 0.716173 and 1.412032. With the standard deviation (2712.810) exceeding the mean value (2487.904), it can be said that oil revenue relatively displays wide dispersion and the same holds for money market instruments given that its standard deviation (4391.349) is more than its mean value (3005.089). In the relation to oil revenue, given 4.473871 and 0.106785 as the Jarque-Bera test value and the associated probability value respectively, it can be said that the series is normally distributed since we cannot reject the null hypothesis of normality of the variables due to the high probability value. The normality hypothesis for money market instrument rejected given its Jarque-Bera value of 13.96629 and the very low probability of 0.000927 of the series.

The Pearson correlation coefficient which provides estimates as to the nature of relationship between variables of interest, as reported in the same Table1, shows that money market instrument is positively correlated (Coefficient=0.667135) with oil revenue and the relationship statistically significant (p=0.0000) at one per cent.

Unit Root Test

The unit root properties of oil revenue and money market instrument are tested using Phillips-Perron (PP) test approach. The test was conducted on the logarithmic form of the series and the results reported in Table 2.

Table 2: Phillips-Perron (PP) test statistic

Null hypothesis(HO):LOILREV has unit root; Null hypothesis(HO): LMMI has unit root

	Phillips-Perron test statistic in Level					
	PP	Prob.	1% Level	5% Level	10% Level	Remarks
LOILREV	-1.675484	0.4355	-3.610453	-2.938987	-2.607932	Accept HO
LMMI	-1.345821	0.5985	-3.610453	-2.938987	-2.607932	Accept HO
	Phillips-Perron test statistic at First Difference					
	PP	Prob	1% Level	5% Level	10% Level	Remarks
LOILREV	-6.153961	0.0000	-3.615588	-2.941145	-2.609066	Reject HO
LMMI	-7.465061	0.0000	-3.615588	-2.941145	-2.609066	Reject HO

Source: Authors (2022)

Phillips-Perron test conducted for both series (oil revenue and money market) in level reports that both series are contains unit root, that is, they are non-stationary. However, application of PP test to the first difference of the series, removes the unit root element in both series. This implies that both oil revenue and money market instruments are integrated of order one.

Contegration Test

Cointegration is suspected when the series are non-stationary (in level), hence the need to test for cointegration. Engle-Granger Cointegration Test becomes applicable because the variables of study are I(1) series. The results of the Engle-Granger Cointegration Test are presented in Table 3.

Table 3: Engle-Granger Cointegration Test

Dependent	tau-statistic	Prob.	z-statistic	Prob.
LMMI	-1.031213	0.8966	-3.372478	0.8499
LOILREV	-1.296911	0.8327	-4.260624	0.7803

Source: Authors (2022)

According to the Engle-Granger Cointegration Test in Table 3. Both tau-statistic and z-statistic suggest that money market and oil revenue in their log form are not cointegration. This is because the null hypothesis of no level relationship between the variables cannot be rejected due to the very high probability value.

VAR Lag Order Selection Criteria

It is safe to apply Vector Autoregression (VAR) to the analysis of I(1) series that are not cointegrated. But due to the sensitivity of the VAR model to model lag order, the VAR Lag Order Selection Criteria test was performed and the results are presented in Table 4.

Table 4: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-123.2734	NA	2.991603	6.771537	6.858614	6.802236
1	-2.615271	221.7501*	0.005465*	0.465690*	0.726920*	0.557786*
2	-1.147574	2.538719	0.006283	0.602572	1.037955	0.756065
3	0.177696	2.149086	0.007304	0.747152	1.356688	0.962042

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Source: Authors (2022)

The criteria (in Table 4) select the optimum lag as the one the smallest value and consequently, the following smallest values of 221.7501, 0.005465, 0.465690, 0.726920, and 0.557786 for LR, FPE, AIC, SC and HQ respectively are reported at lag one. Hence, the optimum lag for the VAR modelling in this study is lag order one.

Vector Autoregression Model Estimation

The Vector Autoregression model of the relationship between oil revenue and money market in

Nigeria was estimated and the results are summarized in Table 5 (while the full results as well as the associated probabilities are presented in the appendix).

Table 5: Vector Autoregression Estimates

		I	II
		LMMI	**LOILREV**
LMMI(-1)	Coefficient	0.919431*	-0.002024
	P-value	0.0000	0.9821
LOILREV(-1)	Coefficient	0.063384***	0.962067*
	P-value	0.0901	0.0000
C	Coefficient	0.288624*	0.410387**
	P-value	0.0013	0.0336
R-squared		0.993784	0.975037
Adj. R-squared		0.993439	0.973650
F-statistic		2877.812	703.0561
Diagnostics	**Test Type**	**Coefficient**	**P-value**
VAR Residual Normality	Jarque-Bera	3.138628	0.5349
VAR Residual Serial Correlation LM	LRE* stat	2.663580	0.6156
VAR Residual Serial Correlation LM	Rao F-stat	0.669170	0.6157
VAR Residual Heteroskedasticity	Chi-sq	16.99817	0.1497

Source: Authors (2022). Note: *, ** and *** denote statistically significant at 1%, 5% and 10% respectively.

The VAR estimates in model I of Table 5 reveal that oil revenue has a positive coefficient (0.063384) and a p-value (0.0901) which is less than ten per cent. This suggests that oil revenue exerts positive impact on money market in Nigerian and the relationship is statistically significant at ten percent. However, going by the negative coefficient (-0.002024) and a high p-value (0.9821) in respect of the impact of money market on oil revenue in Nigeria (model II of Table 5) it can be said that though money market produces a negative elasticity in effect on oil revenue but the association is not statistically significant. By implication therefore, the path of causality inferred from the VAR analysis is that of a unidirectional running from oil revenue to money market in the study period.

Moreover, the model's diagnostics in the form of VAR residual normality test, VAR residual serial correlation LM test, and VAR residual heteroscedasticity test (In Panel B of Table 5) which are tests of normality, serial correlation and heteroscedasticity respectively, attest to the fact the residual of the VAR model is normally distributed, serially-independent and is homoscedastic. The VAR model stability graph of the inverse roots of autoregressive (AR) characteristic polynomial (In Fig.1) reveal that no root lies outside the unit circle and therefore the model satisfies the stability condition.

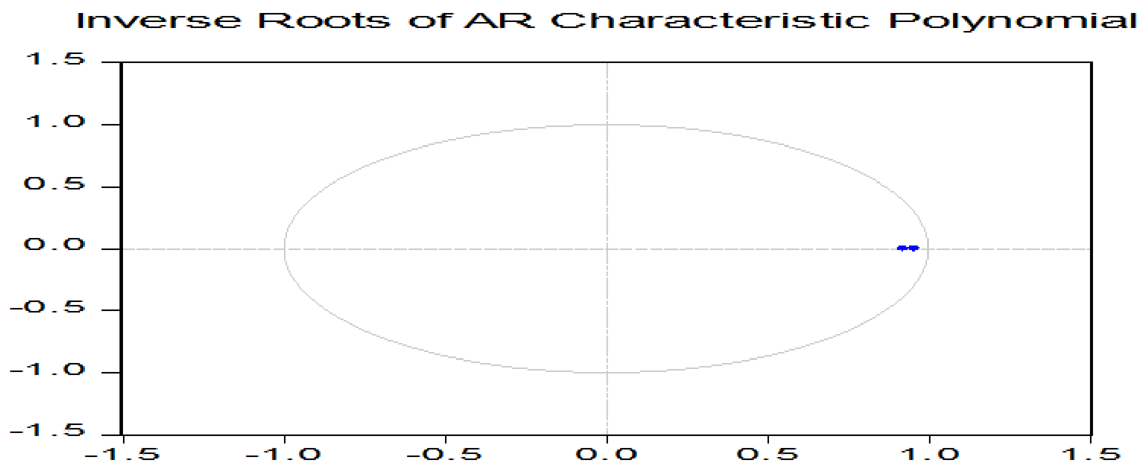

Fig.1: VAR Model Stability Graph
Source: Authors (2022)

CONCLUSION AND RECOMMENDATIONS

This study has examined the role of oil revenue in money market for the period 1981 to 2020 using the Vector Autoregression (VAR) model. Findings from the VAR model estimation, show that oil revenue exerts positive and statistically significant impact on money market in Nigeria. However, the impact of money market on oil revenue in Nigeria was negative but statistically not significant. By implication therefore, the path of causality inferred from the VAR analysis is that of a unidirectional running from oil revenue to money market in the study period.

It can be concluded that oil revenue exerts positive and statistically significant impact on money market in Nigeria which suggests judicious use of oil revenue is a strong promoter of the growth of money market in Nigeria. We therefore recommend that Nigerian government should invest its funds, particularly its oil revenue in the money market and for the development of financial infrastructure targeted at money market development. This will be of benefit to the private sector investors and also improve the liquidity of the Nigerian money market.

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Appendix

Vector Autoregression Estimates
Date: 05/28/22 Time: 16:45
Sample (adjusted): 1982 2020
Included observations: 39 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	LOGMMI	LOILREV
LOGMMI(-1)	0.919431	-0.002024
	(0.04106)	(0.09000)
	[22.3910]	[-0.02249]
LOILREV(-1)	0.063384	0.962067
	(0.03689)	(0.08087)
	[1.71798]	[11.8970]
C	0.288624	0.410387
	(0.08645)	(0.18948)
	[3.33868]	[2.16586]
R-squared	0.993784	0.975037
Adj. R-squared	0.993439	0.973650
Sum sq. resids	1.141333	5.483062
S.E. equation	0.178055	0.390266
F-statistic	2877.812	703.0561
Log likelihood	13.52300	-17.08159
Akaike AIC	-0.539641	1.029825
Schwarz SC	-0.411675	1.157792
Mean dependent	6.387816	6.381176
S.D. dependent	2.198181	2.404186

Determinant resid covariance (dof adj.)	0.004778
Determinant resid covariance	0.004071
Log likelihood	-3.351349
Akaike information criterion	0.479556
Schwarz criterion	0.735489
Number of coefficients	6

System: UNTITLED
Estimation Method: Least Squares
Date: 05/28/22 Time: 16:48
Sample: 1982 2020
Included observations: 39
Total system (balanced) observations 78

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.919431	0.041063	22.39099	0.0000
C(2)	0.063384	0.036895	1.717981	0.0901
C(3)	0.288624	0.086449	3.338677	0.0013
C(4)	-0.002024	0.090002	-0.022489	0.9821
C(5)	0.962067	0.080866	11.89699	0.0000
C(6)	0.410387	0.189480	2.165862	0.0336

Determinant residual covariance 0.004071

Equation: LOGMMI = C(1)*LOGMMI(-1) + C(2)*LOILREV(-1) + C(3)
Observations: 39

R-squared	0.993784	Mean dependent var	6.387816
Adjusted R-squared	0.993439	S.D. dependent var	2.198181
S.E. of regression	0.178055	Sum squared resid	1.141333
Durbin-Watson stat	2.434844		

Equation: LOILREV = C(4)*LOGMMI(-1) + C(5)*LOILREV(-1) + C(6)
Observations: 39

R-squared	0.975037	Mean dependent var	6.381176
Adjusted R-squared	0.973650	S.D. dependent var	2.404186
S.E. of regression	0.390266	Sum squared resid	5.483062
Durbin-Watson stat	2.081781		

YEARS	**OIL REVENUE** (₦ BILLION)	**VALUE OF MONEY MARKET INSTRUMENTS** (₦ BILLION)
1981	8.6	11.70
1982	7.8	15.49
1983	7.3	22.81
1984	8.3	26.11
1985	10.9	28.32
1986	8.1	28.98
1987	19.0	38.63
1988	19.8	49.69
1989	39.1	37.66
1990	71.9	66.91
1991	82.7	97.30
1992	164.1	144.77
1993	162.1	148.96
1994	160.2	153.95
1995	324.5	148.28
1996	408.8	126.62

1997	416.8	249.75
1998	324.3	249.21
1999	724.4	396.65
2000	1,591.7	518.42
2001	1,707.6	652.47
2002	1,230.9	804.59
2003	2,074.3	980.55
2004	3,354.8	1,049.51
2005	4,762.4	1,342.35
2006	5,287.6	1,585.31
2007	4,462.9	2,209.41
2008	6,530.6	2,846.85
2009	3,191.9	3,394.76
2010	5,396.1	4,447.31
2011	8,879.0	5,545.53
2012	8,026.0	6,247.89
2013	6,809.2	6,853.88
2014	6,793.8	7,677.34
2015	3,830.1	8,691.42
2016	2,693.9	10,870.51
2017	4,109.8	12,382.05
2018	5,545.8	12,152.44
2019	5,536.7	13,245.86
2020	4,732.5	14,663.34

Source: Central Bank of Nigeria statistical bulletin (2021)

A REVIEW OF THE CHALLENGES OF ACCOUNTING AS A TOOL FOR SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA AND THE WAY OUT

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ABSTRACT

Accounting is essential to the socioeconomic development of any country due to the variety of economic information it offers and the complexity of every country. How effectively resources are used and handled determines how an economy will develop and prosper. Lack of a carefully planned accounting procedure would certainly result in inefficient allocation and underutilization of available resources. This study examines the technological difficulties that accounting has in carrying out its responsibilities as a toll for socio-economic development against this backdrop. According to the results of the exploratory research approach utilized in this study, accountants must overcome technological obstacles brought on by artificial intelligence, cyber security, and remote work if accounting is to stay relevant in the rapidly evolving business environment. Further research finds that accounting-related concerns brought about by technological advancements such as e-business, input and output processing, cloud computing, information technology, supply chain management systems, and forensic accounting pose significant challenges. The study comes to the conclusion that accounting must play crucial roles in the face of these difficulties. This study suggests that the best way to ensure that accountants stay current with economic and technical developments is to provide them with ongoing training. The study further suggests that governments and other organizations that employ accountants should offer the required support in this area.

Keywords: Artificial Intelligence, Cybersecurity, e-business, Challenges, Remote work

INTRODUCTION

To assist economic judgments made by decision makers who are either insiders or outsiders of an economic unit, accounting is characterized for the purposes of this study as an information function. The functions of accounting as an agent of economic development have been investigated from a variety of angles (Oluwatuyi et al., 2022). For instance, when the capital market is indicated as a clear way to access domestic saving, the significance of financial reporting is underlined. When discussing the effectiveness of the income tax system for economic development, bookkeeping is referred to as a crucial element.

Socioeconomic development is the process of raising people's quality of living through better employment, educational opportunities, and housing options. One of the environmental factors influencing the process of economic and social growth is the rise in the use of the internet for routine tasks. So, a society evolves socially and economically through a process known as socio-economic development. Nigeria's economic hardship is caused by a lack of adequate infrastructure and other socio-economic development elements, including electricity, a good road system, telecommunication, education, and awareness (Okewale & Atobatele, 2022). Infrastructure development is one of the main determinants of whether socio-economic growth is acceptable. As a result of socioeconomic development, a society's activities are enhanced and altered, which has an impact on the economy and reduces the level of poverty that the people experience. (UN 2011, as cited in Okewale & Atobatele 2022; Okewale & Atobatele, 2022).

Accounting plays a significant role in the socioeconomic development of any country. Poorly established accounting procedures will almost certainly result in inefficient resource allocation. The efficient use and management of resources determines an economy's capacity to grow and prosper. In the light of new technology, a country's complexity will be in need of economic data that accounting can provide.

The regular work of accountants is changing as a result of emerging technologies, which are also changing the professional lives of millions of people globally and the socioeconomic progress of entire countries. With the speed at which technology advancements are occurring, this phenomenon is becoming more and more obvious. Numerous causes have contributed to the changes, including quick technology advancements, increased globalization and ease of communication through the internet, and legal and regulatory reforms. Accounting is significantly impacted by technology in both positive and negative ways, and accountants have historically been quick to accept new technologies (Carlin, 2019).

Numerous studies on recent technological developments in accounting have been published (Quinto II, 2022; Abdennadher, 2021; Kroon et al., 2021; Dos-Santos et al., 2020; Appelbaum & Robert, 2020; Abdalla, 2019; Cooper, 2019; Arnold, 2018; Coyle & David, 2018; Bello, 2013; Taipaleenmäki & Ikäheimo, 2013). These studies present accounting challenges on which future works can be built. However, technological barriers to accounting's use as a tool for Nigeria's socioeconomic development have either not been sufficiently investigated or do not exist. Alara (2017) concentrated on the role of accounting in national development, while Oluwatuyi et al. (2022) looked into accounting and Nigeria's economic development. Selected Nigerian businesses were used by Onwughai (2022) to examine how machine learning and artificial intelligence affect accounting operations. While Odoh (2018) concentrated on artificial intelligence system and its implications for proper record keeping in microfinance banks in Nigeria, Odoh et al. (2018) studied the impact of artificial intelligence on the performance of accounting operations among accounting companies in south east Nigeria. None of them approached the technology difficulties facing accounting from a comprehensive perspective. The purpose of this study is to fill the large gap left by this omission.

THEORTICAL REVIEW

This work is based on grounded research theory. New, qualitatively supported concepts and theories of business-related phenomena are the goal of grounded theory research in business and management. The methodological goal of this theory is conceptual development, without any commitment to certain data types, study areas, or theoretical focuses (Sanni, 2022). Instead, it refers to a qualitative analysis method that uses a coding paradigm to assure conceptual development density and is distinguished by a number of distinctive traits (Azar, 2016).

Additionally, it is used when it is thought that developing theory rather than merely more detail is required. Grounded theory can also provide interpretative researchers with a way to strike a balance between the necessity of developing theories that are based on commonplace behaviors and the understanding that the research process is ineluctably subjective. High-quality research (i.e., research that is genuine, reliable, and impartial) will be generated if the correct procedures are followed (Azar, 2016).

METHODOLOGY

For this study, the exploratory research methodology is employed. Explanatory research strives to explain the causes and effects of a clearly defined problem by analyzing the key elements of an understudied field (Sanni, 2022). Exploratory research offers the researcher the chance to identify problems, find fresh information, and learn more about a subject that has not been thoroughly studied. The main advantage of this technique is that, when used properly, it can create a solid framework for additional research on the same topic (Voxco, 2021). This is one of the objectives of the investigation.

FINDINGS AND DISCUSSION

Beavers identified seventeen (17) main accounting-related challenges (2022). The technological issues that may have an impact on accounting being used as a tool for socio-economic development in Nigerian are examined in this paper.

Automation and Artificial intelligence (AI)

One of the major technological issues facing accounting is artificial intelligence. Grewal (2014) put forward the idea of artificial intelligence (AI) as a mechanical simulation system that involves gathering, evaluating, and eventually sending knowledge, information, and intelligence to the appropriate parties in the form of intelligence that may be used. Haenlein and Kaplan (2019, cited in Zemánková, 2019) defined AI as a system's capacity to efficiently receive external input, learn from it, and apply what it has learned to fulfill specific goals and tasks through flexible adaptation.

Numerous studies were cited by Omoteso (2012) in his analysis of the advantages of using AI in accounting and auditing. Just a few of these benefits include consistency, efficiency and effectiveness, audit task structure, better decision-making and communication, increased staff training, newbie skill development, and quicker decision times. AI will have an impact on accounting by reducing the possibility of fraud, improving the accuracy of accounting data, and encouraging the reform of traditional accounting and auditing, claimed Chukwuani and Egiyi (2020). These can lead to an improvement in socio-economic development.

Mohammad (2020) asserted that accountants will ultimately be able to reduce accounting costs and add value to the accounting industry by reorienting their attention away from the dreary tasks they are currently performing and toward decisions that are based on data and analytics. By keeping up with ongoing developments in AI in the accounting and auditing fields, this will be possible. Bizarro and Dorian (2017) asserted that the AI-driven automation enables the evaluation and comparison of metadata-level source material, document processing, conference calls, emails, press releases, and news media from both internal and external sources. According to Makridakis (2017), those who widely utilize AI and are prepared to take financial risks in order to turn innovative products or services into global commercial successes stories will continue to have a sizable competitive advantage that will support socio-economic development.

As one of the most disruptive technologies in recent years, artificial intelligence (AI) has a significant impact on a variety of businesses and industries. AI is a set of technologies that will change the way we do business. Researchers and practitioners link the development of AI to the industrial revolution of the previous century. Several Nigerian Fintech companies have already adopted an AI-driven strategy, upending the financial lending industry (Oyeniran, 2019 cited in Onwughai, 2022). The implementation of robotic devices and intelligent computers, according to artificial intelligence optimists, would greatly improve service delivery rather than detract from it, according to Danimir et al. (2019). They also think that general accounting services can and will be provided more effectively, giving accountants more time to talk with customers about their current situations and their short- and long-term needs.

Danimir et al. (2019) claimed that artificial intelligence (AI) and machine learning will improve accountants' access to a variety of accurate and timely data from a larger variety of sources. Eleonora, (2018) predicted that AI will displace accountants in a number of their more repetitive and routine tasks because it is clear that AI can complete more tasks faster and more accurately than humans. Even in the short term, many accounting job duties will be automated, but accountants can still be trained and given the latest tools to meet all obstacles and take advantage of all opportunities (ICAEW, 2018).

Hasan (2022) cited a number of difficulties to using AI, some of which may be detrimental to the field. These include the disappearance of traditional employment and responsibilities, a growth in income disparity, and a danger to the external auditor's independence (in the case of an organization under greater monitoring by AI). The adoption and use of AI in record keeping is fraught with difficulties in developing nations like Nigeria, from low financing to a lack of human skill (Avneet, 2015). Adoption and use of the technology in Nigeria are discouraged by the lack of a proper knowledge of the idea and applications of AI.

A 2015 University of Oxford study found that when computers take over data analysis and number crunching, there is a 95% chance that accountants would lose their jobs. However, the same data indicated that as technology develops, some employment may be lost while others are created (Griffin, 2016 as cited in Cindy, 2017). Eleonora (2018) found it quite disconcerting that the accounting industry is one of the human endeavors that certain empirical research predict will have a high possibility of computerization. But he went on to say that we do not have to believe such dire predictions, insisting that the accounting industry will continue to be highly significant for the foreseeable future.

Accounting issues with inefficiency and low added value can be addressed with the use of artificial intelligence, freeing accountants to concentrate on more innovative work and increase the value of the firm Jiaxin et al (2018). According to Fogarty (2019), the use of sophisticated analytics for business has increased since the widespread adoption of data warehousing and relational databases on client servers around the turn of the millennium. He continued by arguing that, despite machine learning and artificial intelligence techniques being around for decades, they have had few successful breakthrough applications until recently. These algorithms may now be employed to their full capacity in enterprises due to cloud computing and the ability to use the infrastructure of digital giants like Amazon and Google. Big data and this robust infrastructure are continually producing creative applications across a variety of business types. However, there are other drawbacks to artificial intelligence, such as the initial high cost of installation, the displacement of human labor, and the fact that machines lack human initiative, empathy, and decision-making capacity and as a result cannot fully function without human intervention. Another issue with AI systems is their vulnerability to being infiltrated, compromised, or even showing undesirable behaviors (Onwughai, 2022). These may lead to use

of wrong data for accounting purposes, leading to poor decisions that may negatively affect the socio-economic development of the nation.

Cybersecurity

Accounting faces many challenges, including cybersecurity, which has grown increasingly difficult as technology has developed. Cybersecurity is the process of securing the networks, systems, and applications of digital networks. In error, it is usually interpreted as information security or IT security. All information assets, whether they are in physical copy or digital form, are assumed to be protected by IT security (Yadav, 2017; Von & Van, 2013). The Information Assurance (IA) component of a cyber security system is essential. It entails safeguarding information and managing risks related to its use, processing, storage, and transfer, as well as the systems and procedures that employ it (Wang et al., 2013). According to Ehioghiren et al. (2021), cyber security is the biggest issue facing accountants right now since unauthorized access to a country's data base can have a detrimental effect on that nation's socioeconomic development.

Disruptions accompanied the fourth and fifth industrial revolutions' unparalleled pace. The interconnection of people, data, and devices is accelerated by these disruptions, resulting in increased device convenience and a wider range of online activities. The universality of information systems is triggered by their interconnection, and this is essentially what gave rise to the term "cyberspace". It is interesting to note that, in second quarter of 2022, 5.03 billion people, or 63.1 percent of the world's population, will be using the internet, up from 1% in 1995. (Billie, 2022; Internet Live Stars, 2017). Cybercrime has increased as a result of more people using the internet. Cybercrime in Nigeria not only further exacerbates the financial sector by placing individuals at the whim of online scammers known as "yahoo-yahoo" boys, but it also demonstrates the desperate measures used by financial institutions to hide the widespread hacking to which they are susceptible (Lambo, 2022). More cybercriminals target Personally Identifiable Information (PII), which is used to carry out account takeover fraud, as more consumers are drawn in by the allures of money transfer Apps, working from home, and doing transactions from convenient locations.

During the #ENDSARS protest in Nigeria, cyberattacks by international hacktivists were witnessed in Nigerian online. The Syrian Electronic Army (SEA) launched DDOS attacks against a particular website during the event in support of the young people protesting against police brutality. The websites of a few notable public agencies, including the Central Bank of Nigeria (CBN), the Nigerian Communications Commission (NCC), and the Police Service Commission, were compromised. All of these actions were taken in full knowledge of the security agencies' weak understanding of the cyberspace. Without adequate cybersecurity, accounting will not be able to run smoothly and will not be able to provide reliable data needed for the socio-economic development of the country.

Remote Work (Work from Home: WFH)

Technology advancements have made remote work, sometimes known as Work from Home (WFH), possible. The typical office has been replaced in recent years by more flexible, distributed work arrangements, which poses a significant challenge to accounting (Gerdeman, 2021). There are many reasons why people prefer working remotely, but it is clear that doing so makes them happy. But when knowledge workers return to the office, they usually find that their productivity and happiness have decreased (Jaqua, 2022). Some employers believe that by giving their staff the option to work from home, they may attract top talent who will stay with them longer than if they were required to do so in an unfriendly office environment (Prossack, 2021).

There are several cost saving advantages to working from home from accounting perspective.

The benefits of WFH include work-life balance, increased productivity, lower stress, shorter commutes, fewer interaction with coworkers, and increased control over work schedules, according to Ipsen et al. (2021). WFH makes it simpler for businesses to entice skilled individuals who do not desire to be bound to one particular workplace. This offers business management the chance to lower administrative expenses. Because it reduces costs for businesses significantly, the virtual way of working is becoming more and more common (Olufemi, 2021). An organization becomes more adaptable and better equipped to handle a variety of crises and the rapidly changing market conditions. WFH enables businesses to employ qualified workers from anywhere in the world who can work around the clock, regardless of time zone, increasing productivity and profitability. This also makes WFH more appealing and well-liked.

There are disadvantages to working from home that concern accounting and its use as a tool for socio-economic development. One of them is worker's lack of communication with their coworkers and professional isolation. These have a negative impact on the manager-employee relationship. These also have an impact on feedback and practical examples of what superiors should do in specific situations (Diab-Bahman & Al-Enzi, 2020). Reduced human contact, miscommunication, isolation, and role uncertainty are some of the drawbacks of WFH identified by Ipsen et al., (2021). WFH has a detrimental impact on knowledge management, knowledge sharing, and worker socialization (Bolisani et al.,2020). When too many workers telecommute, cooperation may be challenging, claimed Van der Lippe & Lippenyi (2020). Sarti & Torre (2017) noted that potential barriers to WFH include challenging worker coordination and cooperation, anxiety associated to working alone, investments in information technologies, and apprehension over managerial control.

For these reasons, many companies still prohibit remote employment. First, individuals might not be able to respond quickly enough if a critical situation happens at work. This might be very problematic for businesses that rely on offering top-notch customer service (Pinola, 2020). When it comes to pressing accounting-related activities like payroll, tax deadlines, and other related tasks, it could lead to missed deadlines or other problems. Working remotely might be advantageous for some people, but it can also be detrimental to teams and socio-economic development. Working remotely on a regular basis upsets the systems that support effective teamwork.

New Technology and Tools

Today's accounting-related technologies include e-business, input and output processing, cloud computing, information technology, supply chain management systems, forensic accounting, and others (Quin 2018). The use of technology in the accounting sector has improved a number of processes which can positively improve quality of life, and by extension, socio-economic development. Although there are benefits to technology, there are also disadvantages in the accounting sector. Systems may no longer be relevant due to quick technological improvements. Regular updatings are thus necessary for accounting systems to function successfully and efficiently (Quinto, 2022) which may affect profitability. Accounting software providers may experience problems if they are unable to access their data as a result of a power or computer failure.

Financial data loss could also come from improper backup strategies (Armenia 2021). Data that is provided by an accounting system can only be as accurate as the data it receives. If all of the data entered into accounting systems is not carefully analyzed, financial outcomes could be incorrect. If an accounting system's final output or reports are only sometimes inspected, it could be

challenging to determine whether the data is accurate for socio-economic decisions. Third, additional security measures must be implemented in accounting software to safeguard information against problems like fraud and theft. The danger of unemployment exists if accounting is fully computerized and modernized as a result of technology. This would worsen socioeconomic growth and should be avoided by a good accounting system.

THE WAY OUT

Automation and Artificial Intelligence (AI)

When using human inventiveness and judgment, artificial intelligence cannot replace accountants and auditors. Changes in technology, laws, and the economy will continue to challenge the profession's traditional methods of thought, which is a positive thing. The market's response to these changes will ultimately determine how accounting tasks are carried out. The requirement for unique organizational performance measurements outside of traditional financial statements, as well as the need to respond quickly to changes in customer demand, necessitates the readiness of accountants and auditors. AI should for these reasons, be covered in the training for auditors and accountants. Auditors' judgment and professional skepticism will be more crucial than ever as they use new technologies. Instead of replacing accountants, AI will shift the focus (Greenman, 2017).

Cybersecurity

The professional accountant has a lot to contribute to cyber security as it is necessary for professional practices to have a strong institutional framework that will support good corporate governance in both public and private firms that will build and install public confidence among stakeholders and the entire business system (Gyun & Vasarhelyi, 2017).

Gordon et al. (2010) claimed that having this knowledge will help accounting professionals comprehend the pertinent facets of cyber security and provide policymakers and implementers with better knowledge on how to design a cyber-security system that will improve the socio-economic development of the country. The disclosure of information about internal audit and cyber security controls within Nigerian organizations will help with the provision of litigation support services in addition to the essential provision of professional services in courts, according to Cheng and Walton (2019 cited in Billie, 2022). This is crucial.

The professional association must launch bills on cyber security that will be passed in order for the government and regulatory bodies to be able to develop rules and guidelines to manage cybercrime activities. Nigerians must put an emphasis on adopting integrity, objectivity, fairness, and accountability in all facets of daily life in order to advance the socioeconomic development of the country.

It is not only necessary, but should be aggressively pursued by all developing countries, of which Nigeria is not exempt, to have a pursued Cybersecurity policy and strategy that increases awareness and affects cyberculture while closing up, sustaining, and ensuring that international cyberspace initiatives are linked to a national strategy. A well-informed cybersecurity policy will enable susceptible corporate and governmental institutions to go beyond personalised cyber security measures, increasing user awareness and keeping users one step ahead of attackers (Trelix, 2022). Cyberspace will be protected and kept safe by developing a comprehensive strategy through ongoing threat awareness, proactive measures that constantly foresee threats and vulnerabilities and relentlessly defend against them.

The Nigerian Cybercrime (Prohibition, Prevention, etc.) Act 2015, which was conceptualized on paper in line with what is possible in the developed world, has not yet been seen in action by any of the federal security agencies, nor has it been seen defending the country's financial and educational sectors. Cyber strategy is tightly knit around state and public-private partnerships, with awareness levels regularly ramped up, and this is severely lacking in Nigeria's cybersecurity policy. The cyberspace has advanced beyond governments' ability to wage war. The national cybersecurity policy could be considered as a manifestation of the concentric nature of the national security architecture, which lacks flexibility to address a federal system (Maibashira, 2022; Afuzie, 2022 cited in Bille, 2022).

A cyber liability insurance policy protects businesses from monetary losses, reputational damage, and brand erosion brought on by cyber catastrophes such as data breaches and theft, system hacking, ransomware extortion, and denial of service. The absence of policies covering cyber liability in the financial statements of institutions providing financial services or education services in Nigeria attests to the product's embryonic stage in that country (Oaikhena, 2022; Tijani & Oloyede, 2020). It is interesting to note that the Central Bank of Nigeria's Risk Based Cybersecurity Framework recommended that Payment Service Providers consider cyber-insurance coverage as a component of their security assurance programmes. Nothing comparable about any of the Insurance Act 2003's amendments or its clauses could be asserted. Most banks hide their cyberattacks from the public because they are worried about reputational harm or uninformed panic withdrawals from customers. Integrated efforts to secure the financial services sector are also in their infancy, which limits the collective approach and awareness (Bille, 2022).

Remote Work

Employers should consider the disadvantages before implementing remote working policies since even with them, they are still preferable to having everyone in the same building every day. Making remote work sustainable requires significant planning and preparation on the parts of both employers and employees. The primary objective should be to make established financial controls function with a dispersed workforce. Use a traditional risk assessment approach to determine which controls could put the organization at risk. The majority of businesses can clearly benefit from cloud-based accounting software's ability to handle remote accounting staff for socio-economic development.

Keeping Up with New Technology and Tools

To remain relevant in the ever-changing business environment, the solution is for accountants to stay up with new technology developments and use the appropriate tools when performing their jobs.

DISCUSSION

Technology has changed the accounting industry in a number of ways that could harm the profession and the socioeconomic progress of the country. The accounting industry's use of technology has enhanced several activities. Although technology has many advantages, there are also drawbacks in the accounting industry. Rapid technological advancements render the

systems obsolete. Due to different technological advancements since the development of artificial intelligence and its application in the accounting industry, several methods are now no longer relevant (Jasim & Manaf 2021). For accounting systems to operate effectively and efficiently, regular updates are required. Because of the increased updating costs associated with the update, the company's profitability could be impacted.

Businesses that provide accounting software may suffer if they are unable to access their data because of a power or computer outage. Getting fresh data in and getting old data out might be difficult. Incorrect backup procedures could result in the loss of financial data as well (Armenia & Stefano, 2021). An accounting system can only provide data that is as accurate as the data it gets. Financial results could be inaccurate if all data submitted into accounting systems is not carefully reviewed.

Another drawback of technical development in accounting as a tool for socio-economic development is system crash. When a computer database, such as software or an operating system, stops working properly, it is known as a "system crash" (Yaacoub, 2020). After a system crash, accountants have trouble retrieving lost financial data. Customers may experience delays and inconveniences as a result of the recovery procedure. Since technology has advanced, system crashes have become a serious issue for the accounting industry.

Due to illegal attacks on computerized accounting systems, technological advancement in accounting causes security problems with the accounting information (Yaacoub, 2020). It relates to cybersecurity. An accounting database system's integrity is compromised via system attacks. Any cyber-attack on a database used for accounting affects data integrity since it tampers with information that the company has access to. Technology is linked to attacks on accounting systems; hence the security risk grows as technology develops.

A growing challenge to the accounting profession is fraud in computerized accounting caused by inadequate cybersecurity (Quinto II, 2022). A company's financial health may be inaccurately reported as a result of a computerized accounting system that has been compromised by fraud. Fraudsters attack accounting databases with the goal of obtaining private financial data about businesses for financial gain.

Another drawback of accounting technology developments is automation restrictions. Accounting systems and information can now be automated due to technology, which transfers data to a variety of reports and processes (Tan & Kin, 2019). Within an accounting business, the automation makes it possible to send payments and share accounting data. Automation could cause issues, though, if accountants enter data inaccurately. The system generates numerous reports and other items, and the errors are automatically passed along the line in those items.

Leaders will need to learn how to manage their team members who work from home and offer both emotional and physical support (De Klerk et al., 2021). To track employees who work from home, time and attendance tracking software should be implemented. To make sure that personnel are at their job station and that they are paid appropriately for their time, remote monitoring is required (Kamali, 2021).

CONCLUSION

In light of constantly evolving technology, accounting's position is growing more difficult as a toll for socio-economic development. Accountants are quite skilled at enacting favorable economic changes. Because they are the managers of financial resources, accountants are in the best position to advise policy makers on how to proceed with managing the national economy. They must adapt to the technology's quick changes, along with all of their drawbacks, in order for them to carry out the duty of an agent of socio-economic development. In the absence of a well-developed accounting mechanism that can keep up with emerging technology, there will unavoidably be an under-allocation and misallocation of the resources that are available. This is not good for the socio-economic development of the country.

RECOMMENDATIONS

Students should have access to accounting courses that consider changes in technology as part of their education. They ought to learn more on how to use information and communication technology to change the world. E-accounting is one instance of a digital application that addresses this issue. E-accounting is the idea that online tools may help organizations operate more swiftly, inexpensively, and efficiently than they could in the past. Concurrent users of the system include employees, managers, consumers, citizens, organizations affiliated with the government, and suppliers.

In response to these difficulties, professional accounting bodies have created competency frameworks (International Federation of Accountants, 2019; Institute of Management Accounting, 2019) and reports on potential future careers in accounting (Association of Chartered Certified Accountants, 2020) to manage these changes, face anticipated challenges, and seize potential opportunities. Due to these rising technologies, accounting work will undergo a great deal of change in the upcoming years. These changes may be disruptive, but they also present a great number of possible opportunities for the profession (Demirkan, & Demirkan, 2020). In general, the biggest worry is how professions will adopt to the change and how existing skills will change.

An accountant needs to be well-versed in current economic and technological changes in order to be effective and remain relevant in the ever-changing company environment. It is advised to keep on training and retraining. Governments and other accounting-related employers should provide the required support in this area.

This study used an exploratory research methodology that looked at the body of literature already available. Researchers in the future might decide to use both quantitative and qualitative methods.

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ENHANCING THE PERFORMANCE OF TRADITIONAL MACHINE LEARNING ALGORITHMS IN STOCK PREDICTION USING NONNEGATIVE DISCRIMINATIVE FEATURE SELECTION (NDFS)

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ABSTRACT

The core of machine learning is feature selection algorithms. The feature selection algorithm chooses the important characteristics by enhancing the samples' attributes. The main goals of feature selection algorithms are to improve classification performance and choose the most pertinent attributes of data classes. As a result, features can be chosen based on how well they do categorization. In this study, a feature selection algorithm based on spectral analysis and multi-variate regression Nonnegative Discriminative Feature Selection(NDFS) is introduced to the domain of stock price trend prediction.With three different classifiers, the classification abilities of the characteristics chosen using the NDFS is evaluated. Additionally, using three feature selection algorithms from the literature, NDFS performance is evaluated. The NDFS feature selection algorithm has been identified as a competitive technique that can be applied to enhance the performance of machine learning algorithms in the field of stock price trend prediction.

Keywords: Fundamental information, technical information, feature selection, spectral analysis, Laplacian graph.

INTRODUCTION

Researchers have characterized stock market data as chaotic and highly stochastic (Alelyani et al., 2019; Mattarocci, 2011). As a result, it is characterized by a high level of uncertainty, making stock price forecast difficult. The prediction and forecasting of trends and next day prices in this field is now one in which statisticians and computer scientists are making major strides. The availability of powerful computing resources and machine learning algorithms makes this possible. It is still very difficult to consistently achieve an adequate level of accuracy. Technical and fundamental indicators keep rising to close this knowledge gap. This is due to the work done by data scientists and business analysts to get closer to a higher level of accuracy in stock price movement forecasting. As a result, there are now more indicators being employed as features in stock datasets. (Sachdeva, et al., 2019).

The goal of this study is to identify the best features for stock trend classification using an effective feature selection technique while taking into account the stock market's extremely erratic and unstable character. (Mattarocci, 2011). To extract more significance from the dataset, the hidden correlation in the historical stock data will be taken advantage of. The opening price, low price, high price, closing price, volume, and, in some cases, the adjusted closing price are all included in the stock's historical data in its raw form. The accuracy of categorization and forecasting using

these historical data in their raw form is largely constrained to machine learning algorithms that can interpret time series data. In contrast, the forecast accuracy level is increased and alternative prediction algorithms can be used when new features are constructed from these previous data. Thus, various traits have been engineered as a result of this phenomena. To do this, various functions are applied to the raw historical data to extract the relationship and pattern that are concealed.

By lowering the dimension of the features, feature selection is an efficient way to increase predictive performance (Karabulut et al., 2012). As a result, calculation time is cut down, and overfitting concerns in classification problems are eliminated (Xia et al., 2018). Predicting stock price movements is particularly difficult because stock data are highly erratic and not totally linear (Hartman & Hlinka, 2018). Feature engineering for stock prediction s highly widespread and varied. However, not all features are equally crucial, and the learning system might not use critical features during categorization. The goal of this project is to develop a novel feature selection algorithm that will combine filter and embedded feature selection approaches to provide a feature subset that will enhance stock trend prediction accuracy (Zheng et al., 2020).

The current difficulty is figuring out the best feature combination in a stock dataset. Various aspects of this topic have been studied by numerous researchers, with many of them essentially designing new features. Others have also attempted to construct a subset from the available features by using various feature selection techniques. These initiatives aim to produce a collection of characteristics that best enhance predictive performance (Devi & Seelammal, 2018). Additionally, researchers have attempted to improve machine learning algorithms for use with ensemble approaches and different types of neural network models (Alsubaie et al., 2019; Qui & Song, 2016).

LITERATURE REVIEW

Stock Prediction

Both social scientists and information scientists are very interested in the research field of stock price prediction. Given the degree of intrinsic association that is discovered to be in a category, the various categories of data in stock market research also attract researchers in different ways. Fundamental data is the first type of structured data used in the stock market. This includes the financial ratios and declared assets from the company's annual or quarterly financial statement. The second category is technical information, which refers to the analysis of market behavior rather than the enormous range of potential contributing elements. All of these elements, according to the technical analyst, are already taken into account by the demand and supply curves. As a result, the subsequent stock prices reflect what stock traders are thinking. Technical indicators are created using past prices to reflect recognized recurrent price patterns (Kirkpatrick & Dahlquist, 2016).

Numerous studies on various feature selection algorithms have shown that a good feature selection technique can improve the accuracy of stock market price trend forecast (Hu et al., 2020). Numerous studies from the past and more recent times have used feature selection techniques from the three main categories of filter method, wrapper method, and embedding method. In this study, numerous feature selection methods are analyzed with an eye on selecting features for stock market price trend prediction utilizing a feature selection algorithm that is novel to the field of stock price prediction. The feature selection method that helps to achieve increased accuracy in stock market prediction has been of great concern in the research community, a lot of these algorithms in the filter, embedded and wrapper category have been independently experimented and compared with others in the stock market.

The wrapper feature selection algorithm is observed to have low convergence rate in the iterative process, falls into local optimum and relatively more dependent on machine learning algorithm for selection of features (Li et al., 2014). This study therefore proposes a selection algorithm in the filter category that has never been experimented in the stock market, it will be compared for the first time with algorithms in the filter and embedded category with the objective of discovering a new feature selection algorithm in the stock market domain that can enhance prediction accuracy.

Proposed Nonnegative Discriminative Feature Selection (NDFS)
A feature selection based on spectral analysis is proposed in this work for the selection of relevant features for unsupervised learning called Nonnegative Discriminative Feature Selection (NDFS). Cluster indicator labels based on the intrinsic structure of the stock data are used by this algorithm to detect the relevant features present in the dataset. This feature selection technique based on spectral analysis has been adopted in several domains such as image datasets and microarray datasets. The results from these experiments show that the features selected by the Nonnegative Discriminative Feature Selection (NDFS) algorithm improved prediction performance compared with other similar algorithms (Li et al., 2012). This feature selection algorithm uses constructed Laplacian graph in spectral analysis and a robust multivariate regression method to achieve the selection of relevant features. The sparse solution from the L2,1-norm regularized spectral regression model helps to reduce the selection of irrelevant features that induce overfitting in prediction tasks (Ghanavati et al., 2014).
In the mechanism of the Nonnegative Discriminative Feature Selection (NDFS) algorithm, spectral analysis learns cluster labels that relatively describe the class labels, this is used for the construction process of the feature selection matrix. This process selects the features which are most relevant to the class labels using a linear transformation between features and labels. In the following section, some notations will be used to represent mathematical expressions of different aspects of the Nonnegative Discriminative Feature Selection model, therefore the following assumptions are made to provide clarifications.
Let $X \in R^{nxm}$ denote the data matrix from a dataset of n number of samples and m number of features in which $x_i \in R^d$ is the feature descriptor of the i-th sample. Suppose these n samples are sampled from c classes;

$$Y = [y_1, \cdots, y_n]^T \in \{0,1\}^{nxc} \quad (1)$$

where $y_i \in \{0,1\}^{cx1}$ is the cluster indicator vector for x_i (Li et al., 2012), which approximates to the scaled cluster indicator matrix F defined as

$$F = [F_1, \cdots, F_n]^T = Y(Y^TY)^{-1/2} \quad (2)$$

where Fi is the scaled cluster indicator of xi. and is the target or classes of the data sample (Li *et al.*, 2012). The proposed algorithm learns the scaled cluster indicator matrix and the feature selection matrix simultaneously. The steps are illustrated as follows. The sample similarity matrix is constructed from the dataset sample pairs using a popular similarity measurement, the Gaussian radial basis (RBF) kernel function, in the absence of class information in the relation (Zhao & Liu, 2012).

$$S_{ij} = exp \frac{(-\| xi - xj \|)^2}{2\delta^2} \quad (3)$$

This pairwise sample similarity is widely used in supervised and unsupervised learning to describe the relationships among samples. Its application ranges from effectively representing the cluster affiliations or the class affiliations of samples. In the sample similarity relation above, exp (·) is the exponential function, and δ is the parameter for controlling the width of the region of similarity. When it is large, points farther away can still be considered similar, and when the value is small, points need to be close to being considered similar. In this relation, it can be ensured that samples from the same cluster have a large similarity value and samples from different clusters have a small similarity value

The Laplacian Graph
The next step in the feature selection method is the construction of a Laplacian matrix from the similarity matrix. This Laplacian matrix is used to generate the eigenvectors which have been proved to possess remarkable properties used to ensure consistency in spectral clustering (Zhao & Liu, 2012). The spectrum of the Laplacian matrix can be used to interpret the structural information of the graph from which the matrix was derived, and to measure the relevance of features in a spectral feature selection.

Multivariate Formulation for Spectral Feature Selection
In Nonnegative Discriminative Feature Selection (NDFS), a spectral clustering criterion represented by $J(\hat{Y})$, is jointly optimized with the multivariate $L_{2,1}$ regression model of a feature selection matrix of the given sample data to obtain the objective function for Nonnegative Discriminative Feature Selection (NDFS). The joint optimization relation is given as:

$$Min(Y,W)\, J(\hat{Y}) + \alpha(\|X^TW - \hat{Y}\| + \beta\|W\|_{2,1}) \quad (4)$$

subject to $\hat{Y} = Y(Y^TY)^{-1/2}$ where α and β are parameters, and $J(\hat{Y})$ is the objective function of spectral analysis which can be represented as:

$$MinTr(\hat{Y}^T L\hat{Y}) \quad (5)$$

where $\hat{Y}$ is the cluster indicator matrix and L is the Laplacian matrix constructed from the similarity matrix as shown above. The spectral analysis resolves this optimization using the eigen decomposition of the Laplacian matrix L. The redundant features are removed by the $L_{2,1}$-norm regularization term that is imposed to ensure W is sparse in rows (Li et al., 2012). The sparse matrix W evaluates the correlation between pseudo labels from the solution in the term $J(\hat{Y})$ and features from the data matrix using the joint minimization of the regression model and $L_{2,1}$-norm regularization term, and this is used to achieve suitability for feature selection.

Experimental setting
Three classification algorithms, support vector machine (SVM), Naïve Bayes and Neural Network were used to construct classification models to experiment the performance of the selected features by Nonnegative Disriminative Feature Selection (NDFS), a comparative feature selection algorithm from the filter category Information Gain and another from the wrapper category Forward Feature Selection from the wrapper category were used as competitors to NDFS.. The stock dataset price trend is predicted with the features selected by Nonnegative Disriminative Feature Selection (NDFS) algorithm. The result is then compared with the results from chosen competitors to validate the expected higher prediction accuracy of features selected by Nonnegative Disriminative Feature Selection (NDFS). The target or

class predicted by the prediction algorithm is derived from the stock price using the relation:

$$R_t = \frac{\text{closePrice}_t - \text{openPrice}_n}{\text{openPrice}_n} \quad ; |C_t| = \begin{cases} 1, & R_t > 0 \\ 0, & R_t \le 0 \end{cases} \quad \text{.............................(6)}$$

Where R_t is result from the expression for trading day(t), C_t is the class or label for same trading day, closePrice_t is the close price for the trading day for example the first row in Table 1 (*) and openPrice_n is the first open price in chosen number of days before the trading day. Next day prediction will be one day before the trading day for example second row in Table 1, one week prediction will be the seventh day before the trading day for example in Table 1 , the seventh row(#) (Ghanavati et al., 2016).

Table 1: Apple historical datasets

Date	Open	High	Low	Close
***10/25/2019**	243.16	246.73	242.88	246.58
****10/24/2019**	244.51	244.8	241.81	243.58
10/23/2019	242.1	243.24	241.22	243.18
10/22/2019	241.16	242.2	239.62	239.96
10/21/2019	237.52	240.99	237.32	240.51
10/18/2019	234.59	237.58	234.29	236.41
#10/17/2019	235.09	236.15	233.52	235.28
10/16/2019	233.37	235.24	233.2	234.37

A good number of research in different feature selection algorithms showed that a successful feature selection method can enhance the prediction accuracy of stock market price trend (Hu et al., 2020). This is further established by this work with the accuracy and f1-score observed in our experiment as shown in Table 2 particularly when all features were used without feature selection. The proposed feature selection strategy Nonnegative Discriminative Feature Selection (NDFS) was accessed in this work in terms of accuracy and f1-score which is the harmonic mean of recall and precision values. As shown in Table 2 below, the proposed feature selection method performed well with an accuracy of 85% in the Naïve Bayes model and f1-score of 83% percent indicating a balanced measure of the precision and recall. This is so because they (precision and recall) are considered equally important in this experiment given that the stock dataset is not significantly unbalanced, the Apple dataset used in this experiment have two thousand four hundred and fifty-eight instances and the difference between the positive and negative outcome is seven, hence none

of the parameter was weighted. In comparison with the selected benchmark, it was observed that the proposed feature selection algorithm, Nonnegative Discriminative Feature Selection (NDFS) performed more than the two competitors feature selection algorithm, Information Gain and Forward Feature Selection on the average in the three classifiers used

Feature Selection Algorithm	All features				NDFS				Information Gain				Forward Feature Selection			
Classification Algorithm	Accuracy	Precision	Recall	F1-Score	Accuracy	Precision	Recall	F1-Score	Accuracy	Precision	Recall	F1-Score	Accuracy	Precision	Recall	F1-Score
NB	0.54	0.53	0.12	0.19	0.85	0.86	0.80	0.83	0.80	0.79	0.75	0.76	0.79	0.76	0.68	0.73
SVM	0.50	0.46	0.45	0.45	0.83	0.81	0.83	0.82	0.84	0.82	0.82	0.82	0.75	0.70	0.60	0.64
NN	0.59	0.52	0.23	0.34	0.75	0.76	0.66	0.70	0.72	0.70	0.62	0.67	0.72	0.70	0.71	0.70
Average	**0.54**	**0.50**	**0.26**	**0.32**	**0.81**	**0.81**	**0.76**	**0.78**	**0.79**	**0.77**	**0.73**	**0.75**	**0.75**	**0.72**	**0.66**	**0.69**

Table 2 Accuracy, precision, recall and f-measure from all features and selection algorithm

The Receiver operating characteristics area under curve showed clearly that the three models from Naïve Bayes, Support Vector Machine, Neural Network performed well with the features selected by the three feature selection algorithms which reenforces the existing claim by researchers that feature selection helps to remove irrelevant features from datasets without incurring loss of information thus improving prediction performance.

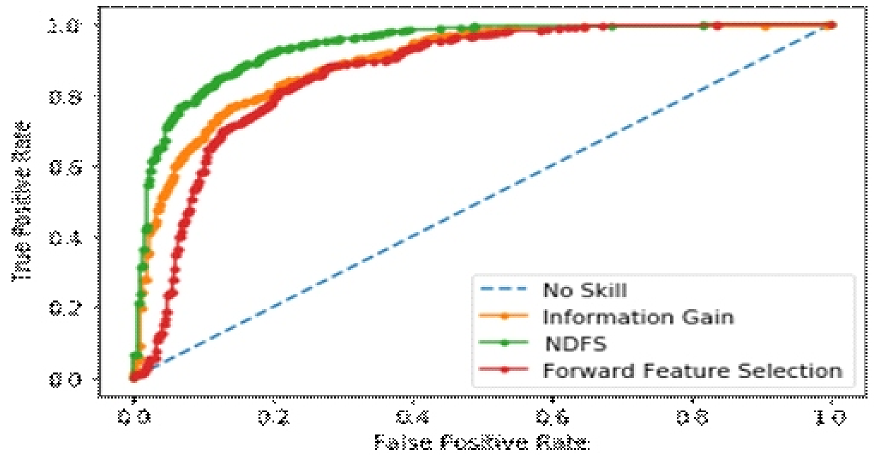

Fig.1 ROC curve for all features and selected features

In Figure 1 the entire features inclusive of relevant and irrelevant features seriously degraded the performance of a model wthere the model is barely different from a guess estimate that shows absence of skill or any form of intelligence, this poor performance is a result of the presence of irrelevant features in the dataset.

The baseline classifier Naïve Bayes which performs more than other classifiers used in this study was used to illustrate the performance of a model with only selected relevant features, in Figure 1 the receiver operating characteristics curve shows an optimal model with performance above 80% with the features selected by Nonnegative Discriminative Feature Selection, Information Gain and Forward Feature Selection. The Nonnegative Discriminative Feature Selection performs better than the two competitors. It is clear that feature selection enhances the performance of a model and helps to construct an optimal model with the abysmal performance observed in Figure 1 when all the features were used.

CONCLUSION

In this paper, we apply three feature selection methods in the filter and wrapper category, Nonnegative Discriminative Feature Selection, Information Gain and Forward Feature Selection in the trend prediction of stock price. Nonnegative Discriminative Feature Selection, is proposed in this work for feature selection in stock price prediction. The empirical results on Apple stock from Nasdaq Stock Exchange shows that the proposed feature selection method Nonnegative Discriminative Feature Selection, enhances the accuracy of stock price tren prediction and also performs better than chosen competitors

Three models from Support Vector Machine, Naïve Bayes, and Neural Network were used to validate the strength of the feature selection methods in selecting relevant features from the introduced fifty-two features used in this study with a binary class. Accuracy and F1-Score evaluation metrics confirmed that the proposed feature selection method outperforms the chosen competitors. The Reciever operating Characteristics area under curve metric showed that feature selection is very important in the construction of optimal models. Conversely the curve also indicated that a model's performance can be highly degraded with the presence of irrelevant features in datasets. The future work will like to consider introducing NDFS to other domain and comparing with other competitors and see how that also improve accuracy and return on investment through a profitable trading strategy with the proposed model.

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PART B:

MANAGEMENT/OFFICE AND INFORMATION MANAGEMENT TRACK

IMPROVING THE BANKING SECTOR PERFORMANCE USING DIGITAL MOTIVATION INDICATORS

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ABSTRACT

Organizations today are faced with more difficulties when compared to organizations in the past due to globalization that has brought increase in competition, complexity and uncertainties, thus the need for organizations to better manage their resources to achieve efficient performance. One of such resources is the motivation of their workforce. The purpose of this paper was to examine the relationship between digital motivation and performance of the Banking Sector (Deposit-Money Banks) in Rivers State, Nigeria. The research design adopted was cross-sectional survey research design at the macro (organizational) level of Deposit-Money Banks. The population consisted of seventy-six managers of four strategic units/departments of the nineteen Deposit-Money Banks operating in Rivers State. For the purpose of data collection, questionnaire was used as the research instrument which was distributed to the seventy-six respondents and seventy-three filled copies of the questionnaires collected were useful for data analysis. The collected data was analyzed using Spearman Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences with a significance level of 0.05. The findings showed that Social media community, cloud-sharing and collaboration have strong and significant relationships with performance of Deposit-Money Banks in Rivers State. We recommended among others, that organizations especially the Deposit-money banks should invest more in their workforce by improving the digital motivation facet of the organization in order to enhance their organizational performance level.

Keywords: Motivation, Digital Motivation, Social Media, Cloud-sharing, Performance

INTRODUCTION

Technology is changing the way we work, relax, interact and do all things. It is changing the way we live (Buhrmann, 2010). E-administration is one of the new ways of administration that has been made possible by the use of technology. Capture, Storage, dissemination and generation of (new) information occur quickly and effectively in organizations because technology enables synchronous and asynchronous communication and/or interaction in different ways. In our present day world, organizations are faced with lots of business dynamism such as advent of technologies, increased employee turnover, etc. The organization thus moves with trends of time and every other organization aspires to move with that trend. Digital motivation connotes the use of software-based solutions to change, enhance, or maintain people's attitude and behavior towards specific tasks, policies, and regulations, thus enhancing the workforce efficiency. Reengineering the present day organizations has become an imperative effort that must be pulled in order to achieve and record an upheaval growth in the performance of the banking sector. Aforetime, the traditional methods and types of motivation have been used to drive performance in the banking sector, but today, moving with the trends of time, the need to digitize and reengineer the workplace becomes inevitable.

Over the years, this concept of digital motivation has been common in virtual organizations-electronically networked organizations that transcend conventional organizational boundaries with linkages which may exist both, within and between organizations (Bourne, 1998) - due to its technological state and electronic process which allows employers or managers oversee the affairs and concerns of their employees without need of physical meetings or interactions. This is an ICT tool, with the goal being to improve and enhance organizational performance as well as efficiency of employees. The digital motivation indicators encompass intra-office and inter-office communication. The concept of motivation and workplace performance is not new, over the years it has generated a lot of studies and global attention from researchers, consultants and authors focusing on the impact of motivation on organizational and employees' performance. Both these two concepts are vital in appreciating the value of human resource as an important factor of production (Latif et al., 2014, Hussein & Simba, 2017; Mulema 2019). In the same vein, Carlsen (2003) supports the notion by emphasizing that motivated workforce facilitates the achievement of a competitive edge and the bottom-line. Motivation is defined as the educating of employees to channel their efforts towards organizational activities and thus increasing the performance of the said boundary spanning roles (Ran, 2009; Armstrong, 2006; Eberendu & Okere, 2015).

A review of theories of motivation and motivating factors by Franken (2007) highlights the roles of positive and negative reinforcement and extrinsic and intrinsic motivation. A goal for many motivators is to reduce harmful behaviors (such as smoking) and enhance positive behaviors (such as healthy eating). This can be achieved through positive reinforcement (rewards) or negative reinforcement (such as a reduction in benefits or withdraw existing positive rewards). Again though, if these are not operationalized or managed correctly within Digital Motivation, they can lead to the opposite behavior. Individuals differ in their preference for extrinsic or intrinsic motivation. Extrinsic motivation occurs when individuals are motivated to perform a behavior to earn a reward or avoid punishment (pupils studying for a good grade, cleaning a room to avoid parents nagging, taking part in a competition to achieve prizes). Intrinsic motivation occurs when engaging in a behavior because it is personally rewarding (sport enjoyable, solving a puzzle). Psychological research on these factors needs to be considered as, for example, it is known that offering excessive external rewards for an already internally rewarding behavior leads to a reduction in intrinsic motivation. Consideration of such individual differences will be an important area for further research involving Digital Motivation (Franken, 2007).

The inevitable growth greeting the banking sector have given rise to the need for managers to take

cognizance of digital motivation and its tools and how to harness it for the greater good of the organization as well as the employees. Unarguably, in different literatures on motivation, the problem of employees' overtime being dissatisfied with their jobs and feeling less motivated has become over-emphasized. Suffice to say that employees who are motivated are usually satisfied with their jobs and tend to perform efficiently and effectively. It has therefore become imperative for management at all levels to take cognizance of this behavior and see how best it can be harnessed and even improved. The ever-growing needs of the employees play a pivotal role in how they perform on the job. In classical literature, the most renowned theory of motivation is possibly that of a United States psychologist, Abraham Maslow, with the Hierarchy of Needs Theory (Bawa, 2017; Mulwa, 2008; Aruma & Hanacho, 2017). Maslow (1943) which discusses five levels of employee needs namely physiological, safety and security, social, esteem or ego and self-actualization (Onah, 2015; Őnday, 2016). He noted that the most basic need emerges first and the most complex need last. When one need is fulfilled, the next higher social need would stimulate employees to work hard and improve efficiency thus the previous needs would losses its strength and the next level of needs is activated (Mulwa, 2008; Onah, 2015; Őnday, 2016). Maslow argues that the most powerful employee motivator is the need which has not been satisfied. According to this theory, employees have several needs which compels them to work and that those needs are coordinated in a hierarchical manner in such a way that lower-level needs (physiological and safety) had to be satisfied before the next higher level social need would motivate employees to work hard and increase efficiency (Bawa,, 2017).

The inability of managers to motivate and keep their employees motivated has become a challenge that demands stringent measures and attention. Based on this backdrop, this study seeks to investigate the significant relationship between Digital motivation indicators and Workforce performance of deposit-money banks in Rivers State, Nigeria.

LITERATURE REVIEW

Digital motivation (hereafter referred to as DM) centers on the use of software solutions to increase the will of people to follow certain behaviors and prevent others (Lister et al., 2014). For example, it is used to encourage adherence to fitness programs (Molden et al., 2008; Deterding et al., 2011) and persuasive technology (Fogg, 2002) are examples of paradigms that employ DM and use software-based motives. Enterprises embed various motivational strategies within their management practices. These include appraisals and bonuses offered as encouragement to employees to perform tasks more efficiently and boost the attainment of both business goals and quality outcomes. In this regard, motivation can be seen as a supplementary requirement that an enterprise can employ to support the fulfillment of other functional and non-functional requirements (Shahri et al., 2015).

Vroom (1964) developed the expectancy theory utilizing three distinct components namely expectancy, instrumentality, and valence (De Simone, 2015; Bawa, 2017). Underpinning the expectancy theory is the fact that people will be motivated when they believe that effort will lead to performance, they can see a strong correlation between performance and certain results (Suciu et al., 2013; Parijat & Bagga, 2014). An employee is motivated to the degree that he or she believes that effort will lead to acceptable performance (expectancy), performance will be rewarded (instrumentality), and the value of the rewards is highly positive (valence) (De Simone, 2015). Expectancy is an estimate of a person's probability that work related activity will result in a given level of performance. According to Rounok and Parvin (2011), managers should build a suitable environment for performance taking into account the differences in various situations. Expectancy theory is complex, but it is consistent with real life situations. Motivated behaviors are deliberate choices controlled by the individual employee. Organizational leaders are compelled to create a favorable environment which the employee feels trusted and empowered to take decisions in the organization which leads to enhanced motivational levels of employees and ultimately organizational productivity is enhanced (Shadare et al., 2009).

Suffice to say that an ad-hoc introduction of DM to a business may be detrimental and pose adverse side effects as well, such as increased pressure and stress within the workplace (Shahri, et al., 2014). This calls for the consideration of the creation and introduction of DM as a software engineering problem rather than a creative design issue. Similar to other categories of requirements such as security (Mouratidis et al., 2003) and regulatory requirements (Ghanavati et al., 2007) a rigorous modeling of DM within its socio technical system environment will help capture and manage system requirements more effectively. Also, integrating DM into the fabric of a business can contribute to the fulfillment of other social requirements, such as providing a sense of belongingness or loyalty to the enterprise. Previously, it has been argued that the design of DM mostly follows approaches highly reliant on design creativity, with limited engineering principles and life-cycle support (Shahri et al., 2014). Such digital incarnation of motivation, however, brings new characteristics and abilities to it, such as capturing data with higher frequency and granularity, which amongst other things; enable more precision in the monitoring, accuracy, and transparency features of the rewarding system.

Skinner's reinforcement theory entails that employee behaviors that lead to positive outcomes will be repeated and behaviors that lead to negative outcomes will not be repeated (Omomia 2014). He claims that human behavior can be conditioned through the use of rewards either tangible such as food or money or intangible, approval or praise. Rounok and Parvin (2011) therefore recommend that organizations should reinforce employee behaviors that lead to positive outcomes and discourage those behaviors that lead to negative outcomes. This can be achieved through staff training and development, among other strategies (Bawa, 2017). In this ever-evolving world, business organizations must become more dynamic and less static. If the organization is too rigid, it is most likely to fail. Changes will surely take place, especially technological changes, and only the firms that are dynamic enough will be able to survive than the ones that are not. A workplace that has dynamism in its operations will be able to adapt to changes by adjusting its operations to suit those changes. One of the ways to achieve or promote dynamism in the organization is by effective adoption of the digital motivation indicators. A dynamic workplace will try new ways to get things done even when the old way is working fine.

Social Media Community

Jenkins characterizes social media as a convergence culture: it translates into media convergence, participatory culture and collective intelligence. Social media was developed in this unique combination of these parameters (Jenkins, 2006). Qualman (2009) refers to social media as the age

of instant communication and transparency calling it the glasshouse effect. He defines it as the tool to deal with the excess information on the Internet: a way to "filter" the information you actually are searching for. Marketers no longer need to artificially create and push brand messages, they need to listen, engage and react to the potential and current customer needs by embedding the brand in existing conversation. Marketing and business models have changed and they need to shift to fully adapt to the impact and demands of social media. Companies receive feedback from costumers using social media. Twitter, for example, is highly used to answer complaints. Whether those reviews about a product are good or bad, this action is changing how businesses have to operate. Companies can take the feedback as an opportunity to act and adjust it to better suit the needs of their public. People take their friends and peers opinions when it comes to choosing a restaurant, for example, rather than just using a research engine to search for it (Qualman, 2009).

Cloud Sharing

As e-learning becomes increasingly grow, higher education has witnessed the explosion of cloud computing or Web2.0 technologies (Smith & Caruso, 2010). Cloud computing uses the Internet and central remote servers to maintain shared documents, files, software, knowledge, and applications through a cloud-based service that computers or mobile devices can access on demand. Cloud-based services are free for users to support learning, social interaction, publishing and collaboration. A user of cloud computing can access to stored data and applications anytime at anywhere. Cloud computing could be the future and it is indeed already used extensively in education for a wide variety of functions including documents, spreadsheets, collaboration, videoconferences, and e-mail (Slahor, 2011). Examples of cloud-based services include Google Apps, Dropbox, and YouTube. Essentially, cloud computing is beneficial to administrators, educators, and learners. It is important for the diverse sectors to use cloud formation with their budget restrictions. Meanwhile, the accessibility of cloud computing attracts learners to analyze their data in greater depth (Susa, 2009). It is envisioned that, in the near future, cloud computing will have a significant impact on the educational and learning environment, enabling their own users including administrators, instructors, and learners to perform their tasks effectively with less cost and more accessible cloud-based apps (Zurita, Baloian, & Frez, 2014).

Collaboration

Collaboration is defined as individuals working together in groups towards to the shared goal collectively. Learners learn best when they actively involved in the learning process through social interaction with the immediate learning environment (Vygotsky, 1978; Woo & Reeves, 2008). They are encouraged to discover their own solutions and to try out ideas and hypotheses. The responsibility of the instructor is to facilitate the students' learning process as a facilitator so that students can exercise their capabilities in knowledge formation (Doolittle & Hicks, 2003).Macdonald (2003) studied online collaborative environment and concluded that the quality of the product was actually higher when composed in an online environment. Study (Tsay & Brady, 2010) also support that cooperative learning is an active pedagogy that fosters higher academic achievement. Five important components elements identified in cooperative learning include positive interdependence, individual accountability, group processing, social skills, and face-to-face interaction (Johnson & Johnson, 1989).In addition, studies (Wang, Yu, & Wu, 2013; Wang, 2013) showed that the integration of social networking sites into instruction could actually promote students' collaborative learning and enhance students' learning as well. Wang (2013) studied mobile assisted social e-learning and concluded that students perceive better quality of learning in a socially connected Web 3.0 learning environment. In collaborative language learning, interaction is the key elements as a means of identifying quality of learning for improving performance and developing language skills (Dippold, 2009).

Workplace Performance

Measuring performance is important as it provides a benchmark for examining particular strategies implemented in the organization (Anad et al., 2009). According to Rozana and Abdulhakim (2005), the assessment of performance is beneficial in upgrading and improving a firm's existing program and policy. Performance can be attributed as the main indicator in assessing the operation of an organization. Many studies in the field of management have looked into the issue of performance especially in the context of strategic management (Alfred, 1989). According to Covey (2007), the external factors that influence workplace performance range from the skill level of the labor force to the nature of today's business environment. Of course, these elements are dynamic, not only influencing the need for organizational performance today but affecting how businesses will strive for peak performance in the future. These external factors were further buttressed upon by Daniel and Santeli (2020).

Talent and Skills of Workforce: If businesses are to become high performance organizations, they must have employees who possess the right skills, abilities, and mindsets. When sufficient numbers of appropriately skilled workers cannot be found or trained, organizational performance is bound to suffer. Keeping skilled employees onboard can be problematic, too. Workers' influence on organizational performance is undeniably crucial. A Hewitt Associates study of 100 large U.S. companies in 2006 concluded that those with formal programs in place to identify and develop skilled workers and high performance talent consistently achieved higher rates of shareholder return (Zielinski, 2006 as cited in Covey, 2007).

Global Competition: Globalization exercises a direct effect on organizational performance. Leading organization globalization initiatives can position firms for success across multiple business units. The two suggest viewing international expansion as "growth and quality improvement opportunities". As well as a mechanism for transforming such factors as company structure, process design, communications, capabilities, and more. Business expansion across international borders logically opens doors to new markets, but it also opens organizations to new competitors—a double-edged sword for some companies. Kaplan and Norton (2006) note that today's organizations are challenged by the fact that intangible assets, such as knowledge workers and research and development, are playing an increasing role in corporate success and by the fact that globalization has dispersed those assets worldwide. These factors are driving companies to get better at aligning both physical and intellectual resources, internally and externally, around the world.

Technology: Technology and performance have been intertwined since the dawn of human civilization. In learning to create and exploit new technologies, humankind has

been able to powerfully influence the world. For example, how the evolving understanding of heat and combustion led to technologies such as metallurgical indicators, wood stoves, steam powered engines, coal-powered plants, electricity, automobiles, large-scale machinery, and, eventually, most of what constitutes the modern workplace. Try to imagine the performance levels of workers without such technologies. Future technologies are likely to show the same patterns, raising performance levels when used well but hindering performance when used poorly. Many other types of technology—from robotics to biotechnology to nanotechnology promise to boost the performance of individuals and organizations in coming decades. But only time will tell how successfully organizations can leverage these technologies to their competitive advantage.

Political and Regulatory changes: As most employers understand, laws and regulations can have a major impact on their businesses. "The challenge is to find a way for companies to incorporate an awareness of sociopolitical issues more systematically into their core strategic decision-making processes," recognizing that such issues can present not only risks but opportunities as well. The keys to managing threats and opportunities are the ability to plan proactively, craft industry alliances, and stay informed about social and political trends (Bonini, et al, 2006).

Influence of Ethics: An ethical atmosphere in an organization is good for efficiency and the bottom line. Ethical attitudes tend to translate into ethical behavior, in turn enabling those who deal with the organization to develop trust in the system. A lack of trust in an organization's fair dealing means all transactions must be monitored more closely, which takes time and drives up costs (Shaw 2006).

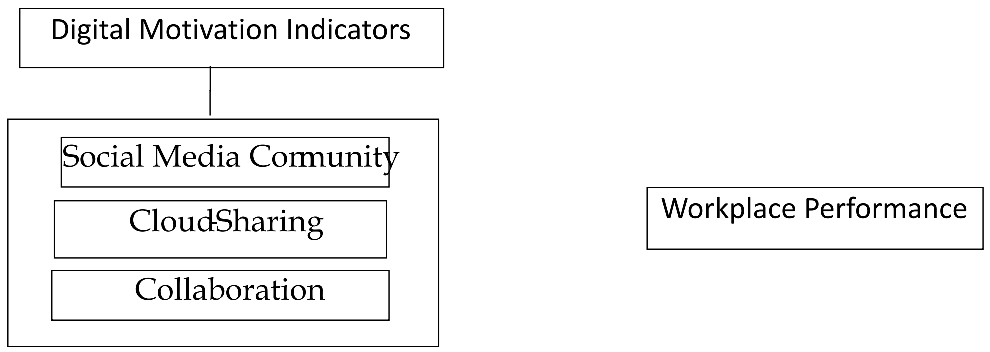

Fig. 1: Framework of digital motivation indicators and performance of deposit-money banks.

Source: Researchers' Desk, 2022

EMPIRICAL REVIEW

According to Thomas (2009), pinpointing what motivates each individual employee is regarded as the main challenge in the workplace taking into account each individual difference. The management must be aware of what exactly encourages the employee to perform; monetary rewards can be an essential determinant of employee motivation and achievement which, in turn, can lead to important returns in terms of firm level performance (Bawa, 2017). Naldöken et al. (2011) examined the financial incentive application on the motivations of employees at a state hospital in terms of their performance. The study established that medical employees, who benefited from these financial incentives were positively motivated.

Muze (2014) also carried a research on motivation and its impact on employees' performance in goal attainment. The intent was solely to investigate the standards which are being used by organizations in motivating their employees; to evaluate the problems that companies face in motivating their employees; and to examine the effect of motivation on employees' performance. Muze's study findings indicates the impact of employee motivation on organizational efficiency, but failed to acknowledge several indicators of employee motivation such as recognition and empowerment.

Another study conducted by Ng et al. (2010, as cited in Singh et al., 2012) sought to study the expectations and priorities of young employees. They found that this category of workers rated opportunities for career advancement as the most desirable work related attribute followed by good people to relate to and opportunities for good training and development. According to these researchers, surprisingly, pay, benefits and job security were ranked in the middle behind career advancement.

METHODOLOGY

The research design that was adopted is the survey design. In relation to the purpose of this study, the study adopted the correlational study so as to know the extent of the relationship between the digital motivation indicators dimensions and workplace performance. In terms of the time horizon and unit of analysis, the study used cross-sectional survey design and analysis was at the organizational level respectively. The population of this study is made up of managers in strategic departments of the deposit-money banks: marketing, public relations and human resources. According to CBN (2021) there are 21 Deposit-money banks in operation; though only 19 of the 21 banks are operating in Rivers State. Therefore, the population of this study was 76 managers of 19 banks in operation in Rivers State.

Furthermore, the study adopted questionnaire as the research instrument for its primary data. The study variables were measured using ordinal scale on a 5-point Lykert. The predictor variable in this study is digital motivation indicators and the dimensions of this variable were adopted as and operationalized using social media community, cloud-sharing and collaboration. While the criterion variable in this study is workplace performance which was operationalized using Niels van der et al. (2012) questionnaire.

The hypotheses formulation for this study was the null hypotheses which was aimed at answering the research questions while attempting to meet its objectives. The validity of the

research instrument was further tested for face and content validity, and Cronbach's Alpha was used in testing the reliability which shows a Cronbach's Alpha greater than 0.7. Specifically the result is as follows: social media community = 0.884; cloud-sharing and collaboration = 0.908; and workplace performance = 0.822. From the 76 copies of the questionnaire distributed, 74(97.37%) copies of questionnaire were returned while the remaining 2(2.63%) were not retrieved. More so, out of the 74 number of questionnaire returned, 1(1.35%) copies was useless because it was not filled properly while 73 (98.65%) copies of the retrieved ones were filled correctly which were therefore used for data analysis. Collected data was analyzed using Spearman's Rank Order Correlation with the aid of the Statistical Package for Social Sciences (SPSS).

DATA ANALYSIS AND RESULT

Table 1: Correlations analysis of social media and workplace performance

			Social media community	Workplace performance
Spearman's rho	Social media community	Correlation Coefficient	1.000	.932**
		Sig. (2-tailed)	.	.000
		N	73	73
	Workplace performance	Correlation Coefficient	.932**	1.000
		Sig. (2-tailed)	.000	.
		N	73	73

**. Correlation is significant at the 0.05 level (2-tailed).
Source: Survey Data, 2022 and SPSS Window output version 22.0

Table 1 above indicates rank value of (*rho* = 0.932) and a PV= 0.000 which is less than 0.05; this means that a very strong and significant positive correlation exist between social media and workplace performance of Deposit-money banks in Rivers State, Nigeria. Hypotheses one is hereby rejected.

Table 2 Correlations Analysis of Cloud-sharing and Workplace performance Relationship

			Cloud-sharing	Workplace performance
Spearman's rho	Cloud-sharing	Correlation Coefficient	1.000	.910**
		Sig. (2-tailed)	.	.000
		N	73	73
	Workplace performance	Correlation Coefficient	.910**	1.000
		Sig. (2-tailed)	.000	.
		N	73	73

**. Correlation is significant at the 0.05 level (2-tailed).
Source: Survey Data, 2022 and SPSS Window output version 22.0

Table 2 above indicates rank value of (*rho* = 0.910) and a PV= 0.000 which is less than 0.05; this means that a very strong and significant positive correlation exist between cloud-sharing and workplace performance of Deposit-money banks in Rivers State, Nigeria. Hypotheses two is therefore rejected.

Table 3: Correlations Analysis of Collaboration and Workplace performance Relationship

			Collaboration	Workplace performance
Spearman's rho	Collaboration	Correlation Coefficient	1.000	.905**
		Sig. (2-tailed)	.	.000
		N	73	73
	Workplace performance	Correlation Coefficient	.905**	1.000
		Sig. (2-tailed)	.000	.
		N	73	73

**. Correlation is significant at the 0.05 level (2-tailed).
Source: Survey Data, 2022 and SPSS Window output version 22.0

Table 3 above indicates rank value of (*rho* = 0.905) and a PV= 0.000 which is less than 0.05; this means that a very strong and significant positive correlation exist between collaboration and workplace performance of Deposit-money banks in Rivers State, Nigeria. Hypotheses three is therefore rejected.

DISCUSSION OF FINDINGS

The result in Table 1 shows that social media has a very strong and significant influence on workplace performance of deposit-money banks in Rivers State, Nigeria. The analysis results revealed a correlation coefficient of 0.932** between social media community and performance, indicating a very strong and positive relationship between social media community and performance of deposit-money banks in Rivers State, Nigeria. More-so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a very strong, significant relationship between social media community and performance of deposit-money banks in Rivers State. This finding is in accordance with the finding of Mulema (2019) who observed that there is a positive relationship between motivation of employee and organizational performance. Given the dynamic environments organizations are operating in, the effective and efficient usage of social media community as a digital motivation tool play major role in improving workplace performance.

The result in Table 2 shows that cloud-sharing has a very strong and significant influence on

workplace performance of deposit-money banks in Rivers State, Nigeria. The analysis results revealed a correlation coefficient of 0.910** between cloud-sharing and performance, indicating a very strong and positive relationship between cloud-sharing and performance of deposit-money banks in Rivers State, Nigeria. More-so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a very strong, significant relationship between cloud-sharing and performance of deposit-money banks in Rivers State. This finding is attuned with that of Slahor (2011) whose study empirically averred that Cloud computing could be the future as it is indeed already used extensively in education for a wide variety of functions including documents, spreadsheets, collaboration, videoconferences, and e-mail.

The result in Table 3 shows that collaboration has a very strong and significant influence on workplace performance of deposit-money banks in Rivers State, Nigeria. The analysis results revealed a correlation coefficient of 0.905** between collaboration and performance, indicating a very strong and positive relationship between collaboration and performance of deposit-money banks in Rivers State, Nigeria. More-so, the probability value (0.000) is less than the critical value (0.05), this shows that there is a very strong, significant relationship between collaboration and performance of deposit-money banks in Rivers State. This finding is in accordance with the finding of Macdonald (2003) who studied online collaborative environment and concluded that the quality of the product was actually higher when composed in an online environment. Given the dynamic environments organizations are operating in, the effective and efficient usage of collaboration as a digital motivation tool play major role in improving workplace performance.

CONCLUSION AND RECOMMENDATIONS

From the analyzed data, result revealed that social media community, cloud-sharing and collaboration play significant roles in enhancing workplace performance. Workplace performance is an important end (output) that organizations would ever seek in the business world. With frequent technological, political, economic and social changes, organizations are in dire need of workers that have the dynamism prowess to work effectively in a turbulent and evolving business environment. For any organization wants to continue to exist as well as achieve success it must continuously manage its workforce, their competences, level of satisfaction on the job, motivators, as well as their attitude towards meeting organizational set-goals. This is one of the ways to gain advantage competitively and to respond effectively to environmental changes.

This study clearly shows that digital motivation indicators are very significant in improving workplace performance. Therefore, organizations, particularly the Deposit-Money Banks can improve their performance and sales turnover through the effective and efficient management of their workers' motivators as well as behaviors. Also, this implies that for managers to achieve performance, they have to meticulously, effectively and efficiently plan for the apt motivational approaches for their workers. Deposit-Money Banks should know that to be able to stay afloat in the ever-growing and competitive global market, workers need to stay motivated and satisfied on their job specializations.

Digital motivation concept encourages the adoption of social media communities that fosters the relationship amongst not just the employees but also with their employers. As this creates them an avenue to cool-off the stress of work performance and builds a sense of workplace spirituality. Also, this concept avers that for every organization that wants to maintain their employees' motivators, then, keen attention should be given to the adoption and usage of cloud-sharing and collaboration avenues as this helps the workers to stay abreast with the necessary information they would need to carry out their tasks, thereby reducing the level of complaints and redundancy on the job and improving the satisfaction on the job which tends to keep them motivated.

Therefore, the Deposit-money banks should invest more in their workforce by improving the digital motivation facet of the organization in order to enhance their organizational performance level. Thus, in line with the findings of this study and to the extent of its consistency with results of previous studies, we conclude that digital motivation indicants of social media community, cloud-sharing and collaboration has a positive significant relationship with performance of the banking sector (deposit-money banks) in Rivers State, Nigeria.

Based on the findings of the study and to the extent of their consistency with the result of similar studies, the following recommendations are made.

1. Managers of deposit-money banks should capitalize on the critical role of social media community in their daily operations to drive their workplace performance.

2. Managers of deposit-money banks should seek to build formidable cloud-sharing antecedents in tandem with their company policies and practices aimed at improving workplace performance.

3. Managers of deposit-money banks should objectively improve their collaboration processes as this has the potency to enhance their performance.

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BIG DATA TOOLS AND PERFORMANCE OF AGRIBUSINESS IN RIVERS STATE, NIGERIA

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ABSTRACT

This paper surveyed Big Data Tools and Performance of Agribusiness in Rivers State, Nigeria. The dimensions of Big Data Tools adopted are Data Mining and Data Analytics. Data Mining uses different techniques such as classification, prediction, cluster and association to mined data from distributed databases and data warehouses while Data Analytics is the application of Mathematics, Statistics and Computer science algorithms to exploit the hidden patterns that exist in Agribusiness dataset. The aim of this paper is to achieve a strategic alignment between the actions of multiple stakeholders of agribusinesses; like firms, research centers, consumers, government, and the society in general and to close the gap between the sellers (producers) and the buyers (consumers). The population of this study comprises of ninety (90) registered agribusinesses in Rivers State, Nigeria. A Sample size of seventy four (74) Agribusinesses was determined using Taro Yamane formula for sample size determination. This study is a macro study (organizational base). Based on the Sample size, a total of seventy four (74) structured questionnaires designed on a 4-point Likert Scale were distributed to each of the agribusiness in Rivers State, Nigeria. Sixty (60) copies of the questionnaire were correctly completed. These were the copies used for the analysis. The Cross sectional survey design was adopted while Spearman's Rank Order Correlation was used to determine the extent to which Big Data Tools enhanced the Performance of Agribusiness in Rivers State, Nigeria. The results showed that there is a significant positive relationship between Big Data Tools and Performance of Agribusiness in Rivers State, Nigeria. This implies that under normal circumstances the output will significantly remain the same for any other dimension(s) of Big Data Tools and for similar organizations. These results can be generalized. We therefore, recommended that all the stakeholders; government, organizations and the individual should see Big Data Tools as major tools for enhancing the performance of Agribusiness in Rivers State, Nigeria.
Keywords: Agribusiness, big data, data mining, data analytics

INTRODUCTION

Agribusiness is the strategic alignment between the actions of multiple stakeholders, like firms, research centers, consumers, government, and the society in general (Sonka, 2014). The term agribusiness was first introduced by Davis and Goldberg in 1957. Agribusiness connotes a field of study or enterprise that is concerned with large-scale, inputs supply, production, processing, storage and marketing of agricultural products (Ogidi, 2014). It is a complex and diverse sub-system of national economy, which includes entities handling production, processing, and distribution of food and its derivatives as well as others related services (Kozera-Kowalska &

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Uglis, 2021). It is not just the traditional agriculture. It encompasses the producers, the supporting organizations, and the consumption (Dawn & Dana, 2001). It involves the business of total supply chain mechanism (Kozera-Kowalska & Uglis, 2021). It is agriculture and business (Zylbersztaj, 2016).

Agribusiness is affected by several indicators; natural (weather) and human factors (technology), in fact, is the incredible array of technology, tied to the individual, communities and government. It is embraced by the whole world because of its important to economic transformation (Zylbersztaj, 2016). We are all involved. Agriculture has becomes a global discuss in international economy. If you eat, you are involved in it as a consumer of its final products, if you farm you are involved in it as a producer of the raw materials that ultimately make their way to the end market. It is actually the business for all. Research has shown that majority of the Rivers State dwellers involves in one form of agriculture or the other.

Agribusiness has transformed the economy of many developed countries of the world (Menard & Klein, 2004). Agribusiness business are different from other business based on some basic key elements which are; Food as a product, Biological nature of production of agriculture, Seasonal nature of business, Uncertainty of the weather, Types of firms, Variety of market conditions, Rural ties and Government involvement (Zhao & Yang, 2018). These concepts makes agribusiness very complicated to follow and requires technological tools to better understand the data and analyze the suitable time of the business. Agribusiness is efficient and complex as compare to the traditional agriculture, it requires a timely or a readily market for sales of perishable good or a preservation method (Menard & Klein, 2004).

Big data tool uses sensor devices, mobile applications and internet, website etc. to mined data from different distributed databases and carryout analytics insight (Riahi & Riahi, 2018). Data mining and analytics tools are capable of gathering data from different distributed agricultural databases, analyze the information and deduce a meaningful insight that will help in producing high quality agricultural product (Ribarics, 2016). The adopted of Information Technology Communication (ITC) into agriculture has changed the traditional perception, now nations of the world are talking about agribusiness (agriculture and business). Big data analytics provides tool like crop scouting (investigation), geographical information systems, information management system etc. (Arjun, 2016).

The field of agricultural is going through a period of change (Heiman, et al., 2002). The level of agribusiness today is already at the stage of knowledge discovery where information is the major driver. Storey and Song (2017) traces the development of agribusiness over the past century by describing nine significant areas of contribution which are economics of cooperative marketing and management, design and development of credit market institutions, organizational design, market structure and performance analysis, supply chain management and design, optimization of operational efficiency, development of data and analysis for financial management, strategic management, and agribusiness education. Agribusiness is suitable in Rivers State, but it requires a lot of research for quality product and accessibility of suitable market, the map of Rivers State is situated around the coastal area suitable for agribusiness (Nwaerema et al., 2019).

The main focus of this study was to examine the link between big data tools performance of agribusiness in Rivers State. Consequently, the following hypotheses were formulated to guide the study:

Ho_1: There is no significant positive relationship between data mining and product quality of agribusiness in Rivers State, Nigeria.

Ho_2: There is no significant positive relationship between data mining and availability of market for agribusiness in Rivers State, Nigeria.

Ho_3: There is no significant relationship between data analytics and product quality of agribusiness in Rivers State, Nigeria

Ho_4: There is no significant positive relationship between data analytics and availability of market for agribusiness in Rivers State, Nigeria.

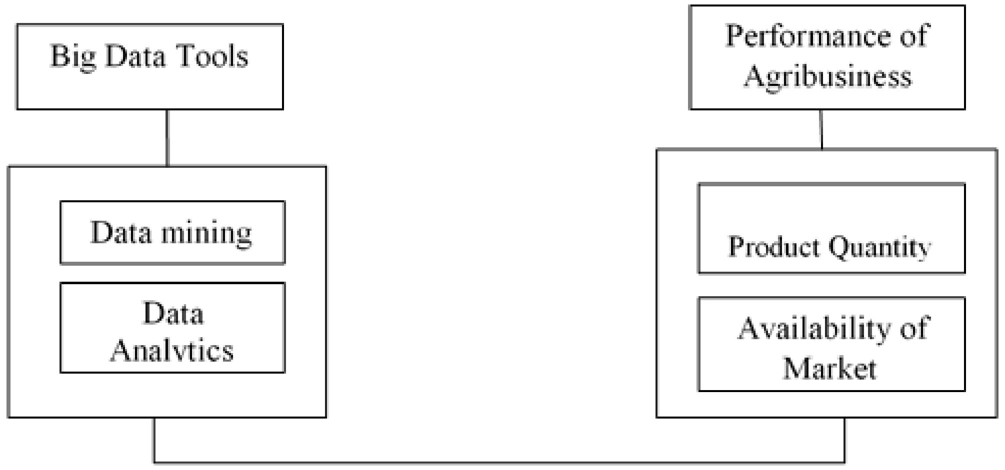
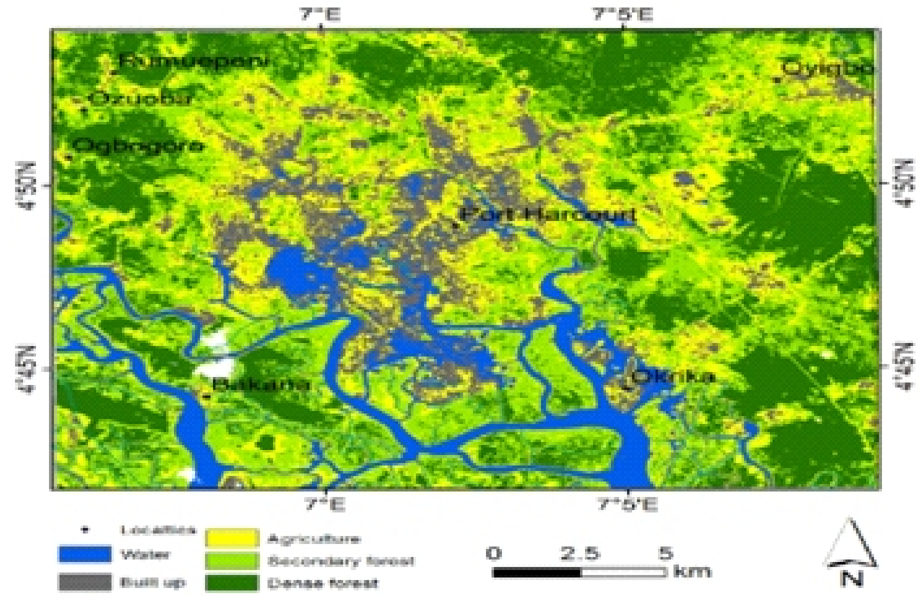


Fig. 1: Big Data Tools and Performance of Agribusiness in Rivers State, Nigeria.

Source: Nwaerema, et al., (2019)

Figure 1: Map of Rivers State extracted from the Map of Nigeria.



LITERATURE REVIEW

Big Data Tools

The primary objective of any profit making organization is to make profit, in most cases this is not always achieved because of lack of required tool for carrying out the process and the perception of the individual or groups. While organization "exist to provide goods and services for the people (society), the amount and quality of these goods/services is as a result of the innovativeness (use of new technology) of the producer or organization, especially in a competitive economy (Avadikyan, et al., 2016). The economic depends on the performance of the organizations and the organizations also depend on the performance of the various economic sectors. No organization can do well in a poor economic system. According to Zeb-Obipi (2022) the wealth of a nation increase only by organizational productivity or productive workers, and the tools available at the workers finger tips determines their level of productivity. Therefore, a productive workforce is the engine behind every successful business, nay a society or nation. This perhaps partly explains the "concern of developing economics to increase productivity through improvement in quality of product and availability of market for agribusiness (Kaushik, et al., (2016).

Data Mining

The concept of data mining tool is a subset of business intelligence (Mohammed & Syed, 2018). The elements of Data Mining tool are classification, cluster, prediction and association (Chen & Chen, 2008). Classification is often used to assign a set of data to a particular group. It is appropriate for group identification (Witten & Frank, 2005). Prediction data mining tool aim is to differentiate factors affects the performance of an organization (Berry & Linoff, 2000). It is effective for forecasting agribusiness success factor (Gibelt, 2017). Cluster data mining is concerned with pattern observation or groups of similar events together (Ester et. al., 2005). Clustering data mining tool can be directly applied to more expounded set so that the relationship between the different attributes will emerged (Kaufman & Peter, 2005). Association data mining is an important and well researched problem in data mining which aims to find hidden relationships among items in large databases (Alharbi, 2015). It has been used in various areas like medical, GIS, relational databases, large database and distributed database (Alharbi, 2015).

Data analytics

Data analytics methods complement one another. It starts with the descriptive method that helps to gain insight from historical data (Riahi & Riahi, 2018). Diagnostics analytics takes a deeper look at data to understand the root causes of events (Milovic & Radojevic, 2015). The aim is to provide an understanding of causal relationship and sequences while looking backward (Baum et al., 2018). Predictive Analytics is the third method of analytics after descriptive and diagnostic analytics. Predictive analytics serves as a forecasting tool, which support the detection of tendencies and the prediction of future trends (Delen & Ram, 2018). Predictive analytics is the combination of art and science for discovering meaningful and novel insight from volume and various data via applying techniques such as machine learning, mathematical and statistical algorithms which supports timely decision-making process (Youssra & Sam, 2018) and lastly Prescriptive analytics is the fourth stage of analytics, its objective is to prescribe what actions to be taken to arrest potential issue and to eliminate and proposing promising trend that fully utilized logical procedures, example of prescriptive analytics is that of large-scale Internet of Things (IoTs) surveillance system that can timely prevent the occurrence of large queue in business and possible weather suggestion for agribusiness (Lawler & Joseph, 2017).

Agribusiness

Traditionally agriculture was defined as a science (Agricultural Science). Agriculture is changing from mere farming to a technology oriented industry comprising of production, agri-science and agri-business. Agribusiness is concerned with understanding how institutions, organizations, and markets affect vertical and horizontal coordination within the food system (Saghaian et al., 2022).

Products quality

Products quality can be measured by the experience of customers (Das-Guru & Paulssen, 2018). As predicted and examined by many research studies, price is one of the realistic indicators that most consumers use to associate with quality of products. In one comprehensive finding from 1989 to 2006, researchers find that correlation between price and quality perception has become weaker (Völckner & Hofmann, 2007). However, Völckner et al. (2007) reveal that customers continue to utilize price indicator as their quality perception. When certain products are having promotion, customers may associate the dropping of price with dropping of quality. For example, some may consider the discounted products as old or expiring stocks and others may consider them as sampling products. Yet, a longitudinal study in Austrian customers has shown a weak relationship between price and perceived quality (Kirchler, Fischer, & Hölzl, 2010). The correlation seems weak because the indicated situations merely constitute minority in marketing field as a whole. According to Arguello, et al. (2019) satisfaction will occur if the company is able to provide products, services, prices and other aspects according to consumers' expectations or exceeding customers' expectations. Quality measurement offers benefits such as knowing how a business process works. Measurement of satisfaction can also be used to find out where to innovate and improve in order to satisfy customers, especially for things that are considered important to customers (Henseler, 2017).

Availability of market

The market is the place where the buyers and the seller meet for business transaction (Adamashvili, et al., 2020). Agribusiness produce are seasonal products. Some are perishable goods except there is more improvement or innovative insight (preservation). Agribusiness market is no longer a primitive market where customers have difficulties meeting the sellers or collaborate with others professionals (Adamashvili, et al., 2020). The internet today is an open space where you can ask questions from different professionals and even invites people to buy (Adamashvili, et al., 2020). Therefore, today, there are great opportunities on the internet. Big data tools encouraged innovation. The use of data mining and analytics aids research and development, knowledge are gain from other professionals and opportunity are maximized while time wastage are minimized (Tripathy, et. al., 2014). Data mining and analytics search for customers to buy product at different point in time, examined consumers behavior and recommend product for them as well (Tripathy, et. al., 2014).

Data mining and Performance of Agribusiness

The concept of data mining tool is a subset of business intelligence as stated by (Mohammed & Syed, 2018). Considering the complex nature of agribusiness, food as a product; the natural factor; biological nature (perishable goods), weather variation, seasonal variations of crops requires the new technology like Data Mining. With data mining tool, it is possible to mined data from different distributed databases (Ranjan, 2008). It is easy to measure products quality based on the data on experience of customers (Das-Guru & Paulssen, 2018). Data mining as knowledge sharing tool also helps the stakeholders to maximized opportunity or minimizes time wastage. It provides tool for searching for customers, providing data for analysis and reporting and also provide data to examined consumers behavior and recommend product for them as well (Tripathy, et.al., 2014).

Data analytics and Performance of Agribusiness

Big data analytics provides tool like crop scouting (investigation), geographical information systems, information management system (Arjun, 2016). Since the origin of mankind, agriculture has been a leading sector, it exploit natural resources (land) for the satisfaction of the basic need (food) for man. Data analytics is significant in quality measurement. Data analytics used the four methods to reviewed measurement of customers' satisfaction. Find out areas of innovation and improvement. It reviewed the hidden patterns in Agribusiness, especially for things that are considered important to producers (Henseler, 2017). Agribusiness is now a global business where producers, professionals, customers and all the stakeholders can easily meet or collaborate together. Data analytics are widely used in all areas of business in the developed world (Adamashvili, et al., 2020).

Theoretical foundation

This paper anchored on the Resource Based View Theory by Berney, 1991. The Resource Based View Theory analyzed and interprets resources of the organizations to understand how organizations achieve sustainable competitive advantage. It focuses on the concept of how difficult to imitate attributes of the firm as sources of superior performance and competitive advantage. It viewed resources as an important aspect of the organization, that resources that cannot be easily transferred or purchased require an extended learning curve or a major change in the organization climate and culture. Therefore, it is more unique to the organization when successfully applied and it will be more difficult to imitate by competitors. The RBV takes an 'inside-out' view or firm specific perspective on why organizations succeed or fail in the market place (Mugera, 2012). How the use of technology enhanced employee performance, increases customers satisfaction and market share (Mweru & Muya, 2015).

METHODOLOGY

The cross sectional survey research design was adopted. As an empirical study, it required data collection presentation and analysis. The population of the study comprises of a total of ninety (90) registered agribusiness in Rivers State, Nigeria (wwww.directory.org.ng). The sample of this study was obtained from the population of ninety (90) registered agribusinesses in Rivers State, Nigeria. To obtain an accurate sample size for this study, Taro Yamane formula was used to determine the sample size of seventy four (74) agribusinesses. In this study, seventy four (74) structured questionnaires were distributed to the various agribusinesses in Rivers State, Nigeria. Sixty of the questionnaires were properly completed and returned, while fourteen (14) of the questionnaires were not properly completed as such, therefore, they were discarded and only the correctly completed sixty (60) copies of the questionnaire were used as our study elements. The study employed descriptive, forecasting and inferential statistical tools (mean and standard deviation) to determine the extent of involvement and to assess the distribution (central tendencies and dispersion). Spearman Rank Order Correlation was used to test the relationship between the dimensions of Big Data Tools (Data mining and Data analytics) and Performance of Agribusiness in Rivers State, Nigeria. The test for hypotheses was premised on the adoption of the 0.05 level of significance, given the preference and emphasis on 95% confidence interval in the assessment of relationships that can be described as social in nature (Sarantakos, 2005).

Table 1: Rivers State Weather Forecast (January 2022 to December 2022)

	Average		Minimum	
	Centigrade	Faraheight	Centigrade	Faraheight
January	27.2	80.9	23.7	74.7
February	27.4	81.4	24.5	76
March	27.1	80.8	24.6	76.3
April	26.8	80.2	24.5	76.3
May	26.2	79.2	24.1	75.4
June	24.6	77.2	23.3	73.9
July	24.6	76.2	22.8	73.1
August	24.6	76.2	22.8	73
September	24.7	76.5	22.8	73.1
October	25.2	76.5	23.1	73.1
November	25.9	78.7	23.6	74.4
December	26.8	80.3	23.8	74.9

Source: www.weather_atlas.com

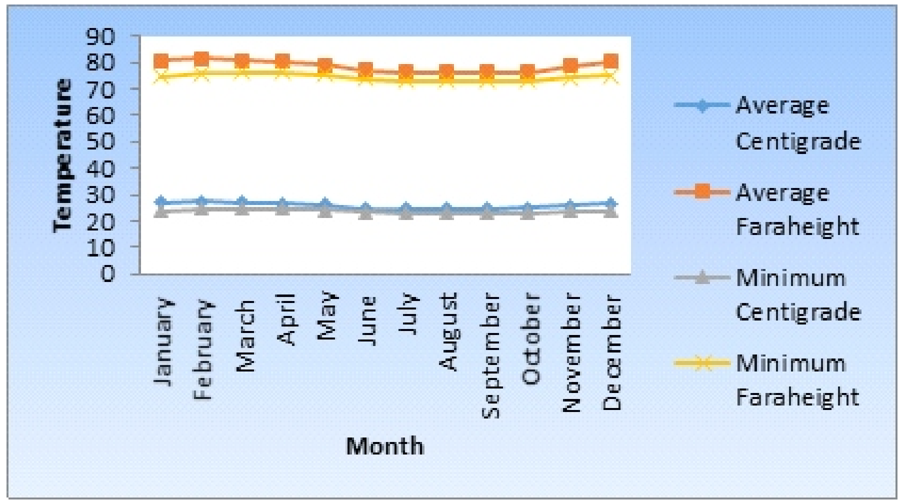


Figure 4: Maximum and Minimum Weather Forecast.

Table one showed the average and minimum weather forecast throughout the year from January to December as between the average of 27.2^{0}C and minimum of 23.7^{0}C.

Table 2: Data Mining

	N	Min.	Max.	Sum	Mean	Std. Dev.
To what extent does your organization able to mine data from distributed databases?	60	1.00	4.00	140.00	2.33	.89569
To what extent does the data mined able to supports effective collaboration?	60	1.00	4.00	151.00	2.51	.77002
To what extent does historical data mined supports the analysis of product quality and availability of market?	60	2.00	4.00	161.00	2.68	.67627
To what extent does your organization able to find solution to agribusiness problems based on data mined from distributed databases?	60	1.00	4.00	163.00	2.71	.78312
Valid N (listwise)	60					

Source: Research survey, 2022.

Table 2 showed the extent to which data mining enhanced the performance of agribusiness in Rivers State, Nigeria. Question one showed that the respondents supported that the organizations are able to mine data from distributed databases with a mean of 2.33 and standard deviation of 0.89569, question two added that data mined from distributed databases supports effective collaboration with a mean of 2.51 and standard deviation of 0.77002, question three added that historical data supports the analysis of product quality and availability of market with a mean 2.68 and standard of 0.67627 and finally question four showed that the respondents agreed that the organizations are able to find solutions to agribusiness problems based on data mined from distributed databases with a mean of 2.71 and standard deviation of 0.78312.

Table 3: Data Analytics

	N	Min.	Max.	Sum	Mean	Std. Deviation
To what extent does your organization able to review hidden pattern from the historical data?	60	2.00	4.00	176.00	2.9333	.63424
To what extent is your organization conversant with diagnostics analytics?	60	1.00	4.00	143.00	2.3833	.95831
To what extent does your organization able to discovered problems that exist in agribusiness?	60	1.00	4.00	142.00	2.3667	.99092
To what extent does your organization able to discover the seasonal variation of products and markets?	60	1.00	4.00	171.00	2.8500	1.17639
Valid N (listwise)	60					

Source: Research survey, 2022.

Table 3 showed the extent to which data analytics supports agribusiness in Rivers State, Nigeria. Question one showed that respondents accepted that the organizations are able to review hidden patterns from the historical data with mean of 2.93 and standard deviation of 0.63424, question two indicated that organizations are conversant with diagnostics analytics with a mean of 2.38 and standard deviation of 0.95831, while question three indicated that the organizations are able to discover problems that exist in agribusiness with mean of 2.67 and standard deviation of 0.99092 and finally question four supported that that organizations are able to discover seasonal variation of products and markets with mean of 2.85 and standard deviation of 1.17639 respectively.

Table 3: Quality Product

	N	Min.	Max.	Sum	Mean	Std. Dev.
To what extent are customers satisfied with the price of product?	60	1.00	4.00	160.00	2.66	.91442
To what extent are the consumers always ready to buy the product from agribusiness business in Rivers State?	60	1.00	4.00	164.00	2.73	.97192
To what extent are customers aware of the product without perceived promotion?	60	1.00	4.00	139.00	2.32	.89568
To what extent does product exceed customers' expectation?	60	1.00	4.00	163.00	2.71	.78312
Valid N (listwise)	60					

Source: Research survey, 2022.

Table 3 showed the extents to agribusiness products are acceptable by consumers in Rivers State, Nigeria. Question one showed that the respondents indicated that the customers are satisfied

with the price of product with a mean 2.66 and standard deviation of 0.91442, question two indicated that customers are always ready to buy the product from agribusiness in Rivers State with a mean of 2.73 and standard deviation of 0.97192, question three indicated that customers are aware of the product without perceived promotion with a mean of 2.32 and standard deviation of 0.89568 and finally question four added that products exceeded customers' expectation with a mean of 2.71 and standard deviation of 0.78312.

Table 4: Availability of Market

	N	Min.	Max.	Sum	Mean	Std. Dev.
To what extent are consumers able to access the agribusiness market?	60	2.00	4.00	176.00	2.9333	.63424
To what extent are agribusiness produce brought from farm to market without branding?	60	1.00	4.00	163.00	2.7167	.78312
In the season of a particular product, to what extent are products supplies always exceed product demanded?	60	1.00	4.00	153.00	2.5500	.79030
To what extent are products supply less than products demanded at a particular season	60	2.00	4.00	208.00	3.4667	.87269
Valid N (listwise)	60					

Source: Research survey, 2022.

Table 4 showed the extents to which consumers are able to access the agribusiness market in Rivers State. Question one showed that the respondents supported that it is easy for the consumers to access the agribusiness markets with a mean of 2.93 and standard deviation of 0.63424, question two showed that the respondents supported that agribusiness produce are brought from the farm to the market with any form of processing with a mean of 2.72 and standard deviation of 0.78312, question three also supported that in the season of a particular product, product supplies always exceed product demanded with a mean of 2.55 and standard deviation of 0.79030 and finally question four added that in the same way , at a particular season or out of season product supply are always less than product demanded with a mean of 3.47 and standard deviation of 0.87269.

Table 5: Data Mining Tool and Performance of Agribusiness

			Data Mining	Product Quality	Availability of Market
Spearman's rho	Data Mining	Correlation Coefficient	1.000	.740**	.749**
		Sig. (2-tailed)	.	.000	.000
		N	60	60	60
	Product Quantity	Correlation Coefficient	.740**	1.000	.919**
		Sig. (2-tailed)	.000	.	.000
		N	60	60	60
	Availability of Market	Correlation Coefficient	.749**	.919**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	60	60	60

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research survey, 2022.

Table 5 showed the relationship between Data Mining and Performance of Agribusiness in Rivers State, Nigeria. The table showed that there is a positive relationship between data mining and product quality. The coefficient of correlation was significant at (r = 0.742) and (*p*-value = 0.000< 0.05) for 95% level of freedom, Also Data mining and availability of market was significant at (r = 0.749) and (*p*-value = 0.000< 0.05) for 95% level of freedom. This showed that there is a significant positive relationship between data mining and Performance of Agribusiness in Rivers State, Nigeria.

Table 6: Data Analytics and Performance of Agribusiness in Rivers State, Nigeria

			Data Analytics	Quality product	Availability of market
Spearman's rho	Data Analytics	Correlation Coefficient	1.000	.511**	.614**
		Sig. (2-tailed)	.	.000	.000
		N	60	60	60
	Quality product	Correlation Coefficient	.511**	1.000	.919**
		Sig. (2-tailed)	.000	.	.000
		N	60	60	60
	Availability of market	Correlation Coefficient	.614**	.919**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	60	60	60

**. Correlation is significant at the 0.01 level (2-tailed).

.Source: Research survey, 2022.

Table 6 showed the relationship between Data Analytics and Performance of Agribusiness in Rivers State, Nigeria. The table showed that there is a positive relationship between data Analytics and product quality, the coefficient of correlation was significant at (r = 0.511) and (*p*-value = 0.000< 0.05) for 95% level of freedom, Also Data Analytics and availability of market was significant at (r = 0.614) and (*p*-value = 0.000< 0.05) for 95% level of freedom. This showed that there is a significant positive relationship between data analytics and Performance of Agribusiness in Rivers State, Nigeria.

CONCLUSION AND RECOMMENDATIONS

Big data tools are veritable tools that will enhance the Performance of Agribusiness in Rivers State, Nigeria. The application of Big Data Tools (Data mining and Analytics) will increase the product quality and provide accessible market for agribusiness in Rivers State. It will aid the producers to produce quality product that will be acceptable on the global market. It is an effective way for inter business collaborations and virtual marketing. It accommodates a large volume of unemployed men and women in the Society. Big data tools is a real time tools that will enhance the performance of agribusinesses of Agribusiness in Rivers State, Nigeria. It is a business for everybody (producers and consumers). The application of Big Data tools in Agribusiness is ideal for the social economic transformation of a developing economic such as Rivers State, Nigeria.

Based on the result obtained, we therefore recommended as follows;

- § Government should support agribusiness in Rivers State by given agricultural loan to investors in agribusiness.
- § Establish a special research centre for Agribusiness in Rivers State.
- § School should not only study agricultural science but make it an entrepreneurial study for undergraduate of Rivers State Universities.
- § There should be improved installation of Internet of Things (IoTs) to improve Geographical Information System (GIS) in Rivers State.
- § Encourage effective Research and Development in the field of Agribusiness
- § Provides application software that integrates data mining tool and analytics in Agribusinesses in Rivers State, Nigeria.

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CLOUD COMPUTING CAPABILITY AND ORGANIZATIONAL COMMUNICATION IN PUBLIC TERTIARY INSTITUTIONS IN RIVERS STATE

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ABSTRACT

The study examined cloud computing capability and organizational communication of Public Tertiary Institutions in Rivers State. Three (3) objective and three (3) hypotheses were formulated to guide the study. The cross-sectional explanatory survey research was adopted. The population of the study consisted of five hundred and two (502) administrative heads who are prominently involved in the communication process as staff of the public Tertiary Institutions in Rivers State. The sample size comprised of two hundred and twenty-two (222) respondents. Structured questionnaire was used as instrument for data collection. The study adopted Person-Environment Fit Theory. Spearman Rank Order Correlation Coefficient was used for the bivariate analysis (testing the hypotheses one to three), the finding revealed that there is a significant positive relationship between cloud computing capability and organizational communication in terms of information dissemination, coordinated work system and decision making and implementation. The study concluded that cloud computing capability enhance organizational communication in public tertiary institutions in Rivers State, Nigeria. Administrative heads across public tertiary institutions, such as ICT directors, Deans and HODS, can have their job highly effectively enhanced by adapting on cloud computing storage process through internet. The study recommended that management of public tertiary institutions should ensure that reliable networks and offline and virtual databases are put in place for speedy storage, retrieval, and safeguarding of their digital capabilities, which will in turn enhance information dissemination, coordinated work system and decision making and implementation in the organizational institutions.

Keywords: Cloud computing capability, information dissemination, coordinated work system, organizational communication

INTRODUCTION

The administrative activities of every institution revolve around organizational communication. Organizational communication is simply the deliberate process of creating and sharing meaningful information, ideas, interest and views across all levels and units of an organization in order to achieve mutual understanding between management and staff. However, the researcher's observation suggests that the management and Administrative System of some of these public Tertiary Institutions in Rivers State are fraught with sluggish information flow and poor feedback system. Cloud computing capability refers to the digital ability to process, store and accessing information files in web-based networks and platforms rather than tangible

computer devices. Cloud computing is simply the act of using web-based computer resources in processing, accessing, storing and handling data and information contents as opposed to the traditional practice of processing and storing data and information contents in a tangible (premise-based) computer system. It requires the skill or the technical ability to use cloud technologies such as Google Drive, OneDrive, and database management systems in storing and accessing office virtually in any device anywhere through the connectivity of the internet. It is associated with storing, accessing, and sharing data and information contents of an office using on-demand internet resources in any device at any time.

Cloud computing capability is also known as cloud computing literacy. Employees who are cloud computing literate are able to access office files beyond their physical office space. Cloud computing capability is very essential for staff of Tertiary Institutions because both educational and administrative communication channels rely on records management. While office files stored in file cabinets and physical computer systems are very susceptible to information insecurity, being able to save documents in Google Drive and other cloud computing facilities reduces the risk of information insecurity. Provided the password is not exposed to other people, files stored in the cloud are very more secure. While employee digital capability may be capable of influencing the success of Organizational Communication in Tertiary Institutions, another factor may moderate the extent of digital communication is digital resources availability.

STATEMENT OF THE PROBLEM

One of the maladies bedeviling the organizational success of Tertiary Institutions in Rivers State appears to be internal communication gap. The researcher's participant observation suggests that the Administrative System of some of these public Tertiary Institutions in Rivers State are fraught with communication issues such as late dissemination of information, information hoarding, poor coordination of operations and poor decision implementation process. Sometimes, Administrative correspondences are sent very late and this results to last-minute rush and mistakes in the implementation of Administrative plans and decisions. Communication gap in the Administrative System of Tertiary Institutions leads to disinformation, misinformation, uncoordinated work process, sluggish Administrative process and poor Administrative results (Otamiri & Odu, 2021; Odu, 2021). Another issue that necessitated this study is the seeming dearth of empirical studies on the relationship between cloud computing capability and Organizational Communication within the context of public Tertiary Institutions in Rivers State.

Interestingly, researchers have also conducted various studies attempting to explain how information technology skills interacts with employee performance in various climes. For instance, Adeshina (2011) examined the relationship between information technology skills of secretarial teachers in Colleges of Education and their ability to utilize the internet for effective lecture delivery; Okpokwasili (2018) examined information systems application skills required of secretaries for job performance in Deposit Money Banks. Furthermore, Adeshina, et al. (2013) examined the relationship between the information technology skills acquired by secretarial teachers in the Nigerian Colleges of Education and their utilization of internet facility for effective teaching. An earlier research by Jonathan (2010) equally examined the effects of computer literacy on the job performance of modern secretaries in NEPA Enugu Zonal office. However, none of these studies was able to provide empirical explanation on how employee digital capabilities interacts with Organizational Communication.

Otamiri and Nmehielle (2020) examined the influence of digital infrastructure on Organizational Communication of Tertiary Institutions in Rivers State. The findings of these studies identified various factors that can impact on organizational communication of various organizations. However, none of them was able to specifically explain how cloud computing capability impact on organizational communication of tertiary institutions in Rivers State in terms of information dissemination, coordinated work system and decision making and implementation. This is the knowledge gap which the study sought to fill. This gives credence to this research effort.

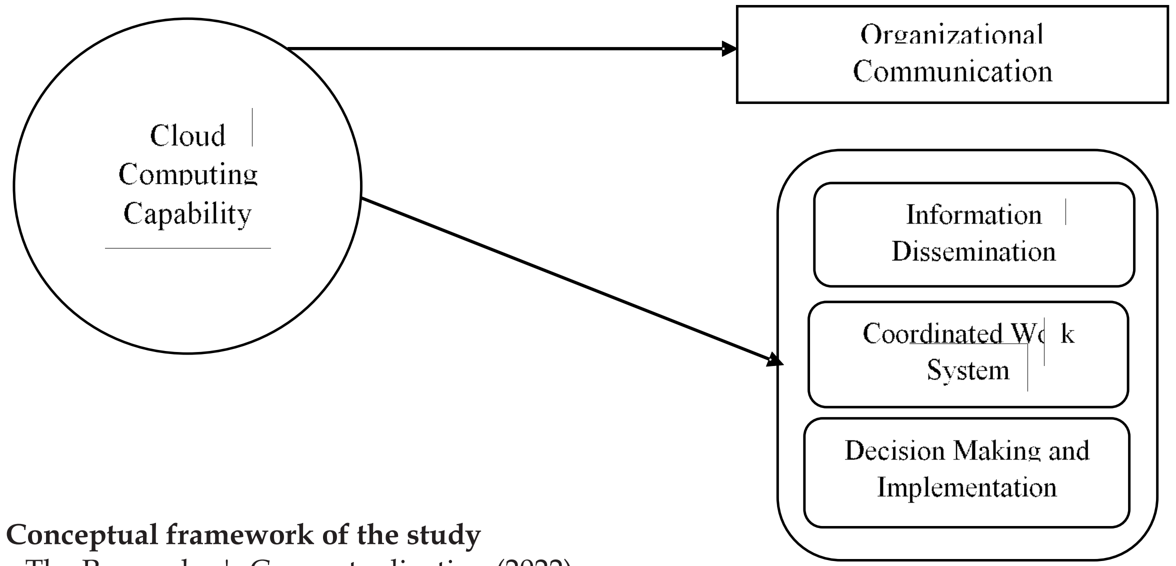

Fig. 1: Conceptual framework of the study
Source: The Researcher's Conceptualization (2022).

The aim of the study was to examine the relationship between cloud computing capability and organizational communication of public Tertiary Institutions in Rivers State. The objective of the study included to:

1. determine the extent to which cloud computing capability relate with information dissemination of public Tertiary Institutions in Rivers State.
2. determine the extent to which cloud computing capability relate with coordinated work system of public Tertiary Institutions in Rivers State.
3. determine the extent to which cloud computing capability relate with decision making and implementation of public Tertiary Institutions in Rivers State.

The following null hypotheses were tested at 0.05 level of significant.

Ho_1: There is no significant relationship between cloud computing capability and information dissemination of public Tertiary Institutions in Rivers State.

Ho_2: There is no significant relationship between cloud computing capability and coordinated work system of public Tertiary Institutions in Rivers State.

Ho_3: There is no significant relationship between cloud computing capability and decision making/implementation in public Tertiary Institutions in Rivers State.

THEORETICAL REVIEW

This work is anchored on Person-Environment Fit Theory propounded in 1962 (Osita, 2018). This theory of psychological stress describes the interaction between the person and environment (P × E) as the key to comprehending people's cognitive, emotional and behavioral reactions such as stress as well as operational productivity level. The relevant assumptions of this theory as deemed fit for this work are as follows:

i. A mismatch between a person and his work environment will lead to tension and uneasiness capable of hampering his level of productivity;

ii. Worker's capabilities (in this case, employee digital capabilities) will determine the level of work pressure and performance (Odu, 2019). In essence, this last assumption explains that employee digital capabilities determines their capacity to deal with the demands of the work environment (whether physical or digital work environment) as well as the ability to collaboratively work with others.

The implication of the first assumption is that an employee with low digital capabilities such as internet capability, data processing capability and cloud computing capability will not be able to cope with the demands of a digitalized work environment. In a digitalized work environment like that of Tertiary Institutions where electronic communication is becoming very prominent, achieving organizational communication will be difficult if the workforce lack the prerequisite digital literacy. Adopting this theory as the major theoretical framework for this study is based on the fact that the theory is related to the predictor variable (Employee Digital Capabilities). Another point that made this theory appropriate to be adopted as the theoretical foundation of this study is the fact that it explains and predicts that the capabilities of each of the workers will influence their ability to cope with demands of communicating in a digitalized work environment.

CONCEPTUAL REVIEW

Concept of Cloud Computing Capability

Cloud computing capability refers to being skillful or proficient in the use of online file storage technologies in creating, storing, accessing and sharing office files which makes it possible for office files to be securely accessed from any device beyond in the one in the office. It has to do with the technical ability to manage administrative records on google drive, iCloud, online database, and other virtual computing platforms. This digital capability has come to be very important in recent times as organizations advance towards virtual records keeping which guarantees access to office files beyond the physical office environment (Eke, 2021). Provided there is good internet signal, workers who have cloud computing skill can upload, access and download Administrative files under their auspices. Kim (2009) defined cloud computing capability as being able to access files, data, programs and third-party services from a web browser via the Internet that are hosted by a third-party provider" and "paying only for the computing resources and services you used.

Cloud computing is a model for enabling convenient, on demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. Cloud computing are those special abilities and capabilities that enable one to manipulate cloud computing technological devices, software and infrastructures to enhance ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g networks, services, storage, applications, and services) that can be rapidly provided with minimal management input or service provider interface (Elekwachi, 2022).

Organizational Communication

Organizational Communication refers of a situation where there is effective information sharing and interaction among various units of an organization and members of the institution. It has to do with effectiveness in internal information dissemination and coordination of the various departments and units of an institution. Bucăța and Rizascu (2017) define communication as a relational process, in which two or more parties shall exchange information, understand and influence each other; it is an indispensable element for the optimal operation of any human collectivities. This consists of the transmission, receipt, storage, processing and use of information. Successful Organizational Communication requires specialized personnel in the field of communication to deal with communication of information both internally and externally.

As instruments of internal communication, through which the organization informs, reminds, announces projects, policies, actions, activities etc., a periodic newsletter can be used, sent via e-mail or on paper. External communication refers to communication management strategy, which any organization applies for the purpose of communicating messages to the general public. An overview of sources suggests that Organizational Communication is a social process which provides contact and information exchange between both departments and units of organization and organization's environment for the purpose of organization's operation and accomplishment of its objectives (Blazenaite, 2012).

Measures of Organizational Communication

Information Dissemination: Information dissemination has been described as a need comparable with other basic human needs. Free flow of information is a right of the people which enable them to participate effectively in the process of economic, social and political activities in the society and enhance education, knowledge and learning even in the workplace (Echezona, 2007). Thus, timely information circulation is the flow of information at the right time, to the right audience, commanding the right feedback, to boost effectiveness and efficiency (Yusuf &Lawal, 2012). Quality of information matters in disseminating and circulating it to the users. Thus, in order for timely information circulation to be enhanced, information managers must identify the recipients needed for such information, appropriate means of communication and cost effectiveness with cognizance to technology and globalization which are incessantly shaping business actions.

In Tertiary Institutions are saddled with the responsibility to circulate the rightful information at the right time and right places to enhance effective decision as may be required at a given point in time. The information manager is expected to interpret and later transmit the defined strategies into management decisions and corporate actions, thus circulating such information in form of instructions, procedures or schedules to employees and other stakeholders as the case may be, at a rightful timely basis (Das, 2011).

Coordinated Work System: The concept of effective coordination as a measure of effective supervision underscores the extent to which an administrative head is able to properly and productively synchronize the attention and energy of human and material resources under his auspices (Otamiri, 2021). Going by the systems theory, no single office or unit in an organization should work in isolation. Administrative heads must therefore be able to properly organize and mobilize subordinates with relevant information and materials for smooth Administrative

operations. The Administrative head must be organized enough to appreciate the needs and challenges associated with each task or function assigned to committees. He must be able to ensure that no office or unit under his auspices is left out. Effective coordination can also be seen as the extent to which uniformity of operations is observable across Administrative offices.

Decision Making and Implementation: Decision making and implementation basically revolves around Organizational Communication. It takes open and constant communication for managers and administrators of universities to make and implement decisions. The word "decision-making" conjures up the image of choice among alternative courses of action in a way appropriate to the demand of the situation. The ability of the decision maker to choose the best option that is capable of achieving the set objective or solving the problem demands structured decision guidelines (James &Yero, 2018). To be effective, university administrators and Administrative heads must be able to come up with decisions that help adapt to function proactively as well as find intelligent solutions to challenges and problems confronting the institution. Effective decision making and implementation repositions universities to better master their environment. Decision making can be regarded as an outcome of mental processes (cognitive processes: memory, thinking, evaluation) leading to the selection of a course of action among several alternatives. Effective decision making is very paramount to the progress of every organization and institution as it leads or shows the next line of action. When decisions are effectively made, confusion is cleared and work can progress. Employees will know what to do and how to do as management decision will be communicated to them. A decision can only be said to be effective when it shows the next line of action.

METHODOLOGY

The explanatory cross-sectional survey research design was adopted for this study. The population of the study consisted of five hundred and two (502) administrative heads who are prominently involved in the communication process as staff of the public Tertiary Institutions in Rivers State. Taro Yamene Sample was used to obtain a sample of 222 respondent from a population of (502) administrative heads who are prominently involved in the communication process as staff of the public Tertiary Institutions in Rivers State. Structured questionnaire was used as instrument for data collection. After validation by the supervisors and other experts, Cronbach alpha was used to test the reliability of the instrument. Out of 222 copies of the questionnaire administered, a total of 150 copies (representing 68%) were retrieved. Mean and standard deviation were used for the univariate analysis; Spearman Rank Order Correlation Coefficient was used for the bivariate analysis. Spearman Rank Order Correlation Coefficient was used in testing the hypotheses one to three.

DATA ANALYSES AND RESULTS

Table 1: Correlation between cloud computing capability and organizational communication

			Cloud Computing Capability	Information Dissemination	Coordinated Work System	Decision Making and Implementation
Spearman's rho	Cloud Computing Capability	Correlation Coefficient	1.000	.722**	.711**	.609**
		Sig. (2-tailed)	.000	.000	.000	.000
		N	150	150	150	150
	Information Dissemination	Correlation Coefficient	.722**	1.000	.640	.710
		Sig. (2-tailed)	.000	.	.000	.000
		N	150	150	150	150
	Coordinated Work System	Correlation Coefficient	.711**	.812	1.000	.760
		Sig. (2-tailed)	.000	.000	.000	.000
		N	150	150	150	150
	Decision Making and Implementation	Correlation Coefficient	.609**	.545	.532**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000
		N	150	150	150	150

**. Correlation is Significant at the 0.01 level (2-tailed).

Table 1 shows r value of 0.722 at a significant level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating to cloud computing capability and information dissemination. Since the significant level is less than the alpha level of 0.05, the null hypothesis (Ho_1) which states that there is no significant relationship between cloud computing capability and information dissemination of public Tertiary Institutions in Rivers State was rejected and the alternate hypothesis (H_{a1}) was accepted. This implies that cloud computing capability has a high positive correlation with organizational communication in terms of information dissemination in Public Tertiary Institutions in Rivers State.

Table also shows r value of 0.711 at a significant level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating to cloud computing capability and coordinated work system. Since the significant level is less than the alpha level of 0.05, the null hypothesis (Ho_2) which states that there is no significant relationship between cloud computing capability and coordinated work system of public Tertiary Institutions in Rivers State was rejected and the alternate hypothesis (H_{a2}) was accepted. This implies that cloud computing capability has a high positive correlation with organizational communication in terms of coordinated work system in Public Tertiary Institutions in Rivers State.

Table 1 further shows r value of 0.509 at a significant level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating to cloud computing capability and decision making and implementation. Since the significant level is less than the alpha level of 0.05, the null hypothesis (Ho_3) which states that there is no significant relationship between cloud computing capability and decision making/implementation in public Tertiary Institutions in Rivers State was rejected and the alternate hypothesis (H_{a3}) was accepted. This implies that cloud computing

capability has a high positive correlation with organizational communication in terms of decision making and implementation in Public Tertiary Institutions in Rivers State. These results showed that there is a significant positive relationship between cloud computing capability and organizational communication. That the ability for organization to store and access files beyond the physical office space through the use of Google Drive, OneDrive and other cloud-based platforms can enhance organizational communication in terms of information dissemination, coordinated work system and decision making and implementation in Public Tertiary Institutions in Rivers State.

DISCUSSION OF FINDINGS

The test of hypothesis one to three revealed that there is a high positive correlation between cloud computing capability and organizational communication in public Tertiary Institutions in Rivers State. This implies that the improvement in cloud computing capability brings about a significant positive improvement in information dissemination, coordinated work system and decision making and implementation. Drive management proficiency in the aspects of its organizing skill, content sharing skill, content uploading and download skill goes a long to aid administrative activities pertaining to timely information circulation for information managers and other administrative officers in public Tertiary Institutions for instance, an information manager who skillfully manages a Google drive is able to share, upload and download contents swiftly irrespective of geographical location. The finding corroborates with the findings of Pack (2018) that this helps information managers to circulate information on time, resulting to timely reportage and notification.

Managing a Google drive competently gives an individual the ability to speedily organize their Google drive page, upload/download, and share contents of all supported format, such as videos, audio, graphics, texts, etc., which helps to transmit data and information on timely bases. He also opined that Google drive management proficiency is the best way to judiciously make the best out of this cloud facility and protect against long search and haphazard arrangement of files and folders that are capable of causing delayed job delivery and frustration of working hours. When an information manager is able to use their laptop, smartphone or tablet to organize their Google drive, share, upload and download contents from wherever they are, it helps him/her to reach out to their recipients without time and location restrictions. Official tasks can be dealt with early enough when Google drive is well managed as contents are being shared, uploaded and downloaded with no geographical or time constraint. Proficient use of Google drive for official purposes by saving and retrieving contents, have greatly reduced the use of hard copies of document and tangible storage devices such as flash drive, external hard disk, memory card, etc., thereby helping to protect data and information, since it is easier to penetrate a physical storage device than a cloud storage platform (Wells, 2016).

CONCLUSION AND RECOMMENDATIONS

Based on the results and discussion of findings, the study concluded that cloud computing capability enhance organizational communication in public tertiary institutions in Rivers State, Nigeria. Administrative heads across public tertiary institutions, such as ICT directors, Deans and HODS, can have their job highly effectively enhanced by adapting on cloud computing storage process through internet. Elaborately, the work also concluded that cloud computing capability enhance organizational communication in public tertiary institutions in Rivers State, Nigeria in terms of information dissemination, coordinated work system and decision making/implementation. It therefore implies that educational organizations such as public tertiary institutions that intend to enhance the performance of their administrative heads, should work on improving their cloud computing capability. The study thus recommends as follows:

1. Management of public tertiary institution should ensure that the details of every decision taken are safely kept in their physical and virtual storage media. This will serve a good reference point for future boost of their organization communication.
2. ICT directors, Deans and HODs in public tertiary institutions should religiously adopt the culture of digital documentation of all the institutional data within their jurisdiction, so as to translate this into enhanced information dissemination, coordinated work system and decision making and implementation.
3. Management of public tertiary institutions should ensure that reliable networks and offline and virtual databases are put in place for speedy storage, retrieval, and safeguarding of their digital capabilities, which will in turn enhance information dissemination, coordinated work system and decision making and implementation in the organizational institutions.

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BUSINESS INTELLIGENCE TOOLS AND ORGANIZATION EFFICIENCY AMONG BUSINESS FIRMS IN PORT HARCOURT, RIVERS STATE

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ABSTRACT

The purpose of this paper is to examine the relationship between business intelligence tools and organizational efficiency among business firms in Port Harcourt, Rivers State. Business intelligence development model and business maturity development model were adopted as the baseline theory for this study and the method adopted for this study is the reviewed of extant literature. The study findings revealed that there is a significant relationship between business intelligence tools and organization efficiency as well as the measure of the study. Therefore, based on this findings and conclusion, the study suggested that organizations that are seeking for ways to be productive and efficient should encourage the use of business intelligence tools to achieve organizational efficiency in the organization, which can enable them to achieve customer's satisfaction and increase productivity.

Keywords: business intelligence tools and organization efficiency, customer's satisfaction, and increase productivity

INTRODUCTION

In today's changing business environment business intelligence (BI) and its tools play an important role in business firms as it support them in decision making that improve the efficiency of the organizations. These tools facilitate firms to store, retrieve and analyze large amounts of information about their operations and allow them to improve strategic and tactical decisions and gain competitive advantage of the industry. Business Intelligence (BI) is a process for increasing the competitive advantage of a business by intelligent use of available data in decision making. Business intelligence tools are broad categories of applications and technologies for gathering, storing, analysing, and providing access to data to help enterprise users make better business decisions. BI tools include digital dashboard, spreadsheet, online analytical processing (OLAP) and data warehousing.

Business intelligence tools help a company in making business decisions faster, accurate and market-oriented. The kind of BI requirements that companies have and how available options fit into their set parameters of cost, functionality, flexibility. The decision of these companies is also based on improving organizational efficiency and effectiveness, the complexity of analytical reporting that is required, heterogeneity of applications, and enormity of the business. Most firm have woken up to the need of business intelligence tools to make successful decisions and carry through a profitable and competitive business. Business Intelligence (BI) tools have tremendous

potential to deliver the right value and provide the required 'intelligence' to these organizations and enable them operate efficiently and effectively.

Organizational efficiency is an internal measure of performance for companies that shows how well the company converts inputs into outputs (Kovac 2007). The more the ratio of outputs to inputs approaches hundred percent, the better the efficiency of the process will be in a simple term, it is doing things right and comes from proper harnessing of time, cost and efforts.

In recent time, most business firms had witnessed steady and rapid decrease in production and growth of their business, this is not unconnected with the use of obsolete and outdated technologies in the sector. Preliminary investigation carried out by the researcher had shown that some business firms is not operating in its expected capacity, comparing to their counterpart in other part of the world. Therefore, the researcher has decided to carry out an investigation to find out whether the use of business intelligence tools among business firms in Rivers State will increase productivity and customers satisfaction of the firms.

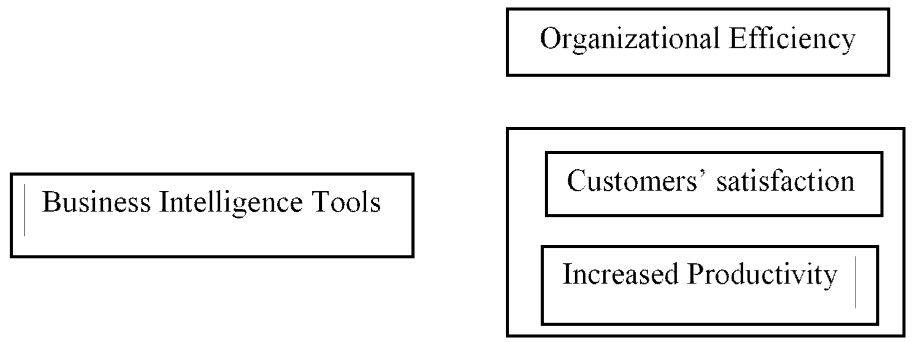

Fig. 1: Conceptual framework of business intelligence tools and organization Efficiency
Source: Research desk (2022)

THEORETICAL FRAMEWORK

The theoretical foundation of this study is hinge on the business intelligence development model and business maturity development model. The business intelligence development model was proposed by Sacu and Spruit (2010) in a technical report at Utrecht University, Netherlands. This model consists of six stages namely predefined reporting, data marts, enterprise-wide data warehouse, predictive analytics, operational BI and business performance management (BPM). This model concentrates on three perspectives: people, process and technology. Furthermore, criteria to evaluate the maturity level are not well defined. This model is used for business intelligence development rather than business intelligence implementation.

Business information maturity model on the other hand, was developed by William and William (2007). This model concentrates on three success factors namely alignment and governance, leverage and delivery; and seven key areas namely BI strategic position, partnership between business units and IT, BI portfolio management, information and analysis usage, process of improving business culture, process of establishing decision culture and technical readiness of business intelligence. This model consists of three levels. The first level concentrates on the information "what" users want to access; the second level concentrates "who", "when" and "where" while the third level concentrates on "how" information can be improved. This model is adapted from TDWI's model from the technical aspect and mostly focuses on the management perspective especially from the cultural perspective. It is well documented with the series of questionnaire to assist the users to perform self-evaluation (Rajteric, 2010).

CONCEPT OF BUSINESS INTELLIGENCE TOOLS

Business intelligence is the process of taking large amounts of data, analyzing that data, and presenting a high-level set of reports that condense the essence of that data into the basis of business actions, enabling management to make fundamental daily business decisions (Stackowiak et al. 2007). Furthermore, Cui et al, (2007), view BI as a method of improving business performance by providing powerful assists for executive decision maker to enable them to have actionable information at hand. Therefore, business intelligence tools are seen as technology that enables the efficiency of business operation by providing an increased value to the enterprise information and hence the way this information is utilized. There are very basic objectives that business intelligence tools must accomplish. These are to generate better information than rivals do, analyze the information and make sound choices quickly and convert strategic choices into decisive actions (Vine, 2000). Business intelligence tools are broad categories of soft wares, applications and technologies used for effective reporting and analysis for the purpose of understanding a company's organizational surrounding and environment and providing managers with basic data for decision making. Gangadharan and Swamy (2004), widen the definition of business intelligence tools as technically much broader tools, which includes potentially encompassing knowledge management, enterprise resource planning, decision support systems and data mining.

Most companies are using different systems that control the information torrents, but only those who use business intelligence tools can exploit the crucial information from different sources and decide what information to use. Eckerson (2004), in his research identified that business intelligence tools do not only help decision makers to make better or more efficient decisions but that business intelligence also helps the entire organization to improve Return on Investment (ROI) profitability, gain customer/supplier, as well as employee satisfaction. He also pointed out that if one BI tool is implemented in a company, there is a single version of truth which helps the company to avoid misunderstanding and gets everything going in the right direction. BI tools are essential for improving customer relationship management as certain risks are decreased by analysing supplier/customer activities and reliability, providing insight into how to rationalize the supply chain. BI tools also assist companies evaluate organizational costs and to improve logistics management, lowering operational cost and decreasing the investments required to make sales (Loshin, 2003).

CONCEPT OF ORGANIZATIONAL EFFICIENCY

Organizational efficiency is the positive result of the comparison between the inputs and the results obtained (Kovac, 2007). Mandl et al. (2008), posit that organizational efficiency is the relationship between input effects: therefore, efficiency shows effect regardless of the inputs or resources needed to achieve the objectives. Robins and Coulter (2005) states that efficiency means obtaining the greatest possible output from the smallest quantities of inputs. Organizational efficiency refers to the level of attainment or realization of policy, programme or organizational

goals and objectives (Philip & Umar 2013). Organizational efficiency is the organization's ability to implement its plans using the smallest possible expenditure of resources. In other words organizational efficiency measures how much of goals and objectives are achieved without waste. It is an essential factor in a firms organizational effectiveness, this being the ease and degree of success with which the organization is able to accomplish its aims.

Organizational efficiency is all about figuring out how an organization can be more effective by using fewer resources, as well as less time and less money to achieve the same goal. Organizational efficiency is time-based, effort-based and measurable (Philip & Umar 2013). Organizational efficiency relates to the term productivity and is a major focus of all managers in order to maintain and improve the level of productivity of their work unit and organization (Kovac 2010). An organization's efficiency factor is the ease with which it can make use of the resources it has available to produce the maximum of goods and services. This factor can affect both large and small companies. Large companies have greater resources; their inefficiency might not affect short term returns, although in the long run, there could be issues. Organizations, however, need to remain efficient at all times if they want to survive and grow (Kholes 2020).

Measures of Organizational Efficiency

Customer Satisfaction

Customer' satisfaction is the state of mind that customers have about a company when their expectations are met or exceeded over the lifetime of the product or service (Anisor et al., 2010). Customer satisfaction is a term frequently used in marketing. It is a measure of how product and services supplied by a company meet or surpass customer expectation. Within organizations, customer satisfaction ratings can have powerful effects. They focus organization resources on the importance of fulfilling customers' expectations. When a brand has loyal customers, it gains positive word-of-mouth marketing, which is both free and highly effective. Customer satisfaction can also be defined as the happiness customers derived when organization activities meet or exceed their expectation. Kotler and Keller (2016) customer satisfaction is essential to an organization or business because customers that are satisfied are expected to remain loyal for longer period, patronize the organization services or products and also inform others about the organization product as well.

Productivity

Productivity is important and essential to the success, efficiency and performance of an organization as that of the economy. Productivity is generally defined as a measure of the amount of output generated per unit of input. In most organizations, productivity has been assumed to be zero in reports when output of an organization has been measured as less in value to the total value of inputs (Boyle, 2006). The definition of productivity as being concerned with the relationship between input and output does not cover issues that many people have in mind when they talk about productivity (Paul & Kenny 2019). Productivity is commonly defined as a ratio between the output volume and the volume of inputs. In other words, it measures how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output.

According to Paula et al (2010), Productivity is considered a key source of economic growth and competitiveness and, as such, is basic statistical information for many intentional comparisons and performance assessments. Productivity growth constitutes an important element for modelling the productive capacity of organizations. It also allows analysts and managers to determine capacity utilization, which in turn allows one to gauge the position of organizations in the business cycle and to forecast growth. In addition, production capacity is used to assess demand and inflationary pressures (Paula et al., 2010).

EMPIRICAL REVIEW

Janathi (2010), explored the concepts of BI, its components, benefits of BI, technology requirements, designing and implementing business intelligence, and various BI tools in an Organization and identified that powerful transaction-oriented information systems are now common place in every major industry, effectively levelling the playing field for corporations around the world. To remain competitive, however, now requires analytically oriented systems that can revolutionize a company's ability to rediscover and utilize information they already own. BI tools have a powerful impact on strategic decisions quality to reduce the time for making decisions and thus these systems must have the ability to allow managers to view data in different perspective, to drilldown and roll-up to aggregate levels, to navigate and on-line query data sets in order to discover new factors that affect business process and also to anticipate and forecast changes inside and outside the organization. BI tools improve the quality of management in organization through new type of technology and techniques for extracting, transforming, processing and presenting data in order to provide strategic information (Adela et al., 2009).

Adela et al. (2009), carried out a research on models for business intelligence tools development and they found that one of the major risks in the process of developing and implementing a BI tool is the system design that stem from poor conceptualization of an enterprise's true business needs before the tool is deployed and for every change in these requirements the prototype must be also revised. A solution for covering this risk is object oriented modelling of a data warehouse that helps us to improve the designing phase and the development cycle and also we can re-use some parts of the prototype that it was implemented in an organization in order to design and implement another prototype in other organizational environments. So, object types can store structured business data in its natural form in object tables and then allow applications, such as OLAP applications, to work in a multidimensional way using the object oriented properties and facilities.

DISCUSSION OF FINDINGS

Based on the literature reviewed, the study findings revealed;

- There is a significant relationship between business intelligence tools and organizational efficiency. Adela et al (2009) confirmed this by stating that big data tools improve the quality of management in organization through new type of technology and techniques for extracting, transforming, processing and presenting data in order to provide strategic information

- There is a significant relationship between business intelligence tools and customers satisfaction. This was confirmed by Eckerson (2004), in his research identified that business intelligence tools do not only help decision makers to make better or more efficient decisions but that business intelligence also helps the entire organization to improve Return on Investment (ROI) profitability, gain customer/supplier, as well as employee satisfaction.

- There is a significant relationship between business intelligence tools and increase productivity. This was confirmed by Cui et al, (2007), view BI as way and method of improving business performance by providing powerful assists for executive decision maker to enable them to have actionable information at hand.

CONCLUSION AND RECOMMENDATIONS

Organizational efficiency in every organization is vital and relevant as efficiency in organization is an ideal factor indicating proper management of resources. Organizational efficiency is influenced by the standard of the business intelligence tools. Business intelligence tools are essential because they represents a strategic framework for managing, controlling and utilizing organizational with the purpose of enhancing and maintaining efficiency in an organization. The study concludes that business intelligence has a significant influence on organizational efficiency measured in customers' satisfaction and increased productivity. The implication is that an increase in the use and standard of business intelligence tools simultaneously brings about a very positive increase in the level organizational efficiency.

Based on the findings, the study recommends that business intelligence tools should be improved and utilized effectively and efficiently as to achieve maximum results when aiming for organizational efficiency.

CONTRIBUTION TO KNOWLEDGE

The study based on reviews, validated the purpose of the study, which is to examine the relationship between business intelligence tools and organizational efficiency. The study also validated the measures of organizational efficiency which are customer's satisfaction and increase productivity.

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MANAGING PEOPLE WITH SPECIAL NEEDS: A COROLLARY FOR WORKPLACE HARMONY OF MDAs IN PORT HARCOURT, NIGERIA

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ABSTRACT

This study avails us the information on how differently-abled workers are regarded in the workplace and giving more insight and credence to why they must be recognized and integrated into the workplace and given same level of recognition and benefits as their 'normal' counterparts. The purpose of this paper was to examine the relationship between differently-abled workers' management and workplace harmony of MDAs in Rivers State, Nigeria. The research design adopted was cross-sectional survey research design at the macro (organizational) level of MDAs. The population consisted of 76 directors of directorates of the 26 ministries MDAs operating in Rivers State. For the purpose of data collection, questionnaire was used as the research instrument which was distributed to the 76 respondents and 73 filled copies of the questionnaires collected were useful for data analysis. The collected data was analyzed using Spearman Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences (SPSS) with a significance level of 0.05. The findings showed that Differently-abled workers' management have very strong and significant relationship with competitiveness of MDAs in Rivers State. We recommended among others, that organizations especially the MDAs should invest more in their workforce by improving the differently-abled workers' management modus operandi in order to boost their competitive advantage.

Keywords: Differently-abled workers, Disability, Disabled persons, People with other abilities, Handicapped

INTRODUCTION

In the workplaces of today, the issue of diversifying the workforce has overtime been relegated to the background whenever it is introduced. The challenge of modern day business is the increased awareness on the part of employees about their rights and privileges. The rise in this awareness has become a pain in the neck of growing management to such concerns that it attempts to diminish the glory of capitalistic mindedness that once bestride the pathway to managing like a colossus (Nwinyokpugi, 2015). The need to reengineer and restructure the traditional modus operandi in the modern-day workplaces has become an imperative fact that cannot be over-emphasized. The workplace is supposed to be engineered in a way and manner that it accommodates all facets of individuals, otherwise; the workforce. Suffice to posit that the major workplaces in our present day industries are rigid with policies especially when it comes to that which has the potency to tilt its diversity management. Being identified as a pivotal tool for improving workplace harmony, Hofstede (2001) avers variated dimensions of workplace diversity management.

Hence, this study adopts one of the dimensions as postulated by Hofstede as its predictor

variable. A diversified workplace is that which gives rooms for different talents and prowess to be maximized devoid of ethnocentric, xenocentric, gender-based and/or ability biases. Thus, this defines the diversified workplace as an all-accommodating workplace that is devoid of discriminatory practices and in the face of any discrimination, tries to eschew them to the barest minimum. This paper reveals the different terminologies that have been used to describe the differently-abled set of persons; ranging from "Handicapped" to "Other-abled persons" and then "People living with other abilities".

Over the years, the workforce in the MDAs has comprised of mainly, able-bodied workers, per se; whereas the differently-abled workforce are relegated to becoming beggars on streets even when they possess the requisite prowess and qualifications needed to thrive in their job roles, the society stereotypes them with obnoxious terms and approaches. The MDAs in Port Harcourt, Rivers State, Nigeria consists of governments and all publicly controlled entities saddled with the onus to deliver public programs, goods, or services (Institute of Internal Auditors, 2011). Nigeria's public sector comprises of several institutions serving various functions related to the provision of goods and services to citizens. Hence, this study identified and defines differently-abled workers as a set of differently-abled individuals embedded with diverse skills and abilities but limited by some form of impairment and/or deformity.

As a growing but dynamic concept, differently-abled workers' management develops as information about the organization's activities and achievements is spread out, and interactions take place between the organization and its stakeholders. Different stakeholders may then have different perceptions regarding the organization, based on their dissenting views and interpretation of the information received: an organization may have, at the same time, a good diversity among its stockholders and one not so good among its employees and employment policies.

Organizations are not wholly in control of the information about them that exists outside the firm's boundaries. Many stakeholders may base their opinions without ever having any direct interaction with the company, through third-party sources (e.g., the media and opinion leaders). Therefore, organizations face an important challenge when it comes to managing their own diversity: diversity may be influenced by a variety of outside sources besides differently-abled workforce management. This in turn plays down on the harmonious coexistence of the organizational actors, either positively or negatively. Based on this backdrop, this study seeks to examine the empirical correlation between differently-abled workers management and workplace harmony of MDAs in Rivers State, Nigeria.

LITERATURE REVIEW

According to Omomia and Omomia (2014), Skinner's reinforcement theory holds sway that employee behaviors that lead to positive outcomes will often-time be repeated and behaviors that lead to negative outcomes will overtime not be repeated. He further avers that human behavior can be conditioned through the use of rewards either tangible (in this case, money) or intangible, (e. g. recognition). Thus, Rounok and Parvin (2011) recommended that organizations should reinforce employee behaviors that have the potency to lead to positive outcomes and discourage those behaviors that would often lead to negative outcomes. This can be achieved through diversification of the workforce by integrating and recognizing the skills and expertise of the differently-abled or, simply put, differently-abled workforce.

In strategic administration, the need to maximize the focal facets of the organization is an imperative factor that must be applied at all cost. Organizations, in this case; MDAs ought to make a paradigm shift in the processes and procedures as well as the wherewithal through which it engages its workforce. The need to reengineer the workplace in a manner that abhors discriminatory practices should be necessitated. The differently-abled workforce amongst other things is same persons as the perceived 'abled' workforce; hence, they should enjoy same rights and privileges in the workplace policies.

Being a differently-abled worker in the erstwhile world had its drawbacks; it would mean that such a person is immediately different from other organizational actors who are viewed as "normal". This purview has long existed at different times and history where disability was considered as harmful, proof of incompetence and even subjugates them to discriminatory practices which tend to stigmatize these persons. While some views disability from diverse opinions, two recent views have been considered as the most appropriate reasons why some employers would discriminate the differently-abled worker from those he perceived as normal. These factors would include:

a. **Beliefs about deed in a past life (Disability and karma):** in the mundane society, it is believed that much travail suffered by some persons (especially disability) is as a result of their misdeeds in the past life. Thus, it is believed that the concept of one's current existence is affected by actions in an earlier lifetime. This makes diverse persons view disability is karma (retributive justice) on those who are affected by it. This practice in our present-day world has remained an equivocal myth; however it forms some people's opinion about others.
b. **References made to the differently-abled in the past:** in the jejune world, disability was defined as any defect that one suffers on his physiognomy and not taking to cognizance the intellectual prowess of such person. This made the society view those living with disabilities as unfit, incompetent, to say the least.

Suffice to say that while these set of persons frowned strongly at the "handicapped" notion which because of its etymology may imply a helpless state and sometimes would portray the image of a beggar, they rather preferred to be addressed as "differently-abled" as this helps minimize the level of stigmatization greeting them. More-so, while the Oxford Dictionaries (2015) defined the word "differently-abled" as people with physical or mental disabilities in the second half of the 20th century, it tends to remain the most generally term in both the British and American divides. To them it has superseded the offensive terms such as crippled, defective and handicapped.
Another point of interest is the view of the "people living with other abilities" – while the differently-abled workers detested terms such as handicapped or defective, they also took exceptions being described as people who live with other abilities. To them they felt this term was rather taunting and used to pacify their conditions out of pity. They believed that the term automatically negates the term "ability" by reason of them having some impairment. Thus, they viewed this term as leaving them with more stigma than the former. However, Wisegreek (2015) defined "Being differently-abled" as a euphemistic term for someone who might formerly have being classed as differently-abled, handicapped, challenged, or having special needs. He opined that it can apply to people with predominantly physical and mental challenges. This description is thought to be more politically correct in some circles because it recognizes that although people have mental and/or physical impairments, they still have other abilities as negating to the picture painted overtime using the differently-abled or handicapped notion.

Workplace harmony

Workplace harmony refers to a friendly and cooperative agreement on working relationships between employer and employees for their mutual benefit (Otobo, 2005, Osad & Osas, 2013). According to Puttapalli and Varam (2012) Workplace harmony is concerned with the relationship between management and employees with respect to the term and condition of employment and the workplace. It is a period where employees and management cooperate willingly in pursuit of the organizational aims and objectives. A harmonious work environment is critical to the success of an organization, especially the industries in Nigeria. Managers of both the private and public organizations are faced with the challenge of ensuring workers satisfaction commitment and loyalty increasing productivity level and most importantly sustaining harmony and mutual trust in the workplace.

According to Elangovan and Xie (2000), harmonious workplace or industry that guarantees satisfaction of workers and employer's aspiration is essential for enhanced organizational productivity and growth. A disharmonious work environment presents itself in the form of disagreement or opposition to particular ideas interest persons or state of things and indicates a level of incompatibility in the social organization or group. Organizational leaders are expected to possess the ability to influence the action of others by exercising the power conferred on them by the position they occupy in the organization. Employees follow the prompting and directive of their leaders or manager to carry out their jobs. Ngethe et al. (2012) are of the view that "Leaders use their influence to draw people towards achieving goals and to maximize results in the organization" leaders attract loyalty and commitment from workers by the way they relate with them. Leadership also helps to stimulate motivate, encourage and recognize their followers in order to get key performance results (Gill et al., 2006).

As Fashoyin (1979) states; any leadership style that is not amendable but confrontational can only lead to conflict and the defeat of organizational goals. The industry is replete with cases of frequent strike actions, shutdown, demonstrations, and grievances arising from lay-offs and most often, outright sack of workers. Workers are frequently hired and fired especially considering that their tenure of office or on the job is not formalized and fixed because projects usually have short time life span or is often time bound. According to Nwinyokpugi (2015), Most managers lack the enterprise required in managing the most critical assets of the organization, the workers where they are expected to stamp their feet to ensure directives are carried out, they display laizzes-faire attitude and in cases they need collaboration through workers consultation, delegation, and involvement, they apply coercion and fail. A harmonious work culture that tolerates diversity and strengthens workers capacity in job delivery, signal a leap towards meeting organizational goals.
Most managers are found to be at a dilemma in managing power or in applying leadership tools in the organization. When wrong management or leadership style is adopted and non-congenial work environment is created, workers react negatively and this can be in the form of strikes, grievance and conflict. Employees with diverse ideologies, skills, backgrounds, expertise, language, sex, culture etc converge at an organization and share ideas to complete works and achieve the organizational goal. Management practice of exclusionism, neglect of power sharing

mechanism which ensures partnership amongst stakeholders in the workplace and derogation of organizational communication pattern may breed disharmony in contemporary organizations, (Iheriohanma, 2007).

Social relations in these organizations are creamed in master servant power chain to such an extent that the employees have no close ties with the owners of work, or its agents. Orders are given using the steam-shovel approach such that no worker is allowed to know the reason for any decision that affects the tasks they do (Nwinyokpugi, 2014). On the other side, Hanson (2006) opines that workplace harmony represents absence of strike by workplace union in organization which is bound to result in effective and efficient organization. Thus, workplace harmony covers four broad areas of cooperation responsibilities; employment policy, collective bargaining, communication and consultation (Odia & Omofonmwan, 2007). Workplace harmony can only come out of what is known as "Workplace Democracy" a situation in organization where to a large extent, the participation of workers is adequately sought in the process of making decision that will determine the condition of their working lives. It involves joint participation in decision making process between the two major actors to labor relations. It encompasses such concepts as joint consultation, co-ownership or co-partnership, co-determination and Whiltleyism (Otobo, 2005). Workplace harmony enhances labor productivity and in turn improves performance in organizations, achieving economic growth, and enhancing living standards and quality of life.

EMPIRICAL REVIEW

Omolawal (2019) investigated Disability, Workplace Relations and Social Exclusion of "The People with Special Needs" in Selected Public Organizations in Ibadan, Nigeria. The study adopted a cross sectional survey design and was complemented with qualitative techniques. Instruments of data collection were questionnaire (administered on 460 permanent workers selected using Cochran's 1977 formula), In-depth Interviews (conducted with 20 officials in charge of staff matters), Key Informant Interviews (conducted with three (3) officials and five (5) workers living with disabilities). Quantitative data collected were analyzed using descriptive statistics, while qualitative data were manually content analyzed. The study found that it is not impairment that disables people; rather it is the social construction and the attitude of the people and organizations, and lack of compliance with existing legislations that actually disable people and render them unproductive.

Omolawal and Obisesan (2019) also investigated Work Environment and Compliance with Policies for the "People with Special Needs" in Selected Public Organizations in Ibadan, Nigeria. The study adopted qualitative research technique and was conducted in two purposively selected local governments out of the six that make up the urban Ibadan city. Instruments of data collection were Key Informant Interview (KII) conducted with 5 officials and 10 willing differently-abled persons; In-Depth Interviews (IDI) conducted with 20 officials and nonparticipant observation. Data were analyzed using content analysis. The findings of the study generally justified the theoretical frame work adopted for this study which explains that the segregation people living with disabilities suffer was not necessarily because of their impairments but rather because of the disabling environment in the society.

METHODOLOGY

The research design adopted was the survey design. In relation to the purpose of this study, the study adopted the correlational study so as to know the extent of the relationship between the

differently-abled workers' management and workplace harmony. In terms of the time horizon and unit of analysis, the study used cross-sectional survey design and analysis was at the organizational level respectively. The population of this study comprises of directors in strategic directorates of the MDAs. According to Nigerian Search Engine & Directory (2022) there are 26 Ministries amongst the MDAs in operation; therefore, the population of this study was the directors of the identified directorates of the twenty-six (26) ministries in operation in Rivers State. The number of these directors is seventy-six (76) thus this constitute the study population size. Furthermore, this study adopted questionnaire as the research instrument for its primary data. The study variables were measured using ordinal scale on a four interval Lykert.

The predictor variable in this study is differently-abled workers' management, while the criterion variable in this study is workplace harmony. The validity of the research instrument was further tested for face and content validity, and Cronbach's Alpha was used in testing the reliability which shows a Cronbach's Alpha greater than 0.7. From the 76 copies of the questionnaire distributed, 74(97.37%) copies of questionnaire were returned while the remaining 2(2.63%) were not retrieved. More so, out of the 74 number of questionnaire returned, 1(1.35%) copies was useless because it was not filled properly while 73 (98.65%) copies of the retrieved ones were filled correctly which were therefore used for data analysis. Collected data was analyzed using Spearman's Rank Order Correlation Coefficient with the aid of the Statistical Package for Social Sciences (SPSS) with a significance level of 0.05. The statistical test for hypotheses was carried out in line with the decision rule by Evans (1996) which he described as:

Between +ve or –ve (0.00- 0.19) = very weak relationship
Between +ve or –ve(0.20-.39)= weak relationship
Between +ve or –ve(0.40-0.59)= moderate relationship
Between +ve or –ve (0.60-0.79) = strong relationship
Between +ve or –ve (0.80-0.99) = very strong relationship
+ve or –ve (1) = Perfect relationship

DATA ANALYSIS AND RESULT

Table 1: Relationship between differently-abled workers' management and workplace harmony

			Differently-abled workers' management	Workplace harmony
Spearman's rho	Differently-abled workers' management	Correlation Coefficient	1.000	.917**
		Sig. (2-tailed)	.	.000
		N	73	73
	Workplace harmony	Correlation Coefficient	.917**	1.000
		Sig. (2-tailed)	.000	.
		N	73	73

**. Correlation is significant at the 0.05 level (2-tailed).
Source: Survey Data, 2022 and SPSS Window output version 23.0

Table 1 above reveals a rank value of (*rho* = 0.917) and a PV= 0.000 which is less than 0.05; this entails a very strong and significant positive correlation exist between differently-abled workers' management and workplace harmony of MDAs in Rivers State, Nigeria. Therefore, the null Hypothesis (H_0) is hereby rejected while the alternate hypothesis (H_1) is hereby accepted.

DISCUSSION OF FINDINGS

The result in Table 1 empirically shows that differently-abled workers' management has strong and significant influence on workplace harmony. The analysis results revealed a correlation coefficient of 0.917** between differently-abled workers' management and workplace harmony of MDAs in Rivers State, Nigeria, indicating a very strong and positive relationship between differently-abled workers' management and workplace harmony of MDAs in Rivers State, Nigeria. More-So, the probability value (0.000) is less than the critical value (0.05), this shows that there is very strong, significant relationship differently-abled workers' management and workplace harmony of MDAs in Rivers State, Nigeria. This finding is in tandem with the finding of Omolawal (2019) whose study investigated Disability, Workplace Relations and Social Exclusion of "The People with Special Needs" in Selected Public Organizations in Ibadan, Nigeria and found that it is not impairment that disables people; rather it is the social construction and the attitude of the people and organizations, and lack of compliance with existing legislations that actually disable people and render them unproductive.

CONCLUSION AND RECOMMENDATIONS

This study addressed the issue of disability which is another visible facet of workplace diversity management. From the foregoing, it is evidenced that after facing centuries of discrimination and stigmatization, modern societies and organizations are enjoined to be more open and positive on the disability discrimination issue. Different scholarly insights/opinions have also revealed that depending their ability to work, these differently-abled employees can be effective for their respective organizations provided that they are well accommodated at work and given every benefit and recognition that is due them to function efficiently. From the analyzed data, result revealed that differently-abled workers' management play significant roles in enhancing workplace harmony. Workplace harmony is an important end (output) that organizations would ever seek in the business world. With the incessant political, economic and social changes, organizations are in dire need of workers that have the dynamism prowess to work effectively in ever-turbulent and evolving business environment.

This study clearly shows that differently-abled workers' management is very significant in improving workplace harmony. Therefore, organizations, particularly the MDAs can improve their performance and productivity through the effective and efficient management of their workers' abilities by ensuring that the differently-abled workers are integrated into the workforce while being furnished with the right equipment and tools to function. As this creates them an avenue to cool-off the stress of work and embeds a sense of workplace spirituality. More-so, organizations especially the MDAs should invest more in their workforce by improving the differently-abled workers' management modus operandi in order to boost their competitive advantage. Thus, in line with the findings of this study and to the extent of its consistency with results of previous studies, we conclude that differently-abled workers' management has a positive significant relationship with workplace harmony of MDAs in Rivers State, Nigeria.

Based on the findings of the study and to the extent of its consistency with the result of similar studies the study recommends that directors of different MDAs should as a matter of priority capitalize of the need to accommodate the differently-abled workforce in its recruitment policies, practices and procedures as it portends as a strong indicant for workplace harmony as well as spirituality.

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EFFECTS OF KIDNAPPING AND HOSTAGE TAKING ON THE GROWTH OF NIGERIA'S ECONOMY

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ABSTRACT

This study examines the effects of kidnapping and hostage taking on the Growth of Nigeria Economy. The structural-choice model was adopted for this study. The study employed the cross-sectional quantitative survey design to identify factors influencing kidnapping via clustered random sampling technique of residents in Katsina. Questionnaires were used for data collection. Out of 400 administered questionnaires, 374 (93.5%) were retrieved for analyses and hypothesis testing. Data was coded with Statistical Package for the Social Sciences (SPSS) version 21 computer software, descriptive and non-parametric inferential statistical analyses were computed. Results revealed that 69.0% of the study sample opined that kidnapping is influenced by unemployment. Results also indicated that 62.6% noted that the pattern of abduction tended to rapt on travelers; as 53% opined abductors targeted students. 66% indicated kidnapping has negative effects on the human development. Hypothesis test result indicated X2 (2, 374) = 8.860, p = .012. Therefore, alternative hypothesis was accepted which states that kidnapping is significantly influenced by unemployment at alpha level of 0.05. The study recommended that kidnapping could be curbed by employing and empowering the teeming population of youths who are vulnerable to subscribe to criminality because of strain.

Keywords: Kidnapping and hostage taking, socio-economic development and Nigerian economy.

INTRODUCTION

Kidnapping of all manner of persons has gained ascendancy in Nigeria. A malady previously unknown to the people has rapidly become domesticated. Nigeria is facing myriad of challenges which are affecting the socio-economic development of the country. One of such problems bedeviling the socio-economic development of the country is the issue of kidnapping and hostage taking. Kidnapping and hostage taking in Nigeria has turned into a social problem which is affecting virtually every member of the Nigerian society in one way or the other. According to Uzorma and Nwanego (2014), kidnapping and hostage taking is among the terrorizing crimes in Nigeria which is mostly common in the most part of the country. Thus, it occurs when a person is abducted and taken from one place to another against their will, or a situation in which a person is confined to a controlled space without the confinement being from a legal authority.

Asuquo (2009) noted that the term "kidnapping" is difficult to define with precision, because it varies from State to State and jurisdiction to jurisdiction. It is the forceful seizure, taking away and unlawful detention of a person against his/her will. It is a common law offence and the key part is that, it is an unwanted act on the part of the victim. It is a restriction of someone else's liberty which violates the provision of freedom of movement as enshrined in the constitution of the Federal Republic of Nigeria, where every other law takes its cue from. For this reason, Siegel (2002) sees it as a serious offence.

Kidnapping and hostage taking is increasing daily in Nigeria and they are often used by armed groups, particularly terror inclined groups as mechanisms of achieving their demands. Kidnapping could be described as an aggressive way of arresting people, irrespective of age, whisking them away to unknown environments in order to detain them against their wish until they satisfy the desires of their captors which is usually monetary. Apart from the fact that it is an unwelcome act on the part of the victims, the act violates victims' fundamental human rights as entrenched in the constitution, therefore it is punishable under the law (Asuquo 2009). Despite this, kidnapping is on the increase and has earned Nigeria the 4th position in hostage-taking globally from the American Bureau of Investigation (ABI) (Taire, 2011; Abdulkabir, 2017; Ene, 2018).

Kidnapping seems easier compared to other forms of serious crimes. According to Davidson (2010), a group of criminals armed with guns and cell phones apprehend unsuspecting victims and drag their victim into a secluded spot and begin to make phone calls to whomever and demand for a ransom. The police with a mandate to provide security for the people are often unprepared for the task at hand. They think their job is done if they manage to secure the kidnapped, but of the kidnappers nothing much is ever heard. As we all know, the police are poorly trained and poorly equipped, but beyond these inadequacies there are worrying signs that their loyalty is suspected. Some whistle blowers have come to grief for confiding in them. The primary role of government is the provision of security for its own people. In Nigeria this role has been largely ignored. The Nigerian state no longer provides security for the Nigerian people. Nigerians have compulsorily become religious as whole families barricade themselves at night in prison-high walls and pray that God protection. But kidnapping as a variant of armed robbery is infinitely more disturbing as it often occurs in the open among persons going about their normal business.

Turner (2008) opined that the phenomenon of kidnapping and hostage taking began in the Niger Delta region as a freedom fight by militants protesting the degradation of their environment by oil industrial activities. Demola (2011) argued that it soon turned into a money making avenue through kidnapping of expatriate oil workers for huge ransoms. Kidnapping and hostage taking has plagued the socio-economic development of Nigeria and has had spill-over effect on some jobless youths and graduates who see kidnapping and hostage taking as a lucrative alternative means of making money, acquiring economic power and getting social recognition. This has had adverse effect on the socioeconomic development of the southern Nigeria. The social life of people has been affected and there is mistrust among people due to incidence of kidnapping and hostage taking in southern Nigeria. Also, the image of the country in the global scene has been shattered as a result of this. Inyang and Ubong (2013) classified the economic effects of kidnapping as direct and indirect costs. Direct Cost of Kidnapping involves the economic value that individuals and government may lose to kidnappers, much money has been paid as ransom.

In Nigeria, it was observed that the level of insecurity has increased since the return to democratic governance in May, 1999. These insecurities are caused by communal clashes, ethnic/tribal conflicts, religious riots/conflicts, militancy and ritual killings, cultism and ethnic militia attacks and the farmers-herdsmen conflicts (Akinola, 2016). These further increased with the arrival of the Boko Haram insurgency in the North east from 2009 to date. The level of insecurity further increased with the changing of the farmerherdsmen clashes into banditry and cattle rustling between 2010-2015.In some states of the North, this form of insecurity further changed to not only banditry, cattle rustling but to also include kidnapping of people for ransom.

In the past and in recent times, Nigerian scholars have concentrated on the social problem of kidnapping. Such include: Ilechukwu, Uchem and Asogwa, (2015), who focused on reducing its occurrence using religious education; Oyewole (2016) examined the connectivity between rituals and kidnapping; Bello and Jamilu, (2017) investigated the consequences of kidnapping and its predisposing factors (terrorism, corruption and poverty); and Emanemua and Akinlosotu (2016), who illustrated how kidnapping has suddenly emerged as a variant profession for armed robbery in Nigeria with high level of proficiency in seizing persons for ransom. While we commend these papers for their contributions to the existing knowledge, we observed that none of them explored the connectivity between kidnapping and injustice which is prevalent in all spheres of life in Nigeria (Chinemerem 2016). It is on this ground that this study was considered worthy of exploration.

Presently, studies have shown different dimensions of kidnapping in Nigeria. These include political, Ene, (2018); economic and financial (Turner, 1998; Bello & Jamilu 2017); religious, either traditional which involves fetish rituals, wealth or power (Asuquo, 2009) etc. Most of the cases of kidnapping happened on the road, where the security network is very poor (Bulwark Intelligence, 2017). Although, some usually occured in workplaces and residential quarters, but its occurrence on roads is more common than other places.

Studies have shown that economy is the bedrock of national development (Akpan, 2010; Famoye, 2015), but the role of manpower in any developing economy is very crucial. However, before manpower could offer the best of their capabilities, their safety must be secured. In that wise, security could be regarded as the main pillar of national development (Famoye, 2015). It is under a secured atmosphere that this study tend to examine the effects of kidnapping and hostage taking on the growth of Nigeria economy.

The main objective of this study is to examine the effects of kidnapping and hostage taking the growth of Nigeria economy. The specifics objectives include:

i. To examine the nature of kidnapping and hostage taking in Katsina Local Government Area.
ii. To analyze the causes of Kidnapping and hostage taking in Katsina Local Government Area.
iii. To evaluate the effects of kidnapping and hostage taking on the economy growth in Katsina Local Government Area.

1.1 Research Questions

This study will be guided by the following research questions:

i. What is the nature of kidnapping and hostage take in Katsina Local Government Area?
ii. What are the causes of kidnapping and hostage take in Katsina Local Government Area?
iii. Does kidnapping and hostage taking have effect on the economy growth in Katsina Local Government Area?

The significance of the study is that the findings of this research would contribute to policy input for members of the Security Council at the Federal, State and Local Government levels. Secondly, the findings would be useful to the various security agencies such as the Nigerian Police, State Security Services and their operatives who are directly charged with the onerous task of maintenance of law and order as well as members of the armed forces. This research will also be useful to members of the media especially defence and security correspondents who report issues related to national security. Finally it would contribute to the existing body of knowledge on kidnapping and hostage taking as well as provoke further research interest on the subject matter.

This study covers the Katsina Local Government Area of Katsina State, Nigeria from period of 2017-2021. This period is chosen because of the upsurge and intensity of hostage-taking and kidnapping within the period in Nigeria and the urgent need for a long lasting solution. This study covers domestic terrorism with particular reference to hostage-taking and kidnapping in Nigeria in relation to national security. The relationship between domestic terrorism and economy growth, the impact of hostage taking and kidnapping on economy growth and the challenges will also be discussed.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Concept of Kidnapping

Scholars have defined kidnapping using various terms (Asuquo 2009; Ogungbola, 2013), and because the concept lacks straight-jacket description, (Walsh & Adrian, 1983; cited in Ene, 2018). However, a few of such descriptions are considered in this section starting with Turner (1998), who contends that kidnapping is an act of capturing people under duress and conveying them to a terminus where they are held in an illegitimate confinement against their wish. Similarly, Asuquo (2009) sees kidnapping as a popular crime against the law and an annoying action carried out against the victims, while Abraham (2010) cited in Ene, 2018), perceives kidnapping as an act of capturing, taking away and keeping people in custody either through force or deceit. Robertson (1968) (cited in Ene, 2018), views kidnapping as an offence relating to capturing, authorizing seizing or taking away of persons coercively and subjecting them to unintentional servitude with the aim of collecting a ransom or in furtherance to another crime. Nwaorah (2009) contends that kidnapping is a deliberate deed carried out by aggrieved persons with an intention of arresting people's value who could be salvaged by those who care for them.

Kidnapping seems easier compared to other forms of serious crimes. According to Davidson (2010), a group of criminals armed with guns and cell phones apprehend unsuspecting victims and drag their victim into a secluded spot and begin to make phone calls to whomever and demand for a ransom. The police with a mandate to provide security for the people are often unprepared for the task at hand. They think their job is done if they manage to secure the kidnapped, but of the kidnappers nothing much is ever heard. As we all know, the police are poorly trained and poorly equipped, but beyond these inadequacies there are worrying signs that their loyalty is suspected. Some whistle blowers have come to grief for confiding in them. The primary role of government is the provision of security for its own people. In Nigeria this role has been largely ignored. The Nigerian state no longer provides security for the Nigerian people. Nigerians have compulsorily become religious as whole families barricade themselves at night in prison-high walls and pray that God protection. But kidnapping as a variant of armed robbery is infinitely more disturbing as it often occurs in the open among persons going about their normal business.

Hostage-Taking and Kidnapping

Hostage-taking is 'the seizure or capture of a person depriving him or her of liberty as a guarantee that certain actions or promises will not be carried out' (Encyclopedia Free Dictionary 2009). It is the act of holding somebody as a prisoner by a person or persons such as criminal or terrorist organizations, until specific demands are met or money handed over. Hostage-taking today is an act of terrorism and a very serious crime (Asokan, 2009). It is a new trend of domestic terrorism in Nigeria used by the perpetrators or criminals to force relatives of any one held hostage to pay a ransom fee (Attoh 2012:214). Over the ages and world-over, several forms of abduction of humans have been recorded. Their typologies are because of the operative models of the abductors, the aims and reasons for the abduction, the societal value-system, mindset and zeitgeist of the event, amongst other numerous factors. However, the most universally known types of hostage-taking and kidnapping include:

Basic Kidnapping: This is the commonest type of kidnapping. It is accomplished in most parts of the world with minimal preparation, with relative low risk of failure. In this typology, abductors usually target local businessmen or their family members; the affluent of the society who they consider as being 'well-off', without having sufficient resources to spend a great deal of money on security precautions. The kidnapper's goal is a fast, easy payoff.

Express Kidnapping: In this form of kidnapping, the victim is abducted, then forced to withdraw their own ransom from a bank or ATM. If all goes well, the victim is released afterwards, generally after having been relieved of all valuables on their person (and occasionally in their residence). This type of kidnapping is popular in urban areas, due to the prolific ATMs. In some cases, this will develop into a standard kidnapping, with further ransom demanded of the family or employer.

Political Kidnapping: This involves any abduction incident conducted to extort political concessions from governments or security forces. As monetary ransom is no longer enough, it is more difficult to negotiate abducted victim's freedom as in many cases the political concessions or demands cannot be met by the involved government, thereby putting the victim's life at greater risk.

Tiger Kidnapping: This abduction model involves a hostage-taking in order to force the victim to participate in a robbery. The robberies have become known as tiger kidnappings because the raiders stalk their prey to study their movements before striking.

Bride Kidnapping: This is a form of abduction for forced-marriage. It is a form of cultural antic to force a damsel to marriage. In this act, the groom-to-be kidnaps his bride. In many cases the would-be couple has never met until the day of the abduction.

Virtual Kidnapping: This is more of a scam than an actual kidnapping. The perpetrators will wait until their target is unreachable (visiting an area with no cellular coverage, for example), then will contact the target's family or company, claiming they have kidnapped the person and demanding an immediate ransom.

High Net-Worth Individual Kidnapping: This is the most cinematically popular form of kidnapping. Generally, the intended target is studied for some time prior to the actual abduction, allowing the perpetrators to gather intelligence on security procedures and personal habits.

Origin of Hostage taking and Kidnapping in Nigeria

Prior to colonialism, in the era of slave trade, the problem of kidnapping was a major problem in developing countries because of its economic gains, rituals benefits for power and burying of monarchs. The root of kidnapping in Nigeria, according to Townsend (2008), can be traced to "natural resources nationalism" – the tendency for an ethic nationality to seek bigger shares of the returns from natural resources found in their locality. That is, the clamour by aborigines of the oil producing Niger Delta region to better and bigger share of the fortune made from the resources gotten from their land (Essien & Ema, 2013). This problem is worsened by accumulation politics which is the tendency for the ruling class to engage in endless accumulation of natural resources and rents accruing from the region, in the face of deliberate acts of marginalization and deprivation of the people (Akpan, 2010). Hostage-taking and kidnapping has several effects in the society: Either to the victim and the affected family, company, relatives, etc, or to the society at large of which the government of the day and its security agencies are involved. Kidnapping and hostage taking has plagued the socio-economic development of Nigeria and has had spill-over effect on some jobless youths and graduates who see kidnapping and hostage taking as a lucrative alternative means of making money, acquiring economic power and getting social recognition. This has had adverse effect on the socioeconomic development of the Nigeria. The social life of people has been affected and there is mistrust among people due to incidence of kidnapping and hostage taking in Nigeria. Also, the image of the country in the global scene has been shattered as a result of this.

Challenges in combating kidnapping and hostage taking in Nigeria

Corruption: Corruption is an endemic issue in Nigeria and it has infiltrated all the nooks and crannies of the country. Security agencies have been viewed as symbols of corruption by the members of the public and it has, to an extent, hampered the security of the country. Some officers and men of security agencies negate the responsibilities entrusted on them and focus on what they will gain.

Lack of adequate information to the security agents by citizens: when kidnapping incidents take place or when kidnapers have hideouts in their vicinities. This could be as a result of fear or mistrust between the people and security agencies.

Misunderstanding and poor synergy among security agencies: Misunderstanding and unhealthy interaction among security agencies has made the issue of kidnapping and hostage taking difficult to tackle. This has created a loophole among the security agencies and the criminal offenders capitalize on this loophole to perpetrate their evil.

Lack of sophisticated equipment for tracking down criminals: Security agencies lack modern equipment that aid in fast and accurate investigations of hostage-taking and kidnapping incidents. Some of the ammunitions in the various armouries of the security agencies are outdated, disused and obsolete. They cannot match the sophisticated weapons used by the dare-devil kidnappers that torment innocent citizens endlessly.

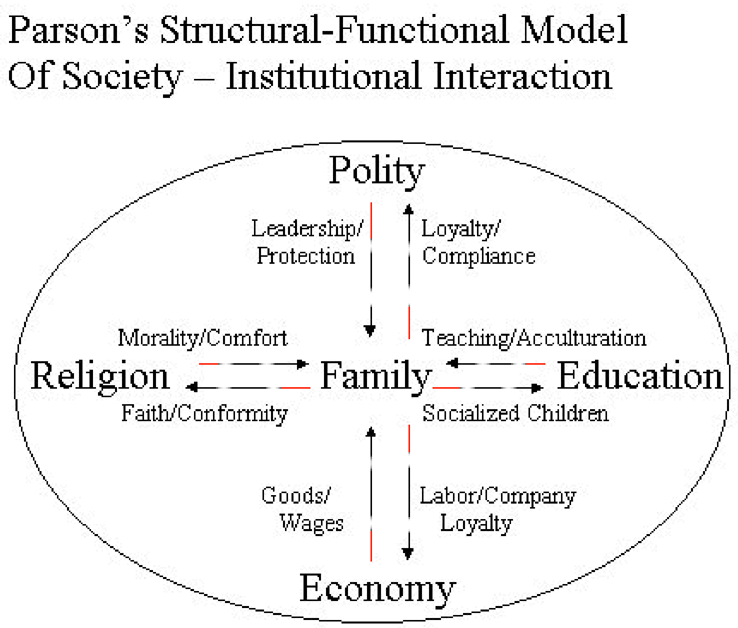
Poor motivation of the security officers: is one of the major challenges facing the combating of kidnapping and hostage taking in southern Nigeria. Officers and men of the security agencies have lost the desire and will to tackle kidnapping and other social vices due to poor motivation.

Empirical Literature

Several studies have been conducted on the effects of Kidnapping on Nigeria economy. Nwanunobi (2017), in his research conducted Delta examine kidnapping for ransom (commonly reported). It is more prominent in the South-East and South-South (Niger Delta), kidnapping for ritual purposes (uncommonly reported) is more prominent in the South-West and North-Central regions, while abduction (mostly unreported) is more prominent in the North-East and North-West region/ Okorie-Ajah and Okpan (2018) Kidnapping has great adverse effect on the nation's socioeconomic development. Inyang and Ubong (2013) noted that over the last few years, the wealthy and the income earners have been picked up by kidnappers who only free their victims after payments of ransom. Okorie-Ajah, and Okpan (2018) revealed that kidnapping exerts enormous and far reaching economic and social costs in the research conducted in Imo. For them, it induces and creates a palpable ambience of fear and despair for all citizens and stultify economic growth and sustainable development. From their observation, kidnapping is one major development challenge bedeviling Nigeria today. They conclude that it drives away investment, both domestic and foreign direct investments and consequently slows down growth which has devastating effect on the socioeconomic wellbeing of the family.

Theoretical framework

The theoretical framework for this study is Talcot Parson's model of structural functionalism



Source: Google Search

Fig. 2: Structural Functional Model

Structural functionalism

Structural functionalism is an approach in Sociology which was developed at the wake of 19th century's industrial revolution. This theory was sociologically developed as an adequate tool for dealing with the interrelatedness of various traits, institutions, groups, and so forth, within the social system. Structural functionalism is as old as the history of sociology. This is evident in the

works of the founding fathers of the discipline like Auguste Comte (1798- 1857) and Herbert Spencer (1820-1903). Coser (1976) attempts a definition of structural functionalism. He saw structure as referring to a set of relatively stable and patterned relationships of social units, while he perceived functions as referring to the consequences of social activities which make for adaptation or adjustment of a given structure or its component parts.

METHODOLOGY.

This study employed cross-sectional quantitative research design, using a survey research method. It is a quantitative approach which uses statistical method of data analysis to study random samples so that findings can be generalized beyond the sample to the population. The research was conducted in five different council wards of Katsina local Government. The target populations for this study will consist of all adult's members of the general public (both male and female) that would be available during the study. According to National Population Commission (2022), Katsina Metropolis government area comprises of 10, 368, 500 total number of people living in the area, also, Law enforcement officials, community members and community leaders form part of the population of the study. Katsina State is etsimated with the population of 10,368,500. The technique employed for this research is the purposive sampling technique based on the researcher's convenience. The Study will sample 400 respondents randomly.

In the process of data collection, questionnaire was distributed accordingly to the target respondents who are the populist or residents of Katsina Metropolis Local Government Area of Katsina state. The reasons for adopting questionnaire as an instrument for collecting data is that it enables the respondent to supply the most accurate data, to the best of his or her knowledge and experience and it save time, cost lees and at the same time the majority of the people within the area are educated therefore, it is assumed that, they will be able to respond to the questionnaire that was administered to them. Analysis of data was descriptive using frequency tables and percentages while hypothesis testing is through chi-square inferential statistics. Data were coded and analysed using Statistical Package for the Social Sciences (SPSS) computer software version 21.

DATA ANALYSIS AND DISCUSSION

Table 1: Socio demographic Variables per Council Wards in Katsina Metropolis

Gender	K/Sauri	K/Kaura	Bayajidat	Ajiya	Katsina	Totals	Percent
Male	52	57	35	47	51	**242**	**64.7**
Female	17	15	41	32	27	**132**	**35.3**
Totals	**69**	**72**	**76**	**79**	**78**	**374**	**100**
Age in Years							
18 – 30	27	34	24	27	43	**155**	**44.5**
31 – 50	39	30	38	36	20	**143**	**41.1**
51 & above	3	6	14	16	11	**50**	**14.4**
Total	**69**	**72**	**76**	**79**	**74**	**348**	**100**
Education qualification							
Primary	8	11	21	17	13	**70**	**21.0**
Secondary	23	34	39	20	32	**148**	**44.3**
Tertiary	30	20	11	12	30	**103**	**28**
Total	**53**	**69**	**73**	**73**	**66**	**334**	**100**

Table 1 presents the socio demographic data of respondents across five sampled council wards of Katsina. Findings from the data indicated that (242) 64.7% respondents were males, while (132) 35.3% respondents were females. This was as a result of declined interest in academic exercises by most female folks in Katsina. (155) 44.5% respondents, were aged 18 – 30 years, (143) 41.1% were aged 31 – 50 years, and (50) 14.4% were aged 51 years above. This age distribution showed that most respondents were between 18 – 50 years. This result implied that there were more younger persons in the sampled (urbanite) areas, whereas older persons retired to rural areas. (70) 21% were having primary education, (148) 44.3% were having secondary education, and (103) 28% had tertiary education. This result indicated that most respondents had attained secondary and tertiary education. Of course, a major criterion for respondents' selection for this survey was the ability to read and write eligibly.

Table 2: What are the factors Influencing Kidnapping in Katsina?

Factors	Frequency	Percentages (%)
Unemployment	258	69.0
Religion/Ritual	23	6.1
Politics	55	14.7
Greed	33	8.8
Others	5	1.3
Total	**374**	**100**

Source: Field Survey, 2022.

From the table 2 (258) 69.0% respondents were of the view that unemployment was the major factor influencing kidnapping. (23) 6.1% indicated that religion/rituals were responsible for kidnapping. (55) 14.7 % opined that politics influenced kidnapping. (33) 8.8% posited that greed was a driver of kidnapping, while, (5) 1.3% were of the opinion that other factors such as clinically verifiable psychosomatics, were responsible for kidnapping in Katsina local government of Plateau state. This data indicates that unemployment was the dominant factor influencing abduction of victims in Katsina.

Table 3: Where do Kidnapping activities take places frequently?

Places of occurrence	Frequency	Percentages (%)
Place of worship	22	5.9
School	53	14.2
When travelling	234	62.6
Market	4	1.1
Others	61	16.3
Total	**374**	**100**

Source: Field survey, 2022.

Results in table 3 indicated that (22) 5.9% showed that kidnaped victims were abducted from places of worship. (53) 14.2% said abduction was in schools. (234) 62.6% opined that

abduction occurred while travelling. (4) 1.1% averred that abduction was in the market place, whereas, (61) 16.3% opined that abduction occurred in other places. This data indicates that travelers were more prone to being kidnapped due to their exposure on interstate highways, and since they were not within capable guardianship, and had no form of target hardening feats to rely on for their security.

Table 4: What are the Category of individuals mostly kidnapped?

Categories of Individuals Kidnapped	Frequency	Percentages (%)
Students	200	53
Business men	30	8
Civil Servant	48	13
Politicians	4	1
All of the above	92	25
Total	**374**	**100**

Source: Field survey, 2022.

Results from table 4 show that (200) 53% indicated that the students were most likely kidnapped. (30) 8% opined that the business men were the most victimised. (48) 13% opined that Civil Servant were the most kidnapped, while, (4) 1% observed politicians were most likely to be kidnapped and (92) 25% respond that all of the above.

Table 5: Kidnapping has effects on the human development in Katsina

Response	Frequency	Percentage (%)
Strongly agree	150	40
Agree	95	26
Strongly disagree	79	21
Disagree	50	
		13
Total	**374**	**100**

Source: Field survey, 2022.

Results in table 5 show that (150) 40% and (95) 26% opined that kidnapping has negative effects on the human development, while, (979) 21% and (5) 13% averred that kidnapping has no negative effects.

Assessment of the level of kidnapping in Katsina local Government.

Table 6: How can you rate kidnapping in Katsina?

Rate of kidnapping	Frequency	Percentages (%)
High	140	37.4
Moderate	123	32.9
Low	111	29.7
Total	**374**	**100**

Source: Field Survey, 2022.

Table 6 indicated that (140) 37.4% were of the view that rate the kidnapping was high and (123) 32.9%, said that it was moderate while (111) 29.7% said it was moderate. This data shows a slightly high incidence of kidnapping in Katsina.

Table 7: What are the Possible Solutions of Curbing Kidnapping

Solution	Frequency	Percentages%
Adequate Policing	21	5.6
Employment/empowerment	241	64.4
Proper Youth Socialisation	38	10.2
Stiffer Penalty	74	19.8
Total	**374**	**100**

Source: Field Survey, 2022.

Result shown in table 7 revealed that, (21) respondents 5.6% suggested that kidnapping could be curbed by adequate policing, (241) respondents 64.4% suggested employment/empowerment, and (38) 10.2% suggested proper youth socialisation, while (74) 19.8% suggested stiffer penalties. This result implies that majority of respondents were confident that employment generation and the empowerment of policing agencies would curb the rising kidnapping trend.

Table 8: Kidnapping hinder the socioeconomic development of Katsina.

Response	Frequency	Percentage (%)
Strongly agree	150	40
Agree	95	26
Strongly disagree	79	21
Disagree	50	
		13
Total	**374**	**100**

Source: Field survey, 2022.

Results in table 5 show that (150) 40% and (95) 26% opined that Kidnapping hinder the socioeconomic development of Katsina, while, (979) 21% and (5) 13% averred that Kidnapping has not hinder the socioeconomic development of Katsina.

Testing of Hypothesis:

The null hypothesis formulated in this study was tested using the chi-square (X^2) independence statistics test, to test the measure of association between hypothesised variables.

The analysis was guided by the decision rule of chi-square and probabilistic statistics, cited in Udofia, (2013, pp. 207–209; 85–92), which states that: "When

1. If the calculated value of chi-square is greater than the tabulated value, we reject the null hypothesis and accept the alternate hypothesis. And
2. If the *p*-value, is less than alpha value, we reject the null hypothesis and accept the alternative hypothesis.

Total unemployment and the Cross tabulation of Influence of Unemployment and Kidnapping of Individuals

* The Rate of Kidnapping

Variables		The rate of kidnapping			
		High	moderate	low	
Influence of	Yes	95	103	82	**280**
kidnapping of individuals	No	45	20	29	**94**
Total		**140**	**123**	**111**	**374**

Table 5 shows the cross tabulation of the variables involved in stated null hypothesis.

Ho: Kidnapping is not significantly influenced by Unemployment.

Table 6: Chi-Square Independence test Result

Measures	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.860[a]	2	.012
N of Valid Cases	374		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.90.

Table 6 presents the Chi-square test result. X^2 = 8.860 Critical = 0.5987.

Therefore, Chi-square Independence test result shows: X^2 (2, 374) = 8.860, p = .012, *s*.

CONCLUSION

The incidence of kidnapping in Katsina and indeed Nigeria is exasperating. It is however not strange because there are known social factors influencing its prevalence. The various reasons for kidnapping maybe multidimensional but, this study has identified unemployment, poverty and unequal employability scaling, caused by corruption and greed on the part of leaders and the state authority; as well as the lifestyle and routine activities of members of the upper and middle class as motivating factors. It is noteworthy that as culture shifts, so does trends in kidnapping. Kidnapping trends such as virtue kidnapping may not be very pronounced at the moment of conducting this study, it nevertheless is bound to surface as technology grows continually in the country.

The present level of threats posed by kidnapping may have stimulated diverse social and physical security responses from individuals, organisations and the government, to nip the malady in the bud. Thus, the study concludes by noting that kidnapping could be checked significantly with the employment of tougher security measures and empowerment of existing security forces. Also, a massive job creation policy is imperative in engaging Nigeria's teeming population of unemployed youths productively. To achieve this both government and private industrialists should take up the challenge.

RECOMMENDATIONS

The study has made the following recommendations to curb kidnapping in Katsina state and Nigeria at large.

i. Top most of the recommendation arising from the study is on employment generation. The danger of having unemployed subjects (youths) is recognised as causative of the high-strung kidnapping activities. Therefore, governmental and non-governmental agencies, private and public institutions such as schools and religious organisations are admonished to cater for the employability needs of members across all ages, especially the youths.

ii. Empowerment of youths has to be tailored to the values of earned trust. The current prominence given to inordinate wealth acquisition and an unrestrained culture of flamboyance needs to be de-emphasized, and the value system of the youth reassessed towards contentment and productivity through proper resocialisation

iii. The law enforcement agents, such as the police and judiciary should intensify prosecuting kidnappers with stiffer penalties so as to deter intending abductors. Proper youth socialization would undoubtedly curb the preponderant number of emerging kidnappers.

iv. Resocialization of Nigerian youths, is one of the recommendations from this study. If all Nigerians re-evaluate their cultural/traditional value system, then, there would be reduction in such criminal acts.

v. Modern Kidnapping trends could be checked through adequate policing. This involves employing or recruitment of more policing agents—both conventional and traditional policing structures, so as to reduce the gap in policing the Nigerian public.

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EMPLOYEE RETENTION STRATEGIES AND ORGANIZATIONAL PERFORMANCE IN THE BANKING SECTOR OF RIVERS STATE

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ABSTRACT

This study examines the relationship between employee retention strategies and organizational performance in the banking sector of Rivers State. The embeddedness theory was use as a theoretical framework for the study. Out of a population of 360 workers, a sample size of 186 was ascertained using the Krejcie and Morgan sample size determination table. The study revealed that employee retention strategies strongly affect organizational performance in the banking sector of Rivers State. It was concluded that employee retention strategies strongly and positively relate to organizational performance in the banking sector. The study recommended that managers should use career development as an important strategy retaining talented workers in order to improve performance and manager should use appropriate compensation system that will keep and encourage talented employees to improve organization performance.

Keywords: banking sector, employees retention strategies, organizational performance,

INTRODUCTION

In all organizations, the retention skilled workers has been a major concern to management. It is the responsibility of the management to retain competent staff in order to achieve superior performance. Bernard and Peggy (2018) opined that employee retention involves taking measures to make employee remain committed to the organization. Chaminade (2007) also sees retention as a voluntary step by an organization to create a good work condition which engages workers for long period of time. Nwulu and Ateke (2018) argue that it is imperative for firms to hire and retain competent employees that are skilled in the performance of their tasks; and deploy same to perform such tasks in which they are proficient, if they must remain successful in today's highly competitive business-scape.

A good retention strategy enables organization to keep competent employees and also keep the organization in a viable position among other revenues. The main purpose of formulating retention strategies is to prevent the loss of competent workers from the organization which could in turn negatively affect the performance of the organization and the employs respectively. Employee retention strategies are means and set of managerial step taken to keep competent, committed and loyal employees for greater performance. Cherebie (2008) supported the above that employee retention strategies refer to the means, plan and decision-making put in place by organization to keep their workers for performance.

Organizational performance is the ability of the organization achieves its goals and objective effectively and efficiently. Richardo (2001) noted that organizational performance is the capacity of the organization to attain its desired goals. Performance is very vital in the organization because it serves as a point measurement of overall achievement. Murphy, Trailer, and Hill (1996) element of organizational performance are effectiveness, efficiency, profitability productivity

and survival achievement of the above dimensions enables the organization to gain competition advantage among others.

The banking sector is highly competitive and dynamics due to the recent increase in technology in the financial sector. The sector needs competent workers in order to achieve higher performance. But it becomes so problematic for the organizations when highly skilled and experienced leave the organization. The challenge some banks faced today is the inability to formulate retention strategies such as career development, compensation system, recruitment/selection, training and supervision that will keep competent employees. These problems in turn lead high employee turnover rate, low performance, low commitment and lack of job satisfaction. Employee retention is the most crucial challenge faced by the organization (Domfeh, 2012). Organization that fails to formulate useful strategies to keep their employees suffers low performance. Brown (2006) also noted that lack of effective retention strategies in organization will result to low performance. To solve this problems, this study opts to investigate the effect of employee retention strategies on organizational performance in the banking sector Rivers State.

The major objective of this study is to determine the effect of employee retention strategies on organizational performance in the banking sector. The specific objective are examine how career development and compensation system relates to organizational performance. The study is guided by the following hypotheses:

Ho_1: There is no significant relationship career development and organizational performance.

Ho_2: There is no significant relationship compensation system and organizational performance.

REVIEW OF RELATED LITERATURE

Concept of Employee Retention Strategies

Employee retention strategies are a systematic step taken to retain talented employees in the organization. Employee's retention is how a firm keeps their employees from leaving the organization. (Armstrong, 2009). Employee retention largely depends on some strategies formulated by the organization in order to encourage employees to stay in the organization and also perform effectively. These strategies according to Armstrong (2009) are compensation system, recruitment/ selection, supervision, training and career development. The above strategies influence employee behaviour at work because it gear towards employee wellbeing and good condition of work.

Organizational performance is the ability of firm to achieve its stated goals. Daft (2000) noted that organizational performance is the capacity of an organization to accomplish their through the use of available resource in an efficient and effective way. Organizational performance involves identifying outcomes that it wants to achieve, creating plans to achieve those outcomes, carrying out those plans, and determining whether the outcomes were achieved. The performance of an organization often manifests itself in employee behaviour and result. Employee behaviour is shown in the physical and mental ability of the employee and result represents the outcome of employee efforts. That is to say, employee competence and ability to perform tacks is a crucial factor that determines the level of organizational performance. Therefore, keeping an experienced worker in organization will improve the performance of a firm.

Career Development and Organizational Performance

Employee sees career development as great attractors to the organization. Career development is a retention strategy put in place by the organization to improve the skills of an employee and to keep employee in the organization. It provides employee with specific skills and correct deficiencies in their performance. Domfeh (2012) noted that career development include improving basic literacy, interpersonal communication, technological knowhow and problem solving, skills among employees. These in turn improves the ability of a firm to achieve its desired goals and objectives. Staw (2001) revealed that employee are motivated to perform effectively due to the perception of career has significant effect on performance because it provides workers the needed skills to perform tasks. Noe (2010) supported that career development attracts top talent, job satisfaction, reduce employee turnover intention and increase general performance (both firm and employee). In the same vien, Napitapulu et al. (2016) also noted career development strongly influence the performance of the employees as well as organizational performance. Career development is the practice of providing training, workshops, coaching, mentoring, or other learning opportunities to employees to inspire, challenge, and motivate them to perform the functions of their position to the best of their ability.

Compensation System and Organizational Performance

Compensation system in the organization is one of the vital factors that attract talented employee compensations refer to what the organization offer to their workers in response of their (workers) performance and contribution toward goals achievement. Compensation includes financial reward and non-financial reward in the organization. It plays a vital role in performance improvement because employees remain in the organization where compensation offered matches their inputs (skills and experience provided). Staw (2001) noted that compensation system significantly attacks committed workers, increase employee aspiration to stay in the organization and improve organization performance.

Compensation strategies provide firm a strong competitive advantage by improving their ability to keep and attract talented employees. Domfeh (2012) noted that employees are more likely to stay in the organization where rewards are paid accordingly. The performance of employee and their willingness to stay is largely affected by compensation system in the organization. Workers who are satisfied with compensation system choose to remain in the organization as they believe losing such a huge reward is costly. Wilis (2002) noted improve in performance is affected by the reward for tasks performed. That is to say, compensation paid to workers influence the level of performance in the organization.

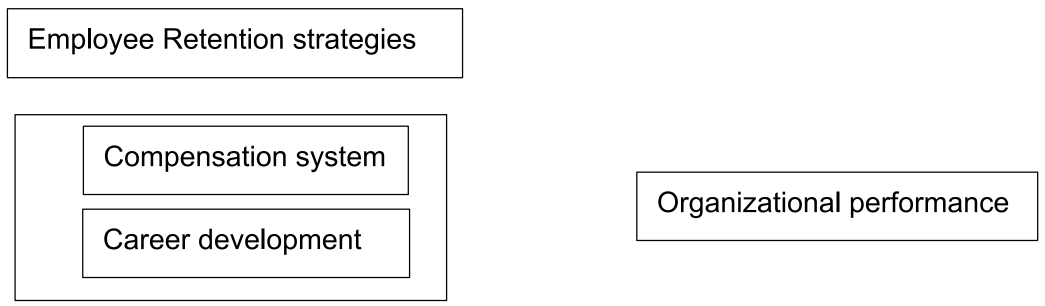

Fig: 1 Conceptual framework
Source: Researcher's operationalization, 2022.

THEORETICAL FRAMEWORK

Job Embeddedness Theory

This theory is used as the theoretical foundation for the study. Job embeddedness theory was developed by Mitchell, Holtom, Lee, Sablynski and Erez in 2001. The theory explains why employee stays in the organization, their work outcomes and work attitudes. According to Young, Stone, Ahaga and Shuck (2013), job embeddedness explain employees links to other people and group, perception of employee fit with job and workplace as well as employees feelings about the sacrifice paid for leaving their current job. The theory states that job embeddedness has three dimensions such as links, fit and sacrifice. Links explains the relationship employee have with other in the organization. Fit described the compatibility that an employee has with their work. Sacrifice refers to the loss that employee will bear when leaving the organization.

This theory states that job embeddedness Influence employee decision to stay or to leave the organization. Organization that embedded their workers will retain talented employees for better performance. Maliku (2004) supported that job embeddedness influence employee's decision to whether remain in the organization or to leave. This is because embedded workers will be less likely to leave the organization this having a strong and positive impact on their performance and organizational performance.

METHODOLOGY

The study used cross sectional survey method. The population size is 360.Twenty commercial banks are currently operating within the Port Harcourt and a total of ten (10) was selected. The total number of population drawn from the 10 selected banks is 360. The Banks are Access Bank, FCMB PLC, First Bank of Nigeria PLC, Guarantee Trust Bank, Wima Bank, Sterling Bank, UBA PLC, Polaris Bank, Union Bank PLC, and Zenith Bank PLC. Out of a population of 360 workers, a sample size of 186 was ascertaihed using the Krejcie and Morgan (1970) sample size determination table. This means that the sample size for the study is 186. Data collection method was primary and secondary method was used. Questionnaire was used to collect relevant data. The response format was scaled in a five (5) points Likert scale which range from strongly Agree, Agree, Fairly Agree, Disagree, Strongly Disagree. The hypotheses were tested using the Spearman Rank Oder Correlation coefficient. The hypotheses were tested at 0.05 (5%) level of significance.

RESULTS AND DISCUSSIONS

Table 1: Correlation analysis between career development and organizational performance Correlations

			Career Development	Organizational Performance
Spearman's rho	Career Development	Correlation Coefficient	1.000	.545**
		Sig. (2-tailed)	.	.000
		N	186	186
	Organizational Performance	Correlation Coefficient	.545**	1.000
		Sig. (2-tailed)	.000	
		N	186	186

****Correlation is significant at the 0.05 level (2-tailed).**

Source: SPSS data Output (2022).

Career development and organizational performance correlates at .545, when the p-value is 0.000 < 0.05. This signified a moderate correlation. Thus, we reject the null hypothesis and accept that the there is significant and a moderate positive relationship between career development and organizational performance.

Table 2: Correlation analysis between compensation system and organizational performance Correlations

Correlations

			Compensation System	Organizational Performance
Spearman's rho	Compensation System	Correlation Coefficient	1.000	.426**
		Sig. (2-tailed)	.	.000
		N	186	186
	Organizational Performance	Correlation Coefficient	.426**	1.000
		Sig. (2-tailed)	.000	
		N	186	186

**Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS data Output (2022).

Compensation system and organizational performance correlated at .426 when the p-value is .000 < 0.05. This indicates that there is a moderate relationship. Therefore, we reject the null hypothesis and conclude that there is a significant and moderate relationship between compensation system

and organizational performance

DISCUSSION OF FINDINGS

The findings of hypothesis one indicated that career development and organizational performance correlates at .545, when the p-value is 0.000 < 0.05. This indicated a moderate correlation. Thus, we reject the null hypothesis and accept that the there is significant and a moderate positive relationship between career development and organizational performance. The finding is supported by the work of Napitapulu, Harhone, Riain, Sawitri and Harsono (2016) which revealed that career development strongly influence the performance of the employees as well as organizational performance. Increase in employee career development also increase organizational performance.

The findings of hypothesis two signified that compensation system and organizational performance correlated at .426 when the p-value is .000 < 0.05. This indicates that there is a moderate relationship. Therefore, we reject the null hypothesis and conclude that there is a significant and moderate relationship between compensation system and organizational performance. This finding collaborate with the work of Staw (2001) which revealed that compensation system significantly attacks committed workers, increase employee aspiration to stay in the organization and improve organization performance. In the same vein, Wilis (2002) supported that improve in performance is affected by the reward for tasks performed.

CONCLUSION AND RECOMMENDATIONS

Organization performance largely depends on the contributions and commitment of employees and their ability perform affectively. Organization embarks on different means and channels to keep and develop competent workers in order to increase their performance. Retention strategies are beneficiary to both employee and the organization because it improve employee affective commitment to the organization and improve general performance of the organization. This study concluded that employee retention strategies strongly and positively affect organizational performance in the banking sector; recommends that:

a. Managers should use career development as an important strategy for retaining talented workers in order to improve performance.
b. Manager should use appropriate compensation system that will keep and encourage talented employees to improve organization performance.

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ORGANIZATIONAL REENGINEERING AND SOCIO-ECONOMIC TRANSFORMATION OF DEVELOPING ECONOMIES: THE PLACE OF MANAGEMENT SCIENCES

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ABSTRACT

Complexity and applied systems thinking provides a standard method for the evaluation and study of societal and organizational patterns. Seeing organizations as a system rather than as individual parts increases our ability as leaders to stimulate creative and innovative approaches, so we can accurately predict and control events before they occur. From an organizational management perspective, using processes of systems thinking and mental modeling capacity, relational dynamics leaders can evaluate changing corporate environment quickly and develop strategies to understand complexity dynamics better. The purpose of this conference paper was to analyzes the role of management sciences in organizational reengineering and socio-economic transformation of emerging economies through systems thinking. Hence, we adapted systems thinking to identify subjective forces underlying the socio-economic transformation of emrgent economies. Systems thinking is characterized by the interaction of components and their nonlinearity of those interactions, while complexity stems from the interrelationship and interconnectivity of elements within a system, and between a system and its environment.

Keywords: Interdependency, interrelationships, socio-economic, systems thinking, reengineering

INTRODUCTION

Over time, the concept of organizational reengineering and socio-economic transformation was analyzed from divergent perspectives. Some of them refer to complex adaptive systems characterized by evolutionary behavior observed in a series of models, others are focus on alternative economic models with increasing potential for setting the agenda for economics, governance, and social development (Smith & Bedau, 2000; Goksoy, Ozsoy & Vayvay, 2012). In complexity theory, systems thinking concerns an understanding of a system by examining the relationship and interactions between the components that define the system (Oshry, 2013; Meadows, 2008; Senge, 2006). Systems thinking deals with seeing the big picture rather than looking at the individual part. It is developed to aid in making subtle patterns clearer. According to Boulding (1956) and Walonick (1993), systems thinking emerges from general systems theory, developed by biologist von Bertalanffy in 1928. They both argue that the general systems theory assumed that a system is characterized by the interactions of its elements and the nonlinearity of those interactions. This conference paper analyzes the role of management sciences in organizational reengineering and socio-economic transformation of emerging economies through systems thinking.

From extant literature, management sciences are a multidisciplinary framework that provides scholarship and derives its origin from mathematics, physics, chemistry, biology, psychology, sociology, economics, and finance (Eidelson, 1997; Chan, 2001). Like complex adaptive systems, management sciences are extensive collection of diverse parts interconnected in a hierarchical structure such that continuity is a natural condition (Jones et al, 2016). In this paper, our objective is to use changes in management, social, economic, and finance theories to explain the socio-economic integration as a paradigm shift toward a market-oriented economic system. In a version of neoclassical microeconomic models of perfect competition based on price, regulations, and shareholders wealth maximization criteria for firms, designed to produce high levels of societal benefits, at least, works perfectly well. However, in the emerging economies, such as Nigeria, there are several reasons to argue otherwise.

First, we consider the characteristics of the modern capital markets under systems thinking, adapting complexity theory to illustrate how organizations can apply swarm intelligence with critical insights that have enormous implications to modern management. The application of such intelligence according to Morgan (2006) termite metaphor suggest that managemnet scholars should rethink what organization means, learn the art of managing change, learn how to use small change to create significant effects and embrace the process of self-organization. Hence, we can extrapolate from the termite metaphor the concept of organizational reengineering designed not only to help solve a number socio-economic problems, but also help to convert the reengineered process into a competitive advantage.

Second, a considerable numbers of management research points to lack of leadership and management strategy as conditions responsible for making the neoclassical microeconomic models of perfect competition less applicable in emerging economies. In an inaugural lecture, Professor Hamilton (2022) describe strategy as a virtual rocket built by managers which take their organizations to the future, they deserve. The argument is consistent with Fielder (1967, 1978) who developed the contingency theory of leadership. The framework contends that leader effectiveness is determined by both the personal characteristics of leaders and the situations in which leaders find themselves. The theory is equally consistent with organizations as open systems in which different approach to management may be necessary to perform different tasks within the same organization designed to improve performance and maximize shareholders wealth (Morgan, 2006; Raymond et al., 1998). In sum, an understanding of change process is only given when the situational characteristics that shape efficiency is explicitly considered.

This paper is structured as follows: In section 2, we present a brief background information on organizational reengineering. In section 3, we use three of the four Morgan's frames: the culture, structural, and political frames as filters for management trend for organizational reengineering. The structural frame focuses on the emergence of microfinance institutions; identify its role and objectives, determine its impact on the economy, and recommend policies. The political frame through regulation and compliance emphasizes understanding organizational politics, conflicts, power struggle, and individuals, their strengths, weaknesses, emotions, motivations, and fears. It also provides an opportunity to explore the effects of regulation and compliance on organizational performance. While the culture frame considers the disparity in the lending process of the banks. Section 4 addresses the interrelationships of the frames discussed in section 3, and use their similarities if any to make recommendations for organizational improvement.

Section 5 concludes with the summary and a concluding remark on perspectives on organizational reengineering and socio-economic transformation in developing economies and their implications for leaders.

Organizational Reengineering

Organizational reengineering (OR) involves integrating core management issues central to effective implementation. Professor Hamilton (2022) defines three critical ones as behavioral, organizational, and functional policy issue. OR is one of the critical changes management approaches designed to bring incredible solutions to the firm. In the area of socio-economic transformation, organizational reengineering has changed business process globally. However, in the emerging market of Nigerian, due in part to inconsistent and unstable socio-political environment, the system mechanisms adapt inappropriately to today's highly competitive and constantly changing market place. In an inaugural lecture, Hamilton (2022) contends that leadership in Nigeria has not only been unable to articulate any meaningful strategy, but also has not properly shaped the Nation's structure and processes to fit its strategy.

In the era of renewed competition or hypercompetition (post covid-19), subjective forces have highlighted the need for organizational reengineering to pursue multiple goals via the same means, such as processes and resources. The place of management sciences in the advancement of technological sequencing and time-honored partitioning of processes from scholar-practitioners in both academic and corporate world is enormous (Goksoy et al, 2012). As a multidisciplinary framework, management sciences via research and development can create value through process thinking to produce positive results for organizations performance measurement, cost reduction, increased production, enhance business solutions, and maximize shareholders wealth. According to Dean (1996), process reengineering can increase major internal and external quality performance, hence increasing competition and customer satisfaction.

In order to increase management effectiveness in dealing with the financial crisis, management must implement a holistic communication and dissemination strategy throughout the organization. In a financial crisis, the ability of an economic system to regain some degree of normality after a recession in self-regulating (Global Risks, 2013). It is a period of increasing economic activity foreshadowing the end of a recession. According to experts, a successful economic recovery process promotes practices that minimize the organization's risk to all dangers and strengthens its ability to withstand and recover from the impending crisis. By applying system thinking, and focusing on the resilience of the organization as a whole, the organization's adaptive capacity to recover from change is enhanced. In a systems approach, the extent to which the analysts address the resilience of the individual subsystems can vary.

Cultural Frames

Disparity in lending practices

In the emerging economy of Nigeria, particularly with reference to the banking industry, banks could engage in process reengineering to change the insensitivity to the credit needs of certain essential sectors. In an inaugural lecture, Toby (2022), argue that for a period of twenty-one years (1981-2010), that the central bank of Nigeria through its monetary policy failed to direct credit naturally without coercion to the agricultural and manufacturing sectors. According to Toby (2022), the average bank credit to the agriculture sector within the period, ranged between 9.0%

and 10.1%. While bank credit to the manufacturing sector ranged between 32.0% and 36.58%, and unfair proportion when compared to this sector's contribution to the GDP. Toby (2022) argued that at 5% level of significance, the inferential statistical test shows a significantly weak correlation between the commercial bank lending and the contribution of agriculture to the GDP.

Toby (2022) contends that the agriculture sector contributed 35.5% to the GDP, while the manufacturing sector contribution averaged 5.4%. With such disparity in lending practices, socio-economic transformation of the Nigerian economy will continue to suffer, thereby, threaten the survival of the nation. Toby (2022) is of the opinion that there is an urgent need to implement a policy framework that would not only regulate these banks, but also help to increase mobilization, and shifting a good proportion of credit portfolio to the promotion of real sector activities in agriculture and manufacturing.

In this kind of emergent economy, understanding how culture norms sybolized great corporate resilience, which is part and parcel of the organizational reengineering and corporate socio-economic transformation cannot be overemphasized. Understanding organizations as culture according to Morgan (2006) has two particular strengths: it focuses attention on the symbolic meaning, or mystic, of many of the coolest features of organizational life, and it demonstrates that organizations are based on shared meanings and framework of interpretation that create and recreate these meanings. Corporate ethics can enhance organizational reengineering by creating stronger moral values, systems of beliefs, and rules that govern how management and employees should act toward each other, people, and communities outside the organization (Jones and George, 2012; Stoner & Freeman, 1989).

From a cultural perspective, the focus on leadership as the key factor in understanding and influencing corporate dynamics is essential, because the link between an organizational culture with ethical thoughts is leadership. With increasing demands competition, growth, technological developments, and regulations, leadership must be proactive in reengineering business processes to achieve performance improvements and encourage socio-economic transformation. (See Ozsoy & Vayvay, 2012). However, according to Morgan (2006), merely reducing organizations to their technical and formal aspects pose a challenge because organizational culture is understood not as a particular expression of human character and vitality, but as a new form of influence and control. From extant literature, organizations can be profitable and socially responsible at the same time only when ethical values and rules control self-interest behavior that threatens the collective interests of organizations and society in general (Jones, 1995).

The emergence of microfinance institution

It is believed that an adaptive corporate structure is the best organizational frame because it allows both management and employees to respond more quickly to changing contingencies. Consider the case of an impending massive layoffs. Even though these actions may lead to an increase in shareholhers wealth, an adaptive organization may choose not to layoff the workers but rather incorporate a positive social welfare reforms that would simultaneously enhance relationships between management and workers. In the emerging capital market of Nigeria, developing a functional policy requires reengineering corporate culture and change how policies are implemented.

According to Hamilton (2022), in the context of Nigeria, policies refer to specific guidelines, methods, procedures, rules, and administration. In the structure frame, equally significant is the allocation and deployment of resources. From Hamilton (2022) perspective, the greatest challenge in the strategy implementation process envolves around internal and external policies, two core structure proxies. In Toby (2022) inaugural lecture, the intermediation paradox of the centarl bank contractionary monetary policy is another evidence of coporate culture with unintended consequence. According to Toby (2022), under the declining savings rate regime, between 2006 and 2020, depositors lost income, while banks increased earnings through interest margins.

Conceptually, organizational reengineering is not only dependent on the current environmental, social, economic, and technological situation, but also on the interaction with its internal subsystems (Hamilton, 2022). As systems theorists suggest, one can understand organizational design by simultaneously investigating the contingencies and structure alternatives existing in an organization. One such structure alternative in the Nigerain banking sector is the financial intermediation through the microfinance institutios (MFIs). From empirical evidence, these instititions have become the main source of funding for small and micro businesses. Before the advent of microfinance institutions, government sponsored development financial schemes were operational but unsustainable (Anyanwu, 2004; Seibel & Marx, 1984).

Process reengineering by the private sector gave birth to microfinance in Nigeria. As an emergent process, the MFIs improve the socio-economic conditions of rural women through loan assistance, community development, skill acquisition, and sustainable livelihood (Anyanwu, 2004). According to empirical evidence, these rural financial systems through self-help movement started in Germany some 150-200 years ago (Adams et al., 1984). Seibel (2003) cronicled the history of self-help movement with the first thrift society establihed in Hamburg, Germany in 1778, followed by the first community bank in 1801, and the first urban and rural cooperative credit associations in 1850 and 1864 respectively. According to Seibel (2003), similar development occurred in Ireland through Irish charities which emerge in the 1720s due to tremendous increase in poverty.

These Irish charities started with interest-free loans from donations. In 1823, a special law turned the charities into financial intermediaries with the ablity to collect interset bearing deposits and interest bearing lonas. These financial ntermediatries were so successful that around 1843, the Irish government put a cap on the interest rate, and in the 1980s the loan funds losted their competitive advantage (Seibel, 2003). In the emerging financial market of Nigeria, the origin of microfinance is without a doubt has its own history. According to Seibel (1970) and Seibel and Massing (1974), the evidence of such institution dates back to 1700s through an esusu system – a form of rotating savings and credit association. As the process of savings evolves, numerous adaptations and innovations began to emerge.

According to Seibel (1970), one of such innovations is the transformation into savings associations with loan fund; while the other is daily deposit collection at doorsteps. However, its origin in Nigeria is open to debate. But as an informal financial institution, its significance and popularity cannot be over emphasized. Its so decentralized that virtually every ethnic group has its own form of self-help movement. As socio-economic conditions of rural and urban workers starts to

improve, modernization of the self-help schemes began to change. Aroound the 1950s, provincial initiative start to emerge; bye-laws regulating its activities went into effect; cooperative thrift and credit societies grew astronomically.

According to Seibel (1970), within a ten year period, these cooperatives grew in numbers from 5 in 1952 to 94 in 1962. In proportion, their numbers also incresased from 20% in 1952 to 44% in 1962. Their working capital and savings, and membership rose from20% to 52% and 23% to 58% respectively. By 1980s, financial intermediation through linkage banking emerged. From corporate finance perspective, financial intermediatries accumulate scarce resources from the surplus end of the economy to the deficient end of the economy in other to increase productitive. In the process, financial intermediaries manage risks, reduce transaction costs, and increase efficiency (Achieng, Karani, & Tabitha, 2015). In the emerging capital market of Nigeria, the functional structure of these institutions continue to change as government starts to regulate the industry.

From a philosophical perspective, a functional structure, is where people grouped together according to similarities in their responsibilities can easily communicate and share information with each other (Child, 1977; Hall, 1972). Such structure offers some advantages and disadvantages. Two of such advantages are coordination and motivation. Research shows that people who approach problems from the same perspective can often make decisions more quickly and efficiently than people whose views differ (Miles, 1980). When workers are grouped together by function, managers are in better position to monitor individual performance, and reward accordingly. One significant disadvantage of the functional structure is the tendency of the structure to hinder coordination as the organization expands its operations. As the organization increases its capacity, its various functions can begin to experience difficulties in coordination. For instance, as companies grow, they often expand their operations, servicing the needs of different regional customers with a single set of financial product or service becomes involved.

Political Frame

Regulation and compliance

From empirical data, regulations and compliance are two significant impediments in the global financial markets (Bejide, 2019). For an emerging economy such as Nigeria, the need to regulate its financial market is significant. The global perception of Nigeria as a risk country is not only a challenge for local investors, but also a deterrent to foreign direct investment. Hence, adequate regulation and disclosure compliance increases the confidence of both local and foreign investors. Regulatory compliance enhances good corporate governance, which in turn creates transparency in the relationships between corporations and the investing public. So, from Morgan (2006) political frame perspective, regulatory compliance, instead of creating frictions, it provides better relationships and transparency in the operations without compromising any business secrets or strategy. From the general systems perspective, complex systems are self reregulating.

As an emergent economy, the Nigerian financial market through compliance, can regulate practical economic measures designed to increase economic development and long-term sustainability. Complex systems like the global financial markets are divided into units which are subdivided into smaller units, and so on. Boulding (1956) and Von Bertalanffy (1972) argued that among possible systems of a given size and complexity, hierarchical systems composed of subsystems, are the most likely to appear through evolutionary processes. They also contend that the mechanisms of natural selection will produce hierarchies much more quickly than non-hierarchic systems of comparable size. In their view, this is because the components of hierarchies are themselves stable systems.

From a leadership perspective, the hierarchical framework as seen through the lens of Boulding and Von Bertalanffy are somewhat generalized. Thus, they would require some form of modification before they could be applied to a particular organizational situation. As with the top layer of any economic system, the mechanisms provided by the framework, defines the dynamic processes that emerge within complex systems (Uhl-Bein & Marion, 2008). The reason for hierarchy according to these researchers go far beyond the need for unity of command or other considerations relating to authority. The political configuration of any economic system somewhat reflects the confidence in rationality and faith that a stable and consistent, defined roles and responsibilities will reduce distraction and increase workers performance on the job (Bolman and Deal, 2013).

In any given organization, the political frame represents a hierarchical power structure with a network of interrelated and interdependent agents working in coalition to achieve organizational goals. In corporate settings, management can use power effectively to encourage the best performance from individuals and groups (Shen and Cannella Jr., 2002). According to March (1962) and Vredendurgh and Maurer (1984), when coalitions, groups of managers who have similar interests lobby for an organization to pursue new strategies or change existing structure, the use of power can lead them to act in ways that improves performance and increase productivity. Oshry, (2007), argue that system power is the ability to influence system processes, in a way that enhances the capacity of the system to thrive and develop in its environment. (Except, of course, the goal is to destroy the system; then power becomes the tool to achieve that purpose).

From systems thinking, organizations as a political arena (Bolman and Deal, 2013) could be explained through managing organizational politics. Management scholars are of the opinion that, the exercise of power is an essential part of efficient decision-making, so it is important that top managers use organizational politics to increase performance and effectiveness rather than for selfish purpose. However, Bolman and Deal (2013) contend that every significant organizational process is inherently political due to the ongoing interplay of divergent interests and agendas. Thus, to avoid a power struggle, an organization must have an active CEO who can manipulate and balance its power structure so that no manager or coalition of executives can become strong enough to threaten the organization's future effectiveness and stability.

The management of organizational politics is a primary responsibility of the CEO because only this role possesses the legitimate authority to exercise control over all other managers. The CEO has the political power to influence the outcome of political struggles and contests between managers so that they help rather than harm an organization. Like all organizations, the financial market is both an arena for internal conflict and political struggle that arises when the interests of one person or group interfere with the interests of another individual or group (Bolman and Deal, 2013; Schmidt and Kochan, 1972).

Interrelationships between Cultural and Political Frames

Understanding the relationships between the culture, structural, and political frames require identifying the similarities, differences that exist between both structures, and fundamental assumptions of both frames. First, from a metaphoric perspective, organization as factory or machine is structurally designed in the arrangement of rules, roles, goals, policies, and to reflect existing environmental conditions. While organization as a jungle or arena is centered on power, conflict, competition, and politics. The above metaphoric frames are focused on the assumptions that organizations need to be organized as coalitions of different groups and members whose primary objectives are to achieve established goals with the efficient use of scarce resources. The similarity in the three frames stems from their implication for leadership. In the structural frame, the core leadership challenge is to align structure to the task, technology, and the environment. In the political frame the challenges center on developing agenda and power base with less conflict and power struggle. While in the culture frame, shared values and meaning are core in creating stronger moral values, systems of beliefs, and rules that govern how management and employees should act toward each other, people, and communities outside the organization. These challenges are similar when considering the assumptions that undergird these frames, as stated above.

Second, from an application standpoint, the structural frame addresses fundamental issues of organization, how, where, and why responsibilities are assigned. What connections and relationships are explicit, and what are the specific ways and means designed to assist organizations to reach their goals and objectives. The cultural frame uses shared values to create behavioral compliance. Structural frames are reflected in organizational charts or hierarchical diagrams, which illustrate relationships between individual components of an organization. While the political frame from Bolman and Deal's (2013) perspectives offers an interplay of divergent interests and agendas, where organizational goals and decisions emerge from bargaining, negotiation, and jockeying for position among members of different coalitions.

CONCLUSION

Complementary to prior studies, in this paper, we have explored three metaphors of organizations or frames to illustrate how organizations can leverage the emergent perspectives to understand better the changing environmental dynamics of their organizations, and the socio-economic transformations in their economies. In the structural frame, leadership assigns specific roles, coordinate activities, set goals, and policies. In the cultural frame, behavioral compliance and acceptance objectives are key to be a relevant player, while the political frame focuses on individual, group interests, and struggle. In addition, to ensure productivity and growth, management must be sensitive to low organizational performance, invest in human capital, and discard the idea of representation, and embrace the idea of accomplishment.

By so doing, organizations invariably accept a lower level of economic performance (above breakeven) that would allow them to remain in business (Gimeno *et al.*, 1997). Human capital is an essential aspect of organizational approach that perceives people as assets, whose value is tied to the organizational value. In the next decade, organizations that repositioned themselves to embrace the changing demographic dynamics, particularly in socio-economic context, would continue to thrive, while those that didn't will suffer the consequences. We think expectations will drive the future, and management should be ready to meet it with vigor and vitality.

Making sense of the perspectives on organizations and their implications for leaders is one critical way of reframing, and another way is, to see it, as an open system. Hence, much of existing management frameworks has their roots in this kind of thinking, which draws its main ideas from general systems theory. Therefore, understanding organizations as entities that are simultaneously complex requires developing and using various divergent perspectives on organizational dynamics. Adaptation is an internal change in a particular system that mirror's an external event in the system's environment (Fichter et al., 2010). As indicated that expectations would drive the future in human resource management. This paper's assessment is due to the chaging socio-economic landscape and the increasing demographic of the workforce; as more younger and diverse the workplace becomes, it brings high expectations with it. Thus, to meet the challenges of the future, coporations must adapt to the forces of change by integrating human capital with organizational values to promote employer-employee relationship with a framework that emphasizes the 'think globally and act locally' mindset.

RECOMMENDATIONS FOR ORGANIZATIONAL IMPROVEMENT

In this rapid changing sophisticated age, leadership needs to adapt a paradoxical mindset - a multifaceted approach to maintaining integrity, mission, and core value while simultaneously maintaining a dynamic, flexible, and adaptive organization. The use of multiple frames allows leaders to understand the complexity and see organizations from multiple dimensions. Empirical evidence reveal that the perception of managerial effectiveness is more among students with symbolic, political, and structural frames. The key to a strong leadership is the ability to motivate others and ensure their actions are congruent with goals sought. To achieve this end, leadership must create a perception that there is more than a professional relationship between them and management. Leadership must invest in building relationships and understanding what makes their employees tick. If we (managers) see our organizations as complex evolving systems, co-evolving within a social eco-system, then our thinking about strategy and leadership changes. With such change, comes a new way of seeing and relating to our environment.

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SKILL-SETS REQUIREMENTS OF MANAGEMENT ACCOUNTANTS IN THE CONTEMPORARY OPERATING ENVIRONMENT

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ABSTRACT

This conceptual article examines the skill-sets requirements of management accountants in a modern operational or disruptive technology environment, where digitalisation is the hallmark of organisational operations. From the extant literature reviewed, we observed that digitalisation has led to the expansion of the management accounting practice space, with fluid boundaries for data analytic specialists, without accounting background. With continuous improvements and expansion in digital technology, especially in the realm of artificial intelligence, reliance on Big Data and Analytical tools, and e-based operations, it requires the uptake of additional skill-sets for management accountants to remain relevant. The implication of digitalisation for Management accountants entails that financial analysts' ability to process internal and external data and segregate essential and reliable data from mere noise efficiently, will constitute a key set of new skills. This will require a shift in the management accountant's role towards that of a data scientist, with strong systematic and mathematical-statistical competencies. Also, ability to collaborate and navigate across functional lines will become critical in shoring up continuous relevance. Therefore, skill-sets upgrade and versatility are the way to go for management accountants to sure up hedging against obsolescence.

Keywords: big data, management accountant, skill-sets, digitalization

INTRODUCTION

The constant flux and dynamics in the operational environment of corporate entities demands best spoke information to enhance decision making. These changing dynamics shaped by technology happenstance undermines the sufficiency of routine accounting information and skill-sets. While, often not a common place discriminated activity in routine business settings, management accounting is increasingly gaining steam propelled by tech/business model changes. As management accounting entails taking part in the management decision-making process, establishing new planning and performance management systems, and providing conceptual and technical know-how in financial reporting and control to remain supportive of management in the organisation's strategy formulation and implementation (Gebhardt et al., 2015). Decision-making is increasingly becoming complex requiring apt decision support frameworks that are robust, yet flexible in delivering optimal outcomes. Clearly, merely providing the information is insufficient and strategic cooperation is essential to a management accountant's survival (Weber & Schäffer, 2016).

Industry 4.0 (I4.0), as identified in the study of Rafi et al. (2019), has reinforced the importance of Big Data and digitalisation in transforming business processes and creating value in the information age. There is a growing abundance of data in the MA department due to the rapid

development of information systems, according to Rafi et al. (2019). Because of the widespread use of digital technologies, a wider range of data about current processes is now readily available, elevating information to the status of a true economic production factor. Furthermore, digital economy financial control and MA operations are adopting a new dimension with the potential for major modifications from cost-based to value model changes (Bhimani & Bromwich, 2009). Digital and industrial convergence have been addressed at the technology level, but the implications for Management accountants and the processes have received less attention in developing countries.

Because MA processes are analysed in terms of their suitability for digital instruments, it challenges MA's existing paradigm (Keimer et al., 2017; Langmann, 2019). Some of the most important procedures, such as planning for the future, forecasting, reporting and consulting, have been adversely affected (Keimer et al., 2017). As a rule, routine and transactional processes can be readily automated (Keimer et al., 2017). Digitalisation appears to significantly influence resource-intensive procedures such as reporting and budgeting (Langmann, 2019). In other words, as a result of digital transformation and responsibilities assumed by management accountants, the organisation would be impacted. It is vital to continue the discourse about how management accountants will need to adapt to the digital environment and how digitalisation will affect their abilities.

Interesting, much of the management accountant's role has been shifted toward supporting the manager's decision-making, anticipating the information needs, taking up the organisation's internal business consultants, and getting involved in a multi-functional team (Janet, 1998). Managerial accountants now have to deal with more data, which necessitates the use of Big Data specialists that specialise in management accounting. There is a substantial influence on management accounting practise and society due to the rise of Big Data and the rising trend toward digitalisation. Because of the importance of data and information to the MA profession and the required competence and skills to meet workplace expectations, the implications for MA and the employability of management accountants remain vast.

To avoid becoming obsolete in the face of the growing use of robotics to perform white-collar jobs, such as accounting and banking, the growing trend toward digital data and digitalisation has created a need for management accountants to strengthen and advance their roles as management-supportive experts. "Robots to steal 15 million of your jobs says bank chief" was the headline of a speech by Bank of England Governor Mark Carney in 2016. CNN and the Daily Mail both reported on this speech in 2016 (Martin, 2019). The changing roles in management accounting is also not unconnected with product development issue, and as such, digitalisation, sustainability, new business model, socio-cultural dynamism, and global competitive environment stands to be the major determinants of the direction in the evolving roles of management accounting (Varaniute et al., 2022).

Ogoun (2020) opined that "technological advances in AI in real terms have come at such unimagined magnitude and disruptions to so many aspects of traditional socio-economic interactions, while at the same time progressively benefiting several other domains of social interfaces. The negatives are borne severely by aspects of societal dealings that were once thought of as sacrosanct and sacred. The aspects of social life where the negatives weigh heavily fall within traditional areas of life that hindsight of the impacts of future human developmental aspirations were never projected and hedging provided for." Hence, the interrogation of skill-sets requirements for management accountants in the emerging digitalized practice space.

LITERATURE REVIEW

The Developmental trajectory of Management Accounting

Prior to this digital era, the status of MA had been the determination of cost, profitability analysis and financial control (Kagermann et al., 2013). MA is charged with vital responsibilities and functions such as; rendering support in the design of the organisation's information system, data collection, maintaining accounting records and preparation of the financial statements, and support in budget preparation. Also, an insight into the status of MA would necessitate a retrospective view of the evolution of MA.

Changes in MA had been of keen interest for most researchers in the accounting field. MA has witnessed a promising period of various searches and efforts to trace its identity in most developed countries (Corina, Alina & Cristina, 2014). The International Federation of Accountants (IFAC) effort to unfold the various stages of evolution had been a source of insight into the status of MA. As stated in the study of Corina et al. (2014), the identified stages are a total of four stages. Stage 1- (prior to 1950) covers the era of cost determination and financial control. Stage 2- (from 1965) focuses on providing information for planning and control and less on strategic consideration. Stage 3- (from 1985), with direction on cost control for waste reduction. Finally, Stage 4- (from 1995) to date is more driven by technologies and digitalisation to create values through efficient resource utilisation.

Among the four stages of evolution identified by IFAC, the first two stages reveal MA's existing status before the gradual adoption of digitalisation in most developed countries. Interestingly, the modus of operation in MA in the first two stages have not gone extinct. Instead, they are redirected and integrated with the last two stages, which is much more useful in the value creation processes for customers, shareholders and the organisation. According to Corina et al. (2014), the information provision by MA in stage two is vital to resource management, waste reduction, and value creation, making the MA an integral part of the management process. This has also resulted in blurring the distinction between staff and line management as MA has been seen to take a strong position as the single source of truth for being a gatekeeper of the firm's information (Rafi et al., 2019).

Moreso, the status of management accounting has evolved into supporting management in strategic, tactical and operational level decision-making by providing relevant information and deploying relevant resources for value creation. In the face of the competitiveness of companies, the decision-making support provided by management accountants also help in product development, which further generates more revenue for the firm. Management accounting is necessary to strike a healthy balance between the income and expenses generated by product development in order to ensure the product's financial viability (Varaniute et al., 2022).

Current State of Management Accounting

The key premise behind this conceptual piece concerning the present condition of MA is neither the absence of particular regulatory requirements nor is it consistent with MA

national/international professional organisation recommendations, as suggested in Dumitru and Calu (2008). Rather than that, our emphasis is on the job profile and evolving capabilities of management accountants that are essential for them to be active participants in the decision-making process due to digitalisation. Given how management accountants' profiles are evolving, the issue of which abilities and competencies management accountants must possess today and, in the future, and how the advent of digitalisation in MA affects their professional need emerges.

A is primarily concerned with accomplishing duties and creating reports that inform internal users and corporate leadership about financial choices affecting the firm's general operations. Due to the reporting obligations of management accountants, anybody joining the managerial accounting profession should be equipt in risk management, budgeting, strategic planning, and financial data analysis. Employers and employees alike must be familiar with generally accepted accounting principles (GAAP), possess great communication skills, and take a proactive approach to their job. These tasks may vary according to the organisation's size, overall income, compliance, and reporting needs.

Similarly, management accountants now appear to serve as business partners in today's more automated workplace (Heinzelmann, 2019). Not only do they need to be familiar with the ERP software in use at their company, but they must also be well-versed in the best practices for incorporating the information it generates into their daily operations and strategic planning. There has to be a more profound familiarity with the big data ecosystem, AI, the Internet of Things, and other IT interfaces. Therefore, IT skills, software skills, and big-data analytical abilities are positive when compared to the reducing demand of record keeping, report preparation and manual data analysis (Alam & Hossain, 2021)

Moreso, Gaensslen et al. (as quoted in Rafi et al., 2019) emphasised the importance of growing expertise in statistics and information technology and social and communication abilities without overlooking the need for a thorough grasp of the industry. Seufert and Oehler (2016) detail the statistical technique abilities (e.g. regression, time series, and clustering) that MA will need to develop to separate themselves from the Data Scientist; another emerging job category. Additionally, as Big Data's relevance increases and as analyst and information expert grows, the plant MA will engage more in data science and data mining.

However, neither theory nor practice has paid much attention to the degree to which the job profiles and competencies necessary for digitalisation match the subject of management accounting (Rafi et al., 2019). Similarly, management accountants' skill development through I4.0 has received scant attention in the management accounting literature. Interestingly, the study by Rafi et al. (2019) reveals that with digitalisation, MA will become decentralised. With the technological progress with new tools, the Chief Financial Officer (CFO) and Chief Information Officer (CIO) departments will collaborate even more closely to use Big Data.

Besides, the present state of MA is context-dependent, contingent upon the climate in which it is practised and the firm's reporting habits. It is a function of the organisational design and structure which the circumstances faced by the organisation can intensify. In tune with this view is the contingency theory, which maintains that no perfect organisational system works in every situation. Instead, a company's structure is a result of how its leaders anticipate and react to unforeseen circumstances (Ghandour, 2021).

Interestingly, advanced countries are rapidly responding to environmental change and organisational contingencies by digitalising or automating their MA operations. Management accountants are evolving into strategic decision-makers, whilst most developing countries continue to operate in analogue environments, with management accountants in charge of cost determination and financial control. To keep up with global competiveness, emerging economies need a quick switch to digital operations. The non-digitalised operations may have some sustainability challenges. However, stakeholders are putting increasing pressure on businesses to account for the environmental effect of their actions, which is reflected in the changes in management accounting concerning sustainability and circularity issues. Also, digitalisation, sustainability, and circularity also play a crucial part in management accounting (Varaniute et al., 2022).

Management accounting has also changed from the traditional paradigm of prioritising budgeting above other aspects like incentives, cost estimation, and financial control (Kagermann et al., 2013). In addition, the scope, practice and application of management accounting has extended to strategic, performance, and risk management (Zabiullah et al., 2017; Varaniute et al., 2022). Moreover, Zabiullah et al. (2017) recognised seven important trends in management accounting: Expansion from product to channel and customer profitability analysis, globalisation of management accounting, Cloud computing, expanding importance of management accounting in enterprise performance management (EPM), the transformation to predictive accounting, embedded business analytics in EPM approaches, coexisting and enhanced management accounting approaches, managing information technology and shared services as a company, and the need for higher skills and proficiency with behavioural cost management.

Revolutionizing Management Accounting Systems

The history of management accounting has been marked by extraordinary attention that has been deliberately instilled or tied to changes in organisational strategy. The significant changes seen in MA are environmentally driven and should not be interpreted as random (Waweru, 2010; Ghandour, 2021). From the established paradigm or outmoded standard of operation, the amount of change witnessed in MA is primarily motivated by the demands of rising hostile competition, new technology, the perceived tyranny of financial accounting, and the growing importance of MA (Guinea, 2016). As previously stated, the development of MA is attributed to its responsiveness to organisational and product changes.

Following the foregoing, IFAC issued an assertion in 1998 outlining the evolution of MA in four sequential stages as captured in the above subhead "The Status of Management Accounting" (IFAC, 1998). This demonstrates that MA has undergone unparalleled change during the last five decades. In a period of value creation, it is self-evident that MA is obligated to capitalise on recognised benefits associated with digitalising its operations.

According to Dahal (2019), the additional direction of MA is to assist management in making competitive decisions by collecting, processing, and conveying information that aid management in planning, managing, and assessing business processes and enterprise strategies. Nonetheless, MA has developed away from backwards-looking management tasks towards future-oriented

information systems that help in strategic planning, control, and decision-making. Historically, MAs have used historical data to concentrate on yearly controls in safe and proven competitive operating contexts to assess overall performance and manipulate responsibility within their organisation (Ikaheimo & Taipaleenmäki, 2010; Taipaleenmaki & Ikaheimo, 2013).

However, contemporary business impulses, such as globalised competitiveness, commercial enterprise networks, and the rising relevance of securities markets as a source of financial resources, have dominated present company activity. As a result, new MA information requirements have evolved, including an increased need for forward-looking data to help with strategic planning and decision-making (Taipaleenmaki & Ikaheimo, 2013; Goretzki, Strauss & Weber, 2013). With the introduction of Big Data, data analytics, and other digitalisation phenomena, MA information requirements will be comprehensive and timely to help in value generation and decision making.

Digitalisation and its Dimensions

It is admitted that the definition of digitalisation does not maintain an all-encompassing or one specific definition. However, it originally means converting from an analogue to a digital process or transforming analogue data into digital information (Nobach, 2019). With the degree of automation of processes in most advanced nations, it is clear that digitalisation has gained much relevance both in production and non-production processes. Interestingly, in the past few years, we have witnessed the emergence of several technologies (Gadatsch, Krupp & Wiesehahn, 2017; Internationaler Controller Verein, ICV, 2014; Lawson, 2018), having both digital and information dimensions. Some of these digitalised structures relevant to MA will be explained in this section.

The Big Data movement, which began about 2010, is one of several contemporary digital developments in data analysis (ICV, 2014). According to Langmann (2019), big data refers to a massive amount of data that is rapidly created, altered, and may take on various forms. According to Davenport (2014), Big Data is the process of developing vocabularies for evaluating and analysing data to assist corporate management in making decisions. The above description shows that Big Data exhibits the 3V (volume, variety, and velocity) characteristics described by Gart-ner Research and Advisory (Gadatsch et al., 2017). Thus, Sicular (2013) defines Big Data as "[...] high-volume, high-velocity, and diverse information assets that need cost-effective, creative methods of information processing for improved insight and decision-making." In an extended explanation that considers the accuracy of the information and the economic value it provides, the 3Vs were expanded to 5Vs, with the addition of Veracity and Value. According to Heimel and Müller (2019); Lippold (2017), this data should provide accurate information (veracity) in order to achieve economic advantages (value).

Additionally, the amount of data generated is increasing at a consistent rate. According to ICV (2014), the amount of global data will expand fiftyfold due to the increased use of sensor technologies in manufacturing and logistics and mobile internet usage. As a result, management accountants have a great deal of responsibility for handling the deluge of information caused by Big Data, as they are charged with the primary obligation of providing information for decision making. The promise of Big Data cannot be overstated since it generates additional value across the value chain.

Business Analytics (BA) is another layer of digitalisation that emerged five years before Big Data and has grown in popularity (ICV, 2014). BA is defined as the use of diverse approaches, including statistical analysis and algorithms, to generate insight from data to solve issues and aid in decision-making inside businesses (Chamoni & Gluchowski, 2017; Langmann, 2019). BA is characterised in phases, each of which allows enterprises to create value, although on a different time horizon. We have descriptive analytics, which is focused on what occurred, and diagnostic analytics, which is focused on why it occurred. Cost accounting may make use of descriptive and diagnostic analytics. In the future, we will have real-time analytics that will show us what is now occurring (Lanquillon & Mallow, 2015).

This may be facilitated by the use of Business Intelligence (BI). Predictive analytics asks, "What is likely to happen?" from a future forecast. On the other hand, Prescriptive analytics recognises what should be done (Lawson, 2019), assisting MA in its planning and decision-making roles. This demonstrates the evolution of MA's function from antiquated MA systems focused on financial decision-making, budget control, and profitability analysis to performance management and company profitability. Interestingly, EPM, being an expanding role of management accounting, is embedded in BA (Varaniute et al., 2022).

Additionally, Business Intelligence (BI), as one of the characteristics of digitalisation, is a more established phenomenon, dating back to 1989. (ICV, 2014). BI may be defined as a concept and management tool that enables a business to manage and improve business data in order to make more informed decisions (Ghoshal & Kim, 1986). According to Kemper, Baars, and Mehanna (2010), BI strives to facilitate decision-making via an all-encompassing integrated strategy based on IT technologies that are driven by company-specific strategic requirements. A BI solution is a collection of the tools required to gather and convert data to acquire the essential information for analysis. According to (ICV, 2014), BI encompasses a variety of technological techniques, making Big Data and other tools a subset of the wider term.

According to a 2006 Gartner research, BI is the most debated topic in IT because it ensures that systems focus on initiatives that enable users to positively impact the business financial success (Gartner, cited in Baier, 2019). BI enables the firm or organisation to manage better the flow of business information and resources both inside and beyond the enterprise or organisation. According to Tamandeh (2016), BI in the digital era enables organisations to detect and convert huge amounts of data into pure intelligent knowledge that managers can use for strategic purposes. From a technological standpoint, business intelligence may be compared to competitive intelligence since organisations primarily use it to achieve a competitive advantage.

Other existing technologies, such as robotic process automation (RPA), machine learning, and artificial intelligence (AI), are accorded the necessary acknowledgement. RPA is a term that refers to software robots capable of simulating human interaction across disparate systems by automating repetitive, structured, and rule-based operations (Langmann, 2019). Machine learning is a term that refers to self-learning algorithms that make predictions about unknown data by inferring meaning from the data and deducing correlations (Langmann, 2019). RPA adheres to programmed rules since it is not considered intelligent. Yet, when combined with machine learning, it becomes more capable of learning to make connections without the use of structured data. (ACCA, CA Australia and New Zealand & KPMG, 2018). AI has a position in

information science to simulate how people think, behave, and solve issues via the use of computers in order to discover new or more efficient ways to do jobs (Lämmel & Cleve, 2012).

Digitalisation in Management Accounting: Implications for Management Accountants

There is significant scepticism across organisations and organisational platforms about the emergence of Big Data and its influence on management accounting information, controls, and decision-making, particularly questioning how Big Data is altering managers' reliance on more conventional information (Drew, 2018). Specifically, the emergence of Big Data and other novel forms of analysis associated with the proliferation of digital technology enables organisational players to govern both organised and unstructured data.

However, actions taken in response to such fresh information demonstrate a break with the historical dependence on information systems output, reflecting earlier corporate plans and operations and associated decision-making that led accountants' work in the past. There is a growing realisation that business strategy, organisational structures, and information system structures defy the conventional linkages that were previously believed to connect them, as a greater emphasis is placed on Big Data-based analyses and insights (Bhimani 2015; Krahel & Titera, 2015).

The issues inherent with Big Data, particularly the diversity of data from several sources (variety) of possibly uncertain economic quality (value), have important consequences for the management accountant. As a result, financial analysts' capacity to analyse internal and external data quickly and to separate significant and trustworthy data from noise will comprise a critical set of new abilities. Consequently, the management accountant's function will be transformed into that of a data scientist with strong systematic and mathematical-statistical abilities (Karenfort, 2017).

Collaboration across departments becomes important to exploit the promise of digitisation fully. Furthermore, the IT department is expected to serve as an enabler and support role for the management accountants. From a strategic standpoint, the emergence of a hybrid accountant, who possesses both managerial and accounting skills, is expected to foster close collaboration with process managers to demonstrate a greater willingness to reshape management accounting design and processes in response to the digital economy and globalisation issues (Bhimani & Bromwich, 2009; Burns, Ezzamel, & Scapens, 2003; Bhimani & Bromwich, 2009).

Before making any modifications to the MA procedures, knowing what is accessible in the digital domain is vital. The term "digitalisation" is ambiguous since it can take on different meanings depending on the situation. The process is known as data conversion from analogue to digital (Nobach, 2019). As it turns out, it's not just one thing. In the last several years, terms like Big Data and Business Analytics (BA) have risen to prominence and have played a vital part in developing MA's essential functions. In this regard, robotic process automation (RPA) is also a typical concern (Langmann, 2019).

Skill-sets Requirements in an Increasingly Digitalised Environment

The argument that management accountants increasingly collaborate with managers on strategic thinking and decision-making has increased management accounting challenges in digitally transformed organisations. Accounting information use and relevance have been questioned in the face of a digital economy. The massive capital market values of digital enterprises such as Facebook, Airbnb, Twitter, and Uber have sparked a significant debate over the use of accounting information (Govindarajan et al., 2018a).

Ogoun (2020) asserts that the top corporations with sterling market value are app-driven and do not have any of the conventional types of major physical asset holdings. Govindarajan et al. (2018) illustrative position shows that digital firms are more valuable than non-digital enterprises. Walmart, for example, has non-current assets of US $ 160 billion and a market capitalisation of US $ 300 billion, compared to Facebook, which has non-current assets at US $ 9 billion and a market capitalisation of US $ 500 billion.

The underlying premise is that accounting has become less effective, if not obsolete, for digital businesses, whose business models are primarily driven by the mobilisation and scaling of intangible assets (Govindarajan et al., 2018b). Most digital firms are built on intangible assets such as research and development, peer and supplier networks, customer and social interactions, branding, organisational strategies, computerised data and software, and human capital. Incorporating these intangibles into the financial statement is a significant underrepresentation.

Additionally, the issue of management accountants' competencies deserves consideration. Management accountants' abilities must be adapted to effectively manage and capitalise on digitisation (ICV, 2014; Schäffer & Weber, 2016). Ogoun, (2020) argued that the present and future "reality is that only those who anticipate and undertake practical and future-directed actions will remain relevant in the next industrial revolution." To achieve this, businesses are encouraged to conduct training measures that impart necessary expert and methodological knowledge and improve their employees' talents internally in a goal-oriented way (Nobach, 2019). The relevant skills obtainable by management accountants in engaging in the partnering role with management and other departments should include; IT Skills, Software Skills, Business Intelligence, Big-data Analytical Skills, Multi-tasking, Integrated team approach, Agile, and Business Analytical.

As a result, management accountants who are actively involved in digitisation must stay current on available technology and their application (ICV, 2014; Heimel & Müller, 2019). This also implies that, in order to minimise resource waste, management accountants must consider their organisations' constraints in terms of pricing, practicability within current IT infrastructure, and simplicity of use with the available know-how.

Despite the insurmountable obstacles confronting the MA profession throughout the digital revolution, several perks, potentials, and chances are associated with the digitalisation of MA activities inside organisations. According to the Chartered Global Management Accountant (CGMA, 2014), an SAS (business analytics software supplier) analysis predicted that major organisations in the United Kingdom will more than treble their use of Big Data analytics. After the IT department, it is more probable that the financial department will be accountable for Big Data activities. This might send a signal to management accountants that they should be aware of the possibilities of Big Data and the roles it could play. Management accountants' roles in Big Data activities, whether as data scientist or data manager, position them to supply organisations with a

number of the abilities necessary to unlock the potential of data, most notably when they are involved in business partnerships.

Additionally, process automation results in greater efficiency. Automating and offshoring repetitive tasks to Shared Service Centres (SSC) enables the acceleration of numerous processes such as planning, forecasting, reporting, and consolidation (Langmann, 2019). Similarly, predictions, analyses, and decision-making are improved since they are based on enhanced data and verified results from predictive analytics and machine learning (Heimel & Müller, 2019). As a result, prognoses are formed correctly via both automation and predictive analytics. Additionally, mobile solutions provide superior managerial decision-making, particularly when current information is accessed by phone. With the degree of high-quality information available for decision-making, there is an assumption of little risk connected with such a choice. As a result, an enormous opportunity for advanced value-adding activities is identified (Becker & Nolte, 2019).

As a trusted source of accounting information, management accountants must scale up their professional skill sets to assure data quality, define the business's needs, and identify the essential data to support decisions or monitor performance.

Discussion and Concluding Remarks

Digitalisation is a key trend that remains in constant advancement as it affects corporate activities in manifold ways. The effect of digitalisation has kept firms in constant adjustments to keep up with competitors. The paper is a theoretical expose' of the expediency of skill-sets upgrade for management accountants in a contemporary operational environment or in a disruptive technology environment. Following the review of MA's status, this paper concludes that the status of MA before digitalisation has not gone extinct. This is evident in the stages of MA evolution. Among the four stages of evolution identified by IFAC, the first two stages of cost determination and provision of information for planning reveal MA's existing status before the gradual adoption of digitalisation in most developed countries. The status of MA is redirected and integrated with the last two stages, which is much more useful in the value creation processes for customers, shareholders and the organisation. Also, it has placed Management accountants as strategic partners in the decision-making role.

Furthermore, we conclude that the need to revolutionise the antiquated MA system is paramount and urgent in the face of the digital revolution and strategic gains by firms who embrace digitalisation over their competitors. Dahal (2019) illustrates that the existence of MA in entities assists management in competitive decision-making by collecting, processing, and conveying data that aid management in planning, managing, and assessing business processes and enterprise strategies. We also concluded that among the various dimensions of digitalisation, Big Data, BA, BI, and RPA are the most relevant to MA as they enhance Management accountants' value creation role.

The implication of digitalisation for Management accountants entails that financial analysts' ability to process internal and external data and segregate essential and reliable data from mere noise efficiently will constitute a key set of new skills. This will require a shift in the management accountant's role towards that of a data scientist, with strong systematic and mathematical-statistical competencies. Also, ability to collaborate and navigate across functional lines will become critical in shoring up continuous relevance. More importantly, the IT department is envisaged as an enabler and support function to the management accountant.

We conclude that, as seen by the huge capital market values of digital businesses such as Facebook, Airbnb, Twitter, and Uber, the use of accounting information is dwindling in a digital economy dominated by intangible assets. It becomes difficult when these intangibles are greatly underrepresented in the financial statement. Nonetheless, chances for MA still exist as a result of digitisation. When an organisation makes the greatest use of data and information gathered via digitalisation, it gains a competitive edge. Additionally, leading organisations outperform their rivals when it comes to Big Data, since more research indicates that leading enterprises generate larger returns than their competitors. Therefore, skill-sets upgrade and versatility are the way to go for management accountants to sure up hedging against obsolescence. Hence, future studies should focus on the issues and conflicts that organisations face as a consequence of digitisation. Extensive, longitudinal case and field investigations are necessary to expand and clarify our knowledge of this increasingly pervasive problem.

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IMPORTANCE OF FLIPPED CLASSROOM APPROACH IN ENHANCING STUDENTS' ACHIEVEMENT OF LEARNING OUTCOMES

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ABSTRACT

Jobs in the 21st century require employees' abilities to analyse, evaluate, and synthesize knowledge to creatively solve problems, and these abilities are increasingly becoming necessary for survival in the modern world. To develop these skills, educators need to embrace innovative teaching and learning strategies that encourage active learning environment. Flipped learning allows sufficient time during its face-to-face sessions to effectively engage learners with problem-solving tasks that encourage their cognitive development, rather than exposing them to learning experiences that are fraught with a repetitive accumulation of facts and knowledge only. The focus of this paper is to highlight the significance of flipped classroom in accomplishing learning objectives. The essence of this practice is the facilitation of student-centred learning that encourages interaction and collaborative efforts to achieve higher results in human endeavours. Flipped learning is a combination of two generational models, which incorporates the traditional face-to-face classroom system and an online learning platform, which employs a mix of asynchronous and synchronous interactions.

Keywords: Flipped classroom, learning outcome; Teacher's role

INTRODUCTION

The major objective of education is to ensure that students achieve sufficient training, that will enable them acquire the necessary knowledge and skills. To achieve this, there should be a departure from passive learning environments to active and engaging approaches that engage, as well as encourage students to use their minds. This is to empower them to adequately participate in the labour market. This can only be achieved when students are confronted with the resolution of complex and real-life situations in which they must learn to make decisions (through analysis, evaluation and synthesis of information) in the face of challenging situations and learn to think for themselves with a critical and analytical attitude (Ruiz-Jim´eneza, et al., 2022). One of the strategies that has shown the greatest potential for incorporating active and collaborative learning into teaching and learning processes is the flipped classroom model, also known as the inverted classroom model (Prober & Heath, 2012; O'Flaherty & Phillips, 2015; Yabro et al., 2014).

Since education is focussed on the acquisition of the required knowledge, skills and attitudes for societal development, educators should continue to seek better strategies to effectively realize these objectives. The lecture method which has been a dominant approach in most classrooms mainly encourages memorization of content. This practice may not promote learning beyond knowledge and comprehension of Bloom's taxonomy of learning, and it may not specifically be an effective method for facilitating the acquisition of practical skills and knowledge (Bligh, 2000;

Charlton, 2006; Phoeun & Sengsri, 2021). While lecturing alone does not empower students to create their own knowledge from the content they are exposed to, their engagement in collaborative learning, problem-solving or project-based activities, and cooperative learning, affords them the opportunity to gain deeper knowledge of the content that allow them to create their own knowledge and apply such to solve real-life problems.

Engaging in social interaction with peers in real-world contexts promotes learners' ability to reflect on previous exposure and views. Such social interactions facilitate the development of the students' critical thinking tendencies that empower them to effectively transfer their knowledge across courses and apply it to unfamiliar situations.

LITERATURE REVIEW

Concept of flipped classroom

The concept of flipped classroom originated from America and was initially coined by Baker (2000); Lage et al. (2000). It refers to the rearrangement of the in-class and outside classroom activities in teaching and learning processes (Dong, 2016), with the focus on encouraging students' autonomous learning interest and exploring ability (Phoeun & Sengsri, 2021). It allows learners to take control of their learning, resulting in more amount of time for interaction between students themselves, and their teachers (Bergmann & Sams, 2012; Subramaniam, 2016; Phoeun & Sengsri, 2021).

It is a pedagogical model that allows instructor to share pre-determined digital resources with students via an internet-enabled platform outside the classroom; related content is also taught asynchronously through the platform (Bergmann & Sams, 2012). So, prior to class time, students individually engage with learning materials, often via pre-recorded lectures, prescribed readings, study guides, interactive videos, simulations, cases, and in-class pedagogies such as interactive engagement, and peer instruction (Ruiz-Jim´eneza et al., 2022). As they engage themselves with the content, they are expected to construct their own knowledge using, for example, presentations, discussions, role-plays, and debates, as well as collaborative problem-solving activities (Abeysekera & Dawson, 2015; O'Flaherty & Phillips, 2015; Sohrabi & Iraj, 2016). The main objective of this model is to work on the higher-level skills of Bloom's taxonomy (i.e. create, analyse, and evaluate) by making the students take much more active roles in their learning process during face-to-face meeting with the teacher (Berenguer, 2016).

The Flipped Classroom approach encourages students to take charge of their own learning, resulting in adequate communication and contact time between students and teachers (Bergmann & Sams, 2012). It allows active participation of students in teaching and learning processes while the teacher becomes a guide or facilitator, and not the sage on the stage (Baker, 2000). It is the reorganization of the inside and outside classroom processes to complement each other in order to enrich teaching and learning, which focuses on students' motivation, autonomous learning interest and exploring ability (Dong, 2016; Phoeun & Sengsri, 2021). It is a methodology that facilitates democratization of teaching and learning, as the autonomy is in learners' hands to access the lecture videos or learning content anytime and anywhere before coming to class (Pinnelli & Fiorucci, 2015). While in the class, students are engaged in collaborative, problem-solving, and cooperative activities which facilitate the development of their cognitive abilities.

Owing to the continuous integration of emerging technologies into education to enhance students' achievement, teaching-learning is undergoing much transformation. Flipped classroom or inverted classroom is part of the innovations that has transformed conventional in-classroom learning activities into out-of-classroom activities and vice-versa (Betihavas et al.,

2016). It is a learner-centred strategy that allows students to take responsibility for their learning, where learning content is transmitted to them to study when they are out of the school (Turan & Akdag-Cimen-, 2020). When instructional content has been transmitted to the students to study in their various locations before class time, it allows engagement of the students in hands-on practices and collaborative learning activities during face-to-face meetings (Akçayır & Akçayır, 2018). Research has shown that the use of flipped learning in various academic disciplines including mathematics (Lo & Hew, 2021), health education (Sullivan, 2022), engineering (Awuor et al., 2022), English education (Chen & Hwang, 2020), and business education (Fang et al., 2021; Senali et al., 2022), has been one of the effective model to enhance learners' critical and creative thinking skills.

It is an effective way to encourage autonomic learning as it allows teachers to make instructional content available to students in appropriate format (video, text, image or a combination of them) to study in their various locations before classroom meeting (Subramaniam, 2016). This creates adequate class time to engage learners in problem-solving and task-based activities, where teachers can ascertain if learners are able to understand and apply new knowledge gained from the content or not. Teacher, as a facilitator or guide during face-to-face meeting, is able to intervene or reinforce learning on individual basis whenever it is found out that any of the learners do not understand or has misconception of any of the concepts (Doman & Webb, 2017).

Though many studies have established that flipped classroom has the potential to facilitate effective learning, however, most teachers are still reluctant to adopt it in their professional practice. This is where this paper finds its relevance to highlight the importance of flipped classroom in accomplishing learning objectives.

Importance of flipped classroom and attainment of learning outcomes

Phoeun and Sengsri (2021) carried out a study to examine the effect of a flipped classroom with Communicative Language Teaching (CLT) approach on aspects of the students' English speaking ability at Royal University of Phnom Penh (RUPP), Cambodia, and reported that the students significantly improved their English speaking skills as they were able to expose to authentic and communicative activities in the classroom and on the online platform. Similarly, the following researchers studied the effect of flipped classroom with other academic disciplines, English education (Chen & Hwang, 2020) mathematics (Lo & Hew, 2021), business education (Fang, Patall, Vasquez & Stautberg, 2021) engineering (Awuor Weng & Militar, 2022) and, health education (Sullivan, 2022). They all reported significant improvement in the performance of the students.

Also, it enhances students' participation in learning, helping them to migrate from being passive learners to active participants in their learning activities, rather than sitting passively and listening to their teachers in the case of lecture method. In addition, it fosters students' critical and creative thinking skills, as well as collaborative spirit. As they participate in hands-on practices, problem-solving and collaborative learning activities (Akçayır & Akçayır, 2018), their critical thinking and collaborative skills are being developed.

Flipped classroom facilitates the development of learners' digital skills which are necessary to survive in today's world that is driven by technology. Digital skills are required for survival in the ever-changing technological world (Partnership for 21st century skills, 2009; Brierton et al., 2016). Frequent engagement with technology in learning enables learners to improve on both their digital skills and academic achievement (Sackes et al., 2011; Wartella et al., 2016; Hurwitz, & Schmitt, 2020). Livingstone and Helsper (2010); Hurwitz and Schmitt (2020) also claimed that there is a relationship between the time learners spent online and the level of their digital skills. Flipped learning enables teachers to intervene or reinforce learning on individual basis whenever it is found out that any of the learners do not understand or has misconception of any of the concepts (Doman & Webb, 2017). The adoption of flipped classroom allows students to access the instructional materials at their convenience, and seek clarification on confusing concepts via the internet, or from their teachers with the aid of their mobile devices, thereby acquiring digital skill as they interact with the devices (Herreid, & Schiller 2013; Couch, 2014; Clark, 2015; Lee, & Lai, 2017). The model allows students to be responsible for their learning. Students are able to set goals and work towards realizing them, as well as able to access instructional content regardless of time and location.

Teacher's role in flipped classroom with collaborative problem-based learning

As teachers deliver instructional materials online in an appropriate format (video, text, image, or a combination of formats) with a user-friendly platform for students to study, adequate time becomes available to them during the face-to-face sessions to engage them in problem-solving activities that promote their cognitive development. This type of learning does not imply a mere combination of the two models (out-of-class and in-class) but involves an appropriate and effective blend to achieve specific learning objectives by taking advantage of the two environments (online and face-to-face contexts). The face-to-face component of flipped learning is where students actively collaborate and interact with instructional content with the focus of gleaning and generating information to solve problems, while the teacher plays the role of a facilitator. This is based on constructivist theory which stressed that the exposure of students to learning environments that inspire and empower them to construct their knowledge strengthen their thinking skills which endow them with the abilities to address real-life challenges.

The teacher's role in any collaborative problem-based learning, is to guide the learners to unfold knowledge themselves by playing the role of a facilitator rather than that of an information provider. Zuckerman et al. (1998) stated that within problem-based learning, the teachers must stimulate their students' imagination by presenting them with situations that are within their grasp to recognize the new elements that relate to their existing knowledge, and provide them the opportunity to work collaboratively to resolve the problems. Students must be encouraged to continually ask questions to assess their understanding and improve their knowledge.

When teachers are actively involved in challenging students to think by using questions to guide their thought processes, they become more focused in their desire for knowledge. Effective implementation of collaborative problem-based instruction, requires teachers to appropriately scaffold activities that will enable their students to understand how to exercise their minds as they collaborate with their peers, and how to deeply reflect on their acquired step-by-step knowledge of how to resolve situations (Harris & Rooks, 2010; Gillies & Nichols, 2015).

To encourage productive interaction that promotes creative thinking, sufficient scaffolding is necessary because according to Vygotsky (1978), it makes learning more manageable for students by presenting complex tasks in a manner that makes them accessible, feasible and within the learners' grasp. The factors of problem-based learning include both structure and the types of activities that are required by learners to enhance their thinking skills, which will allow them to address problems (Prince & Felder, 2006; Levy & Petrulis, 2012).

The focus of problem-solving is the comprehension of existing knowledge to resolve situations and develop new abilities; the structure involves timely questions framed by teachers or students; and tasks that include problem solving and investigations of practical situations, which results in the generation of greater understanding. Interactive and collaborative environments empower

them to exercise their minds enabling them to formulate solutions to problems and develop higher-order tendencies, as they respond to their peers' questions in more complex and confident ways.

Creative learning experiences empower the students to innovate in their activities by developing the knowledge gained from their teachers to create new combinations in studying (Azizi et al., 2014; Saptenno et al., 2019). Creativity in learners occurs as a result of creative thinking in the learning process that involves creation and collaboration (Yustina et al., 2020). Problem-based learning model has significant effect on the development of students' learning motivation, creative thinking skills, and learning results better than that of the discovery learning model (Saptenno et al., 2019).

Interaction and collaboration are important in the process of developing students' creative thinking abilities. Collaboration enables students to interact among themselves by exchanging views and ideas to effectively discover new knowledge to accomplish their objectives. Interactive and collaborative environments encourage learners to exercise their minds to find solutions to problems and develop higher-order tendencies, as they accommodate and respond to their peer's questions and remarks. As students work collectively and share ideas on their learning activities, such a collaborative and interactive context facilitates the development of their creative thinking which better equip them for effective participation in the knowledge-based society.

The development of creative thinking skills is essential to ensure that students are sufficiently prepared to address the current and future challenges of their communities (Institute of Medicine, 2010). Creative thinking involves extensive thinking, identifying problems, reflecting, analysing, evaluating and solving problem, etc. (Geist, Larimore, Rawiszer & Sager, 2015). The promotion of creative thinking requires students' active involvement in teaching-learning process (Nelson, 2017). Active learning strategies, such as case scenarios, problem- based learning, discussion, reflection, etc. may satisfy the requirement (Chan, 2013; Von Colln-Appling & Giuliano, 2017).

Teacher as a facilitator ensures that the learning environment is flexible, because such learning climate improves the mood of the students. However, the teacher should regularly remind the students about the main task associated to problem-based learning and embolden them to be open-minded. In addition, the teacher can facilitate their problem-solving activities by charging them to 'think of new solutions to the problem', 'think freely instead of relying on one idea'; 'think inventively about alternative solutions to the problem', and often ask them to evaluate their opinions to ascertain the best solution to the problem. According to Ulger (2018), when the students underperform, the teacher can encourage them by asking open-ended questions to enhance the process such as: 'What do you think about your opinion? 'Give a different suggestion for the solution to the problem? or 'What type of information could improve your opinion relating to the solution to the problem?

CONCLUSION

Several studies have shown that flipped learning allows instructors more time in its face-to-face sessions to reinforce the accomplishment of learning objectives. Flipped learning permits students to collaborate with their peers both online and via face-to-face meetings, thereby allowing them the opportunity to learn collectively to understand instructional content and find solutions to real-life problems respectively; and further helping them to bridge achievement gap. However, to effectively implement flipped learning to achieve the desired outcome, the teachers need training and retraining, as well as incentives that will propel them to embrace the innovation. In addition, an enabling environment, with regards to skills and facilities, that emphasizes innovative approaches to teaching and learning should be encouraged.

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IMPACT OF HUMAN CAPITAL UTILIZATION ON ORGANIZATIONAL PERFORMANCE OF SELECTED SMES IN IMO STATE

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ABSTRACT

The study focused on the impact of human capital utilization on employee commitment in selected SMEs in Imo State. The specific objectives are, to determine the effect of employee retention management on organizational performance of selected SMEs in Imo State, to assess the effect of performance management on organizational performance of selected SMEs in Imo State, to ascertain the effect of manpower development on organizational performance of selected SMEs in Imo State and to determine the effect of physical and social capabilities on organizational performance of selected SMEs in Imo State. The survey research design was adopted and structured questionnaire was used to collect data. Sample size of 131 was drawn from 196 population. The data was analyzed using descriptive statistical tool. The hypotheses was tested using, Pearson Chi-Square, and Correlation. The study found out that employee retention management has significant effect on organizational performance of selected SMEs in Imo State, and performance management has significant effect on organizational performance of selected SMEs in Imo State. Also that manpower development has significant positive impact on organizational performance of selected SMEs in Imo State and that physical and social capabilities have significant positive relationship with organizational performance of selected SMEs in Imo State. The study recommended that Employee with high potential skill gaps should be identified and properly captured in order to achieve high fliers for employee retention and greater workforce productivity and Management should identify their critical capital resource capabilities putting emphasis on those that can enhance employee performance and constantly appraise performance of employees. Finally there is need for SMEs to focus attention on manpower development in order to build high workforce pool to enhance effective succession plan and desired business growth.

Keywords: Employment retention, employee commitment, human capital utilization, manpower development, organizational performance

INTRODUCTION

Employees are important assets to organizations when well managed. Committed employees marshal other assets and resources towards the realization of organizational objectives. A competent and committed workforce enable organizations to effectively exploit opportunities in the business milieu; employees have become the ultimate source of differentiation and superior performance, as globalization and other environmental shifts weaken traditional sources of competitive advantage (Ateke & Akani, 2018). It is through the deliberate efforts of employees that other assets can be used to produce expected products. In other words, no matter how much is invested in technology and other modern assets, the achievement of organizational goals and objectives highly depends on effective utilization of qualified and committed human resource as drivers of other resources (Kisumbe et al., 2014).

The term human capital utilization here simply means the effective and efficient use of human resource in an organization in order to achieve desired growth and development, and avoid wastage of manpower (Kisumbe et al., 2014). Ogbodo (2007) sees human resources utilization as a means whereby managers employ the right workers for the right job, train and develop the workers so that they contribute meaningfully to pursue organizational goals. Also, to maintain a productive workforce through various retention initiative to continuously sustain productivity at a minimum cost and maximum output. Human capital utilization predicates how to recruit, develop and utilize the organizational personnel in the way which is most appropriate for the achievement of the firm's aim and objectives. In terms of business strategy an organization can success if it has suitable competitive advantage and it is the organization employees, described in terms of their training, experience, judgment intelligence, relationship and insights (Kisumbe et al., 2014).

Effective utilization of human resource is key to growth and development of an organization. Susan (2012) to explain that human resources exist within people and consists of a person's potential ability as well as critical knowledge, skill and other personal characteristics which include personality factors (attitudes), aptitudes, physical and mental traits needed to perform the job. Human capital utilization has the opportunity to enable organizations to survive, grow, be competitive and profitable (Werner, 2014). The success and continuity of any organization is hinged on the active Human capital utilization, to ensure that the employee irrespective of cadre actively participate towards organizational goals. Based on the foregoing, this study sets out to determine the impact of human capital utilization on organizational performance of selected SMEs in Imo State.

The management of human resources has faced complex challenges or weaknesses; - regarding human capital and categorizing them like any other factors of production and regarding employees' training as a cost, rather than investment. Also, some managers do not recognize the importance of employees as sources of production, organizers and movers of factors of production (Olowu & Adamolekun, 2012). In today organization many pressures are witnessed in demanding a broader, more comprehensive and more strategic perspective with regards to the organization's human capital. These pressures create a need for a longer term perspective in managing people and consideration of people as potential assets rather than merely variable costs; they are valued assets and are sources of competitive advantage, through their commitment, adaptability and high level skills, improved performance can be realized. But despite its adaptation, many organization find it difficult to appraise and take account of their workforce due to poor set standard and procedure this affects their output.

Without effective recruitment and selection process, the organization becomes unable to get the right people in the right place at the right time doing the right job; and this may hamper the growth of the organization. Also, an untrained staff is redundant and a liability to an organization, particularly the company under study. In that inept state, they can no longer deliver the goods and services and subsequently will impart the wrong or obsolete knowledge to others. According to Adams (2002), an untrained staff in the modern society may be a menace to the realization of goals in organization. Also retaining a productive workforce is also important for any organization because if the organization cannot retain its employees, it will not be able to exploit its human asset progress inside the organization. Also, there are possibilities of underperforming employees which are not able to achieve their targets.

Again, ineffective human capital utilization can lead into the problems:- lower employee turnover; employees not doing their best; breach of laws; poor social resources and physical need

or having some employees thinking their salaries are unfair and inequitable relative to others in the organization. Thus maximum productivity level cannot be achieved unless the essential material resources are available, even if an organization has gotten all the money and materials it needs, employees must still manage the materials effectively for optimal productivity.

This research intends to look at the impact of human capital utilization on organizational performance of selected SMEs in Imo State. The study intends to attain the following specific objectives; to determine the effect of employee retention management on organizational performance of selected SMEs in Imo State, to assess the effect of performance management on organizational performance of selected SMEs in Imo State, ascertain the effect of manpower development on organizational performance of selected SMEs in Imo State and determine the effect of physical and social capabilities on organizational performance of selected SMEs in Imo State. The following questions bothers in this study: What is the effect of employee retention management on organizational performance of selected SMEs in Imo State? What is the effect of performance management on organizational performance of selected SMEs in Imo State?, to what extent does manpower development affect organizational performance of selected SMEs in Imo State? And to what extent does physical and social capabilities affect organizational performance of selected SMEs in Imo State?

Ogbodo (2007) defined the term human capital utilization as a means whereby managers are able to employ the right workers for the right job, train and develop the workers so that they contribute meaningfully to pursue the organizational goal to avoid wastage. Also to maintain the productive workforce through various retention initiative such as motivation in other to continuously sustain productivity at a minimum cost and maximum output. Human capital utilization is to recruit, develop and utilize the organizational personnel in the way which is most appropriate for the achievement of the firm's aim and objectives. In terms of business strategy an organization can success if it has suitable competitive advantage and it is the organization employees, described in terms of their training, experience, judgment intelligence, relationship and insights (Kisumbe et al., 2014). Agegnehu (2016) asserts that the effective utilization of human capital is seen as key factor to growth and development of an organization in this contemporary world faced with challenges such as globalization, tribalism, corruption and mismanagement. It is critical to the success of organization because human capital has certain quality that creates value (Noe, 2004).

Organizational performance describes the health of a firm as an outcome of management processes measured against nominated corporate goals or compared to the health of competing firms (Ateke & Kalu, 2016); and measure a company's capacity to achieve set goals by optimizing scarce resources (Ateke & Didia, 2017). Organizational performance is essentially, a reflection of how a firm performed, or is performing, with respect to attaining objectives, fulfilling missions, and operating based on core values. Organizational performance has consistently been a focus of business theorists and practitioners due to the notion that a firm's ability to survive, prosper and attract investors' interest is hinged on its performance records and future performance potentials. A company's performance could be measured in both financial and non-financial terms, and such measurement criteria are expected to represent key performance indicators that are universal in the firm's industry (Gawankar et al., 2013, as cited in Ateke & Didia, 2017).

Previous studies have examined how human capital relates to organizational performance.

Francis (2018) assessed the impact of human capital utilization on organizational growth and development and found that human resource utilization, recruitment and selection, manpower training and development and staff welfare/health, safety have positive impact of organizational growth and development. Similarly, Bartocho (2016) examined human capabilities utilization as a competitive tool in organizations for improved employee performance in courier companies in Kenya. The results revealed that physical capital resource capabilities had the greatest influence on employee performance, financial capital resource capabilities which also had a positive and statistically significant influence and the human capital resource capabilities had a positive relationship but statistically insignificant influence. Social capital resource capabilities were found not to be significantly associated with employee performance.

Also, Kisumbe et al. (2014) research analyzed human resources utilization and the need to re-balance the realization of organizational and employee's objectives. The findings in a great extent revealed ineffective human resource utilization in government offices, the drivers being the least utilized. The study recommended development of clear and reliable incentive schemes; undertaking job descriptions reviews to widen the scope and identification of employees' objective and preparation of plans for its realization. Relatedly, Macky and Boxall (2007) explored a heterogeneous sample of New Zealand workers from a diverse range of companies and their attitudes and exposure of human capital utilization on organisational growth. They found that higher levels of Human capital exposure were significantly and positively associated with job satisfaction, trust in management and organizational commitment. More so, Delaney and Huselid (2016) examined how human resource utilization affect employee skills, employee motivation, and the structure of work will be positively related to organisational performance. They did find significant support for their hypothesis, and noted that progressive human resource utilization practices, including selectivity in staffing, training, and incentive compensation are positively related to perceptual measures of organisational performance.

METHODOLOGY

This study adopted survey research design. This design is considered as the most convenient way to obtain facts from cross section of respondents, which assisted in the collection and data analysis for easy profiling, defining, segmentation, estimation, predicting and examining associative relationship. Survey design is preferable when a study involves a population or a sample of respondents from whom information is obtained either verbally or through questionnaire. The researcher collected vital data for analysis from primary sources and secondary sources. The primary data was collected by the researcher for analysis from primary' sources using questionnaire. The secondary data was also collected by the researcher from secondary sources as journals, textbooks, internet publications, etc. The target population consist of 196 management and staff of some selected SMEs in Imo State. The businesses are shown in table 1 below.

Table 3.1: Population Size of the selected firms

Name of Industry	No of Staff
Fasmicro Limited	41
Click Haircut Services	23
C.N.O Rental Services	22
Ukay's Clothing	18
Wannyviv Fabrics	29
DYKON Solar Solutions Nig. Ltd.	63
	196

Source: Field survey, 2022

From the study population, the sample size was determined below using the Taro Yamane formula:

Using $n = \frac{N}{1 + N(e)^2}$

Where; n = Samples Size

N = Population size

I = Constant

e = Degree of error

Thus, substituting the values in the formula

$$n = \frac{N}{1 + N\,(e)^2}$$

$$= \frac{196}{1 + 196(0.05)^2}$$

$$\frac{196}{1 + 196(0.0025)}$$

$$\frac{196}{1 + 0.49} = \frac{196}{1.49}$$

Sample size (n) = **131**

In deriving the sample size for each enterprise, the Bowley's sample proportionate formula was used as follows

$$n_h = \frac{n\,N_h}{N}$$

Where,
n_h = sample size for stratum h
N_h = population size for stratum h
N = total population size
n = total sample size

Sample size for Fasmicro Limited	=	$\frac{131 \times 41}{196}$	=	**27**
Sample size for Click Haircut Services	=	$\frac{131 \times 23}{196}$	=	**15**
Sample size for C.N.O Rental Services	=	$\frac{131 \times 22}{196}$	=	**15**
Sample size for Ukay's Clothing	=	$\frac{131 \times 18}{196}$	=	**12**
Sample size for Wannyviv Fabrics	=	$\frac{131 \times 29}{196}$	=	**19**
Sample size for DYKON Solar Solutions Nig. Ltd	=	$\frac{131 \times 63}{196}$	=	**42**

Simple random sampling technique was used by the researcher in obtaining information for the research. The sampling technique provides employees the same and known chances of being nominated. In this study, questionnaire and interview was the research instruments used. Questionnaire was the main research instrument used for this study in gathering necessary data from the respondents. The questionnaires which were close ended was well structured, typed and provide answers to the research questions and hypotheses therein.

This instrument was structurally design to capture elements in the objectives, research questions and hypotheses stated in section one. Options or alternatives were provided for each respondent to pick or tick one of the options. As a 5-point Likert scale questionnaire of Strongly Agree [5], Agree [4], Undecided [3], Disagree [2] and Strongly Disagree [1] was used in structuring the questionnaire to measure the degree of opinions. Validity is the extent to which a measuring instrument on application performs the function for which it is designed. To ascertain the validity of the instrument, content validity was adopted. The instrument was validated by expert in the field who checked the appropriateness of the items in terms of coverage, clarity of language, suitability and relevance.

To test for the internal consistency of the instrument, a test re-test reliability of the instrument were done and reliability coefficient of (r) obtained. To ensure reliability of the instrument, the researcher adopted a test re-test method in which the researcher distributed 18 copies of the questionnaire to the employees of the organizations understudied. That is 3 copies for each

organization. After some days, the instrument was collected and re-administered for the second time. All the variables are tested to know how structurally sound and reliable as reflected by the respective factor Cronbach's alphas. Cronbach's values of above 0.6 are considered strong measures of reliability (Nunnally & Bernstein, 1994).

Completed questionnaire were edited for completeness and consistency. The data collected was then coded and checked for any errors and omissions. Descriptive statistics were used to analyse the data collected. The descriptive statistics used included mean and standard deviation. Percentages were also used to analyse the data from the respondents to establish the relative importance and weight of variables. Correlation and Pearson Chi-square test was used to analyse the study hypotheses with the aid of Statistical Packages for Social Sciences (SPSS) Version 23.

DISCUSSION OF FINDINGS

Table 2: Distributed and Return of the Questionnaire

Distributed	Number returned	Percentage	Number not returned	Percentage
131	119	91	12	9

Source: Field Survey, 2022

Table 4.1 above shows that 119 (91%) of the questionnaire were returned and used, while 12 (14.91%) were not returned and were not used.

Table 4.2: Effect of employee retention management on organizational performance of selected SMEs in Imo State

	Item Statement	SA	A	UN	D	SD	TN	$\bar{X}$	SD	Remark
a	Better recruiting from the beginning affects organizational performance	81	14	8	2	9	490	4.12	1.08	Accept
b	Training your managers to foster retention improve organizational efficiency	38	82	4	13	7	465	3.91	1.13	Accept
c	Measure and support engagement ensures labour turnover	79	12	5	2	5	557	4.68	0.88	Accept
d	Show of recognition in multiple ways strengthens workforce productivity	88	5	4	3	24	501	4.21	1.51	Accept
e	Frame the long-term career trajectory ensures organizational growth	90	2	3	4	45	435	3.66	1.84	Accept

Source: Field Survey, 2022

Key
$\bar{X}$ = Mean
SD = Standard Deviation

The effect of employee retention management on organizational performance of selected SMEs in Imo State was examined with a mean criterion of 3.00. All the respondents recorded a mean score range of 3.66 to 4.68. The respondents accepted that better recruiting from the beginning affects organizational performance (M=4.12), training your managers to foster retention improve organizational efficiency (M=3.91), measure and support engagement ensures labour turnover (M=4.68), show of recognition in multiple ways strengthens workforce productivity (M=4.21) and frame the long-term career trajectory ensures organizational growth (M=3.66).

Table 4.3 : Effect of performance management on organizational performance

	Item Statement	SA	A	UN	D	SD	TN	$\bar{X}$	SD	Remark
A	Setting of SMART performance goals improves organizational Performance	30	21	13	13	12	415	3.49	1.431	Accept
B	A clear performance improvement plan promotes organizational performance	48	9	10	12	10	454	3.82	1.481	Accept
C	Focus on employee development and positive reinforcement enhances organizational performance	31	14	15	15	14	557	3.37	1.495	Accept
D	Tracking of performance progress consistently increases organizational performance	40	11	13	12	13	501	3.60	1.520	Accept
E	Providing and receiving regular feedback improves organizational results	30	26	11	11	11	435	3.64	1.388	Accept

Source: Field Survey, 2022

The effect of performance management on organizational performance of selected SMEs in Imo State was examined with a mean criterion of 3.00. All the respondents recorded a mean score range of 3.37 to 3.82. The respondents accepted that setting of SMART performance goals improves organizational Performance (M=3.49), a clear performance improvement plan promotes on organizational performance (M=3.82), focus on employee development and positive reinforcement enhances organizational performance (M=4.68)), tracking of performance progress consistently increases organizational performance (M=3.60) and providing and receiving regular feedback improves organizational results organizational results (M=3.64)

Table 4.4: Effect of manpower development on organizational performance

	Item Statement	SA	A	UN	D	SD	TN	$\bar{X}$	SD	Remark
a	Individual development (personal) promotes organization's goals	30	21	13	13	12	415	3.49	1.431	Accept
b	Career development (professional) organizational performance	48	9	10	12	10	454	3.82	1.481	Accept
c	Manpower development enhances organizational performance	31	14	15	15	14	557	3.37	1.495	Accept
d	Manpower development ensures individual performance	40	11	13	12	13	501	3.60	1.520	Accept
e	Manpower development encourages improved in organizational results	30	26	11	11	11	435	3.64	1.388	Accept

Source: Field Survey, 2022

The effect of manpower development on organizational performance of selected SMEs in Imo State was examined with a mean criterion of 3.00. All the respondents recorded a mean score range of 3.37 to 3.82. The respondents accepted that individual development (personal) promotes organization's goals (M=3.49), career development (professional) organizational performance (M=3.82), manpower development enhances organizational performance (M=4.68)), manpower development ensures individual performance (M=3.60) and it encourages improved in organizational results (M=3.64).

Table 5: Effect of physical and social capabilities on organizational performance

	Statements	SA 5	A 4	UN 3	D 2	SD 1	TN	$\bar{X}$	SD	Remark
A	Self-awareness physical and social capabilities ensures growth	65	123	16	61	39	1026	3.38	1.46	Accept
B	Self-management (emotion) enhances effectiveness	70	99	1 4	4 6	75	955	3.14	1.40	Accept
C	Social-management (relational disposition) strengthen organizational flexibility.	93	10 2	1 7	4 2	50	1058	3.48	1.52	Accept
D	Social-awareness (sensibilities and learning) determines organizational growth	89	11 1	3 0	3 5	39	1088	3.58	1.55	Accept

Source: Field Survey, 2022

Table 5 shows the assessment of the effect of physical and social resources on organizational performance of selected SMEs in Imo State. All the respondents recorded a mean score range of 3.14 to 3.58. The respondents agreed that Self-awareness physical and social capabilities ensures growth (

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Retention Management * organizational performance	119	100.0%	0	0.0%	119	100.0%

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	139.011[a]	96	.016
Likelihood Ratio	110.769	96	.144
Linear-by-Linear Association	.046	1	.830
N of Valid Cases	119		

a. 119 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

The tables above is the output of the computed Chi-Square values from the cross tabulation statistics of observed and expected frequencies with the mean scores of responses on the effect of employee retention management. Pearson Chi-Square computed value (X2c=139.011) is greater than the Chi –Square tabulated value (X2t = 124.34) with 96 degrees of freedom (df) at 0.05 level of alpha (X2c = 139.011, $p < 0.05$).

Decision

Since the Pearson Chi- Square computed X2c=139.011 is greater than Chi- Square table value X2t = 124.34, H0 is rejected and we accept H1 that employee retention management has significant effect on organizational performance of selected SMEs in Imo State.

H02: Performance management does not have any significant effect on organizational performance of selected SMEs in Imo State

Table 4.7: Correlation of performance management and organizational performance

Descriptive Statistics

	Mean	Std. Deviation	N
Performance management	3.36	1.410	119
Organizational performance	3.41	1.308	119

Correlations

		Performance management	Organizational performance
Performance management	Pearson Correlation	1	.614*
	Sig. (2-tailed)		.002
	N	144	144
Organizational performance	Pearson Correlation	.614**	1
	Sig. (2-tailed)	.002	
	N	144	144

**. Correlation is significant at the 0.01 level (2-tailed).

The table above shows the relationship between performance management and organizational performance. From the result of the correlation, it is observed that performance management is positively correlated with organizational performance. The correlation coefficient value is 0.614. Statistically, the Sig. (2-tailed) value of 0.002 ($p<0.05$) shows that the relationship was significant. We therefore reject H0 and conclude that performance management does not have any significant effect on organizational performance of selected SMEs in Imo State.

$H0_3$ Manpower development has no significant impact on organizational performance of selected SMEs in Imo State

Table 4.8 Correlation Result of manpower development and organizational performance

Descriptive Statistics

	Mean	Std. Deviation	N
Individual development (personal) promotes organization's goals	3.84	1.633	119
Manpower development encourages improved in organizational results	3.59	1.107	119

Correlations

		Individual development (personal) promotes organization's goals	Manpower development encourages improved in organizational results
Individual development (personal) promotes organization's goals	Pearson Correlation	1	.426*
	Sig. (2-tailed)		.011
	N	119	119
Manpower development encourages improved in organizational results	Pearson Correlation	.426**	1
	Sig. (2-tailed)	.011	
	N	119	119

**. Correlation is significant at the 0.01 level (2-tailed).

Decision rule

If p-value (Sig.) of Pearson correlation coefficient < 0.05, reject H0

If p-value (Sig.) of Pearson correlation coefficient > 0.05, accept H0

The correlation result above shows that the correlation coefficient value is 0.426 indicating that succession planning is positively correlated with organizational effectiveness. The Sig. (2-tailed) value of 0.011 ($p<0.05$) shows that the relationship is significant. We therefore reject H0 and conclude that Manpower development has no significant impact on organizational performance of selected SMEs in Imo State.

$H0_4$ Physical and social capabilities have no significant impact on organizational performance of selected SMEs in Imo State.

Table 4.9 Descriptive Statistics

	Mean	Std. Deviation	N
Social-management (relational disposition) strengthen organizational flexibility.	3.48	1.425	304
Social-awareness (sensibilities and learning) determines organizational growth	3.51	1.418	304

Correlations

		Social-management (relational disposition) strengthen organizational flexibility.	Social-awareness (sensibilities and learning) determines organizational growth
Social-management (relational disposition) strengthen organizational flexibility.	Pearson Correlation	1	.463**
	Sig. (2-tailed)		.000
	N	304	304
Social-awareness (sensibilities and learning) determines organizational growth	Pearson Correlation	.463**	1
	Sig. (2-tailed)	.000	
	N	304	304

**. Correlation is significant at the 0.01 level (2tailed).

The correlation value r = 0.463 shows that there is 46.3% degree of relationship between the variables, and the p-value shows that the relationship is significant. Therefore, we reject H0 and conclude that physical and social resources have significant impact on organizational performance of selected SMEs in Imo State.

CONCLUSION AND RECOMMENDATIONS

The study was able to x-ray the essentiality of human capital utilization judging from the procedure, potentials, and effort any organization can exert to it. Thus it concluded that there is a significant relationship between human capital utilization and organizational performance of selected SMEs in Imo State. Based on the findings of this study was pertinent and laid emphasis on the need for employee retention management, performance management, manpower development and physical and social capabilities. Based on the findings, it is recommended that:

i. Employee with high potential skill gaps should be identified and properly captured in order to achieve high fliers for employee retention and greater workforce productivity.
ii. Management should identify their critical capital resource capabilities putting emphasis on those that can enhance employee performance and constantly appraise performance of employees.
iii. There is need for SMEs to focus attention on manpower development in order to build high workforce pool to enhance effective succession plan and desired business growth.
iv. Finally, the study recommends that both Physical and social capabilities should be maximally utilized in order to have optimal outcome.

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HUMAN RESOURCE MANAGEMENT AND BUSINESS PROCESS RE-ENGINEERING AS PATHWAY TO ORGANIZATIONAL PERFORMANCE IN POST COVID-19 PANDEMIC

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ABSTRACT

In the modern world, competition is becoming more intense, and new competitors are emerging from different business organizations with different strategies in this post COVID-19 pandemic era. As a result, the company is now searching for new sources of competitive advantage that are uncommon, challenging to imitate, and can be used continuously. To improve the performance of business organizations, this study looks at how Human Resources Management (HRM) affect the use of Business Process Reengineering (BPR) techniques. The utilization of the literature review approach is highly emphasized in the current study. According to the findings, HRM favorably influenced the adoption of BPR, as depicted in the literature. Also, based on the review, BPR affect organizational performance positively. The effectiveness of HRM within the organization was shown to be a key factor in the BPR's success. The results will be important for organizations looking to apply BPR to enhance their general performance in this post COVID-19 pandemic period. The results would also be beneficial to academics since it lay the groundwork for understanding how HRM affect BPR in the post pandemic period. The study offered some suggestions and points for further research.

Keywords: Business process re-engineering, covid-19 pandemic, human resource management, organizational performance

INTRODUCTION

The World Health Organization (WHO) declared the coronavirus disease (COVID-19), which started in China in late 2019 and quickly spread throughout the world, a global pandemic on 11th March 2020 (Cucinotta, & Vanelli, 2020). Over 496.5 million people globally tested positive to COVID-19 pandemic, with over 6.2 million deaths (WHO, 2022). The COVID-19 pandemic's global spread has caused disruption, uncertainty, complexity, and ambiguity for all enterprises (Lebni et al., 2021). The pandemic has left organizations with variety of difficulties, including

declining revenue, declining consumer spending, bad marketing results, firm closures, low employee motivation, victual working, increased unemployment, and changes in service delivery and lifestyle (Abbas et al., 2021; Nangia & Mohsin, 2020; Azizi et al., 2021; Butterick & Charlwood, 2021; Engidaw, 2022; Fonseca & Azevedo, 2020; Madero-Gómez et al., 2020; Nangia & Mohsin, 2020). These left many organizations with the challenges of achieving their goals.

The historical challenge of COVID-19 pandemic requires enterprises to think deeply and concentrate on reengineering methods due to the unprecedented and uncertain circumstances and the changing economic landscape (Kumar & Reddy, 2019). To survive in the cutthroat economic world of today, many organizations across the globe are changing their organizational structure and management styles. BPR may be one of the key elements in bringing about the much-needed innovation to update the archaic corporate procedures. According to Hales and Savoie (1994), BPR is an interesting idea that has the power to "rescue" a "failed" business and propel it toward survival and expansion. BPR, was a key idea in the 1990s that entails fundamentally rethinking and rebuilding company processes to bring about notable change or performance improvement (Naz et al., 2013; Siregar, 2021).

Sindhura et al. (2022) drew attention to the connection between BPR and the business transformation approach that emphasizes using information technology to implement customer-focused company management approaches. BPR can therefore be one of the key elements in increasing organizational performance. Traditional notions of corporate activities are altered by the concept of BPR (Petrillo et al., 2018; Rashmi et al., 2009). Organizations are redesigning their operations because of this calamity to mitigate the effects of the COVID-19 global pandemic. Corporate reengineering brings several aspects to facilitate response to changes in the business environment (Abubakar, 2016).

One of the elements needed to implement the BPR is human resources (Risley, 2020). The most significant resources in organization is its workforce, which also helps accomplish its goals. Nwulu and Ateke (2018) contends that it is imperative for firms to possess competent employees that are skilled in the performance of their tasks; and deploy same to perform such tasks in which they are proficient, if they must remain successful in today's highly competitive business-scape. In the view of Okoronkwo (2021) and Prinsloo (2020) human resources (employees) are relied upon to create, develop, innovate, and implement organizational activities required to attain stated goals. This is even more amplified in service settings where employee competency is the basis for differentiation and competitive advantage (Nwulu & Ateke, 2018).

Thus, firms make concerted efforts to address employee issues that beget absenteeism and turnover; and boosts employee performance, job satisfaction, motivation, individual and organizational productivity, sales growth, and profitability (Al-Suraihi et al., 2021; Davidescu et al., 2020; Lebni et al., 2021; Risley, 2020). Human resources are essential to the success of organization since they ensure the implementation of chosen plans (Petrillo et al. 2018; Rashmi et al., 2009). This is because organizations utilize human resources throughout the entire operations (Abed & Mohammad 2012). Organizations that want to succeed in BPR must refocus their HR procedures to apply redefined practices more efficiently while lowering costs.
Several studies (Abubakar & Palisuri, 2019; Greengard, 1993; Omidia & Khoshtinata, 2016; Sindhura et al., 2022) demonstrate the relevance of HRM to BPR and the favorable impact of BPR

on organizational performance (Abubakar, 2016; Bako & Banmeke, 2019; Hameed et al., 2022; Khashman, 2022; Njuguna & Wanjohi, 2021, Orogbu et al., 2015). But to the best of the researchers' knowledge, only few of these studies were carried out in Nigeria. Furthermore, no studies combined HRM, BPR, and OP in a single research. In the existing body of literature, a feasible relation between HRM, BPR and organizational performance is negligible in Nigeria context. So, this study examines the nexus between HRM, BPR and organizational performance in Nigeria by employing a survey research approach in form of literature review perspectives. The question is: how does human resource management affect the business process re-engineering in organizations? and to what extent does business process re-engineering influence organizational performance?

LITERATURE REVIEW

The study reviews prior research on organizational performance, business process re-engineering, human resource management, and the relationship between the factors.

Organizational Performance

There are several different interpretations of the term "organizational performance (OP)." OP relates to the extent to which an organization successfully allocates its available assets to maximize profit (Adegorye et al., 2017). According to Smith (2020), OP is measured by how well an organization fulfils the expectations of its constituents, how well it performs in terms of shareholder value, finance, and the marketplace, and how well it meets its goals and objectives. Business performance in the view of Harry and Ateke (2019) describes the success of a firm in a given market operation. Knies et al. (2016) pointed out that individuals, groups, and entire organization can be evaluated based on organizational performance at various levels of hierarchy.

Luo et al. (2012) conducted a meta-analysis of organizational performance and concluded that it should be measured in both economic and operational terms. Economic performance reflects financial and market outcomes such as profits, sales, return on investment for shareholders, and other financial metrics, whereas operational performance focuses on observable indices such as customer satisfaction and loyalty, the firm's social capital, and competitive edge. This current study, though a literature review in nature, adopts the view of Luo et al. (2012) because they captured what is expected of organizational performance.

Business Process Re-engineering

Business process re-engineering (BPR) entails a basic and radical rethinking of business processes to achieve significant improvements in key and current performance criteria, such as costs, service quality, and speed (Itunga et al., 2012). Re-engineering is not only a program to improve business processes, but to improve the total business process operations (Yahaya et al., 2011). Additionally, Baayer (2020) argued that BPR is a methodology and technique used by any organization to become more efficient by changing its processes. This methodology and technique may start by learning how business processes currently function and how-to re-design these processes to discard the superfluous or redundant processes to improve efficiency and gain in competitiveness.

Therefore, by implementing the BPR, firms promote ongoing critical thinking for process changes at all management levels. Business process reengineering is a planned process-driven strategy targeted at enhancing a business entity's overall performance (Essowè, 2020). Improving a

company entity's costs, services, and efficiency is the main goal of business process re-engineering. Business process reengineering implementation causes significant organizational changes. The changes typically begin at the top of an organization and work down to lower ranks (Serban, 2015). Based on the definitions, it is logical to states that BPR is a management strategy to enhance business performance.

Human Resource Management

Human Resource Management (HRM), according to Schwind et al. (2013), is the leadership and management of people within an organization using systems, methods, processes, and procedures that help employees achieve their own goals and, in turn, strengthen their positive contributions to the organization. They also emphasize that HRM is a tool that the business can use to archive its major organizational goals and not an end. They argued that failing to adhere to employee goals set forth in the system may lead to decreased performance and employee departure. Similarly, HRM is defined as a strategic, integrated, and cohesive approach to the employment, development, and well-being of the people working in organizations (Armstrong & Taylor, 2014). HRM is concerned with all elements of how people are employed and managed in organizations. It therefore encompasses all facets of managing employees in organizations. Additionally, HRM was defined by Bohlander and Snell (2017) as the process of managing human talent to accomplish an organization's goals.

Bohlander and Snell further pointed out that the core of HRM is the ability of successful organizations to bring together various types of individuals to accomplish a common goal. As a result, HRM integrates various employees to accomplish a shared goal, which is the organization's goal under consideration. Finally, Opatha (2021) made the point that HRM is the adoption of specific functions and activities for using personnel efficiently and effectively in a business to fulfill its goals, which include fully satisfying the major stakeholders and favorably influencing the environment. It entails the creation, implementation, and ongoing upkeep of systems, methods, and policies for managing employees in a strategic, participatory, and sustainable manner. The definitions provided by various authors do not actually have many significant discrepancies in their meanings. Basically, HRM is the application of certain activities or functions for managing employees in an organization to achieve its goals such as business process re-engineering.

Theoretical Framework

This study is rooted in the Resource Based View (RBV) theory, which was developed from Penrose's (1959). The term "resource-based view of the firm" refers to the idea that resources are significant for enhancing effectiveness, seizing opportunities, and countering threats (Munjuri et al., 2015). Firms compete in a constantly evolving and dynamic business environment, according to the RBV (Crook et al., 2008). The use of people by businesses can help them gain and maintain a competitive advantage (Barney, 2001; Masood, 2010). A company can achieve this if its human resource pool is unique and cannot be replicated or replaced by those of its rivals or competitors. The RBV as a foundation of competitive advantage principally resides in the application of the collection of priceless resources at the firm's disposal. The company must identify the major prospective resources that could meet the requirements of being valued, uncommon, unique, and not replaceable by the firm's rivals (Galbreath, 2005) in the industry in which the company works. Resources are inventories of readily available factors that a company owns or controls, according to Eze and Daniel (2020), whereas capabilities are a company's ability to use resources. Fundamentally, it has to do with how resources are combined to create capabilities.

Conceptual Model

Based on the literature, the conceptual model that connects HRM, BPR and organizational performance is shown in figure 1 below.

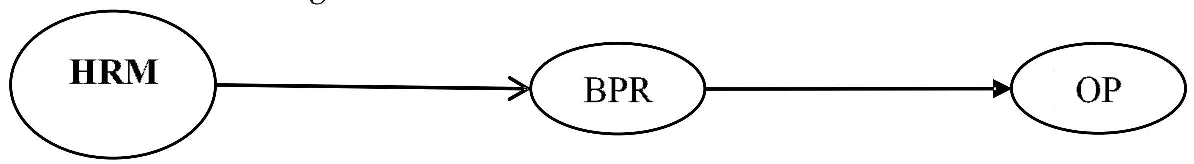

Figure 1: Conceptual Model of the Study
Source: Researcher's Design (2022)

Human Resource Management and Business Process Re-engineering

Numerous studies have demonstrated how HRM impacts BPR in organizations. Petrillo et al. (2018) found that putting the appropriate people in the proper jobs will increase the likelihood that both short-term and long-term goals will be accomplished. Some individuals have a flawed understanding of business process reengineering and believe that it is only implemented when a company is having difficulties meeting performance goals (Devie, 2013). Haghighat and Mohammadi, (2012) pointed out that, lack of support from senior management and inability to undertake BPR were the reasons why it failed to be successful. Additionally, Haghighat and Mohammadi contended that the company's lack of readiness to manage human resources was the required reason of failure in the implementation of BPR. Omidia and Khoshtinata (2016) argued that, one of the reasons BPR fails is ineffective human resource management. The ability to communicate with one another, train and build the spirit of creativity, and create an environment that promotes the sharing of fresh ideas and lack of resistance to new changes, all help organizations and people embrace the changes that have been made (Omidia & Khoshtinata, 2016).

Reconstruction in the process aims to make it easier for employees to handle complex consumer expectations like those for higher product quality, more reasonable costs, and delivery deadlines. The company's internal and external environments can have a favorable impact on its human resources. Negative consequences include workers' fear of losing their jobs, project uncertainty, and a general feeling of unease and anxiety at work, while positive benefits include a collaborative work atmosphere, top management commitment, and changes in system management (Omidia & Khoshtinata, 2016).

According to Greengard (1993), HR may offer direction and helpful advice to any BPR effort as it develops. According to the author, HR's expertise can cover a wide range of topics, such as modifying the new process, developing new job descriptions and role descriptions that reflect the new corporate structure, resolving issues with revised compensation, training and developing the workforce, establishing the new corporate culture, and promoting effective communication among employees.

Al-Mashari and Zairi (1999) reviewed the literature on the hard and soft elements that contribute to successes and failures, divided these components into subgroups, and selected important success and failure factors to examine the BPR implementation process. A few key success aspects included communication, empowerment, people involvement, training and education, fostering a culture of change and promoting the organization's receptivity to change, top management support and commitment, among others. Problems with commitment, support, and leadership were mentioned as causes for failure, as were organizational reluctance to change, issues with communication, and a lack of organizational culture.

Sidorova and Isik (2010) conducted research and concluded that the study focuses on BPR, which entails fundamentally altering organizational processes while effectively utilizing information technology (IT) to make significant strides in terms of dependability, efficacy, and profitability. Three French groups and their Tunisian subsidiaries undertook an overview of BPR. To evaluate the key indicators of a BPR project's effectiveness and compare the significance of these indicators in the context of France with Tunisia, the collected data were methodically evaluated. According to the study, following the fundamentals of BPR and diversifying the project's human resources can lead to higher productivity, better goods or services, and lower costs. Furthermore, their findings show how much more important respect for principles and a range of resources are in French businesses than in Tunisian ones.

Naz et al. (2013) n their study on HRM in terms of management competency, teamwork, effective communication, information technology, and organizational structure, as well as their impact on the effectiveness of BPR, suggested using HRM in conjunction with the implementation of BPR would produce better results and support organizational better performance. Various experts agree that HR executives provide crucial support and direction as a program develops.

In their study, Safavi et al. (2014) found that BPR has helped many organizations make significant strides forward. These changes were necessary to meet the demands brought on by a more competitive and globally integrated market. The study shows how many organizational transformations took human factors into account rather than just concentrating on these economic goals. In the literature on information technology adoption and organizational change, there are some fundamental guidelines for taking human factors into account when designing products. It also shows that to achieve the highest significant productivity improvements, it is necessary to maximize both the technical and technological as well as the human factors simultaneously. One may anticipate that those who will have to live with the changes made by BPR would be extensively involved in their design and execution given the significance of such changes.

Employee resistance to BPR programs is a result of poor communication, a lack of organizational maturity, a lack of technical skills among employees, conflicting organizational traditions and ideologies, a lack of benefits that are perceived, a fear of power loss, and weak project leadership, as demonstrated by Taher and Krotov (2016). Taher and Krotov demonstrated how these elements might result in the sabotage of BPR activities using the case study of Natural Springs, a Russian start-up company, to show how goals can be redirected, resources can be diverted, and energies can be lost. Taher and Krotov further concluded that countering these sabotage measures can be done through a combination of strategies, including strong leadership, stakeholder impact analysis, the establishment of incentive and deterrence mechanisms, and effective communication which are factors of HRM.

Omidi and Khoshtinat (2016) conducted a case study of Iran Air to examine the impact of organizational culture, human factors, and technical variables on the implementation of BPR in the Iranian Airlines. After statistically analyzing the data collected from the senior, middle, and operational managers who made up the study's population, the authors concluded that both technical and human factors have a significant impact on Iran Air's decision to implement BPR.

In their study, Abubakar and Palisuri (2018) explored how information technology and human resources may be used to create a BPR plan. Their study's goal was to examine how human resources and information technology are used when BPR strategies are put into practice with the intention of improving business organization performance. They employed a literature review strategy that served as the foundation for their research operations and included a description of the theory, research findings, and other items found in reference materials. Their study's conclusions showed that BPR techniques mix information technology and human resources to enhance and develop corporate performance.

Padayachee and Shano (2019) provided evidence that the strategic process of HRM and BPR activities and functions, as well as the entire parts of HRM and BPR, when integrated result in a coherent sequence of tasks to improve the efficiency of the organization. According to Padayachee and Shano (2019), HRM practices like training, development, hiring skilled workers, reducing the cost of delivering goods and services, fostering innovation, advancing research, and developing effective communication should be combined with BPR procedures (process plans, gap analysis, timeliness, issue resolution processes, training and development, and communication strategies). Researchers claim that the results of their combination provide the architecture for effective business operations, positioning the company both strategically and competitively for its strategic skills. They showed how HRM activities considerably enhance BPR activities across a wide range of corporate organizations based on the model characteristics that define HRM and BPR activities. These components, in accordance with Padayachee and Shano (2019), include improved performance, cost containment, cost-effectiveness, creative thinking, interaction, legitimacy, constant implementation, as well as employee commitment and motivation to promote goods and services to meet organizational goals and priorities.

Sindhura et al. (2022) conducted study on role of HRM in BPR. The object of their study was to look at the impact of HRM as well as information technology in the deployment of methods of BPR targeted at enhancing the performance of business organisations. The study employs a method of reviewing the literature, with a synopsis of the hypothesis, findings, as well as other research information obtained from relevant sources to sustain as the cornerstone for research activities. They used a sample size of 153 respondents to obtain data using structured questionnaire. According to the study's findings, BPR techniques with HRM and information technology improve firm efficiency. Also, the role and actions of HRM in BPR were found to be significant.

Sindhura et al. further identified how HRM positively affect BPR which are to; shape up the process to make it successful, creates job descriptions and statements displaying new corporate

orders, helps in training the new workforce, molding the new corporate culture, employees to know their opinion before BPR, revised employee performance management plan and clarify new targets, proper coordination with IT department before re-engineering of the process, streamline the work among employee to increase their productivity, act proactively and promote healthy work culture, and re-train employees on periodic basis to improve skills related to information technology and BPR program.

In conclusion, according to the literature, for BPR techniques to be effective human resources is highly significant. Therefore, as shown in the literature, HRM has favorably influenced the implementation of BPR in organizations. Additionally, the literature has highlighted the elements that would improve HRM's efficiency while using BPR in organizations (Naz et al., 2013). There does not appear to be much debate, either in theory or, on the necessity of making more effort to include human variables to maximize the benefits of the BPR exercise in organizations.

Business Process Re-engineering and Organizational Performance

The impact of business process reengineering on organizational performance in the Malaysian electronics manufacturing industry during the coronavirus pandemic was examined by Hameed et al. (2022). A survey of the electronics manufacturing businesses registered in the Federation of Malaysia Manufacturers' directory produced the data for 103 samples. Partial least squares structural equation modeling is used to analyze the data. The findings demonstrate that organizational performance is significantly improved by business process reengineering dimensions such as top management commitment, organizational readiness for change, information technology capabilities, and people management. However, organizational structure and the other dimensions were found to have a much stronger impact on organizational performance when strategic thinking is present in the organization.

Khashman (2021) explores how information and communications technology plays a mediating role in the relationship between business process re-engineering and organizational effectiveness (ICT). His study's goal is to use ICT as a mediating tool to emphasize the aspects of business process reengineering (BPR) procedures that have an impact on organizational performance in Jordan's Drivers and Vehicles License Department (DVLD). With a total of five constructs, the study used the PLS software to investigate the fundamental correlations between the most pertinent combinations of BPR, ICT, and Organizational Performance. According to the operational, middle, and top levels' (n=124) observations at the Drivers and Vehicles License Department (DVLD). By employing the ICT as a mediating variable, it was discovered that there was a large and strong statistically positive correlation between several business process reengineering-related factors and organizational Performance.

In Nairobi City County, Njuguna and Wanjohi (2021) examined the impact of business process re-engineering on the performance of Agro-processing enterprises. In this study, the performance of Agro-processing businesses in Nairobi City County was evaluated in relation to organizational restructuring, knowledge management, information technology skills, and process monitoring. All 177 Agro-processing businesses in Nairobi City County that were registered with the Kenya Association of Manufacturers comprised the study's target population. The study used a straightforward random sample methodology to choose 65 businesses. The study included both primary and secondary data, with the former coming from questionnaires and the latter coming from the companies' financial statements. As Pearson's coefficient of correlation was used to measure the magnitude and direction of the association between the variables, descriptive statistics were employed to accurately depict the distribution of the results. Tools like tables and graphs were used to present quantitative data. The link between the dependent variable and the independent factors was examined using multiple regression analysis. The results of the study showed that process monitoring, knowledge management, information technology skills, and organizational restructuring all work together to influence how well Agro-processing enterprises operate.

Bako and Banmeke (2019) focused on Commercial Banks and Micro-finance Banks in Ilaro, Ogun state to evaluate the Impact of Business Process Reengineering (BPR) has on Organizational Performance. The study's goals are to identify the innovative and strategic changes that BPR can help the organization make, to ascertain the impact of BPR on organizational performance, to evaluate the roles played by information technology in the implementation of BPR for an organization to achieve its objectives, and to ascertain how BPR can impact the services that an organization provides. The respondents were chosen using a simple random sample technique, and a survey was conducted on the personnel of commercial banks and micro-finance banks in Ilaro to collect the data for this research project. The respondents returned 124 completed surveys. Regression analysis with many variables was used to analyze the data. According to the results, all the tested hypotheses had returned P-values of 0.05 or below, which is the level of significance for results from multinomial regression models. As a result, all four of the alternative hypotheses evaluated were confirmed. This BPR has significant positive effect on organizational performance.

Orogbu et al. (2015) looked at the connection between organizational performance and business process reengineering in a few selected automobile companies in the southeast of Nigeria. Determine the level of business process reengineering in the performance of several automobile businesses in the Southeast was the major goal of their study. A random sampling of 120 people from the population was employed as the sample size. Data analysis methods included Pearson's product moment correlation and the Z test, both of which were used to assess the significance of the coefficient of correlation at the 0.05 level of significance. The results showed that BPR and OP have a positive link.

Dieto (2021) emphasized the importance of BPR in organizations because it increases productivity by eliminating wasteful spending, gives a company the chance to undergo a radical transformation that implies significant improvements in production methods in the shortest amount of time, enables the company to adapt to changes, enhances the quality of services it provides, and is also intended to bring transformation to the office space, resulting in the improvement of the working environment, which greatly impacts productivity.

In conclusion, based on the literature, BPR techniques are essential to build and enhance organizational performance. Therefore, as shown in the literature, BPR has affected organizational performance positively. The significant of BPR exercise for improving organizational performance can never be underestimated. However, only few of the above-mentioned investigations were conducted in Nigeria, to the best of the researchers' knowledge. Furthermore, no studies combined HRM, BPR, and OP in a single research in Nigeria, which makes it difficult to generalize the findings of the studies to Nigerian context.

CONCLUSION AND RECOMMENDATIONS

Effective organizations are those that can adapt to change in today's world of intense competition. Companies that refuse to adapt to change and stay the same in this post COVID-19 pandemic will

fail. For business organizations to survive and adapt to the changing environment around them, managers must create the core transformation sequence. BPR is an effective management strategy for transforming businesses through significant improvements. Human resources help in the implementation of BPR in organizations which eventually lead to increase in organizational performance as seen from the literature. Therefore, the efficiency of HRM has a significant influence on the BPR's success. Also, BPR positively influence organizational performance. This study concluded that because HRM is a magic bullet for the success of BPR, and BPR is a road map for organizational performance. It is essential to integrate it in the overall strategy when planning, designing, and implementing BPR projects. Because it was based on a literature review, this current study has certain limitations. To comprehend the statistical significance of HRM and BPR on organizational performance. It is necessary to use a quantitative instrument to gather and analyse data on HRM and BPR in organizations.

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ENTREPRENEURIAL PASSION AND VENTURE PERFORMANCE OF SMALL BUSINESSES IN RIVERS STATE NIGERIA

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ABSTRACT

This study examines the relationship between entrepreneurial passion and venture performance of small businesses in Rivers State. Survey research design was employed in the study. The owners, managers and/or supervisors of 98 laundries, packaged water and paint sellers in Rivers State were sent the questionnaire and 75 of them returned theirs, representing a response rate of 76.5%. The relationship between the variables were tested using Spearman Correlation Coefficient. The result showed that the dimensions of entrepreneurial passion significantly influences venture performance. It was thus concluded that the passion of the founder of a business is a major determining factor towards the success of her products/services, as well as the extent to which the business will be perceived by customers. To this end, it is recommended that small business founders should: focus on their customers' experience; diversify product/service offerings in order to cater for customers' changing tastes; frequently engage customers to get feedback on products/service and personalize customer's experience in order to boost and strengthen customer relationship; invest heavily into the business especially at its early stage to scale growth; focus on social media by creating profiles on all of the major social media platforms (Instagram, Facebook, Twitter, etc.); and seek mentor networks with the goal of picking up intensive management techniques that they can be deployed to more effectively and efficiently manage and grow their work force and business processes.

Keywords*:* Entrepreneurial passion, venture performance, inventing, founding, developing, customer satisfaction, new product success

INTRODUCTION

Nigeria has a large number of small and medium-sized businesses (SMEs). According to Mekwunye (2018), small business owners prefer small firms since they require less money and can cater to niche market needs. Because they are leading Nigeria's economic and industrial transformation, their significance for the country's growth cannot be emphasised. There are several barriers preventing Nigeria's small and medium-sized enterprises (SMEs) from growing and expanding in order to meet the country's ever-increasing demands. For example, there is a limited availability of funding from financial institutions and the government; a high cost of credit facilities, which includes interest rates and maintenance costs; inconsistency in government policies and bureaucratic bottlenecks experienced in the administration of incentives and support facilities from all levels of government; and an absence or limited infrastructure such as a reliable electric grid or well-developed roads and transportation systems, as well as an inability to obtain locally produced raw materials (Mekwunye, 2018). Small businesses, on the other hand, have the potential to help Nigeria expand its economy and become

a global player. This premise underpins the research, which tries to identify the traits that may be used to forecast a company's performance.

The dynamism and competitiveness that characterize today's markets coupled with the increasingly smarter and better informed customers that firms seek to serve requires that firms exploit newer and better ways of achieving improved performance (Ateke, 2018). Performance refers to a company's capacity to achieve a high degree of profitability in terms of financial capital as well as other resources (Neely, 2016). However, according to Richard et al. (2019), venture performance can be broken down into three distinct categories: product market performance, which includes sales and market share; financial performance, which includes profitability, return on investments, and return on assets; and shareholder return, which includes economic value-added and total shareholder returns. It is well known that customer happiness has an impact on many different metrics of corporate performance, including total sales, market share, gross margin, shareholder value, and total revenue. A higher degree of customer satisfaction has a beneficial impact on customer retention, purchase intention, and good word-of-mouth recommendations. The level of customer satisfaction, on the other hand, is a good predictor of future business performance, including yearly sales growth, net operational cash flows, and market share (Wiele et al., 2017).

The significance of being passionate about entrepreneurship was already recognized by Schumpeter who argued that passion is responsible for entrepreneurial behavior that defy reason-based explanations, such as unconventional risk taking, uncommon intensity of focus and unwavering belief in a dream (Schumpeter, 1951). In line with this theory, Cardon et al. (2009) argues that entrepreneurial passion directly influences individual entrepreneurial behavior such as the commitment towards goals and nature of striving towards goal attainment (Cardon et al., 2009; Cardon et al., 2005). Subsequently, Cardon et al. (2009 p.517) defined entrepreneurial passion as "consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur."

Though scholars argue that there is a positive relationship between passion and persistence, absorption and creative problem solving (Cardon et al., 2009; Zhou & George, 2001), some empirical studies did not manage to find a direct relationship between entrepreneurial passion and venture performance (Baum & Locke, 2004; Baum, Locke, & Smith, 2001). Given the limited empirical research in this area, this study seeks to ascertain whether entrepreneurial passion predicts venture performance of small business in Rivers State. The study was guided by the following hypotheses:

$\mathbf{Ho_1}$: There is no significant relationship between inventing and new product success.
$\mathbf{Ho_2}$: Inventing does not significantly relate to customer satisfaction.
$\mathbf{Ho_3}$: There is no significant relationship between founding and new product success.
$\mathbf{Ho_4}$: Founding has no significant correlation with customer satisfaction.
$\mathbf{Ho_5}$: There is no significant association between developing and new product success.
$\mathbf{Ho_6}$: Developing does not significantly relate to customer satisfaction.

LITERATURE REVIEW

Entrepreneurial Passion

The most popular definition of entrepreneurial passion is the one proposed by Cardon and colleagues (Cardon, 2008; Cardon et al., 2013; Cardon et al., 2009). They define entrepreneurial passion as "consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur" (Cardon et al., 2009, p. 517). Under this definition, entrepreneurial passion is seen as arising when the entrepreneur exhibits intense positive feelings towards a specific entrepreneurial activity or "domain" they undertake in relation to their entrepreneurial venture, such as inventing, founding, and developing, and considers that the activity or "domain" is central to their self-identity (Cardon et al., 2013).

Based on this definition, Cardon et al. (2013) developed a five-item self- report scale to capture an entrepreneur's passion towards inventing, and four-item scales to capture an entrepreneur's passion towards founding and developing. In developing these scales, they initially created a larger pool of items and discarded items during the process of scale validation. The scale that measures passion towards inventing comprises four items that capture an entrepreneur's intense positive feelings towards this activity, and one item that measures the centrality of this activity to the entrepreneur's self-identity. Similarly, the scales that measure passion towards founding and developing comprise three items that capture an entrepreneur's intense positive feelings towards each activity, and one item that measures the centrality of each activity to the entrepreneur's self-identity. In this study, we view entrepreneurial passion through the lenses of inventing, founding and developing.

Inventing: Passion for inventing concerns activities associated with scanning the environment for new market opportunities, developing new products or services, and working with new prototypes (Cardon et al., 2009). Entrepreneurship is often associated with key changes of the economic or social landscape. Some entrepreneurs search for innovative ideas deeper and more frequently than others (Katila & Ahuja, 2002), and the desire to deliver new solutions to the marketplace is often an important motivator for entrepreneurs. Individuals experiencing passion for inventing may actively seek out new opportunities, enjoy coming up with new product or service ideas, and relish inventing new solutions to important needs and problems. Such people enjoy tinkering with new product designs and exploring the articulation of these designs in concrete applications.

Founding: Passion for founding relates to assembling the necessary financial, human, and social resources needed to create a new venture (Cardon et al., 2009). The desire to found an organization is an important motivator for many entrepreneurs and the founder role identity can be both complex and central to an entrepreneur's self-concept (Hoang & Gimeno, 2010). Entrepreneurs often have a need for achievement that manifests itself in the founding event — a tangible representation that they have done "something" entrepreneurial. Entrepreneurs who experience passion for founding primarily enjoy the process of founding a venture, and often develop identities that are intertwined with the venture identity (Cardon et al., 2005).

Developing: Passion for developing is associated with the growth and expansion of the venture after founding (Cardon et al., 2009). Many entrepreneurs are motivated not by a desire to found an organization, but by a conscious motivation to grow and expand a venture. These individuals often exhibit different strategies for organizational management than their counterparts (Gundry

&Welsch, 2001). They also tend to rely on different management styles, and to communicate with key stakeholders in a manner that promotes the organization's continued expansion (Baum & Locke, 2004). While in many cases entrepreneurs who demonstrate high passion for developing do so in a venture they have founded themselves, it is equally plausible that a non-founding entrepreneur could also experience high levels of passion for stepping into an existing start-up and developing it into a more lasting, valuable, or sustainable venture. Entrepreneurs who experience passion for developing their firm(s) may enjoy activities such as increasing sales, hiring new employees, or finding external investors to fund such developments.

Concept of Venture Performance

Scholars continue to argue about how to characterise organisational performance in light of its complexity and multidimensionality (Santos & Brito, 2012). Regardless of the viewpoint, creating customer value by utilising productive assets offered by stakeholders constitutes the ultimate aim of organisational performance (Carton, 2004). Organizational performance can be interpreted in a variety of ways. Organizational effectiveness is a broad notion that encompasses both financial and nonfinancial measures like customer satisfaction, operational effectiveness, and corporate social responsibility. It also relates to financial, product market, and shareholder return in a limited sense (Singh et al., 2016; Richard et al., 2009).

New Product Success: New product success is defined as a percentage of sales by the firm in previous year through improved or new addition in product line that were launched by the firm in last three calendar years under review. It normally comprises of two major components that are percentage of sales from last products that are new to the market and percentage of sales from products that are new to the firm (Dul & Ceylan, 2014). Success of any new product offering is relying on how well an organization is capable to acquire information from the external environment and how well the intelligence program of any firm are working to acquire information about their competitors is considered to be a worthy component during new product development design stage. Distributing such kind of information among every concerned department might encourage new product development teams to endorse features that were collected from customers through feedback and market surveys and launch successful offerings with increased rate of acceptability (Tih et al., 2016). Research has revealed that those companies who are actively sharing external information and knowledge will ultimately increase internal coordination among different departments that increases the ratio of success for the launch of new product in the market (Lau, 2011).

Customer Satisfaction: Customers are essential to a company's long-term viability as well as its ability to turn a profit. Providing clients with the goods and services or items of value they desire at the right price, in the right place, at the right time, and in the appropriate mix is how Adirika, Ebue, and Nnolim (2001) define customer satisfaction. Satisfaction, according to Kotler and Keller (2016), is an individual's assessment of how well a product performs (or does not perform) in comparison to their expectations. When a product or service doesn't live up to expectations, the customer is left feeling let down. The customer is pleased or thrilled if the service or product meets or surpasses his or her expectations. Since customer satisfaction refers to how someone feels after purchasing or consuming a product that fits their demands, it's a widely accepted definition. As a result, long-term client retention depends heavily on customer pleasure. Convenience, customer care, transaction techniques and processes, pricing, and products and services are regularly used in customer service to achieve client satisfaction (KPMG, 2018). As an intervening variable for improving company performance, customer service qualities are directly linked to customer satisfaction.

METHODOLOGY

Survey research design was employed in the study. The owners, managers and/or supervisors of 98 laundries, packaged water and paint sellers in Rivers State were sent the questionnaire and 75 of them returned theirs, representing a response rate of 76.5%. The laundries, packaged water and paint businesses were selected from the latest official list of registered businesses in the state (Rivers State Yellow Book Directory, 2013/2014). A pretest was first done to determine the internal consistency of the research instrument, and the Cronbach alpha values did not fall short of Nunnaly and Bernstein's (1994) 0.7 minimum threshold. Entrepreneurial passion, with the sub-constructs inventing, founding and developing, was measured with items adapted from Cardon et al. (2013).; while the measures of venture performance (new product success and customer satisfaction) were adapted from the works of Huanga et al. (2004) and Milner and Furnham (2017). The relationship between the variables were tested using Spearman Correlation Coefficient.

RESULTS AND DISCUSSION

The Spearman Rank Order Correlation Coefficient is adopted in the assessment of the extent to which the variables correlate. This choice is premised on the fact that we intend to test the relationships between variables and data was collected at the ordinal scale. Therefore, based on a confidence interval of 95% confidence a criterion of 0.05 level of significance is adopted in the assessment of the significance of relationships (where $P < 0.05$) and insignificance of relationships (where $P > 0.05$).

Table 1: Relationship between Inventing and Venture Performance

		Inventing	New Product Success	Customer Satisfaction
Inventing	Correlation Coefficient	1	.765**	.754**
	Sig. (2-tailed)		.000	.000
	N	75	75	75
New Product Success	Correlation Coefficient	.765**	1	.747**
	Sig. (2-tailed)	.000		.000
	N	75	75	75
Customer Satisfaction	Correlation Coefficient	.754**	.747**	1
	Sig. (2-tailed)	.000	.000	
	N	75	75	75

Table 1 depicts the result for the relationship between inventing and the measures of venture performance. The result reveals that the relationship between inventing and new product success is significant at rho = .765 and p = 0.000; the result for the relationship between inventing and customer satisfaction is also significant at rho = .754 and p = 0.000. The result for the test on the effect of inventing on the measures of venture performance suggests that inventing contributes significantly towards enhancing the manifestations of new product success. This is because the result reveal that at rho = .765, the relationship between inventing and new product success is stronger and much more significant than the effect of inventing on customer satisfaction. The evidence suggests that although all relationships are highly

substantial and significant even at a 0.05 level, new product success has a higher tendency to reflect the creativity and innovative capacity in the organization. As such, the null hypotheses for this set of relationships are therefore not supported.

Table 2: Relationship between Founding and Venture Performance

		Founding	New Product Success	Customer Satisfaction
Founding	Correlation Coefficient	1	.462**	.441**
	Sig. (2-tailed)		.000	.000
	N	75	75	75
New Product Success	Correlation Coefficient	.462**	1	.510**
	Sig. (2-tailed)	.000		.000
	N	75	75	75
Customer Satisfaction	Correlation Coefficient	.441**	.510**	1
	Sig. (2-tailed)	.000	.000	
	N	75	75	75

Table 2 shows the result for the relationship between founding and the measures of venture performance. The result reveals that the relationship between founding and new product success is significant tough weak, at rho = .462 and p = 0.000; the result for the relationship between founding and customer satisfaction is significant, and also weak, at rho = .441 and p = 0.000. The result for the test on the consequence of founding on the measures of venture performance suggests that though it is weak, founding contributes a little more towards new product success. Thus, the null hypotheses for this set of relationships were also not supported.

Table 3: Relationship between Developing and Venture Performance

		Developing	New Product Success	Customer Satisfaction
Developing	Correlation Coefficient	1	.876**	.862**
	Sig. (2-tailed)		.000	.000
	N	75	75	75
New Product Success	Correlation Coefficient	.876**	1	.857**
	Sig. (2-tailed)	.000		.000
	N	75	75	75
Customer Satisfaction	Correlation Coefficient	.862**	.857**	1
	Sig. (2-tailed)	.000	.000	
	N	75	75	75

Table 3 portrays the result for the relationship between developing and the measures of venture performance. The result reveals that the association between developing and new product success is significant at rho = .876 and p = 0.000; the result for the relationship between developing and customer satisfaction is also significant at rho = .862 and p = 0.000. The result for the test on the impact of developing on the measures of venture performance suggests that developing contributes meaningfully towards increasing the manifestations of new product success. This is due to the fact that the result reveal that at rho = .876, the relationship between developing and new product success is stronger and much more significant than the impact of developing on customer satisfaction. The evidence suggests that although all relationships are highly substantial and significant even at a 0.05 level, new product success has a higher propensity to be a function of the entrepreneur's drive towards developing after founding. Consequently, the null hypotheses for this set of relationships are also not supported.

CONCLUSION AND RECOMMENDATIONS

The results and discussions thus far allows one to aver that entrepreneurial passion has a substantial influence on the performance of small business. In other words, the passion of the founder of a business is a major determining factor towards the success of her products/services, as well as the extent to which the business will be perceived by customers. To this end, it is recommended that small business founders should:

i. Focus on their customers' experience. This can be achieved by delivery quality experiences and products, anticipating and responding to customers' needs, and leverage on the knowledge about customers' needs to develop novel and innovative products/services.
ii. Diversify product/service offerings in order to cater for customers' changing tastes.
iii. Frequently engage customers to get feedback on products/service and personalize customer's experience in order to boost and strengthen customer relationship.
iv. Invest heavily into the business especially at its early stage to scale growth. This can be achieved by committing to redirecting profits made back into the company.
v. Focus on social media by creating profiles on all of the major social media platforms (Instagram, Facebook, Twitter, etc.). This will allows the business better market itself and interact a larger pool of potential customers.
vi. Seek mentor networks with the goal of picking up intensive management techniques that they can be deployed to more effectively and efficiently manage and grow their work force and business processes.

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FLEX-TIME WORK ARRANGEMENT AND EMPLOYEE RETENTION IN CHEMICAL AND NON-METALLIC INDUSTRY IN RIVERS STATE, NIGERIA

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ABSTRACT

This study examined the relationship between flex-time work arrangement and employee retention in chemical and non-metallic industry in Rivers State. The study adopted the cross-sectional research survey design. Primary data was generated through structured questionnaire. The population of the study covered a total of 45(forty five) employees from the three (3) chemical and non-metallic industry in Rivers state: Given the sizeable nature of the population, the study opted for census wherein the population was adopted as the sample size. Descriptive statistics was used for ascertaining the univariate distribution of the data for each variable. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient. The tests were carried out at a 0.05 significance level. Findings revealed that there is a significant relationship between flex-time work arrangements and employee retention of chemical and non-metallic industry in Rivers State. Hence, this study concludes that the adoption of flex-time work arrangements positively influences employee retention of chemical and non-metallic industry in Rivers State. Therefore, paper recommends that management of chemical and non-metallic industry should endeavor to provide work shift and part time schedules to its employees as a positive contribution in employment strategies.

Keyword: Flex-Time work arrangement, employee retentions, employee engagement, employee wellbeing, employee job fit

INTRODUCTION

Organizations are putting in efforts and strategies to recruit and maintain their most important workers. To recruit and maintain workers in the company will need different techniques. Some may agree that getting the right pay is the best technique to improve employee retention but is not the only thing that affects a potential candidate's decision to embrace and remain with a business. Many factors contribute to businesses implementing flex-time arrangement strategies, and one of the most debated is employee retention which many corporations are seeking ways to accomplish it. An organization's willingness to keep its staff on board for the long haul is employee retention. Hence, employee retention described the mechanism by which an organization empowers workers to continue for a prolonged period. Employee retention is crucial for companies because it is associated with replacing and retraining new workers (Irshad & Afridi, 2010), particularly for those who are extremely qualified and hard- to-find specialist knowledge (Kreishan & Al-

Hawarin, 2011; Bulut & Sayin, 2010).

Employee retention is critical to management and in order to achieve firms must develop an atmosphere that allows workers to continue for longer periods of time (Singh & Dixit, 2011). Employee retention is viewed as a crucial component of maintaining a competitive advantage in the marketplace (Ghansah, 2011). Employee retention is an issue that most companies are struggling with these days. Employing skilled workers for the job is important but maintaining them in their employment is much more important because replacing a new existing employee with a new worker raises operating expenses of fresh new hires and filling positions (Ghansah, 2011). One way to get workers retained is through flex-time arrangement. With this, employees can work on the go, at home, at a coffee shop, or even while traveling through the help of technological advancement. Employees can reach the office from anywhere using computers, smartphones, and tablets, with cloud-based services controlling the business area. Employers might empower their workers to pursue new positions and embrace new opportunities in order to work flexibly. Allowing workers to work flexibly makes them to feel being part of the organization and not only produces happy and committed employees, but also promotes teamwork and creativity, both of which key success factors.

Scholars have consistently reflected on the need for flex time arrangement for past decades. This represents the increasing importance of flex-time arrangement. The basic understanding is that flexible work structures allow a company to control its workers and adjust them towards work accomplishments. This is centered on Atkinson's (1984) revolutionary "flexible firm" concept. If flexibility allows organizations to respond to evolving expectations from the environment, the primary problem of flex-time arrangement within an organizational context is allocating the work force to the varying consumers' needs or production. Flexibility, from the employee's viewpoint means having the right to choose where to work, for how long and the boss to work with. Several researchers have conducted research on the value of employee retention (Zaffane, 1994) but very few have attempted to examine the relationship between flex-time arrangement and employee retention in Nigeria. This has demanded more studies in this area to fill this gap.

Globalization, deregulation, crises, and technological changes have compelled many companies to consider flex-time arrangement to retain workers and continue to expand and grow capable human resource (Greenwood & Hinings, 1996). In today's business operations, flex-time arrangement are neglected. The chemical and non-metallic industry's failure to implement flex-time arrangement has had an impact on workers retention and firm efficiency, resulting in low profitability, low sales volume and poor business growth. The attitude and behavior of employees in chemical and non-metallic industries in Rivers state denotes absence of employee retention. These are: lack of punctuality, not on seat and refusal to render helping hands to coworkers including high rate of defection. Lack of employee retention can be attributed to a variety of factors.

According to Arthur (2001), incompatible corporate cultures, feelings of not being respected or admired, a sense of not being a part of the corporation, insufficient oversight, and a lack of opportunities for advancement are some of the reasons why workers decided to leave an organization. Others include; unequal pay, no fringe benefits, and lack of a flex-time arrangement. Relationships at work are not working out effectively. The lack of flexible work practices is to be blamed for this. The problem of establishing flex-time arrangement is a problem for both workers and employers in businesses as competition intensifies. Consequently, firms become immune to issues such as; absenteeism, "not on seats," and other ineffective behaviors that impede the organization's smooth operation (Byrne, 2005).

With respect to research performed by different scholars, such as Blake, (2006), Armstrong, (2006), and Sekuguchi, (2004), the most obvious cause for staff leaving is the presence of a downtrodden relationship between workers and their immediate manager which is quite the opposite of retention strategy. Numerous workers seek to withdraw from an organization because of friction they experienced with their line managers, contrary to the adage "people abandon managers, not organizations." Employees quit their employers for a number of reasons. This resulted in high workplace frustration, causing managerial-level workers to pursue alternate jobs, raising an organization's staff turnover (Yang & Spector, 2008). Workers quit their employers because they can find a suitable job and same positions in other business entities (Price, 2007).

Human resource in an organization is by far the most important, expensive, and unpredictable of all the resources that can be used to achieve the organization's task (Yang & Spector, 2008). To really get job going, companies need competent individuals. Today's greatest obstacle for management is recruiting, maximizing, and retaining experienced staff. The rest of today's employers deserve to be allowed to work from home. Flex-time arrangement are becoming more important as younger people take over the workforce. Employees tend to combine jobs and personal lives, breaking away from the conventional 1-to-5 work days. The root of these problems is traced to lack of adopting Flex-time arrangement. Employees are working under stress and see work as burden which affected their performance. These show the neglect of flex-time arrangement in chemical and non-metallic industry. Also, this has created a room for investigation to examine the relationship between flex-time arrangement and employee retention in chemical and non-metallic industry in Rivers state to provide solution to this problem.

The purpose of this paper therefore was to examine the relationship between flex time and employee retention in chemical and non-metallic industry in Rivers state. The specific objectives of the study include to:

i. Examine the relationship between flex time and employee wellbeing in chemical and non-metallic industry in Rivers state?
ii. Examine the relationship between flex time and employee work fit in chemical and non-metallic industry in Rivers state?

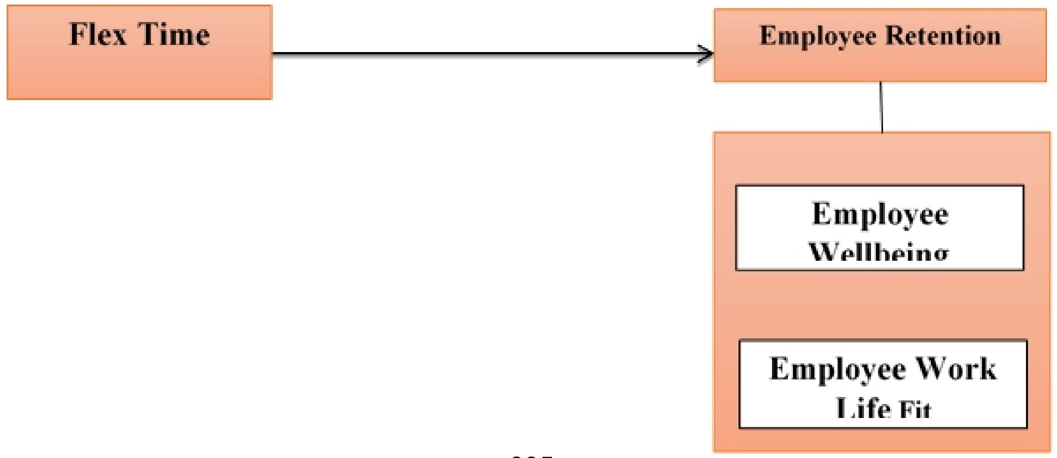

Fig. 1: Conceptual model for the relationship flex-time and employee retention
Source: Desk Research (2022)

LITERATURE REVIEW

Theoretical Foundation

This study is premised on the Spill-over Theory which main focus is basically talks about work and family life. The author advocated that job related factors and family related factors should be in equilibrium for employees to be productive, brings about customer satisfaction, have job satisfaction and control their employee turnover. Spill over theory explains was to control work related stress or family life related stress so that it does not spill over to work or family life (Greenhaus & Beutell, 2010). It describes the general behavior, emotions, attitudes as well as stress can be carried over from a life domain to another (Nnko, 2022).

This is due to the fact that, work and family domains are interconnected despite their physical and temporal boundaries implying a bi-directional relationship between the two domains, that is, work may carry over to family (work-to-family spillover) and family may carry over to work (family-to-work spillover (Bird et al., 2007). The theory explains On the basis of the theory, if work-family interactions are rigidly structured in time and space, then spillover in terms of time, energy and behavior is generally negative. Studies argued that if work–family dynamics leave little room for flexibility, then negative spillover in terms of time, energy, and behavior results (Gunavathy, 2011; Bae, 2012). Nnko (2022) further suggests that flexible work–arrangements may promote employee participation in organizations activities and initiatives through a felt obligation to give extra effort in return for additional benefits.

According to Hill et al. (2013), employers who permit employees to integrate work and family responsibilities, actively and efficiently produce positive spillover and a healthier, happier, more productive working staff, resulting in maximized productivity. A growing number of African countries have undertaken health facility performance studies using Spillover theory to guide the development of interventions to inefficiency in health system resources (Sara et al., 2014). However, like many other theories, Spillover theory has its limitation as it produces results that are sensitive to measurement error. This theory is relevant to this study as it explains best link between flex-time arrangement and employee retention. This theory supported the variable work scheduling as it articulates the relationship between spillover and employee retention how to select appropriate resources from the environment can enhance the value and brand image of the products and services of an organization.

Concept of Flex Time Arrangement

Flex time arrangement is a flexible work hour's policy where employees are allowed to choose when their workday starts and ends, as long as they achieve the daily, weekly or monthly hours set by the employer. There are several variations, but the core principle is the same – to provide employees with more freedom and flexibility in making their own work schedule. Flex-time arrangement promote a much greater degree of jobs offered by employers and create opportunities for promotion. Employers offer career development opportunities, work autonomy, and promotional opportunities to workers to improve their retention intent (Ashton & Sungm 2002). Flex-time arrangement create sustained performance improvement in organizations and create a better work place especially when workers are satisfied and attain personal achievement. When these two benefits work together, it translates into high level of financial performance, sustained competitiveness and innovation on the part of the firm and increases employee retention.

Flex-time arrangement involve allowing workers to choose when to work, where, and how long they may work either from home or office (World at Work, 2011). Rather than just be working in a tightly controlled workday, flexible work practices encourage workers to have control over time and the environment favorable. Flex-time arrangement include; job sharing, work weekends, yearly hours, flextime, part time work and fixed-term agreements, subcontracting are all forms of this kind of coordination (Brewster & Tregaskis,1997). Flex-time arrangement look at flex timing and enable workers to re-arrange work timings to accommodate them under basic rules, and flex-place. This represents the right of workers to work in the position that is more effective to deliver the task (Hill, 2001).

Compressed workweeks, a shortened workload and more holiday days are some of the other choices from which workers can make (DeSivatte & Guadamillas, 2013). While there are some challenges for the organization in implementing flexible work practices such as rising costs and supervision challenges as well as feelings of loneliness associated with working in remote location which can lead to job discontent (Kelliher & Anderson, 2008), the benefits are more: it can reduce stress, job enrichment and autonomy, reduce absenteeism, and increase job satisfaction and productivity (Russel et al., 2009). Individual and organizations may have the freedom to manage working hours to be productive.

Concept of Employee Retention

Griffeth and Hom (2001) define employee retention as "a process through which employees are motivated to stay in the organization for a longer period of time." Retaining talented employees for longer period of time is envisaged as one of the important functions of HRM (Bhatnagar, 2004). Singh and Dixit (2011) define employee retention as "the different strategies and practices, which let the workers adhere to an institution for a longer period." Thus, employee retention is the ability to preserve those employees an organisation want to retain, for longer than its rivals (Johnson, 2000). Retention of employees is a multifaceted element of the HR policies of organisations. Employee retention relates to an organization's willingness to maintain its workers. Modern meaning relates to customer liking, classification, dedication and confidence, willingness to suggest, and repurchase aim are all recent concepts for the idea of retention (Stauss et al., 2001). According to research, a number of primary factors affect retention, including corporate culture, connectivity, planning, pay and rewards, flexible work schedules, and preparation and professional growth programs. Employee retention, in particular, promotes continuity and links the experience of employees in companies on a daily basis to the organization's vital performance drivers.

Employee retention can be represented by a simple statistic. For instance, if the retention rate is 80%, usually indicate that an organization kept 80% of its employees in a given period thus, employee retention is achieved. Many consider employee retention as relating to the efforts by which employers attempt to retain employees in their workforce. It is not the effort but the real number of workers preserved successful in the organization which exceeded greatly the number that left the firm in a given period. Employee retention is a difficult concept, as there is no one-size-fits-all approach. Retention has been described in literature as a continuing commitment to

do business with a firm (Zineldin, 2000). Maintaining retention of workers is regarded as a critical component of gaining a competitive edge among companies. Thus, retaining workers will do more good than not retaining them. Employee retention may be measured by different indicators, herein, we adopt employee wellbeing and employee work life fit.

Employee Wellbeing

Having looked at the relationship between well-being and productivity at the individual level, we now zoom out, and look at this relationship at the firm level. We first present results from novel empirical analyses in collaboration with the Gallup Organization, analysing its extensive client database to study the relationship between employee well-being and various firm performance outcomes. We then supplement this analysis with other, supporting evidence from the literature. In general, we expect the direct effects of "happier workers working better" identified previously to translate into positive impacts at the aggregate firm level. But beyond immediate, direct effects of mood on motivation and productivity, we also expect there to be more slowly moving and indirect effects.

Stressful commuting, sitting in uncomfortable office spaces and committing to inflexible work schedules – these three things take a massive toll on employee's health. By adopting flex time in your company, you will help your staff members avoid everyday traffic jams and work in nicer environments – at home. Having a chance to work from home at least one day a week can make a huge difference for exhausted employees. It lets them re-energise, become more related and take better care of their mental and physical well-being. The independent variable used in this study is wellbeing. Guest and Conway (2004) define wellbeing in terms of six constructs including: a manageable workload; personal control over the job; support from colleagues and supervisors; positive relationships at work; a reasonably clear role and a sense of control of involvement in changes in the organisation. In some cases, wellbeing is also defined in terms of strain. Strain is defined as psychological, physical or behavioural responses to stressors (Le Fevre et al., 2003).

Several stressors influence the wellbeing level in a workplace. The term stressor is used to indicate job or organizational conditions that require adaptive responses from employees (Jex, 1998). If an employee's response to a stressor is either neutral or even positive then it is not considered as a strain (Cooper and Quick, 1999). The negative impact of strain upon an employee's efficiency, effectiveness, satisfaction and performance are well-documented. Amongst other outcomes, strain is manifested in the form of job dissatisfaction, anxiety, depressed mood, headache, coronary heart disease, absenteeism, poor performance and turnover (Jex, 1998; Cooper et al., 2001). The purpose of studying wellbeing in the present study is to examine its relationship with organizational commitment as moderated by WLOC. Here we could argue that wellbeing might act as a positive force towards influencing the level of individual commitment.

Employee Work Life Fit

The term work-life fit is commonly used as a more comprehensive expression to describe policies that have been previously termed 'family-friendly', but are now extended beyond the scope of the family. Work-life fit refers to the flexible working arrangements that allow both parents and non-parents to avail of working arrangements that provide a balance between work responsibilities and personal responsibilities (Valiulis & Drew, 2006).Work-life fit is connecting employees' work lives and personal lives together in a way that allows them to succeed in both. Work-life fit is different than work-life fit because balance implies that employees need to be putting equal time or effort into their work and personal lives, which is not always possible.

Having a better fit between employees' work and personal lives can bring them many benefits, including lower stress, less burnout, and increased productivity. An improved work-life fit can also increase morale amongst employees, lead to greater attraction and retention of employees, and reduce employees' absenteeism (MacKay, 2017; Canadian Centre for Occupational Health and Safety, 2016). To fully achieve these benefits both for employees and the organization, there needs to be buy-in on all levels, and potentially adjustments to ideas surrounding how work should be conducted. Working remotely does not necessarily mean employees are not being productive, work-life programs are for all employees in all types of personal situations, and supervisors also need to have work-life fit in their own lives (Canadian Centre for Occupational Health and Safety, 2016). In fact, the more employees are in contact with work-related tasks, the more health problems and absences from work they experience (Dettmers et al., 2016). One way to do this is with regular "digital detoxes" to help employees get a break from work and ensure they have time to fit their personal life into their whole life (MacKay, 2017)..

Empirical Review

Previous researchers suggested several factors which facilitate employee retention (Cappelli, 2000). The factors are career opportunities, work environment, organizational justice etc. Employees stay loyal with the organizations that consider these factors (Cole, 2000). According to Osteraker (1999), employee retention is considered the panacea for success of firms because it depends on these factors. Van Knippenberg (2000) claimed that employees will be more loyal if they identify themselves within a group and support a group goal. Past studies on career advancement have laid emphasizes on just a portion of the career management process. The aspects are known to be the exploratory behavior or career goal setting (Colarelli & Hartmann, 1983). Other studies of career advancement and development have equally made use of student as samples. Most of these studies of career advancement have used result measures connected to personal effectiveness, like satisfaction with career information and occupational choice (Greenhaus et al., 2000).

The study carried out by Ogini (2020) found a correlation between job promotion and employee engagement in Nigerian public manufacturing firms. In order to investigate the factors, the analysis used a cross-sectional survey. They studied 162 employees from twelve (12) manufacturing firms in Nigeria. As the result shows, there is a significant relationship between work advancement and employee engagement in Nigerian public manufacturing firms. Morris and Quarles (2004) conducted a study on promotional opportunities and employee intent to stay. From the findings, they conclude that promotional opportunities affect employee intention to stay.

Similarly, researchers have found significant relation between promotion opportunities and performance of employees (Delaney & Huselid, 1996; Shahzad et al., 2008; Teseema & Soeters, 2006). Careem et al. (2913) carried out a study on retention and performance of employees and found that why workers performance were improved is because the organization value them and retained them using all necessary techniques which made workers to develop sense of commitment and intention to stay. Joarder et al. (2011) also found that workers chances for promotion make workers get rid of intention to leave the firm, instead, they develop more committed spirit to work with the firm.

Irshad and Afridi (2010), Kwenin et al. (2013) and Luthans (2005) also found that promotional opportunities have a significant relationship with employee retention. From the empirical review, it is obvious that many studies have not been conducted on employee retention in chemical and non-metallic industry in Rivers state. The few research reviewed were mainly from the foreign environment of which culture in such places might differ in some extent from the domestic environment like Nigeria. This was considered as a gap which led to the present study. Hence, from the review of past scholarly works and the arguments they put forward clearly shows that adopting flex-time arrangement will improve employee retention in chemical and non-metallic industry in Rivers state. From the foregoing discourse, the

study hypothesized thus:

Ho$_1$: There is no significant relationship between flex time and employee wellbeing of Chemical and non-metallic industry in Rivers state.

Ho$_2$: There is no significant relationship between flex time and employee working life fit in Chemical and non-metallic industry in Rivers state.

METHODOLOGY

The study adopted the cross-sectional research survey design. Primary data was generated through structured questionnaire. An accessible population of 45 employees from the three (3) Chemical and non-metallic industry in Rivers state. Given the sizeable nature of the population, the study opted for census wherein the population was adopted as the sample size. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient. The tests were carried out at a 0.05 significance level.

DATA ANALYSIS AND RESULTS

Table 1 shows the result of correlation matrix obtained for flex-time arrangement and measures of employee retention. Also displayed in the table is the statistical test of significance (p - value), which makes us able to answer our research question and generalize our findings to the study population.

			Flex-time arrangement	Employee wellbeing	employee working life fit
Spearman's rho	flex-time arrangement	Correlation Coefficient	1.000	.725**	.631**
		Sig. (2-tailed)	.	.000	.000
		N	40	40	40
	employee working life fit	Correlation Coefficient	.725**	1.000	.829**
		Sig. (2-tailed)	.000	.	.000
		N	40	40	40
	employee working life fit	Correlation Coefficient	.631**	.829**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	40	40	40

** Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data December 2022 and SPSS

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.631 on the relationship between flex-time and employee work life fit. This value implies that a strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in employee work life fit was as a result of the adoption of flex-time. Therefore, there is a strong positive correlation between flex-time and employee work life fit of chemical and non-metallic industry. Similarly displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between flex-time and employee engagement of chemical and non-metallic industry in Rivers state.

Also displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between flex-time and employee wellbeing of chemical and non-metallic industry in Rivers state. Also displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between flex time and employee working life fit of chemical and non-metallic industry in Rivers state.

DISCUSSION OF FINDINGS

The findings showed that there is a positive significant relationship between flex-time arrangement and employee retention in chemical and non-metallic industry in Rivers state. This is supported by Robbins and Judge (2013) who argue that policies focused on employee work life balance are effective in lowering absenteeism and improve retention of highly skilled employees. It was found that the company exercises working from home. As observed by Dessler (2013), many self-employed people especially those in the creative arts industry tend to work from home. Additionally, employees that have modern communication technology are also increasingly working remotely. The findings show that working remotely requires confidence in using technology and investment in technology equipment.

Also, in agreement with this study is the findings by Christopher et al. (2014) where the respondents indicated that having the opportunity to adapt their work schedule according to their own needs brings along positive attitudes not only in their personal life but also in their work life. The study showed that flexible working hours offered respondents the opportunity to put in the necessary effort and energy in their work during the moments that counted most. Also, the same applies to the findings of Pierce & Newstrom (1982; 1983); Kossek &Ozeki (1999) who found and concluded that a more limited amount of flexibility was optimal in predicting improved performance, with employees specifying in advance what hours they would work, rather than varying their schedule on an ad hoc basis.

Findings by Porter et al. (2008) argued that flex-time work arrangement and demand for services substantially increases performance willingness to stay longer as work becomes more flexible, there is demand for new management skills, hence better and reliable service delivery, as well as more responsive and excellent services. These results also agree with De- Tumi (2005) who argued that understanding the nature of the flexible work one provides to the employee allows for an appreciation of how the workers see the services provided. In any work flexibility, the employee's performance is crucial to one's ability to ensure that they are satisfied beyond expectation. This helps in giving employees not what is obvious but also fulfills a multitude of less obvious employee's needs (De-Tumi, 2005).

CONCLUSION AND RECOMMENDATION

Based on the findings of this study, it can therefore be concluded that majority of the chemical and

non-metallic industry in Rivers state sampled in this study lay emphasis on flex-time work arrangement for retaining its employees. Therefore, study recommends that management of chemical and non-metallic industry in Rivers state should endeavor to provide work shift and flex-time for its employees as it creates a positive relationship with affective organizational commitment, employee retention, job satisfaction and thus employee happiness.

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INFORMATION SECURITY PRACTICES AND ORGANIZATIONAL EFFICIENCY IN TELECOMMUNICATION COMPANIES IN RIVERS STATE, NIGERIA

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ABSTRACT

This study examined the relationship between information security practices and organizational efficiency of telecommunication companies in Rivers State, Nigeria. The study adopted a cross-sectional survey in its investigation of the variables. Primary data was generated through structured questionnaire. The population for this study was four telecommunication companies in Rivers State, Nigeria. Given that the population size is small and can be adequately covered, our study adopts a census method. However, one hundred and seventy-four managers were used as respondents for the study. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient. The tests were carried out at a 0.05 significance level. The hypotheses were tested using the Spearman rank order correlation Coefficient. The tests were carried out at a 95% confidence interval and a 0.05 level of significance. The study findings revealed that there is a significant relationship between information security practices and organizational efficiency of telecommunication companies in Rivers State, Nigeria. The study concludes that that there is a positive significant effect of information security practices on organizational efficiency in Telecommunication companies in Rivers State. The study recommends that management should ensure that they do their best to use password and security firewall so as to meet up to newly developed virus, spyware and hackers that are within the cyber world.

Keyword: Information security practice, organizational efficiency, time minimization, cost minimization

INTRODUCTION

Information is as old as nature, it preceded the existence of man, it plays key role in shaping and enhancement of civilization, especially as it concerns organizations, families, communities, nations and the world in general in our modern society. It assumes the form of both formal and informal conversation, meetings, telephone calls, personal conversation, letters, reports, memos and trade publications. Hardly can any organization or system perform efficiently without information (Bestman, & Ikuru, 2019). Information is an essential component of organizational assets, securing the information system implies securing the assets of that organization (Bjorck, 2001). The competitive nature of businesses necessitated the proper security of organizational information or database, loosing vital information to competitors or thieves can result to total collapse of the organization. The increase in knowledge and Information Technology and its numerous users (both good and bad) of information system has been one of the major problem operating businesses on the internet despite its numerous advantages (Schlienger & Teufel, 2003). The world today is a global village that has necessitated movement of businesses towards the internet, as they are now referred to as internet driven business. The benefit of operating on the internet greatly out weight the local and manual process, but one attack can totally destroy all the

day's harvest, that is why it is necessary to be conscious of every given situation when you are online, this calls for information security. On the internet several computers are linked together, so that different databases, companies, people are in constant communication with one another, so there is different behaviour and interest (good and bad) or intension, most Information Technology experts are not to improve productivity but their aim of learning is for criminal activities like the hackers. Whatever venture man go into, the greater the risk, the higher the benefit, the only solution in achieving this great benefit is how the security of information be properly enforced. Information security is a way of solving the problems of businesses operating online (Kruger & Kearney, 2006). Information security answer the question of business online and need to be a continued process as a result of new hijackers and new competitors.

Different researchers have defined information in different ways, they are as follows; Information is an intellectual property of an organization, it constitutes a decision process or a comprehensive decision reach by the management of the organization stored in the database of the organization (Shaw & Chen, 2009). According to Kruger and Kearney (2006) information is a resource, it aids in achieving productivity, the availability of information in our disposal determines how effective a staff or organization can improve performance. The process of protecting this information from access, use, disclosure, disruption, modification or destruction by unauthorized users of the organization is referred to as information security (Bestman, 2015). Because of the competitive nature of business and human nature (intension), management needs to protect their information from unauthorized users of the information system, even the authorized users must be guarded to follow a particular process in carrying out their job function. Information security is securing valuable asset of the organization from unauthorized or intended threat or information hijackers who may want to cause harm or defraud the organization. It is the technological, legal, and management strategy to protect organizational information (asset) from thief and unauthorized users of the information system.
According to Tiwari et al. (2007), information security is the protection of information from unauthorized users from gaining access, use, disclosure, disruption, modification, perusal, inspection, recording or destruction. Information is one of the most valuable asset or identity of the organization. Information security requires the handling of information with care, ensuring that unauthorized users did not gain access into the system.

According to Singh (2009) secured information must obey these three basic and sensitive properties called the triad of information security; they are Information confidentiality, Information Integrity and Information Availability. Confidentiality is the term used to prevent the disclosure of information to unauthorized individuals or systems. For example, a credit card transaction on the Internet requires the credit card number to be transmitted from the buyer to the merchant and from the merchant to a transaction processing network.The system attempts to enforce confidentiality by encrypting the card number during transmission, by limiting the places where it might appear (in databases, log files, backups, printed receipts, and so on), and by restricting access to the places where it is stored. If an unauthorized party obtains the card number in any way, a breach of confidentiality has occurred. Confidentiality is necessary (but not sufficient) for maintaining the privacy of the people whose personal information is stored in the database of the organization (Xuemei et al., 2009).

Integrity means that data cannot be modified undetectably, although it can be viewed as a special case of cSonsistency as understood base on the organizational policies (Tiwari et al., 2006).

Integrity is violated when a message is actively modified in transit. For any information system to serve its purpose, the information must be available when it is needed. This means that the computing systems used to store and process the information, the security controls used to protect it, and the communication channels used to access it must be functioning correctly. High availability systems aim to remain available at all times, preventing service disruptions due to power outages, hardware failures, and system upgrades. Ensuring availability also involves preventing denial-of-service attacks. Non-repudiation implies one's intention to fulfil their obligations to a contract. It also implies that one party of a transaction cannot deny having received a transaction nor can the other party deny having sent a transaction.Integrity involves maintaining the data accuracy, consistency, and trustworthiness. Availability: meaning that the ability of the system to make it assets accessible to only authorized users and in a timely manner as determined by the systems requirements.Simply means prevention of unauthorised withholding of information or resources (Tiwari et al., 2006).

One major way to measure organizational efficiency is to measure performance targets (evaluation the performance of the organization), this set the pace for effectiveness and impact metrics, it does not assume the aspects of security operation of specific level of performance (like reducing the number of virus infected computers, decreasing the number of easy-to-guess passwords.). Its concern with organizational information security performance goals and objectives, it is expressed in the form of high level policies and requirements. Existing laws, regulations and bestpractices. Having understood the three basic concept of information security practices was actually measured on the level of encryption, data masking and back-ups.

The purpose of this paper therefore was to examine the relationship between information security practices and organizational efficiency in Telecommunication companies in Rivers State. Hence, the following hypotheses were formulated:

$Ho_{1:}$ There is no significant relationship between data masking and time minimization of Telecommunication companies in Rivers State.

H_{o2}: There is no significant relationship between data masking and cost minimization of Telecommunication companies in Rivers State.

$Ho_{3:}$ There is no significant relationship between encryption and time minimization of Telecommunication companies in Rivers State.

H_{o4}: There is no significant relationship between encryption and cost minimization of Telecommunication companies in Rivers State.

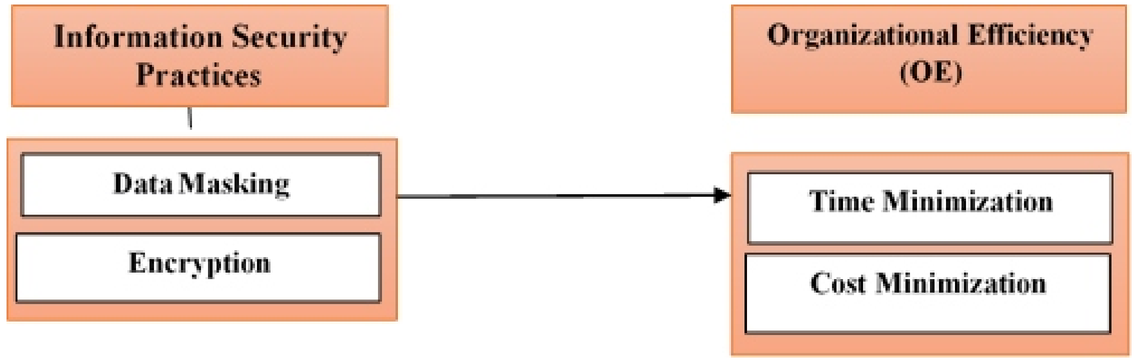

Fig. 1: Conceptual model of relationship between information security practices and organizational efficiency

Source: Desk Research (2022)

LITERATURE REVIEW

Theoretical Foundation

The theoretical foundation of this research is embedded in the system theory. Systems theory was introduced by biologist Lvon Bertalanffy in the 1930s as a modeling devise that accommodates the interrelationships and overlap between separate disciplines. The reality is that when scientists and philosophers first tried to explain how things worked in the universe, there were no separate disciplines. There were simply questions to be answered. But as we started understanding more and more, the sciences broke down into chemistry, physics, biology, and then biophysics, biochemistry, physical chemistry, etc. so that related components of a problem were investigated in isolation from one another.

The Systems Theory introduced by Lvon Bertalanffy reminds us of the value of integration of parts of a problem. Problems cannot be solved as well if they are considered in isolation from interrelated components. An enormous advantage systems analysts have in knowing the definitions of systems theory is that they present us with ideal guidelines for our initial familiarization with a new problem, which of course is a new system. .A system is a set of related components that work together in a particular environment to perform whatever functions are required to achieve the system's objective.Information security is classified into part of a system that human, and machine interact to achieve a definite objective.

Information Security Practices

In general, security is "the quality or state of being secured from unauthorised users of the information system, or to be free from danger (Xuemei, Yan, & Lixing,2009). It is the protection of organizational assets (digital asset) against adversaries, from those who would do harm, intentionallyor otherwise. For example, it is the objective of the National security of a state to protect its citizenry from any external attack or harm (Mathisen 2010). The security department protects the sovereignty of a state, its assets, its resources, and its people. Achieving the appropriate level of security for an organization also requires a multifaceted system, the software, the hardware and the user cooperative to achieve the same goal (Bazzina, 2006).
For an information system to be successful, the following multiple layers of security is put in place to protectits operations:

- Physical security, to protect physical items, objects, or areas from unauthorized access and misuse
- Personnel security, to protect the individual or group of individuals who are authorized to access the organization and its operations
- Operations security, to protect the details of a particular operation or series of activities
- Communications security, to protect communications media, technology, and content
- Network security, to protect networking components, connections, and contents
- Information security, to protect the confidentiality, integrity and availability of information assets, whether in storage, processing, or transmission. It is achieved via the application of policy, education, training and awareness, and technology.

Some information is more sensitive and requires a higher level of confidentiality. Control mechanisms need to be in place to dictate who can access data and what the user can do with it once they have accessed it. These activities need to be controlled, audited and monitored (Kraus

2010).For example, financial information (record), criminal records, source code of programme (the source code of programmes are the procedure and process written by the programmer), trade secrets and military tactical plans can be termed confidential, they can only be accessed by the right users.Various security mechanisms that provide confidentiality are encryption, logical and physical access controls, transmission protocols, database views and controlled traffic flow. Confidentiality can also counteract identity theft where one individual misrepresents himself as another, usually for fraudulent financial gain. Thus confidentiality of data or systems covers the processes, policies and controls employees to protect information of the system and the institution against unauthorized access or use (Kraus 2010).

Data masking

Data Masking masks sensitive or confidential application data so that it can be replicated safely to non-production systems. Using pre-built or customized sophisticated masking techniques, IT organizations can preserve the original information characteristics and maintain data and referential integrity. The realistic yet de-identified data enhances the quality of test data, which, in turn, enhances the quality of development, testing, and training. Data privacy solutions can be easily customized for each organization's business requirements, further increasing quality and accelerating implementation. Data anonymization tools using data masking techniques are commonly built into commercial database systems (Vinogradov & Pastsyak, 2012). Data masking substitutes sensitive attribute values in data sets with fictitious ones to hide their sensitivity, protect their confidentiality, and prevent them from being used to re-identify personal identities (Dhir & Garg, 2017).

The process is irreversible, and does not allow reconstitution of the original data element once executed. Given that data masking produces a fundamentally comparable data element and data set, its use generally has minimum or no impact to business processes (Ogigau-Neamtiu, 2016). Data masking can be static or dynamic. Static masking replaces sensitive attribute values with constant values already present in the data set. Dynamic masking replaces attribute values with random ones within the range represented in the data set (IBM Knowledge Center, 2016). Rabi and (2012) found that dynamic data masking with random replacement of sensitive values yielded high security with the added convenience of not having to alter processes to accommodate changes in data structure.

Some authors consider encryption to be a form of data masking (Dhir & Garg, 2017). However, encryption performs a significantly different process that altogether suppresses the sensitive data, making it illegible to the naked eye and to data mining algorithms. Unlike masking, encryption is reversible, and relies on the use of cryptographic keys (symmetric or asymmetric) to transform data back to its original legible state (OgigauNeamtiu, 2016)

Encryption

Encryption is the method of transforming the actual record(s) or information to non-readable format that it will be difficult for unauthorized users to read the source document in transit communication processes (Olumofin & Goldberg, 2010). This helps to keep the document confidential, these document can only be read by those who understand the coding (right users). It changes the format of the document to special text or character that makes no meaning to the reader. The plain text (clean message) to non-readable format to present to the unauthorised users makes no meaning. Encryption is a measures used to prevent the access to documents. Other process of implementing confidentiality are as follows;

§ Access Control List: It helps with confidentiality as only authorised users should be able to access the system.

§ A firewall: It also helps with confidentiality by trying to prevent the traffic getting through. Just like firewall, Identification Service (IDS) and Internet Protocol Service (IPS) systems they also helps with confidentiality, they continually monitoring traffic that should and should not enter the network and take action accordingly if traffic violates network rules.

These are some instruments used in the literature for enforcing data confidentiality. These instruments are based on cryptographic techniques or unspecific secured hardware and constitute the building blocks for tamper-resistant database systems.

§ *Encryption:* the purpose of encryption is to ensure data opacity (protection against snooping attacks) by keeping the information hidden to any unauthorized persons (e.g., intruders). The plaintext version of an encrypted data cannot be recovered from the ciphertext without the decryption key. In general, and morespecifically in the database context, care should be taken about the chosenencryption mode to prevent an attacker to analyze repetitive patterns in theencrypted text.

Data confidentiality focuses on protecting data from unauthorized disclosure. Currently, data is a major asset for any enterprise, not only for knowing the past, but also for aiding today's business or predicting future trends (Baer, 2004). Given its decision support nature, Data Warehouses (DWs) translate data into business knowledge, providing information for adding business value. Consequently, DWs are the core of enterprise sensitive data. Unfortunately, this makes them a major target for attackers (Yuhanna, 2009). Consequently, efficiently securing sensitive data has become an imperative concern in many enterprises (McKendrick, 2009).

Organizational Efficiency

Efficiency measures relationship between inputs and outputs or how successfully the inputs have been transformed into outputs (Low, 2000). To maximize the output Porter's Total Productive Maintenance system suggests the elimination of six losses, which are: (1) reduced yield – from start up to stable production; (2) process defects; (3) reduced speed; (4) idling and minor stoppages; (5) set-up and adjustment; and (6) equipment failure. The fewer the inputs used to generate outputs, the greater the efficiency.

According to Pinprayong and Siengthai (2012) there is a difference between business efficiency and organizational efficiency. Business efficiency reveals the performance of input and output ratio, while organizational efficiency reflects the improvement of internal processes of the organization, such as organizational structure, culture and community. Excellent organizational efficiency could improve entities performance in terms of management, productivity, quality and profitability. The Pinprayong and Siengthai (2012) introduced seven dimensions, for the measurement of organizational efficiency:

- Organizational strategy
- Corporate structure design;
- Management and business system building;
- Development of corporate and employee styles;
- Motivation of staff commitment;
- Development of employee's skills;
- Subordinate goals.

Effectiveness and efficiency are exclusive, yet, at the same time, they influence each other; therefore, it is important for management to assure the success in both areas. Pinprayong and

Siengthai (2012) suggest that ROA is a suitable measure of overall company performance, since it reveals how profitable organizations assets are in generating revenues
Organizational performance = effectiveness x efficiency;

$$Efficiency = \frac{Organizational\ performane}{Effectiveness}$$

Total asset turnover ratio measures the ability of a company to use its assets to efficiently generate sales; therefore, it can be treated as efficiency. Profit margin ratio is an indicator of a company's pricing strategies and how well it controls the costs, also it is a good measure for benchmarking purposes; therefore, it could be treated as effectiveness. As a result, overall performance can be measured by quantifying the efficiency and the effectiveness. Efficiency is all about resource allocation across alternative uses (Kumar and Gulati, 2010). It is important to understand that efficiency doesn't mean that the organization is achieving excellent performance in the market, although it reveals its operational excellence in the source of utilization process. This study measures organizational efficiency through time minimization and cost minimization.

Time Minimization

When the employees are productive, they accomplish more in a given amount of time. In turn, efficiency saves their company money in time and labour. When employees are unproductive, they take longer time to complete projects, which cost employee's more money due to the time lost (Olajide, 2000). The importance of higher productivity of the employees in public enterprise cannot be overemphasized, which include the following; Higher incomes and profit; Higher earnings; Increased supplies of both consumer and capital goods at lower costs and lower prices; Ultimate shorter hours of work and improvements in working and living conditions; Strengthening the general economic foundation of workers (Banjoko, 1996). Armstrong (2006) stated that productivity is the time spent by an employee actively participating in his/her job that he or she was hired for, in order to produce the required outcomes according to the employers' job descriptions. As suggested by Bloisi (2003) the core cause of the productivity problems in the South African society are people's motivation levels and their work ethics.

That speed and time are important resources, that organisations seek to maximize speed and minimize time, and that the way they do these indicates their efficiency should be obvious. Speed and time were the essence of time and motion studies since the days of scientific management introduced by Taylor that led to management efficiency. They are the sources of competitive advantage and ―Time-based Competition (TBC) (Bateman and Snell, 1999). They aim at reducing the total time it takes to deliver a product or service, and this is because they entail fast and timely design, execution, response and delivery of results. It is, therefore, very apt to say: Organisations must respond to market needs quickly by introducing new products fast; quickly delivering customer orders; and responding quickly to customer requests‖ (Bateman and Snell, 1999). There are, therefore, at least three possible indices of time minimization. These are: (1) Design-to-market Time, (ii) Product Delivery Time, and (iii) Job Completion Time. These indices are based on the conception of time as the amount of man-hour spent or duration taken to accomplish a task (Zeb-Obipi, 2015).

Cost Minimization

According to Drury (2004), it focuses on cost reduction and continuous improvement and change rather than cost containment. The term cost reduction could be used instead of cost optimization. Whereas traditional cost control systems are routinely applied on a continuous basis, cost optimization tends to be applied on an ad hoc basis when an opportunity for cost reduction is identified. Cost minimization consists of those actions that are taken by managers to reduce costs, some of which are prioritized on the basis of information extracted from the accounting system. Although cost optimization seeks to reduce costs, it should not be at the expense of customer satisfaction. Ideally, the aim is to take actions that will both reduce costs and enhance customer satisfaction.

Cost minimization has become an essential emphasis in today's highly competitive business environment. This study was aimed at defining cost optimization and discussing the philosophies that underpins optimization. Over the past 25 years, there has been a significant shift in the cost accounting and management accounting (Maher and Deakin, 1994, Günther 1997 and Götze, 2004). This shift is the result of an increasing competitive environment due to the introduction of new manufacturing and information technologies, the focus on the customer, the growth of worldwide markets, and the introduction of new forms of management organization (Blocher *et al.*, 1999).

With respect to cost minimization our interest is on monetary expenses incurred as a measure of corporate productivity efficiency. Cost is conceived as expenses incurred on production factors and activities. There is no doubt that every organization seeks to minimize its expenses as much as possible as a way of maximizing profit. This has been pursed through concepts such as cost effectiveness and cost reduction. Though there are various concepts of cost as could be gleaned from Baumback's (1983) discussion of profit planning and control, we shall limit ourselves to three here. These are quality, labor, and strategic costs.

METHODOLOGY

The study adopted a cross-sectional survey in its investigation of the variables. Primary data was generated through structured questionnaire. The population for this study was four telecommunication companies in Rivers State, Nigeria. Given that the population size is small and can be adequately covered, our study adopts a census method. However, one hundred and seventy-four managers were used as respondents for the study. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient. The tests were carried out at a 0.05 significance level. The hypotheses were tested using the Spearman rank order correlation Coefficient. The tests were carried out at a 95% confidence interval and a 0.05 level of significance.

DATA ANALYSIS AND RESULTS

Table 1: Correlations Matrix between Data Masking and Time Minimization

			Data Masking	Time Minimization
Spearman's rho	Data Masking	Correlation Coefficient	1.000	.954**
		Sig. (2-tailed)	.	.000
		N	152	152
	Time Minimization	Correlation Coefficient	.954**	1.000
		Sig. (2-tailed)	.000	.
		N	152	152

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

The result of correlation matrix obtained between data masking and time minimization delivery was shown in Table 1 The correlation coefficient of 0.954 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p 0.000<0.01. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between data masking and time minimization of Telecommunication companies in Rivers State.

Table 2: Correlations matrix between Data Masking and Co st Minimization

			Data Maskin g	Cost Minimization
Spearman' s rho	Data Masking	Correlation Coefficient	1.000	.879**
		Sig. (2-tailed)	.	.000
		N	152	152
	Cost Minimization	Correlation Coefficient	.879**	1.000
		Sig. (2-tailed)	.000	.
		N	152	152

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

The result of correlation matrix obtained between data masking and cost minimization was shown in Table 2. The correlation coefficient of 0.879 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p 0.000<0.01. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship data masking and cost minimization of Telecommunication companies in Rivers State

Table 3: Correlations Matrix between Encryption and Time Minimization

			Encryption	Time Minimization
Spearman's rho	Encryption	Correlation Coefficient	1.000	.931**
		Sig. (2-tailed)	.	.000
		N	152	152
	Time Minimization	Correlation Coefficient	.931**	1.000
		Sig. (2-tailed)	.000	.
		N	152	152

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

The result of correlation matrix obtained between encryption and time minimization was shown in Table 3. The correlation coefficient of 0.931 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p 0.000<0.01. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between encryption and time minimization of Telecommunication companies in Rivers State.

Table 4: Correlations Matrix between Encryption and Cost Minimization

			Encryption	Cost Minimization
Spearman's rho	Encryption	Correlation Coefficient	1.000	.869**
		Sig. (2-tailed)	.	.000
		N	152	152
	Cost Minimization	Correlation Coefficient	.869**	1.000
		Sig. (2-tailed)	.000	.
		N	152	152

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

The result of correlation matrix obtained between encryption and cost minimization shown in Table 4. The correlation coefficient of 0.869 confirms the direction and strength of this relationship. The coefficient represents a positive correlation between the variables. The test of significance shows that this relationship is significant at p $0.000<0.01$. Therefore, based on observed findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between encryption and cost minimization of Telecommunication companies in Rivers State.

DISCUSSION OF FINDINGS

The findings revealed that there is a positive and significant relationship between encryption and organizational efficiency telecommunication companies in Rivers State. This confirms the views that data Masking masks sensitive or confidential application data so that it can be replicated safely to non-production systems. Using pre-built or customized sophisticated masking techniques, IT organizations can preserve the original information characteristics and maintain data and referential integrity. The realistic yet de-identified data enhances the quality of test data, which, in turn, enhances the quality of development, testing, and training. Data privacy solutions can be easily customized for each organization's business requirements, further increasing quality and accelerating implementation.

Business need applications to function and these applications require maintenance and testing, new applications get developed as companies grow. These activities are managed by internal development team or external contractors. Application development and testing activities need realistic data for validation. Usually, copies of production environment databases are created using internally developed scripts and given to development teams. However, this method is risky since real data with sensitive information could fall in wrong hands. This also applies to analyst or trainers who need such a data for their work. These increase the chances of as data getting stolen.

CONCLUSION AND RECOMMENDATIONS

Therefore, this study concludes that there is a positive significant effect of information security on organizational efficiency of telecommunication companies in Rivers State. Specifically, the study found study that data masking significantly predicts organizational efficiency, with its measures; time minimization and cost minimization in telecommunication companies in Rivers State. Also, the study found that encryption significantly predicts organizational efficiency, with its measures; time minimization and cost minimization in telecommunication companies in Rivers State.

Therefore, the study made the following recommendations that:

i. Management of telecommunication companies should do its best to use its password and security firewall so as to meet up to newly developed virus, spyware and hackers that are within the cyberworld.
ii. Management of telecommunication companies should ensure that most encrypted software related to security should be handled by expert that are within several departments of the organization, to avoid a very few to handle such description in case of unforeseen eventualities.

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MANAGEMENT INNOVATION AS A STRATEGY FOR ORGANIZATIONAL PERFORMANCE OF ALCOHOLIC BEVERAGES COMPANIES IN RIVERS STATE

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ABSTRACT

The paper examines management innovation for organizational performance of alcoholic beverages companies in Rivers State. The objectives of the paper were to determine effect of administrative innovation on employee commitment in alcoholic beverages companies in Rivers State, ascertain the extent of the relationship between process innovation and employee output in alcoholic beverages companies in Rivers State and determine extent at which technological innovation affect quality product in alcoholic beverages companies in Rivers State. The paper has a population size of 1,050, out of which a sample size of 289 was realized using Taro Yamane's formula at 5% error to tolerance and 95% level of confidence. Instruments used for data collection were primary questionnaires and interview. The total number of 289 copies of the questionnaire were distributed while 224 copies were returned and 65 copies were not returned Survey research design was adopted for the study. Three hypotheses were tested using Spearman Rank Order correlation coefficient statistical tool with the support of SPSS version 20.0. The findings indicate that a significant and positive relationship exist between administrative innovation and efficiency of alcoholic beverages companies in Rivers State. There is a positive relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State. Technological innovation has a significant and positive relationship with efficiency of alcoholic beverages companies in Rivers State. The paper concludes that innovation is managerial strategy that presents new ideas to business leaders to increase efficiency with minimum resources. The paper recommends that beverages companies in Rivers State should adopt administrative innovation in order to provide creative work methods and processes in the provising of products and services. Beverages companies in Rivers State should use process innovation in order to gain more outcomes through the reduced time and improve their efficiency in the processes they produces their products and services. Beverages companies in Rivers State should use technological innovation to support their work processes so as to increase the efficiency of their systems, products and services in the dynamic business environment.

Keywords: Management Innovation, Organizational Performance,

INTRODUCTION

The changing business and social environment requires organizations to adopt innovation management. Innovation management is organizing and managing innovation processes. Research and development (R&D) management encompasses invention processes along with innovation processes. Drucker (2019) asserts that innovation is mainly the work of knowing rather than doing and it can be and need to be managed like any other corporate function. Innovation is the key element for competitiveness and economic growth and a major component in developing technology among firms. Innovation management facilitates organizations to focus on competitiveness and success performance in order to adopt a new process. Firms must utilize technological and process capabilities successfully. Innovation enhances the growth and survival of firms on one hand and while it is a very complex and risky process, with low success

rates. Innovation is the activity of bringing something new into the world – an act of introducing a new device, method or material for application to commercial practical objectives.

Companies are today managing business in a highly interrelated international business world (Alhawari et al., 2020). Companies are therefore more exposed to abnormal and unexpected events such as a crisis, since it constitutes new risks and unpredictable business surrounding. For companies that are not adequate to adopt in time of crisis, it can be challenging to have a sustainable profitability or even survive (Darbomens & Zurawska, 2020). Innovation plays an important role not only for large firms, but also for SMEs. The capability to innovate is recognized today as one of the main aspects leading to competitive advantages among firms (Mcadam & Keosh, 2013).

Based on the foregoing, this study offers a point of departure and knowledge gap filling in adopting administrative process and technological as dimensions of management innovation efficiency as measures of organizational performance in examining the relationship between management innovation strategy and organizational performance of alcoholic beverages companies in Rivers State. Most studies on relationship between innovation strategies and firms' performance focused on simple innovation strategies involving process and administrative technological innovation.

Management of innovation in business organization is as old as the work of business. Management of innovation is the economic implementation and exploitation of new ideas and discoveries in business organization. Innovation management also is the implementation of an innovation culture in an organization which helps to promote the development of new ideas and business opportunities (Riederer, Baier & Graefe, 2005). Innovation management is the process by which businesses improve their competitiveness and profitability by creating and/or adopting relevant new products and ideas. Innovations result in the development of new products and services, new features in existing products and services, and new ways to produce or sell them or a different approach to any other process within the company (Beerens et al., 2004, Vemuri et al., 2003).

Organizations are finding that, as markets become saturated and competition gets stronger, it is increasingly necessary to find novel or innovative approaches to business problems and issues. They may look for this creativity in their staff or may even recruit new, more creative employees. This can help both the marketing of the organization by being seen to be creative and 'cutting edge', and it can improve productivity and efficiency by solving current problems or business obstacles.

Innovation has long been recognized as an important driver of economic growth. Empirical research and surveys of business activities show that innovation leads to new and improved products and services, higher productivity, and lower prices. Management of innovation in manufacturing firm is a real problem, which have cause managers of the firms to face a lot of challenges that comes as a result of inability of managers to unify the complex nature of innovation into a new functional product. However, companies must often solve various problems caused by their unpreparedness to manage innovation processes.

Management of innovation processes in the company is a challenging task for managers of the company which has resulted into innovation process management failures, cause by lack of innovation expertise, failure to secure the flow of information in a company, insufficient training and motivation of employees. However in the long run, these challenges will cause substandard product, low profit index, low employee morale and total breakdown of the system.

The purpose of the study was to investigate the relationship between innovation management and organizational performance of alcoholic beverages companies in Rivers State. The study lo9oks at innovation management from the lenses of administrative innovation, process innovation and technological innovation. The following hypotheses were thus formulated to guide the study:

Ho_1: There is no significant relationship between administrative innovation and efficiency of alcoholic beverages companies in Rivers State.

Ho_2: There is no significant relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State.

Ho_3: There is no significant relationship between technological innovation and efficiency of alcoholic beverages companies in Rivers State.

LITERATURE REVIEW

Foundational Theory

This study is founded on the Theory of Innovative Enterprise, first published in 1911, Joseph Schumpeter, drawing inspiration from Karl Marx, argued that capitalism had to be conceptualized as an economic system in which technological change, or more broadly speaking innovation, constantly disrupted the general equilibrium of market exchange. The theory of innovative enterprise shows how by transforming its cost structure a firm can grow large while, in sharp contrast to the monopoly model, enhancing the efficiency of the economy. This theory argues that superior economic performance depends on innovative enterprise: the development and utilization of productive resources to generate higher quality, lower cost goods and services. Government policies to support the achievement of superior economic performance must be based on a theory of how an innovative enterprise evolves, operates and performs. In this study, a theory of innovative enterprise in which social conditions summarized as strategic control, organizational integration, and financial commitment are central to the development and utilization of productive resources. The need for these social conditions derives from the uncertain, collective and cumulative character of the innovation process (Lazonick, 2013).

Concept of Management Innovation

Management innovation is “the invention and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals” (Birkinshaw Hamel & Mol, 2017). Management innovation is the invention and adoption by an organization of a radical management practice or method that is new to the state or art. The organization develops a management innovation and implements it first, and the success of the radical management innovation by the pioneer organization leads other organizations to adopt it. Organizational innovation is influenced by marked orientation. Innovation management is the means of creating innovation capabilities (Salavou et al. 2018).

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Administrative Innovations

Administrative innovation is an innovative idea for the recruitment of the staff, the allocation of resources, the definition of tasks, the management model or the rewarding system” (Evan, 2009). Administrative innovation refers to the social system of an organization (Roy, Robert & Giuliani. 2013). Klein et al. (2001) have defined the implementation of administrative innovations as the extent to which organizations incorporate and routinely use the innovations. The degree to which organizations routinize new programs or systems so that they are regularly used is relevant to a wide array of processes (Fidler & Johnson, 2007) from upper-level strategy making to lower-level decision-making. It has bearing on governmental initiatives and the diffusion of technological advances and plays a central role in reorganization and organizational regeneration (Maier, Verjel, Bercovici & Maier, 2017; Chen, Gong, Song & Wang, 2021).

Innovation Process

Innovation process is a sequence of activities aimed at creation and implementation of innovation. It includes activities related to generating innovative ideas, their evaluation, and creating an innovation and ensuring its spread among customers (Maier et al., 2017; Dorin, 2018). Ateke and Harry (2021) and Sidhartha and Maheshkumar (2015) contends that process innovation occurs when an organization proffers solution to existing problems or performs existing business process in essentially different ways that generate something highly beneficial to those who perform the process, those who rely on the process or both.

Process innovation is a new or significantly improved approach to carrying out business processes that brings about consequential increase in productivity and minimizes costs (Ateke & Harry, 2021). Zauková and Loučanová (2008) developed a transparent model of the innovation process to enhance understanding its phases. According to Hammel (2002), innovation competence is understood as a tool which allows company to use in innovation process management, innovation tools, supported communication and information technology, management processes and appropriately to establish criteria for measuring the success of the individual phases of innovation projects:

Technological Innovation

Technological innovation deals with the “new combinations” of production factors of new products and services, introducing new production processes, marketing and business organization (Maier et al., 2017; Barik, 2022). Technological innovation is a part of the total innovation discipline. It focuses specifically on technology and how to embody it successfully in products, services and processes. Technology as a body of knowledge might thus be seen as a building block for technological innovation, serving as cornerstone to research, design, development, manufacturing and marketing. According to Frascati Manual (OCDE, 2002), technological innovations comprise new or significantly modified technological products and processes, where technological novelty emerges, unlike improvements, from their performance characteristics.

Innovation Management and Organizational Performance

The theoretical link between innovation and company competitiveness from a long-term perspective can be traced back to the early definition of strategic adaptation. According to this stream of research, the process of strategy is considered a dynamic process, with adaptation being the key aspect needed to achieve competitive advantage in a long-term perspective (Floyd & Lane, 2000) Thus, innovation has proved to be important at the company level as well as on a national level. Management innovation can play a central role in the process of changing organizations, facilitating organizational adaptation to the external environment and increasing the efficiency and effectiveness of internal processes.

Empirical Review

Yunus and Waidi (2011) did a study on Technology innovation and Nigeria banks performance: The assessment of employee's and customer's responses to examine customer's and employee's responses to technology innovation, and their effects on the performance of the Nigerian banks. Fifteen (15) major banks were selected for the research. Two null hypotheses based on two different sets of questionnaires distributed to selected banks employees and customers were formulated to test whether there is no significant relationship between technology innovation and customer's satisfaction; and between technological innovation and Nigerian banks employee's performance. 1912 questionnaires were distributed to customers to test the first hypothesis out of which 1634 were collected which is 85% of the distributed questionnaires, 1458 questionnaires were distributed to selected banks employees to test the second hypothesis, 1223 questionnaires were collected making 84% response rate. Pearson correlation co-efficient was used to analyze the hypotheses. The study found that technological innovation influenced employees' performance, customer's satisfaction and improvement in banks profitability.

Nadeem et al. (2013) carried out a study on the Role of Innovation on Organizational Growth: Evidences from Pakistan. The objective of study was to ascertain the role of innovation on the growth of organization. The study adopted a survey design. Data was sourced from primary and secondary sources. The population of the study were employees of Alghazi Tractor Factory Ltd (AGTL) D. G. Khan and a sample of 100 employees were selected randomly from the population. Data collection instrument used was by standard questionnaire and analysis was done using correlation coefficient through SPSS. There were two variables of innovation in the study which are empowerment and proper training. The study found that innovation play significant role on the growth of organization.

Islam and Mohamed (2011) conducted a study on the impact of organizational innovation on firm performance in a Malaysian-based ICT Companies. The study objective was to investigate the effect of organizational innovation on company performance. Data were collected via electronic survey from 115 small and medium enterprises operating in the ICT industry in Malaysia. Specially designed questionnaire was used to measure the research constructs. The questionnaire used in the study was in three parts: organizational innovation, performance and demographic data. The sampling frame consists of 1488 small and medium-sized firms listed in the National ICT Association of Malaysia's (PIKOM) directory. Reliability and validity tests were conducted using Cronbach's alpha in Nunnally (1978) and the Cronbach's of each constructs were greater than 0.8, suggesting a strong reliability for our survey instrument. The study found that organizational innovation was positively related to company performance which was measured in terms of both market and financial metrics.

Lilia and Mahmoud (2013) conducted a study on the impact of innovation on the performance of Small and Medium Scale Manufacturing Enterprises in Malaysia. The objective of the study was to ascertain the effect of innovation dimensions on the performance of Styles. The study adopted the survey design and data was sourced from both primary and secondary sources. The data were analyzed using a hierarchical regression analysis. The study found that product innovation and process innovation affected firms performance positively with 0.123 ($p<0.0l$) and 1 = 0.111 ($p<0.01$) respectively. The study recommended that further studies should be carried out to look into how SMEs could calculate cost-benefit ratio of innovation and how they could opt for internal or external sources of innovation before actual innovation is undertaken.

Masood et al. (2013) carried out an empirical study on the effects of innovation types on the firm performance of Pakistan's manufacturing sector. The objective of the study was to access the effect of innovation types on firm performance in Pakistani manufacturing sector. The study found that there was a positive effect of innovation types on the firms' performance. The study recommended that business leaders of the manufacturing firms should give additional importance to different types of innovations for attaining high organizational performance.

METHODOLOGY

The study adopted survey research design. The study was carried out primarily through the survey research design and structured oral interview. Secondary data were sourced from books, Journals and internet. The population (1050) of the study consists of employees of alcoholic beverages company in Rivers State. A sample size of 289 was realized using Taro Yamane's formula at 5% error to tolerance and 95% level of confidence. The total number of 289 copies of the questionnaire was distributed while 224 copies were returned and 65 copies were not returned, Instruments used for data collection were primary questionnaires and observation. The instrument used for data collection was questionnaire structured in 5-point Likert scale and validated with the content validity of face to face approach. The reliability test was done using test-retest method. The result gave a reliability coefficient of 0.86, indicating a high degree of consistency. The three hypotheses formulated were tested at 0.05 level of significance. The Spearman Rank Order correlation coefficient statistical tool with the aid of SPSS version 20.0 was used to test the hypotheses formulated in this paper.

DATA ANALYSES AND PRESENTATION OF RESULTS

Statistical Test of Hypotheses

The testing of the hypotheses was done by the use of the Spearman Rank Order Correlation Coefficient statistical tool with the application of the SPSS package version 20.0. The correlation decision scale frame of Dana (2001) was used as guide to analyze and interpret the result of the tested hypotheses. The correlation decision scale frame is thus: (a) $\pm$ 0.00 – 0.19 (very weak), (b) $\pm$ 0.20 – 0.39 (weak), (c) $\pm$ 0.40 – 0.59 (moderate), (d) $\pm$ 0.60 – 0.79 (strong), (e) $\pm$ 0.80 – 0.99 (very strong), and (f) $\pm$ 1 (perfect).

Hypothesis One

H_{01}: There is no significant relationship between administrative innovation and efficiency of alcoholic beverages companies in Rivers State.

Table 1: Spearman Rank correlation coefficient and Zr-test on the relationship between administrative innovation and efficiency of alcoholic beverages companies in Rivers State.

Variables	N	r_s	Df	Zr-cal	Z-crit	Result
Administrative Innovation and Efficiency	224	. 712	222	2.105	1.960	Sig.

Source: SPSS Output, version 20.0

Table 1 above shows SPSS output for the Spearman Rank Order Correlation Coefficient test between administrative innovation and efficiency of alcoholic beverages companies in Rivers State. The Spearman Rank Order Correlation Coefficient is computed at 0.712 and p (2-tailed) < 0.05 for d.f = 222 (where d,f = degree of freedom and is given as N-2). When put to statistical test, Zr-cal (2.105) is greater than Z-crit. (1.960) at the degree of freedom (df) of 254 and 0.05 level of significance. However, we noted a strong and positive relationship between administrative innovation and efficiency of alcoholic beverages companies in Rivers State, with $r_s = 0.712$. Hence, the null hypothesis is rejected. Therefore, we could state that there is a significant relationship between administrative innovation and efficiency of alcoholic beverages companies in Rivers State.

Hypothesis Two

Ho_2: There is no significant relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State.

Table 2: Spearman Rank correlation coefficient and Zr-test on the relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State.

Variables	N	r_s	Df	Zr -cal	Z-crit	Result
Process Innovation and Efficiency	224	. 718	222	2.120	1.960	Sig.

Source: SPSS Output, version 20.0

Table 2 above shows that a relationship existed between process innovation and efficiency of alcoholic beverages companies in Rivers State ($r_s = 0.718$). This reveals that there is a significant relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State. The statistical test shows Zr-cal of 2.120 which is greater than Z-crit. (1.960) at the degree of freedom (df) of 222 and 0.05 level of significance. Hence, we rejected the null hypothesis. This indicates that r_s value of 0.718 is significant. Therefore, the result is there is a significant relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State.

Hypothesis Three

Ho_3: There is no significant relationship between technological innovation and efficiency of alcoholic beverages companies in Rivers State

Table 3: Spearman Rank correlation coefficient and Zr-test on the relationship between technological innovation and efficiency of alcoholic beverages companies in Rivers State.

Variables	N	r_s	Df	Zr -cal	Z -crit	Result
Technological Innovation and Efficiency	224	. 722	222	2.128	1.96 0	Sig.

Source: SPSS Output, version 20.0

Table 3 above indicates SPSS output for the Spearman Rank Order Correlation Coefficient test between technological innovation and efficiency of alcoholic beverages companies in Rivers State. The Spearman Rank Order Correlation Coefficient is computed at 0.722 and p (2-tailed) < 0.05 for d.f = 222 (where d,f = degree of freedom and is given as N-2). When put to statistical test, Zr-cal (2.128) is greater than Z-crit. (1.960) at the degree of freedom (df) of 222 and 0.05 level of significance. However, we noted a strong and positive relationship between technological innovation and efficiency of alcoholic beverages companies in Rivers State, with $r_s = 0.722$. Hence, the null hypothesis is rejected. Therefore, we could state that there is a significant relationship between technological innovation and efficiency of alcoholic beverages companies in Rivers State.

DISCUSSION OF FINDINGS

Hypotheses one was developed to ascertain the relationship between administrative innovation and efficiency of alcoholic beverages companies in Rivers State. The result of Spearman Rank Order correlation coefficient indicated relationship existed between administrative innovation and efficiency of alcoholic beverages companies in Rivers State ($r_s = 0.712$). This reveals that administrative innovation is strongly and positively related to efficiency. The statistical test shows Zr-cal of 2.105 which is greater than Z-crit. (1.960) at the degree of freedom (df) of 222 and 0.05 level of significance indicates that the null hypothesis should be rejected in favour of the alternative hypothesis. Therefore, the result is there is a significant relationship between administrative innovation and efficiency of alcoholic beverages companies in Rivers State. This finding supports the views of (Maier et al., 2017; Chen et al., 2021).

The implication of this is that administrative innovation, which is the generation of a new product, of a new service, of new technology or of a new administrative practice provides deliberate change in. administrative machinery which would be more efficient, the change may be new idea, procedure, rules, methods, techniques or establishing new organisation. It also involves the creation of a new organization design which better supports the creation, production and delivery of services or products. An organizational activity can be the organizational innovation. Every organization has administrative innovation. It forms the basis for enhancing corporate activities and support the innovation process in the development and improvement products and services (Chen, Gong, Song & Wang, 2021). Administrative innovation is within non-technical innovation. In order to support corporate administration and management, administrative innovation is used to support recruitment policies, allocation of resources and authority, and task structure, as well as authority and reward tasks in relation to management activities (Maier et al., 2017).

Hypotheses two was developed to ascertain the relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State. The result of Spearman Rank Order correlation coefficient indicated relationship existed between process innovation and efficiency, with r_s = (0.718). This indicates that process innovation is strongly and positively related to efficiency. The statistical test reveals Zr-cal of 2.120 which is greater than Z-crit. (1.960) at the degree of freedom (df) of 222 and 0.05 level of significance indicates that the null hypothesis should be rejected in favour of the alternative hypothesis. Therefore, the result is there is a significant relationship between process innovation and efficiency of alcoholic beverages companies in Rivers State. This finding corroborates the views of (Maier et al., 2017; Dorin, 2018).

The implication of this is that process innovation is the implementation of a new or significantly improved production or delivery method. Process innovation strategies allow employees to gain more outcomes through the reduced time and improve a firm's efficiency and effectiveness, and processes (Maier et al., 2017). Process innovation is used to support companies in aligning their processes in a customer-oriented manner to help ensure business success in the long term (Dorin, 2018). Process innovation is the application or introduction of a new technology or method for doing something that helps an organization remain competitive and meet customer demands (Maier et al., 2017; Dorin, 2018). Process innovation happens when an organization solves an existing problem or performs an existing business process in a radically different way that generates something highly beneficial to those who perform the process, those who rely on the process or both (Maier et al., 2017).

Hypotheses three was developed to ascertain the relationship between technological innovation and efficiency of alcoholic beverages companies in Rivers State. The result of Spearman Rank Order correlation coefficient indicated relationship existed between technological innovation and efficiency (r_s = 0.722). This reveals that technological innovation is strongly and positively related to efficiency. The statistical test shows Zr-cal of 2.128 which is greater than Z-crit. (1.960) at the degree of freedom (df) of 254 and 0.05 level of significance indicates that the null hypothesis should be rejected in favour of the alternative hypothesis. Therefore, the result is there is a significant relationship between technological innovation and efficiency of alcoholic beverages companies in Rivers State. This finding supports the views of (Maier et al., 2017; Barik, 2022).

The implication of this is that technological innovation aims at improving a product or introducing a new product or process with new technological characteristics to differentiate it from before (Maier Maier et al., 2017). Technological innovation is the process where an organization (or a group of people working outside a structured organization) embarks in a journey where the importance of technology as a source of innovation has been identified as a critical success factor for increased market competitiveness (Barik, 2022). Technological innovation brings benefits. It increases productivity and brings citizens new and better goods and services that improve their overall standard of living. Technological innovation *can help enterprises develop and expand in the direction of higher factor input utilization and output efficiency* (Maier et al., 2017; Barik, 2022).

CONCLUSION AND RECOMMENDATIONS

Innovation is that the main issue dynamic the economic structure from past to present, shaping the competitive environment among this structure and crucial the competition power of

corporations. Corporations giving and applying the innovations when the inventive method state that innovation is that the only best way in making competition advantage within the market, increasing the share of profit and financial gain stream, ranking before the business, and spring forwards in competition; thus, innovation is that the most powerful competition weapon if accomplished properly. Innovation plays a key role in introducing novelty to existing product lines or processes, leading to increased market share, revenue, and customer satisfaction. Organizations are interested in using minimum resources to yield more benefits through efficient practices. Efficiency innovation often assumes the form of a process improvement or a more efficient business model. It enables businesses to: simplify and streamline their existing processes and produce their existing products at a lower costs. Thus, innovation is managerial strategy that presents new ideas to business leaders to increase efficiency with minimum resources.
In view of the findings in this paper, the following recommendations were suggested.

1. Beverages companies in Rivers State should adopt administrative innovation in order to provide creative work methods and processes in the providing of products and services.
2. Beverages companies in Rivers State should use process innovation in order to gain more outcomes through the reduced time and improve their efficiency in the processes they produces their products and services.
3. Beverages companies in Rivers State should use technological innovation to support their work processes so as to increase the efficiency of their systems, products and services in the dynamic business environment.

CONTRIBUTION TO SCHOLARSHIP

Businesses operate in a dynamic environment that is full of competition and changes in technology. Organizations that do not adopt to the changing trends in the business environment cannot compete and survive the dynamics that continually occurs. No organization can control the external business environment. Thus, to have competitive advantage and stay in business, organizations are to have innovative policies.

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ORGANISATIONAL CAPABILITIES AND RESPONSIVENESS OF DOMESTIC AIRLINES IN NIGERIA

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ABSTRACT

Therefore, this study examined the relationship between organisational capabilities and responsiveness of domestic airlines in Nigeria. The study adopted an explanatory cross sectional survey research design which was carried out at the organisational level of analysis. The population of this study was the nine operational scheduled domestic airline operators in Nigeria. The study adopted the entire population as a census. However, elements from the population were used as the participants or respondents for the study. Therefore, for the purpose of data gathering in this study and in line with the study unit of analysis which was at the macro level, copies of questionnaire were distributed to five managers of the nine domestic airlines in Nigeria bringing the total number to forty-five respondents. The reliability of the instrument was ascertained using the Cronbach alpha reliability instrument with all items scoring above 0.70. The Spearman Rank Order Correlation Coefficient was utilized to establish the level of relationship as hypothesized with the aid of Statistical Package for Social Sciences version 23.0. Findings revealed that there is a statistically significant relationship between organisational capabilities and responsiveness of domestic airlines in Nigeria. Therefore, the study concludes that when domestic airlines in Nigeria effectively build, deploy and utilize their capabilities, there is a positive improvement in their competitive advantage. Hence, the study recommends that domestic airlines in Nigeria should develop their capacity to make strategic decisions by sensing the need for change, learning about how to respond to opportunities and threats and recognising shifts in the environment that could impact the firm's business.

Keywords: Organisational capabilities, responsiveness, strategic decision-making, strategic flexibility

INTRODUCTION

In today's economy, nearly all businesses work in precarious and vibrant competitive settings. There exist many springs of change resulting from factors such as enhanced worldwide competition, decreased lead time and product life, demand variety and fresh techniques (Khoshnood & Nematizadeh, 2017). Conventional long-term strategic planning and the strategic approaches that would be unchanged are not bases of competitive benefit anymore, as there is no surety in most sectors about the development of the company setting and what it will be like in the future (Doz & Kosonen, 2008). Organizations need to identify and seize possibilities quicker than their competitors do to attain enhanced agility. According to Salih and Alnaji (2014) it includes carrying out a thorough evaluation of the key players in a business entity's external environment: vendors, consumers and competitors.

Responsiveness is the act of being ready and disposed to offer services in a timely manner to clients in a bid to meet or surpass their expectations by utilizing information obtained from the market. Responsiveness is important in creating a good impression in the minds of customers which will likely increase their tendency in prolonging their relationship with the organization. Through technology, organizations are now able to perform creditably and respond swiftly in line with customers' expectations that will bring up the level of customers' satisfaction (Shariq & Tondon, 2012, as cited in Georgewill, 2021).

Responsiveness denotes the multiplicity of responsive measures that a firm can make with effortlessly, speed, and expertise upon detecting opportunity and threat in a business environment (Roberts & Grover, 2012). In order for organizations to be successful and achieve superior performance, firms must continually anticipate, determine and deliver customer satisfaction to the target markets, keep abreast with the emerging market trends, monitor competitor activities and proactively adjust their products and service offering, reconfigure internal resources and operating routines more effectively and efficiently than competitors (Gattiker et al., 2005). One effective means by which organisations achieve responsiveness is to possess organisational capabilities which have been viewed as viable means for managing organisational resources in turbulent environments (Sawy, 2011). The prevalent competition has compelled firms to search for new strategies to arrive at a competitive edge, as the previously acceptable strategies are been eroded (Chirico & Salvato, 2008). Organisational capabilities are core element for an organization to build vitality in the ever- present dynamic environment (Rehman & Saeed, 2015).

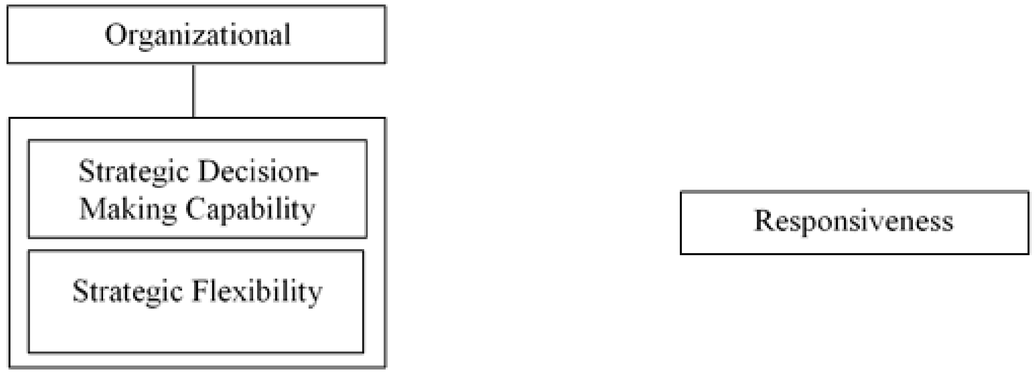
Organisational capabilities are what enable the company to perform their daily operations. Dynamic capabilities of a company, beyond and above basic capabilities, possess three different characteristics: valuable to clients, are better compared to those of the rival company and are not easy to copy (Makadok, 2011). Organisational capabilities are intangible assets of a firm, which involve specific and identifiable processes, learned and stable patterns of collective activities, and organisational routines (Zollo & Winter, 2002; Eisenhardt & Martin, 2000; Ambrosini & Bowman, 2009).

Organisational capabilities are adopted as a firm exhibits her character of adapting, renewing, reconfiguring and re-creating resources and core capabilities to respond to changing business environments (Wang & Ahmed, 2007). New strategies emerge with the combination of those resources and capabilities (Eisenhardt & Martin, 2000). These ultimately facilitate the creation of resources that are valuable, rare, inimitable and non-substitutable in competing with others (Winter, 2003). Organisational capabilities thus address a fundamental question of how a firm builds advantage and improved performance in a competitive market place (Teece et al., 1997). Organisational capabilities are intangible assets of a firm, which involve specific and identifiable processes, learned and stable patterns of collective activities, and organisational routines (Zollo & Winter, 2002; Ambrosini & Bowman, 2009).

The purpose of this paper therefore was to examine the relationship between organisational capabilities and responsiveness of domestic airlines in Nigeria. The specific objectives of the study included:

i. Examine the relationship between strategic decision-making capability and responsiveness of domestic airlines in Nigeria
ii. Examine the relationship between strategic flexibility capability and responsiveness of

domestic airlines in Nigeria



Fig, 1: Conceptual model of relationship between organisational capabilities and responsiveness

Source: Desk Research (2022)

LITERATURE REVIEW

Theoretical Foundation

Resource-based view

Penrose (1959) was the first to introduce this theory. This theory stipulates that; an organisations' superior performance is possible due to the use of the resources the organization owns or controls. Further, according to the model the way the organisation uses the resources affects its performance (Wernerfelt, 1984). The theory further emphasises on the resources characteristics and the capabilities acquired by the organization that leads to sustainable performance (Kraaijenbrink, Spender & Groen, 2010). Molloy, Chadwick, Ployhart and Golden (2011) explains that, resources are a source of advantage such that a firm can dominate its rivals based on the way they build, position and safeguard the resources that are distinct and allow them to gain an advantage over their rivals.

Principally, Resource-Based View theory focuses on the need for organizations to look within or inwards, at their available resources and capabilities, in formulating strategies to gain advantage over its competitors and threats to business survival (Wojcik, 2015). Organizations can achieve superior performance and gain sustained competitive advantage over its competitors through strategic resources it possesses, developed and controlled and which must meet the "VRIN" criteria; Valuable, Rare, Inimitability and Non-Substitutability (Barney, 2014 cited in Liedke, Irigaray & Neves, 2019). Valuable refers to resources that could be used to implement new strategies to improve an organization's effectiveness and efficiency, because they can be used to reduce cost or increase revenue when compared to the competitors. Rare refers to resources that are not freely available to all organizations, since they are heterogeneously distributed. Inimitability refers to resources that are not perfectly mobile because they cannot be easily acquired. Non-substitutability refers to the irreplaceability of a resource. So, the Resource-Based View theory assumes that resources are heterogeneous and imperfectly mobile across all firms (Miller, 2003). Barney (1991) defined sustained competitive advantage as a non-duplicable advantage; he went further to describe the three distinct resources that can provide organizations with sustained competitive advantage as: Physical resources (physical, technological, plant and equipment), Organisational resources (formal structure) and Human resources (training, experience and insights).

Barney (1991) came up with the characteristics of the resources; they should be valuable, rare, inimitable and not substitutable (VRIN). The value elements of the "VRIN" framework mean that

the resource must be able to exploit opportunities or minimize threats from competitors. Further, the resource must be rare within the strategic group of competitors, such that the valuable resource cannot be or is not commonly held by competing organizations. The resource must, in addition, be imperfectly imitable that it is not easily replicated by competing businesses. Finally, the resource must not have substitutes such that the availability of similar resources is not common amongst other organizations or easily replaceable. Hence, firms can accomplish a short-term competitive advantage by utilizing resources that meet the VRIN criteria and by getting involved in actions that improve their efficiency or effectiveness in different ways than the competing firms.

Organisational Capabilities

Aldridge (2007) defines organisational capability as the ability to develop soundly based strategies and the ability to apply strategic thinking and manage an organization strategically. Johnson, Whittington and Scholes (2011) define organisational capability as the adequacy and suitability of the resources and competences of an organization for it to survive and prosper. Capabilities are those things that the company can do well repetitively such as production, logistics, daily human resource organisational capability.

A basic assumption of the 'capability view' is that companies have ways of doing things and dealing with organisational problems that show strong elements of continuity (Dosi et al., 2013). Firms are heterogeneous and they develop different organisational routines even if they belong to the same industry and produce similar outputs. Firm-specific ways of acting are based on organisational capabilities that have been gradually accumulated and shaped within firms. Organisational capabilities, we can conclude, enable firms to deal effectively in a firm-specific way with key organisational problems (Dosi et al., 2015).

Organisational capabilities are identified with the know-how of a firm of performing particular problem-specific activities (Dosi et al., 2015). Core capabilities embody proprietary knowledge that is unique to a particular firm and superior to that of the main competitors. It is widely agreed that firms' competitiveness depends on the development of only a few core capabilities. "Companies derive competitive strength from their excellence in a small number of capability clusters, where they can sustain their competitive edge (Dosi et al., 2013). Types of organisational capabilities include technological, marketing managerial, knowledge management and network capabilities.

Organisational capabilities in view of Hamel and Prahalad (2013) is the ability of an enterprise to use its competitive capabilities to enable it to grow and become better at what it does with time. Although no single measure that is known universally that measures strategic capabilities, Vesalainen and Hakala (2014) observed that organisational capabilities consider the strategies an enterprise has with regard to the firm's assets, competencies and resources used by the firm to exploit its resources to gain competitive advantage. Vogel and Güttel (2013) stated that assets such as cash, property, patents, human resources, technology and skills of the employees, structure of the firm and leadership methods are all essential to the enterprise's ability to formulate and employ strategies and enjoy strategic advantages over competitors.

Spanos and Lioukas (2001) listed types of organisational capabilities that can be identified and are common to businesses: technological, product development, production process, manufacturing, and logistics capabilities; production efficiency; market sensing, channel and customer linking, and technology-monitoring capabilities; marketing capabilities, such as skills in segmentation, targeting, pricing, and advertising. Aldridge (2007) defines Strategic capability as the ability to develop soundly based strategies and the ability to apply strategic thinking and manage an organization strategically. Johnson et al. (2011) define strategic capability as the adequacy and suitability of the resources and competences of an organization for it to survive and prosper. Capabilities are those things that the company can do well repetitively such as production, logistics, daily human resource management (Smith, 2008). According to Day (1994, as cited in Almeida et al., 2013), capabilities are a complex bundle of skills and accumulated knowledge that enable firms to coordinate activities and make use of their assets to create economic value and sustain competitive advantage. Components of organisational capabilities are resources and competencies. Resources are the assets that organizations have and competencies are the ways those assets are deployed effectively, that is, 'what the organization does well' (Johnson et al., 2011). Competence means a skill and the standard of performance, whilst competency refers to behavior by which it is achieved.

Dimensions of Organisational Capabilities

Strategic decision-making capability

In turbulent and unpredictable environments effective decisions by top executives serve as the foundation of successful strategic management practices (Hitt & Collins, 2007). Milliner (2006) sees strategic decision making as a fundamental process in business management of which strategic decisions affect the long-term health of the organization. Complex, constantly and unpredictable changing business environment makes strategy formulation increasingly difficult as it affects organizations by making it difficult for them to plan for the future. Strategic decisions concern the issue of strategy formation, while operational decisions concerns strategy implementation, control and analysis.

Strategic decisions externally reposition an organization or business unit in some way while operational decision, in contrast takes a desired position in the industry and then develops the means by which the position can be achieved (Kask 2010; Kenny, 2005). Strategic decisions have to ensure that an organization is doing the right things (what), and operational decisions have to ensure these things are done right (how). Compared to operational decisions, strategic decisions are rare with larger implications for the ongoing organisational competitiveness, that affect subsequent decisions more, and are more difficult to reverse (Fleisher & Bansourssan, 2003; Blythe & Zimmerman, 2004). Strategic decisions making executives are concerned with how resulting actions affect firm performance. The common goal of strategic leaders is to develop and sustain a competitive advantage. The development of competitive advantage is rather difficult in complex business environment since their various stakeholders endeavor to influence decisions made inside the organization (Hitt & Collins, 2007).

Tait and Nienaber (2010) is of the opinion that the concern of any strategic manager is to create and shape strategies that beat that of her competitors, this was reinforced by Pearce and Robinson (2007), a study which affirmed that the firm's ability to achieve strategic competitiveness and earn above average returns is compromised when a firm does not 48 appropriately and quickly react to global dynamism that firms face often. Sound strategic decision making in manufacturing firm is a bedrock for realizing the huge potentials of the sector (Umar & Simon, 2015).

It is important to bring out the types of strategic decisions that could be made in an organization. Dean and Sharfman (1996), Mintzberg et al. (1976) and Hickson et al. (1986) stated ten types of which are restructuring; new product; organisational change; new process technology; marketing strategy; geographic expansion; diversification; new facility; human resource strategy and quality improvement. Restructuring entails shutting down part of a business or closing a

facility, allegation of different facilities. New product involving adopting new manufacturing product. Organisational change entails creating a new structure, reorganizing around customers. Marketing strategy involves emphasizing new market segment and establishing a brand or private-label. Geographic expansion involves selling products to foreign markets, opening new facilities within a country or abroad. Diversification is moving into different purview, broadening assortment. New facility entails constructing a new plan, merger with a different company. Human resource strategy involves adopting new compensation systems, worker involvement programs and Quality improvement entails developing total quality effort.

Strategic flexibility

With growing uncertainty in the business environment, it is essential for organizations to build flexibilities into the systems to cope with the dynamic environment, which point to the capability of an organization to respond effectively to the opportunities and challenges presented by the competitive environment (Nandakumar *et al.*, 2014). The business environment has become more competitive and dynamic than ever before and companies are continuously forced to adapt to environmental changes (Grewal & Tanshuhaj, 2001; Young-Ybarra & Wiersema, 1999). The ability of a company to rapidly identify major changes in the competitive landscape, reallocate resources to new courses of action and reconfigure existing organisational routines that support these actions, do ultimately determine whether a company can faster create competitive advantage than its rivals (Shimizu & Hitt, 2004; Gelhard & Delft, 2015). This important dynamic capability is strategic flexibility (Eisenhardt *et al.*, 2010).

Organizations are operating in the era of changing environment that are characterized by globalization, computerization, information technology, and changing purchasing patterns. The sustenance of competitive advantages has become challenging and there little or no long-term stability. Therefore, organizations need to be flexible and act more intelligently with their environment; high firm performance comes from not only having timely and needed information about changing markets but understanding the implications or actions that are necessary as a consequence of this knowledge, and acting appropriately (Javalgi et al., 2005). Merely possessing valuable resources and capabilities are not adequate to respond to our ever-present hypercompetitive environment effectively, dynamic capabilities is needed to develop and renovate these organisational resources and capabilities (Teece et al., 1997).

Responsiveness

Responsiveness refers to the extent to which firms react rapidly to changes in a business environment to seize potential opportunities (Bernardes & Hanna, 2009). This responsiveness reflects "the efficiency and effectiveness with which firms sense, interpret, and act on market stimuli (Garrett et al., 2009), and has been treated as a competitive advantage. For example, Wei and Wang (2011) proposed that responsiveness represents a competitive marketing advantage by deploying resources to satisfy customer needs. Inman et al. (2011) noted that a firm with a high level of responsiveness outperforms its competitors in terms of operations. Inman et al. (2011) noted that a firm with a high level of responsiveness outperforms its competitors in terms of operations. Palmer (2001) presents responsiveness from service marketing and operations management perspectives. From service marketing perspective, responsiveness is related to a firm's willingness to help customers and speed of service delivery; while from operations management perspective, it is related to speed and variety of products offered (Nwulu & Ateke, 2018). From an integrated perspective, responsiveness may be seen as the ability of a firm to provide a variety of services speedily as well as their willingness to help customers in service delivery processes (Nwulu & Ateke, 2018; Asree et al., 2010).

Scholars have conducted numerous studies to explore how organisational responsiveness can be enhanced (Wei &Wang, 2011). According to Bernardes and Hanna (2009) central to this concept of organisational responsiveness seems to be the capability to learn fast in an environment where changes are fast-paced and difficult to foresee. Accordingly, scholars have increasingly realized that to develop and maintain responsiveness, a firm must constantly learn from partners with rich experiences in terms of responding to market changes (Yu et al., 2013).

Organisational Capabilities and Responsiveness

Organisational capabilities improve the effectiveness, speed, and efficiency of organisational responses to environmental turbulence (Ogbo et al., 2014), which ultimately strengthens performance. They allow "the firm to take advantage of revenue enhancing opportunities and adjust its operations to reduce costs" (Drnevich & Kriauciunas, 2011: 258). Organisational capabilities, also through sensing opportunities and reconfiguration, provide the organization with a new set of decision options, which have the potential to increase firm performance (Eisenhardt & Martin, 2000; Teece, 2007).

The influence of organisational capabilities on a firm's ability to achieve superior performance is contingent on the firm's context (Teece et al., 1997). Drawing on contingency theory, Wldern et al. (2013) argue that both the internal and external contexts within which dynamic capabilities are embedded are important in understanding their effects. Internal fit, characterized by compatible dynamic capabilities and organisational structure, and external fit, reflected in corresponding organisational capabilities and levels of competitive intensity, represent two fundamental conditions that facilitate the role of dynamic capabilities in affecting performance. Dynamic capabilities enable the management to make timely decisions to change the operational routines of the firm when necessary (Ambrosini & Bowman, 2009). Thereafter the firm should be able to introduce new innovations, which may lead to improved performance. Thus, the relationship between organisational capabilities and firm performance is mediated by the dynamic capabilities' effects on the firm's operational capabilities and innovation activities (Danneels, 2002).

From the foregoing discourse, the study hypothesized thus:

Ho$_{1:}$ There is no significant relationship between strategic decision-making capability and responsiveness of domestic airlines in Nigeria.

Ho$_{2:}$ There is no significant relationship between strategic flexibility and responsiveness of domestic airlines in Nigeria.

METHODOLOGY

The study adopted an explanatory cross sectional survey research design which was carried out at the organisational level of analysis. The population of this study was the nine operational scheduled domestic airline operators in Nigeria. The study adopted the entire population as a census. However, elements from the population were used as the participants or respondents for the study. Therefore, for the purpose of data gathering in this study and in line with the study unit of analysis which was at the macro level, copies of questionnaire were distributed to five managers of the nine domestic airlines in Nigeria bringing the total number to forty-five respondents. The Spearman Rank Order Correlation Coefficient was utilized to establish the level of relationship as hypothesized with the aid of Statistical Package for Social Sciences version 23.0.

The reliability of the instrument was ascertained using the Cronbach alpha reliability instrument with all items scoring above 0.70 as shown below:

Table 1: Reliability Coefficients for the Variables

S/No	Dimensions/Measures of the study variable	Number of items	Number of cases	Cronbach's Alpha
1.	Strategic Decision-Making Capability	5	38	0.756
2.	Strategic Flexibility	5	38	0.787
3.	Responsiveness	5	38	0.899

Source: SPSS Output

DATA ANALYSIS AND RESULTS

The level of significance 0.05 was adopted as a criterion for the probability of accepting the null hypothesis in (p> 0.05) or rejecting the null hypothesis in (p <0.05). The decision rule which applies for all bivariate test outcomes is according to Bryman and Bell (2003), where:

Table 1: Shows the description of range of correlation (Rho) values, as well as the correlative level of association

Range of Rho (+ and – sign value)	Association strength
± 0.80 – 0.99	Very strong
± 0.60 – 0.79	Strong
± 0.40 – 0.59	Moderate
± 0.20 – 0.39	Weak
± 0.00 – 0.19	Very weak

Source: Researchers Desk

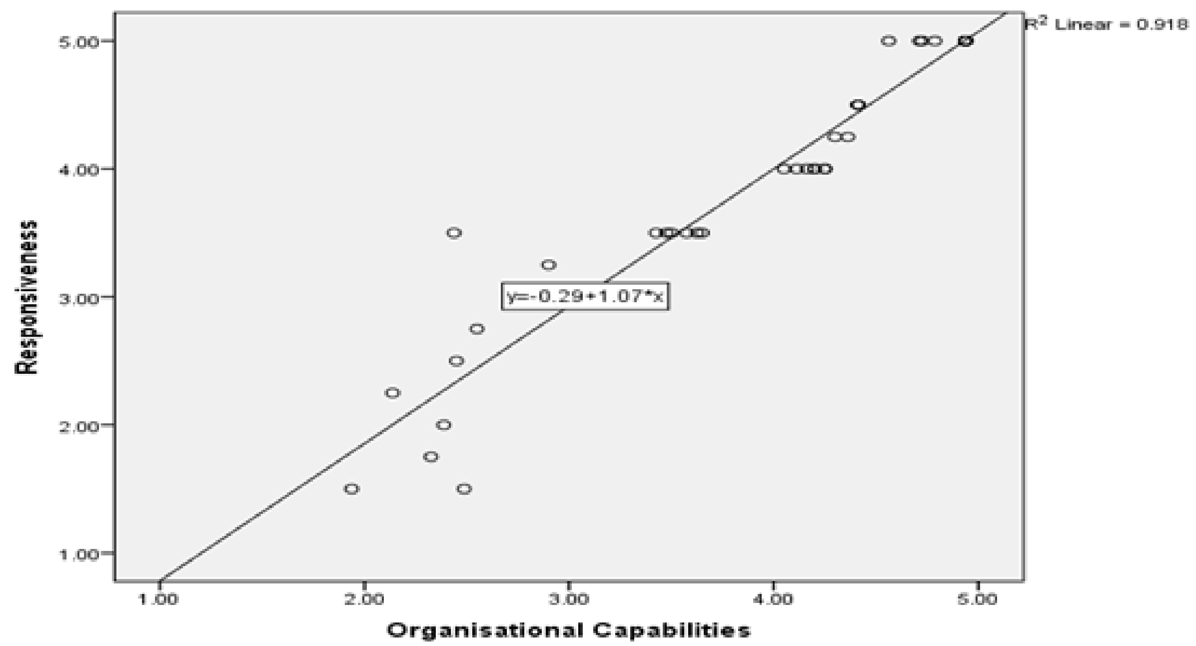


Fig. 1: Scatter plot show showing the direction of the relationship between organisational capabilities and responsiveness

Figure 1 shows a very strong relationship between organisational capabilities (independent variable) and responsiveness (dependent variable). The scatter plot graph shows that the linear value of (0.918) depicting a very strong viable and positive relationship between the two constructs. The implication is that an increase in organisational capabilities simultaneously brings about an increase in the level of responsibility. The scatter diagram has provided vivid evaluation of the closeness of the relationship among the pairs of variables through the nature of their concentration.

Table 2: Correlations for strategic Decision-making and Responsiveness

			Strategic Decision Making	Responsiveness
Spearman's rho	Strategic Decision Making	Correlation Coefficient	1.000	.860**
		Sig. (2-tailed)	.	.000
		N	38	38
	Responsiveness	Correlation Coefficient	.860**	1.000
		Sig. (2-tailed)	.000	.
		N	38	38

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output version 23.0

Table 2 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.860 on the relationship between strategic decision making and responsiveness. This value implies that a very strong relationship exists between the variables. Similarly, from the result obtained from table 1, the sig-calculated is greater than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between strategic decision making and responsiveness of domestic airlines in Nigeria.

Table 3: Correlations for Strategic Flexibility and Responsiveness

			Strategic Flexibility	Responsiveness
Spearman's rho	Strategic Flexibility	Correlation Coefficient	1.000	.959**
		Sig. (2-tailed)	.	.000
		N	38	38
	Responsiveness	Correlation Coefficient	.959**	1.000
		Sig. (2-tailed)	.000	.
		N	38	38

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.959 on the relationship between strategic flexibility and responsiveness. This value implies that a very strong relationship exists between the variables. Similarly, from the result obtained from table 1, the sig-calculated is greater than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the

null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between strategic flexibility and responsiveness of domestic airlines in Nigeria.

DISCUSSION OF FINDINGS

This study examined the relationship between organisational capabilities and responsiveness of domestic airlines in Nigeria. The findings revealed that there is strong positive significant relationship between organisational capabilities and responsiveness of domestic airlines in Nigeria. The finding of this study reinforces previous studies by Gurkan and Bititci (2015) who found out that organisational capabilities have been adopted in large enterprises, with some interest on SMEs. This was because larger enterprises have short- and long-term strategic planning while SMEs have short term planning focusing on niche strategies. SuarezPerales, Garces-Ayerbe, Rivera-Torres and Suarez-Galvez (2017) found that the organisational capabilities of strategic proactivity and continuous innovation are associated with proactive environmental strategies of 134 North American and European ski resorts.

Also, the finding of this study is in agreement with the finding of Bonsu (2016) asserts that there is a direct relationship between organisational capabilities and organisational performance (financial and operational). He concluded that irrespective of the competitive intensity in the business environment, micro and small family businesses that adapt marketing and managerial capabilities will always outperform industry players. While in Egypt, Salama (2017) on developing and examining a conceptual framework relating to resource based organisational capabilities and inter-organisational practices on organisational performance, he concluded that organisational performance, in the factories in Egypt, is affected by variables other than knowledge management capability and organisational learning. On the contrary, Ogunkoya (2014) indicated that there is no significant relationship between organization capabilities and organisational performance of banking sector in Nigeria. This implies that the ability of a firm to be able to produce unique and creative goods/services does not guarantee the organization to edging its competitors in the industry.

The study finding also aligns with Lee and Klassen (2008) who examined the influence of managerial capabilities in fostering SMEs participation in public procurement and the findings of the study were that the managerial capabilities and skills in business available or is able to obtain in due time, improvement of climate for innovation which includes an organized, systematic, and continual search for new opportunities, innovation strategy which has been linked to available resources, the corporate strategy, the marketing function and the information technology functions.

The current finding also empirically substantiates the baseline theory of Resource Based View (RBV) theory which asserts that the competitive advantage and superior performance of an organization is explained by the distinctiveness of its capabilities. Newbert (2007) study showed that 2% of results were at least partially inconsistent with RBV logic. RBV theory indicates that human resource is not necessarily a capability for determining competitive advantage of the firm when various capabilities are in play. On the other hand, dynamic capabilities are different between firms because the same capabilities that are distinctive (imperative) to one firm can be nothing more than just a normal operating capability to the others (Winter, 2003). The Resource Based View (RBV) theory of strategy asserts that the competitive advantage and superior performance of an organization is explained by the distinctiveness of its capabilities. From the above views it can be concluded that the organisational capabilities in insurance companies is critical in influencing competitive advantage.

CONCLUSION AND RECOMMENDATIONS

Therefore, the study concludes that when domestic airlines in Nigeria effectively build, deploy and utilize their capabilities, there is a positive improvement in their competitive advantage. Therefore, the study recommends that:

a) Domestic airlines in Nigeria should develop their capacity to make strategic decisions by sensing the need for change, learning about how to respond to opportunities and threats and recognising shifts in the environment that could impact the firm's business.
b) Domestic airlines in Nigeria should develop capacity in strategic flexibility through knowledge acquisition and creation, interpretation of the gathered information so as to filter the relevant and useful knowledge.

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REMOTE WORKING AND EMPLOYMENT RELATIONS IN THE CHEMICAL AND NON-METALLIC INDUSTRY IN PORT HARCOURT, NIGERIA

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ABSTRACT

This study examined the relationship between Remote working and Employment Relations in the Chemical and Non-Metallic Industry in Port-Harcourt, Nigeria. The objective of the study was to find out how employees of the Industry stayed connected while on the job in the face of remote working. The study population was the two (2) companies in the Chemical and non-metallic industry in Port Harcourt. A census sampling technique was adopted. The instrument that was used to gather the data was the Interview Guide. The instrument was tested for validity, using the peer review method and reliability was ensured by maintaining consistency of interview questions throughout the research. Data for the study was presented in diagrams and paragraphs and analyzed using the QSR NVivo. Data showed that there is no relationship between the Remote Working and Employment Relations, but showed a relationship between a child node of Remote Working and an outlier (health challenges and other special circumstances). The Chemical and Non-Metallic industry in Port Harcourt did not transit to remote work like most of the industries in the world did in 2019, except in special circumstances that could include health challenges of employees. The result indicated that remote work has not been adopted in the Chemical and Non-Metallic industry but a hybrid work model is introduced gradually and when necessary, which means that employment contract, workplace rules, workplace grievances and disputes settlements did not have the need to change. Since the industry is yet to adopt remote working, but is gradually tilting towards the adoption and utilization of the hybrid work model, it is recommended that organizations in the industry should prepare for the future by drafting a prospective employment contract model, to cover potential organizational changes when the industry goes hybrid or totally remote.

Keywords: Remote working, employment relations, co-working spaces, hybrid working, employment contract, employment parties, government

INTRODUCTION

Employment relations refer to the formation of the workplace employment contract; the performance of the contract; the determination of the contract; the specification of the parties in the contract; and the ways by which the parties are involved in the regulation of the contract (Biriowu, 2018). The Employment Relations domain has experienced shifts that have occurred in the model of managing people in Organizations. These shifts were responses to emerging eras in the industrialization regimes of the production of goods and services. The first regime brought with it increasing hierarchically structured organizations and employees with low discretionary know-hows. The corresponding people management model that suited these employees then, is referred to as Personnel Management.

The second and third industrialization era (globalization) came with it, global, flatter organizations and a global workforce. The corresponding people management model that suited these employee sets is referred to as Human Resource Management. The emergence of the fourth industrial revolution, also known as Industry 4.0 (World Economic Forum, 2022), which marked the era of technological advancements, particularly in the spectrum of digital technology, drastically transformed the way that organizations and employees work and relate with one another. The era of the world's most significant technologically driven change is forcing

organizations to harness converging technologies in order to create an inclusive human centered future for employees. This includes employees' ability to "do their jobs from a location other than a central office operated by the employer" (VMware, 2022, para. 1), also termed remote work.

Okikiola (2019) states that remote work includes work that occur in employee's home or co-working spaces, private offices, including other off-site locations such as in cars, parks, churches, mosques, cafés, etc. Remote work entails organizational flexibility to enable and encourage employees' blend of known practices and technology to connect with and work in virtual teams to create value. The transition from physical Office working model to the Remote working model would normally lead to the formation and fashioning out of terms and conditions of employment for the management of this paradigm shift. Employers are therefore looking at the practicalities of how to transition staff back to office-based working. This is because the decision to permanently transit to remote working is said to go to the very root of the employment relationship, and the meaning of work and the workplace (Smith et. al., 2022). For Smith et al. (2022) then, any future solution requires employers to navigate complex local legal considerations, traversing not only employment laws and human resources topics, but also tax, data privacy, and immigration laws.

The focus of this paper therefore was to find out how employees of the Chemical and Non-Metallic Industry in Port Harcourt, Nigeria, stayed connected while on the job in the face of the emerging reality – remote working, and indeed the rise of a remote workforce, and the general implications of remote work on employment relations.

Prior to the advent of distant or virtual working, the formation, performance and determination of the terms and conditions of employment of workers had the physical work setting in mind before the authoring of the rules of engagement. With the emerging technological trends that has inevitably caused a change in workplace practices where a large number of the workforce has been sent home to set up offices in locations other than the workplace, the terms of engagements would inadvertently change too. For instance, when such practices that require a physical or in-person meeting (i.e. contract formation, performance and determination) are done remotely, organizations as well as employees are forced to change the rules of engagements. This poses a problem. This study examined the implications of remote working on employment relations in the age of technological advancements.

LITERATURE REVIEW

Baseline Theory

The technological determinism was adopted as the foundational theory of this study. The theory was propounded by Marshall McLuhan in 1962 in his *The Gutenberg Galaxy: The making of Typographic Man*. The theory is a deterministic approach to explaining how technology and technological innovations play a role on how individuals live their lives. McQuail (2010) states the theory describes how social change will be caused be technological innovations, particularly in the spectrum of the media, and the role that media technology disruptions will affect the way that people in a society act, think, and a live their lives, moving from one technological innovation to another.

Purporting that all technology is communication and an extension of ourselves which offers us the means of enhancing our communicative and innovative abilities through time and/or space (Griffin, 2000). Although the theory is also argued to be a reductionist approach to linking the technology and behavior (Van Dijk, 1999), it is an overall explanation of the effects of technology in the way that society operates and develops. The adoption of remote work stems from communications technological innovations and society's need for flexible work style and pace, which is why the technological determinism theory is relevant to the study.

Concept of Remote Working

Remote Year (2019) describes remote work as "a working style that allows professionals to work outside of a traditional office environment" (para. 3). It refers to the situation where an employee does not need to be physically present in a work environment to perform their contractual duties. Organizations allow their employees to set up a workstation remotely and on the go as long as they execute their projects and meet or surpass organizational goals. Also popularly known as work from home, remote work is "a telecommuting type of flexible working arrangement that allows an employee to work from remote location outside of corporate offices" (Gartner, 2020, para. 1). This offsite arrangement affords employees the flexibility of time management and the result is a balance of work-life situations, access to other career opportunities, safety from commutation hazards and ease of tasks delivery. Remote work signifies employees 'dial in' or 'stay connected' to the work nexus even when they are not physically present at the workplace.

For VMware (2022), the new thinking in organizations today is on how to stay connected on the job either through physical presence at the workplace or remotely. For VMware therefore, staying connected while on the job may come in the following ways:

THE NORMAL – The use of Trado- physical office setting model. This involves the use of office-based workers; in-office employees; Out-of-office workers; Office workers.

THE NEW NORMAL- The use of the remote working model (work from the employee's home and work from anywhere else outside the employer's workplace).

THE HYBRID MODEL – The use of a combination of the physical office setting and remote working models.

For VMware then, remote working takes different forms that range from working from an employee's home; working from other co-working spaces; short term remote work or telecommuting (temporary or less frequent version of remote work for child birth or other health challenges); working from an Organization's home office.

Many employers are said to be mindful of the following benefits that being in the same physical space brings (Smith et al, 2022): (1) Collaboration and innovation, (2) Knowledge sharing and (3) Social cohesion.

Making Home Work – Opportunities and Threats

Smith et al. (2022) contend that remote working is the most dramatic transformation of the global workforce. For Smith et al., therefore, tens of millions of office-based workers have been sent home to set up remote workplaces from kitchen, dining tables and home offices on a scale never seen before, and businesses around the world have adapted surprisingly well. Studies conducted by some Consulting Firms (AT&T, 2020; Surepayroll, 2020) on the reasons why remote working will be sustained indicate that:

§ Workers make home work because working from home eliminates commuting to the workplace and its associated hazards, including traditional office related stress, boredom, job burn-out and other health challenges.

§ A study published in Science-Norway indicates that long before COVID-19, studies showed that office workers were getting sick more often, finding those energy-efficient physical office buildings as demons, at not just

trapping heat but airborne pathogens as well.

§ Workers make home work because non-commuting to work eliminates the cost of auto mobile gas and vehicle maintenance costs.

According to studies carried out by AT & T (2020), other reasons why remote working will be sustained indicate that Employers support the idea of making home work because, the absence of in-office workers leads to a reduction in production costs such as office maintenance related spending. Employers also increasingly support the making home work because it contributes to green office management (lowering carbon emissions to the planet).

The above position was supported by a survey conducted by Sure-Payroll (a U S based Consulting Firm in 2020) who found that 86% of people prefer to work alone to maximize their productivity, and their sentiments were proven by 2020's increase in productivity when most professionals were working remotely). AT&T was reported to have saved $30 million a year with its telework initiative within the same period. At the other spectrum are arguments on why remote working should die and the CEO of WE-WORK (2020) observes that a significant threat is that remote workers end up missing the camaraderie and find their homes distracting and those who are severely engaged with the company want to go to the office two-thirds of the time, at least. Other threats that plague homework have been identified and according to the CEO of WE-WORK (2020), they include:

§ Remote working is said to be a threat to corporate culture and innovation.

§ Paucity of remote working tools to employees occupying non-leadership positions will kill remote work success.

§ The population of the corporate world has a preponderance of digital immigrants than digital natives (Prensky, 2014).

§ A study confirmed that although Millennials disproportionately suffered financially from 2020's lockdowns, it was Gen Zers who endured diminished career prospects. That's because it's harder to learn a job when you only have a laptop for leadership. Internships may not provide the same value when they are fully remote.

§ Working remote leads workers to miss the group solidary and happy hour plans that engender team work spirit.

The Hybrid Model

The use of a combination of the physical office setting and remote working models is referred to as the hybrid model. In this model as stated in Biriowu (2022), employers' decisions are informed by the provisions of their employment contractual documents, the new meaning of work (which includes remote workers and in-office workers), and the workplace (which includes the physical office setting and the remote work setting).

This model incorporates the following best remote work practices for their remote work population, VMware (2022):

§ Clear guidelines and policies: A culture of trust is often grounded in a healthy understanding of expectations: Is a person expected to be "in the office" (or accessible for communication online) by a certain time or for a certain number of hours a day?

§ Team building for the remote work population: A virtual team is still a team. Managers, in particular, have a responsibility to build collaborative, communicative teams that are

invested in each other's success.
- Top-notch technologies: Companies with high-performing remote teams invest in the technologies their people rely on to do their jobs. These include remote desktops and mobile devices, high-speed broadband, reliable and easy-to-use applications, and other business-specific needs.

The HR Employee Support Function (Making Work Home)

At the commencement of the employment relationship with an employer, the workplace becomes the place where employees spend the majority of their waking time. It is the expectation of all employees to be in a positive, welcoming and productive environment. It is also the expectation of employees to have a workplace or environment where they would be well-informed, well cared for, and valued as part of the team. Where an employer puts in place these mechanisms that would make the workplace enticing, exciting, inviting and interesting, then the performance and productivity delivery from employees are assured. These conditions may create passion in employees such that the workplace may be missed when they are off on vacation and other forms of absences from work. These will lead to positive employee experience; engagement; commitment; and employees' citizenship behavior.

The Human Resource employee support function of an organization provides the structure to fulfill the expectation of all employees whose desire is to be in a positive, welcoming and productive environment. These will make work home.

The key components of the HR employee support function are:
- Recreational facilities provision at the workplace such as Gyms, inter-work group sporting competitions, happy hour events.
- Employees' Queries Resolution,
- Workplace Accommodation/Relocation Management,
- Effective Newcomer Orientation/Onboarding scheme
- Dual Careers Administration,
- Activity Tracking/Time Management,
- Career orientation Review and
- Employee Mentoring advisory

E-Human Resource Management

The advent of the fourth Industrialization made its debut with the principle of work and organization digitalization, and a corresponding remote workforce. The people management model that suits this new normal is referred to as E-Human Resource Management.

E-Human Resource Management, according to (Biriowu, 2022) uses the following tools to function:
- effective communication technology,
- teleconferencing,
- telework technology,
- video conferencing,
- widespread internet broadband adoption,
- email,
- increasingly mobile modern workforce,

- remote work software,
- mobile work tools, and
- virtual reality conferencing

VMware (2022) added that E-Human Resource Management requires a collaborative and dynamic mobile and multi-generational workforce with different communication preferences to function.

Employment Relations

Employment Relations refer to the formation of the workplace employment contract; the performance of the contract; the determination of the contract; specification of the parties in the contract; and the ways by which the parties are involved in the regulation of the contract (Biriowu, 2018). The transition from physical office working model to the Remote working model would normally lead to the formation and fashioning out of terms and conditions of employment for the management of this paradigm shift. As their words import, "Union-Management relationship should be based on the making and administering of rules which regulate employment relationships (Dunlop, 1958; Flanders, 1965). This serves as the basis for the employment contract.

Employment Contract

The employment contract could be understood on the basis of its formation, performance and termination. In legal parlance, a contract is said to be an agreement between two or more persons, which creates an obligation to do or not to do a thing, and the agreement must be enforceable at law. This contract which is seen as a master/servant relationship, empowers the employer (the master) to decide what thing is to be done; the way it should be done; the means by which it should be done, the time and place it should be done. Prior the birth of Remote working, the intent of the parties in the employment contract is for one of the parties to present him/herself at the physical workplace. The implication of the introduction of Remote working therefore will entail a re-visitation of the pre-remote employment contract model, to cover, those Organizations are who either totally remote or hybrid. Once the formation of the contract has been perfected, the duties and obligations of the parties are brought to bear on the parties. This, in legal terms, is referred to as the performance of the contract.

In the performance of the employment contract, Drake (1985) points out that, the Courts, over the years, developed duties, rights and obligations for the parties, and remedies for damages suffered by the parties in the employment relationship. Remedies (claims for damages) are available at common law where one of the parties proves a breach of its rights and duties by the other party. At common law, therefore, labor (a worker) is entitled to claim damages only where he is able to prove a breach of the common law duty which an employer owes him. An employer is also entitled to claim damages only where he can prove a breach labor owes him. These duties, obligations and rights are described in legal parlance as common law duties. For Drake (1985) therefore, these duties and obligations are apportioned to both employers and employees.

The duty to take reasonable precautions to secure the physical safety of workers may be regarded as the most important of all the duties of the employer at common law, of similar relevance are the other duties implied at common law. However, and for the purpose of this paper, the duty to take reasonable precautions to secure the physical safety of workers have implications to the birth of Remote working, in the face of its key attributes of non-delegability, Reasonability and Non-extension to employees' properties. A recent case of injury reported by a Remote Worker in South Korea who had a fractured leg while at home working was held by the Court as qualified to be paid damages. The Remote working implications of this duty of care is on how to re-define what constitutes "out of and in the course of employment" to qualify for damage claims.

The termination of contract of employment could be explained in relation to the law of contract. That is, where a party to the contract commits a breach to the contract, the innocent party could either accept or waive that breach. This conception which applies in England however, relates to the law which provides that a congenial reason be provided before an employee is removed (Uvieghara 2001). This practice is absent in Nigeria. The Courts of England prohibit the removal of workers at the whims and caprices of employers. In Nigeria, the Courts uphold the legal maxim, "that no one imposes a willing servant on an unwilling master" and vice versa. In cases of dismissal however, Nigerian Courts would demand congenial reason to enable them determine the wrongfulness or otherwise of cases bothering on dismissal.

The implications of the birth of Remote Working on proving congenial reason to determine the wrongfulness or otherwise for termination of employment when such occurs without the physical presence of the employers Representatives or co-workers becomes a task that has to be re-visited. In Human Resource Management parlance, the word termination is widely used to describe all forms of personnel separations in industrial organizations (such as termination, resignation, redundancy and dismissal).

For Uvieghara (2001), there are various ways by which a contract of employment can be brought to an end. These are by notice, by agreement, by frustration, by performance and through constructive termination. A contract of employment may be brought to an end by notice where either party gives appropriate notice on an intention to terminate the contract. Appropriate notice may be determined by provisions in the employee's conditions of service handbook; by statute and practice. A contract of employment may also be brought to an end by agreement where duration of contract is spelt out in that agreement. Through frustration (supervening events such as Civil War, illness, death etc.), a contract of employment could be brought to an end. By performance, parties to an employment contract may bring it to an end when a definite period is fixed for the performance of the contract. It is another matter if a dispute arises on whether the parties actually performed.

The Employment Parties

The relationship between employers and employees comprises three groups of actors or parties. These actors are the workers or employees and their associations; the employers and their associations; and the Government (and its agencies).

Workers or Employees: A worker or an employee has been identified as anybody that offers his/her labor services to an individual or organization in return for a definite remuneration (Oyesola, 2010). The worker sees his relationship with his employer as that of an engagement to secure the best possible conditions and living standards for himself. Okene (2012) points out, the Courts have formulated three types of tests in order to determine whether a person is a servant (employee or worker) or not. These tests are referred to as the control test; organization or

integration test; and multiple or economic reality test. The control test emphasizes the right of control exercised by the employer over the worker. That is, a control on when and how a job is to be done.

Due to some observed difficulties associated with the control test, the organization or integration test was developed to take care of likely injuries to third party employees which the control test excluded. Following the complex nature of the employment relationship, the Courts over the years found the control and integration tests to be inadequate in determining this relationship. The multiple test which takes care of the nature of the job, the skill types and sets, are now used to determine the employment relationship. Following the birth of Remote Working, the right of control exercised by the employer over the worker, that is, a control on when and how a job is to be done is flexible and at the discretion of the employee, which is likely to be abused. The Courts are to re-visit the testing model that will re-affirm to model of control for the use of the employer whose right it is to run the Organization.

It is to be noted that workers formed unions so as to have a strong power base to withstand the strength of the powerful employer.

The Employer: Oyesola (2010) sees an employer as the individual or organization that hires men to work for him or it. Characteristically, his focus is all about having the right to manage, the ability to plan for the future, so that the organization can continue to be a success, to make profit for its shareholders, and to keep its employees 'motivated'. The Nigerian Trade Disputes Act (S.90 (3) defines an employer to be any person who has entered into a contract of employment to employ any other person as a worker either for himself or for the service of any other person and includes the agent, manager or factor of the first mentioned person or his personal representative". Employers over the years had to band together through the formation of Employers Organizations to withstand the increasing power of workers' unions.

The birth of Remote work is likely to alter the primary focus of employer on his right to manage and his ability to plan for the future, so that the organization can continue to be a success, to make profit for its shareholders, and to keep its employees 'motivated'.

The Government (and their Agencies): The problem of labor immiseration led to concern shown by some persons who clamored for the role of Government in the management of employment relations. This pressure and social conscience according to Akerele (1982) compelled governments to intervene in the employment relations system so as to mitigate the harsh effects of labor exploitation by regulating such things as hours of work and the employment of children. It is to be noted that Government or state intervention over the years has come in the form of the creation of the Labour Ministry; statutes as noted in constitutional provisions and Acts promulgated by the law making arm of the state; judicial interventions, including common law and court decisions; and the recognition and listing of workers' unions and employers' unions or organizations.

The birth of Remote Working will compel Government to review the Labour Legislations that were modeled to protect employees from work conditions associated with the physical workplace. The Labour Act that empowers Authorized Labour Officers to enter and inspect premises where workers perform their jobs may not permit them to enter private homes of

Remote Workers.

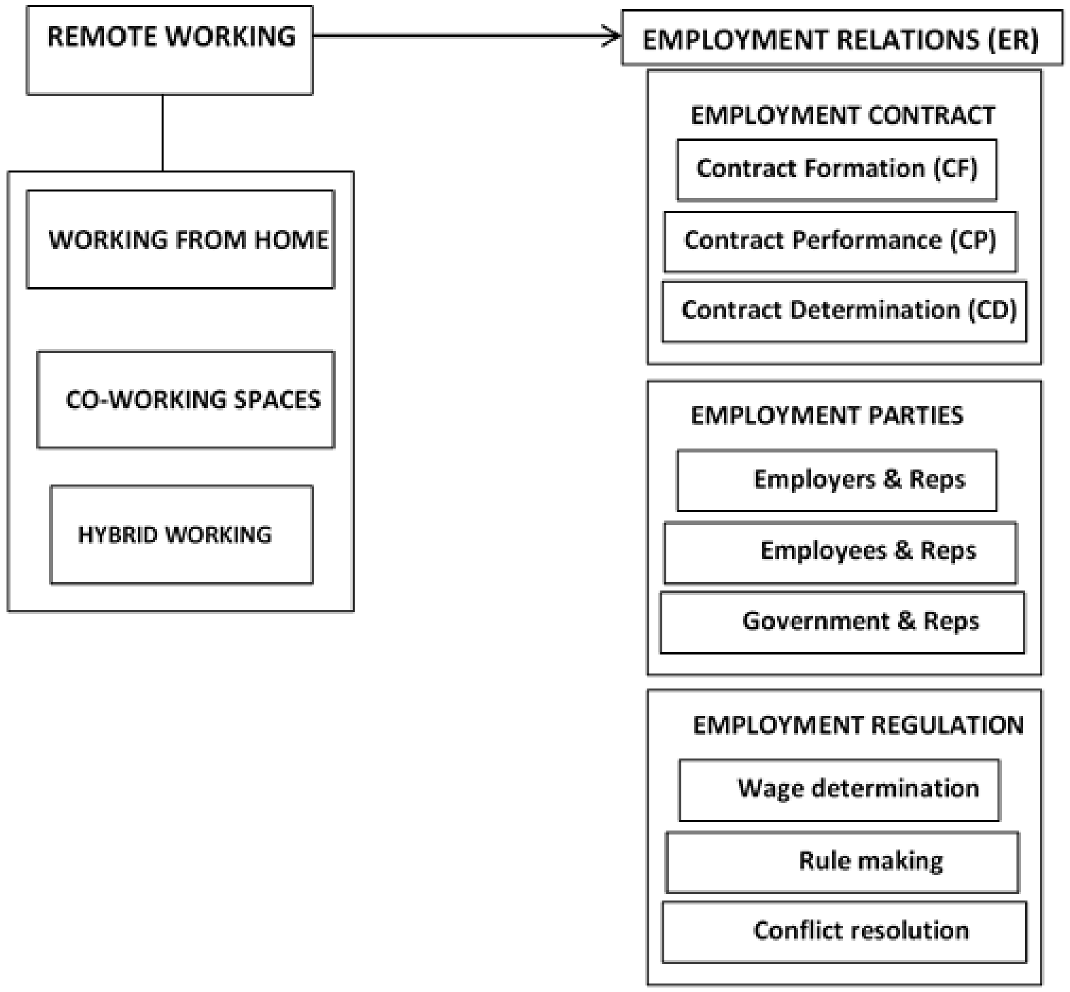

Fig. 1: Conceptual Framework of Remote working and Employment Relations

METHODOLOGY

This study qualitatively examined the ways remote work affects employment relations in the chemical and non-metallic industry in Port Harcourt. Using a survey research design, the researcher conducted the study at a macro-level unit of analysis, a study that prompted the eliciting of responses from Human Resource Managers in the industry. The study was conducted at a macro (organization) level thus, the study's population was the two (2) companies in the Chemical and non-metallic industry in Port Harcourt namely, Ndorama Eleme Petrochemicals and Notore Chemical Industry. The study adopted a census sampling technique because the population is a manageable size, hence both companies were surveyed. The instrument that was used to gather the data was the Interview Guide, which was formulated to congregate responses that answered the Research Questions. The instrument was tested for validity using the peer review method and reliability of instrument was ensured by maintaining consistency of interview questions throughout the research. Data for the study was presented in diagrams and paragraphs and analyzed using the QSR NVivo.

Data Presentation and Analysis

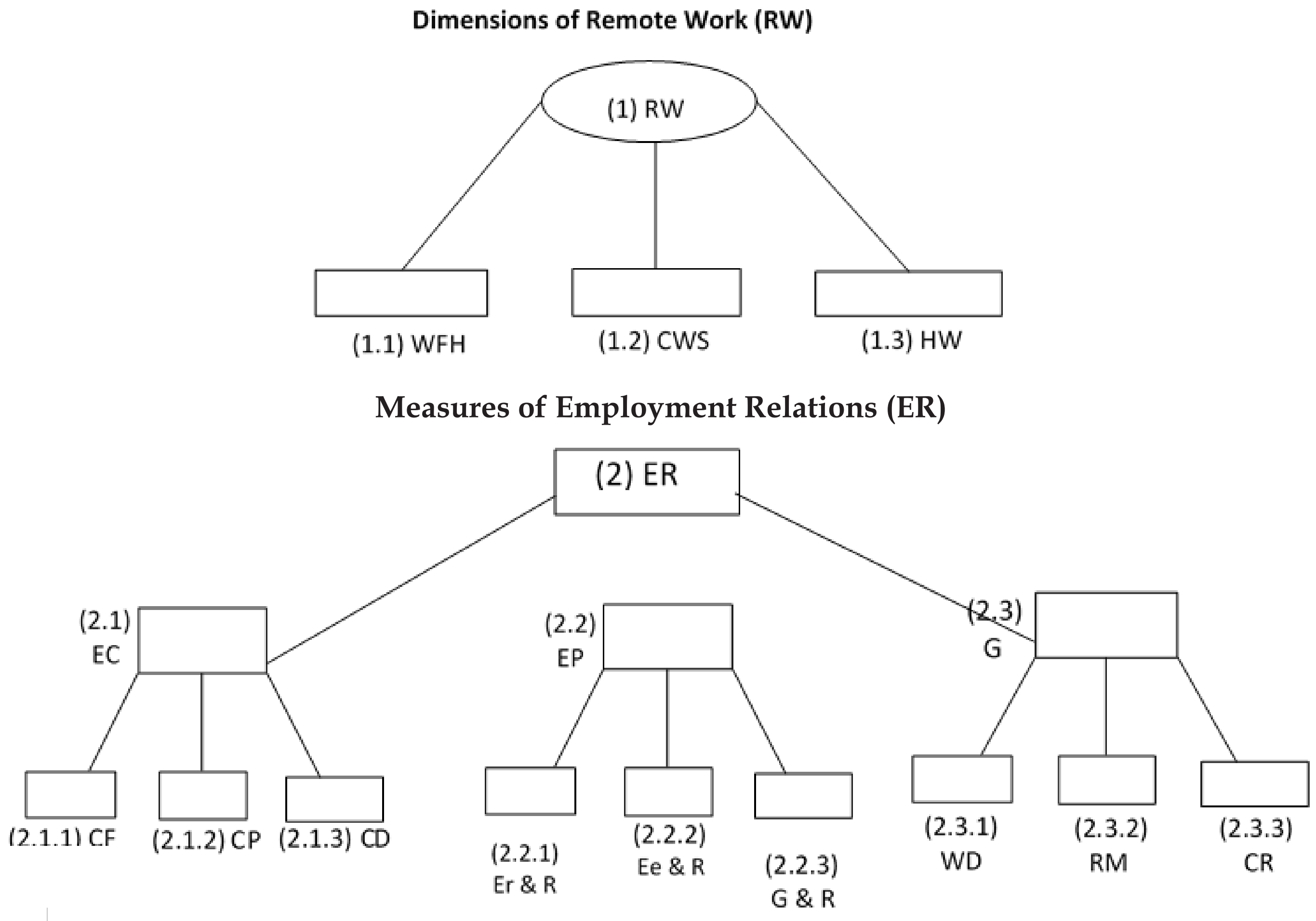

Figure 2: QSR NVivo (2022) Analysis of Remote Work and Employment Relations

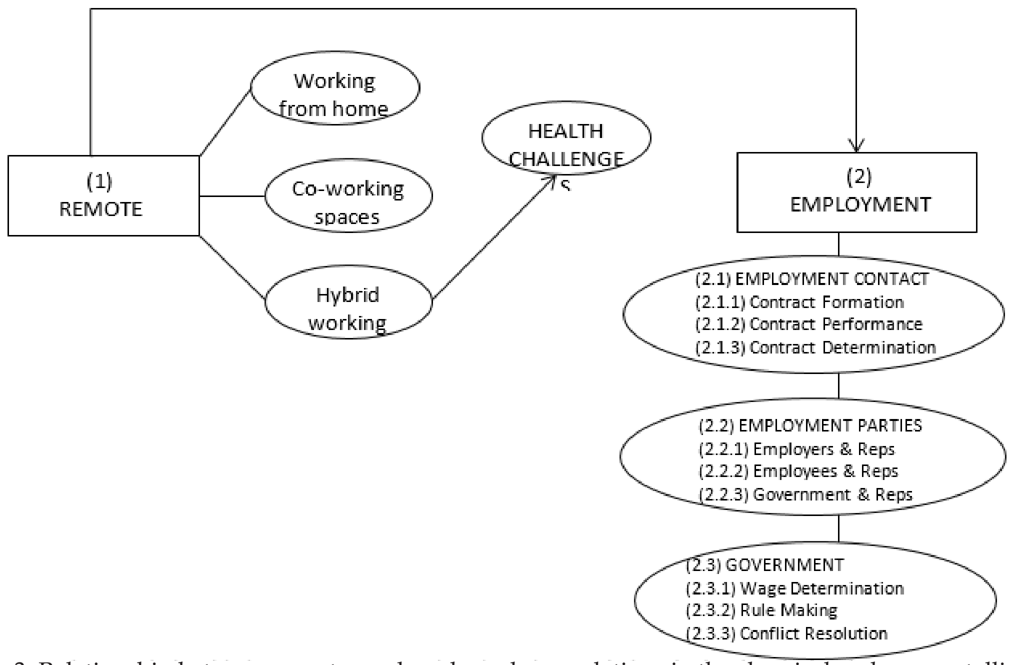

Fig. 3: Relationship between remote work and employee relations in the chemical and non-metallic industry

QSR NVivo Output

The output of the QSR NVivo data analysis as presented above that showed the relationship between two parents nodes, Remote Work (RW) and Employee Relations (ER), and as displayed, the Dimensions of RW (children nodes) are Working from Home (WFH), Co-Working Spaces (CWS) and Hybrid Working (HW) whereas the Measures of Employment Relations (ER) (children nodes) are Employment Contract (EC), Employment Parties and Employment Regulations. Data showed that there is no relationship between the RW and ER but showed a relationship between a child node of RW (HW) and an outlier (health challenges and other special circumstances).

Descriptive Analysis

The HR departments of the Chemical and Non-Metallic industry in Port Harcourt claimed that Remote Work was only an interim plan that is now defunct. While HR Dept 1 stated that "…my organization being a manufacturing company has returned to full blown work", HR Dept 2 revealed that remote work is a mechanism that is employed in the organization "not as a mode of work but to manage staff needs to be off work depending on circumstances or work situations… our working structure is a physical workspace but people can be allowed to work from home based on their needs". In describing how Remote Work is not fully an adopted type of service delivery, HR Dept. 1 attested that as a result of the fact that the Chemical and Non-Metallic industry is a manufacturing industry, Remote Work is not practical, stating that "… unfortunately my organization being a manufacturing company has returned to full blown work", which HR Dept. 2 corroborated, stating that the organization "has the physical work setting in mind as of today and the current practice is still physical work space setting". The organizations also explained that their contracts of employment have not changed because according to HR Dept. 2 for instance, "our employment contract is based on physical working settings… as a petrochemical plant, 70% of our employees are expected to be physically present at work as machines are to be mounted and the process monitored… since we are not changing our work structure, our relationship is being managed within the physical working environment… we are not changing the employment contract" and the HR Dept. 1 elaborated on the topic stating "our contract conditions remain the same post Covid-19. The only gradual change is that they are trying to digitalize some processes that should eventually encourage work from home in the next two years… for now, employees are expected to physically be at work. Work from home is yet to be enshrined in company policy". The organizations however stated that even though in special cases where some level of remote work is allowed, for instance in the case of HR Dept. 1 that stated that "work from home is only considered for employees with low immune system, health challenges or a few employees working in non-plant areas of the company", the industry is still largely physical work-oriented, which HR Department 2. purported thus:

> Employees still has physical work setting in mind, since we are still majorly physical work oriented and just using the remote system as options to manage work life balance of each staff requiring remote working. KPI is still monitored as per physical work setting, however, when people are allowed to work from home, they are expected to meet their KPIs irrespective of their challenges.

DISCUSSION OF FINDINGS

Finding for Research Question 1 as inferred from data revealed that remote work does not affect the formation and determination of the employment contract and that the contract remains the same because the Chemical and Non-Metallic Industry is still physical work oriented as is only beginning to introduce the hybrid work scheme. This is yet to affect employment contract in any way. This finding supports Dunlop (1958) Flanders (1965) position about employment contract that union-management relationship should be based on the making and administering of rules which regulate employment relationships. The import of this is that since there is no change in employees' means of carrying out their duties, there is no need for a change in employment contract.

Finding for Research Question 2 showed that remote working is yet to affect the making of workplace rules in the Chemical and Non-Metallic industry because the means of working is still office/plant based. This is because remote work is yet to be implemented in the industry. Finally, finding for Research Question 3 workplace grievances and disputes settlement are status quo because remote work has not been fully adopted and the industry's operations are still very physically-based. However, further finding showed that hybrid work is being practiced at special instances where employees grapple with health challenges or other special circumstances that could restrict movements. Additionally, finding revealed that the study's findings are hinged on the technological determinism theory because technological innovations play a significant role in the adoption of hybridization as the Chemical and Non-Metallic industry are gradually adopting hybrid work.

CONCLUSION AND RECOMMENDATIONS

The Chemical and Non-Metallic industry in Port Harcourt did not transit to remote work as most of the industries in the world did in 2019. Except in special circumstances that could include health challenges of employees, the industry is majorly plant-based, employees are required to be at the workplace to install, maintain and monitor machines and see production processes through. To this end, remote work has not been adopted in the Chemical and Non-Metallic industry and a hybrid work model is introduced gradually and when necessary, which means that employment contract, workplace rules, workplace grievances and disputes settlements have not need to change.

Based on the finding of the study, taking into cognizance the fact the Chemical and Non-Metallic industry is yet to adopt remote work but is gradually tilting towards the adoption and utilization of hybrid work, the following are recommended:

- § A drafting of a prospective employment contract model, to cover potential organizational changes when the industry goes hybrid or totally remote.
- § HR employee Support function is to be restructured to make work home.
- § The Courts are to re-visit the testing model that will re-affirm the model of control for the use of the employer whose right it is to run the Organization.
- § The alteration of the primary focus of the employer on his right to manage and his ability to plan for the future, so that the organization can continue to be a success; to make profit for its shareholders; and to keep its employees 'motivated'.
- § Remote work should be highly considered in the industry because its birth adoption will compel Government to review the Labour Legislations that were modelled to protect

employees from work conditions associated with the physical workplace.

§ The workplace rules currently in vogue are modeled to work for physical workplace settings. Models of workplace rule making for Remote working will now need the instrumentality of high cost technologies and employees and Managers re-skilling.

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TALENT MANAGEMENT AND ECONOMIC WELL-BEING OF YOUTHS IN SOUTH-SOUTH NIGERIA

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ABSTRACT

The study examined the relationship between Talent Management and Economic Wellbeing of Youths in South-South, Nigeria. The descriptive survey design was adopted; the population of the study comprised of 7, 398, 061 youths in south-south Nigeria that were drawn from Rivers 2, 494, 441; Delta 1, 711, 501; Akwa Ibom 2, 373, 784; and Bayelsa 818, 335. The population was gotten from National Bureau of Statistics. The sample of 384 was derived using Krejcie and Morgan Sampling Table. The reliability of the instrument was determined using the Cronbach's alpha test instrument with the aid of Statistical Package for Social Sciences (SPSS) version 23 and it stood at 0.98 higher than the benchmark of 0.7. The data collected for this study were analyzed through descriptive and inferential statistics. The Spearman Rank Order Correlation Technique was employed to test the various hypotheses formulated. The result of the test of hypotheses revealed that talent management showed a strong, positive and significant relationship with economic wellbeing of Youths in South-South, Nigeria. The study concluded that economic wellbeing of youths is dependent on effective talent management via talent acquisition and development. In line with the findings and conclusion, the study recommends that training and development programmes must be adequately monitored to ensure that those who need them are the beneficiaries; government and organizations must ensure that they attract, recruit and select youths with talents and mentor them until they make the best out of them and also, non-governmental organisations must ensure they seek adequate data on unemployed youths and identify the area of interest of many people before embarking on empowering them. This will ensure the right people get the right skill, and society will become better for it.

Keywords: Economic wellbeing, standard of living, talent acquisition, talent management

INTRODUCTION

Organizations are formed as a result of the need to perform tasks that are too difficult for a single person to complete. As a result, organizations are occasionally saddled with the enormous responsibility of bridging their talent gap by attracting, hiring, and retaining individuals who possess the necessary skills and competencies required to realize organizational goals and objectives. A talent is an innate giftedness that is considered a gift (Tansley, 2011).

According to Burkus and Osula (2011), talent is innate and, as such, can be identified and developed at a young age. According to Collings and Mellahi (2009), talent management strategy is the systematic identification of key positions that differentially contribute to the organization's sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organization.

The ability of an organization to attract, hire, and retain individuals with skills and competencies that will meet the organization's current and future needs is referred to as talent management. According to Ali et al. (2019), talent management is the anticipation of needed human capital for an organization and the planning to meet potential needs. According to Campbell and Hirsh (2013), talent management is the best human resource in an organization whose performance has a significant impact on the organization's overall performance. TM is responsible for sourcing (finding talent), screening (sorting qualified and unqualified applicants), selection (assessment/testing, interviewing, reference/background, checking applicants), on-boarding (offer generation/acceptance, badging/security, payroll, facilities; retention measures to keep the talent that contributes to the organization's success); development (training, growth, assignments); and deployment (optimal assignment of staff to projects, lateral opportunities, promotions) and renewal of the workforce with analysis and planning as the adhesives, overarching ingredient (Brewster et al., 2010).

Effective talent management will enable youths with raw talents to be acquired and developed for economic growth and well-being. Economic well-being is the ability to acquire the goods and services needed to meet one's needs and maintain an acceptable standard of living. This includes food, clothing, housing, education, and recreational activities (Fidelis, 2018).

Nigeria, with a population of more than 210 million people in 2021, is one of Africa's economic and demographic powerhouses (Frankema, 2021; National Bureau of Statistics, 2018b). Over 65% of Nigerians are under the age of 35, with 35% between the ages of 15 and 30 (Population Reference Bureau (PRB), 2018). This group of people constitutes Nigeria's active working population (Omobowale et al., 2020). According to a Bureau of Statistics report, the unemployment rate has risen rapidly. By the end of the first quarter of 2017, unemployment in Nigeria had reached 40%, with youths accounting for the lion's share of this figure (National Bureau of Statistics, 2018b).

Despite several empowerment/poverty reduction programs in Nigeria, the plight of the youth has deteriorated, as evidenced by increased unemployment, poverty, and social exclusion. Economic growth has failed to bring about meaningful change in people's lives and the environment. To be sure, despite regular statements of growth figures indicating prosperity in South-South Nigeria, the zone has remained on the periphery in terms of citizens' quality of life. This ugly situation amongst youths in Nigeria has called for effective talent management strategy. Garg and Rani (2014) asserted that talent management begins with identification and recognition of individuals for their unique strengths. Private and public organizations must pay proper attention to talent acquisition and development. It is on this premise that this study is designed to address economic challenges faced by youths in South-South, Nigeria through investigation of the relationship between talent management and economic well-being of youths in South-South, Nigeria. The study was guided by the following hypotheses:

$Ho_{1:}$ There is no significant relationship talent acquisition and standard of living of youths in South-South, Nigeria.

$Ho_{2:}$ There is no significant relationship between talent acquisition and per-capita income of youths in South-South, Nigeria.

$Ho_{3:}$ There is no significant relationship between talent development and standard of living of youths in South-South, Nigeria.

$Ho_{4:}$ There is no significant relationship between talent development and per-capita income of youths in South-South, Nigeria

Fig. 1: Conceptual framework showing the relationship between Talent Management and Economic Wellbeing
Source: Tamunomiebi and Worgu (2020).

LITERATURE REVIEW

Theoretical Review

The study was anchored on modernization theory Modernization theory posited that development must be structured in line with the Western World for development to occur in third world nations. That is, programmes and policies must be Western-oriented to gain wider acceptability. Hence, most of the developmental programmes in many third-world countries are often Western-oriented without considering the peculiar challenges of each milieu (Mahakwe, 2022). This has primarily contributed to Nigeria's poor implementation of many youth empowerment programmes. This theory portrays youths' empowerment programmes in the light of westernization and explains the reason behind the abysmal performance of many of those programmes in addressing the needs of the target population. The Nigerian government and other stakeholders relies heavily on foreign aids, loans and helps from many of these Western nations and more often than not, these benefits come with stringent conditions (Ukponu et al., 2022). This ultimately affects the implementation of many of the policies initiated by the Nigerian government. If government can look within and develop talents amongst youths, it will increase economic wellbeing.

Concept of Talent Management

Talent was defined by Michael et al (2001) as “the sum of a person's abilities; his or her intrinsic gift, skills, knowledge, experience, intelligent, judgment, attitude, character and drive”. It also includes his or her ability to learn and grow. 'Talent is what people must have in order to perform well in their roles. Talent management is an organization's ability to attract, hire and retain individuals with skills and competencies that will carter for the organization's present and future needs. Ali et al. (2019) assert that talent management refers to the anticipation of required human capital for an organization and the planning to meet potential needs.

Campbell and Hirsh (2013) view talent management as the best human resources in an organization whose performance highly influence the organization's overall performance.TM is the sourcing (finding talent), screening (sorting of qualified and unqualified applicants); selection (assessment/testing, interviewing, reference/background, checking, of applicants) on-boarding (offer generation/acceptance, badging/security, payroll, facilities; retention measures to keep the talent that contributes to the success of the organization); development (training growth, assignments); deployment (optimal assignment of staff to projects, lateral opportunities, promotions) and renewal of the workforce with analysis and planning as the adhesives, overarching ingredient (Brewster et., al., 2010).

Talent Acquisition

Organizations promote their values in order to attract talented individuals to apply to join the organization. Talent acquisition refers to the process of attracting, recruiting, selecting and employing talents in an organization. Ra'ed et al. (2018) argue that tracking talents and attracting them must be integrated with the management's overall strategies. Management must be aware of the kind of talent that they need and device strategies to attract these talents to the organizations. Garg and Rani (2014) assert that talent management begins with identification and recognition of individuals for their unique strengths. They opine that talent acquisition entails workforce planning, recruitment and selection. Planning is a composition of how appropriate individuals are selected on the basis of their skills, knowledge, pragmatism, maturity and ensuring that they are smoothly fitted into their assigned roles as well as the overall system.

The HR department is often charged with the responsibility of recruitment and selection because they constitute the competitive advantage a firm has over others. The firm decides on the positions to be filled through manpower planning, carrying out job analysis, developing the job description, and job specification. Talented individuals are brought into the organization through an integrated process of recruiting, assessment, evaluation, and hiring. Remuneration also plays a significant role in attracting knowledgeable people, and the best way to attract such a valuable asset is by following what is called employer branding. This type of branding shows the organization's efforts in building a strong and unique image about it and installing this image in the minds of its employees to keep them and in the minds of the desired talented candidates to attract them (Hung, 2013).This implies that when organizations pay employees' salaries and wages that commensurate with their inputs in the organization (fair reward system), they overtime build a corporate image which helps in attracting the right kind of talent to the organization.

Talent Development

As soon as an employee is hired, it becomes imperative to adapt to the organization's culture. The employee at this point is availed the opportunity to develop new skills while sharpening the set of skills he has already, this is done to ensure that the employee performs his current job optimally and prepares for higher responsibility in the future. Organizations overtime utilize programs like induction, career planning, mentoring, training, autonomy, coaching, performance appraisal as well as feedback to develop talent management.

Ra'ed et al. (2018) posit that talent development starts with a performance appraisal and evaluation, by which an individual's strengths and weaknesses are assessed and training needs are pinned down, providing the needed feedback for learning programs and career planning. This means that organizations initiate talent development by simply evaluating the strengths and weaknesses of the employees in relation to their performance, observe areas where they need to be trained and train them accordingly in order to ensure improvements on their career plans.

Thunnissen (2016) assert that when management is able to marry their concern for employees and the organizational interests, employees tend to be motivated in the development phase with certain practices that eventually boosts employees' professional development and involvement. This is basically why it is the duty of the organization to create a clear career path so talent will be attached to future needs (Nobarieidishe et al., 2014). Organizations that create the right platform for employee career development tend to successfully attract, motivate and retain their employees especially as employees will be highly motivated and committed to their jobs.

Concept of Economic Wellbeing

Young people are key actors and a driving force for global development and peace. They are critical partners in the development of nations and their contribution to society must be measured in terms of productive pursuits of service to humanity and their economic wellbeing. The Wellbeing Economy is an emerging paradigm with useful assumptions for framing economic, environmental, social and political goals (Fidelis, 2018). Economic wellbeing simply means that people are able to acquire the goods and services required to meet their needs and maintain an acceptable standard of living. This includes the consumption of food, clothing, housing, education and leisure activities. It means social, economic and political life processes that give due attention to human and nonhuman welfare. This is all encompassing, including commitment on the part of individuals to achieving a world system that takes away oppression of human and non-human elements of the earth (Fidelis, 2018).

A vision of a wellbeing economy in Nigeria has to be seen in respect of expectations across the country. For the great majority of citizens, it should suggest a paradigm shift that gives attention to the core of their humanity, for which current models have despised with impunity. For example, more than 75 percent of Nigeria's 200 million people, as of today, are without electricity. But government has consistently injected public funds into finding ways out of this problem. Meanwhile, government (at the federal and state levels) has consistently budgeted huge amount of money, annually for tackling the problem of power without given due attention to renewable energy sources, where the answer lies. The growth economy, characteristically, does not seem to rest on any long term social benefits if an immediate prospect for profit is not in sight. This is rational with the free market system (Fidelis, 2018).

Empirical Review

Ogunu (2002) in his study titled evaluation of management training and development programme of Guinness Nigeria PLC examined the management training and development

programme of Guinness Nigeria PLC, Benin City with a view to ascertaining its relevance, adequacy, and effectiveness. Hypotheses testing in the study revealed that facilities for staff training were adequate for effective training of management staff, training programme for management staff were relevant to the jobs they performed, and the training programme undergone by staff did indeed improve their performance and effectiveness at works.

Nganga et al. (2013) empirically examined the impact of training and development on performance of state owned corporations. Their study adopted the explanatory research design and used a structured questionnaire to obtain data from 142 human resource managers in Kenyan State owned corporation. After analyzing the data collected using SPSS version 19.0, the researchers found out that there is positive and significant relationship between training and development and organizational performance.

Tamunomiebi and Worgu (2020) examined talent management and organizational effectiveness. The paper adopted a literature review methodology. The findings in extant literature revealed that talent management significantly enhances organizational effectiveness. Based on extant literature, the paper concludes that talent management is a significant predictor of organizational effectiveness. In the end, it was firstly recommended that management should map out strategies to identify, attract and hire talented individuals because for organizations to perform satisfactorily and outcompete their competitors, they need to device strategies to attract and acquire the right kind of talent essential to attainment of corporate goals. Secondly, management should endeavour to marry organizational and employee interests by formulating and implementing policies and practices that favours the career development of the employee. Lastly, that management should introduce and maintain a reward(s) and recognition system as this serves as an important component in building and retaining talent(s) in an organization.

METHODOLOGY

The study adopted descriptive survey design; the population of the study comprised of 7, 398, 061 youths in south-south Nigeria that were drawn from Rivers 2, 494, 441; Delta 1, 711, 501; Akwa Ibom 2, 373, 784; and Bayelsa 818, 335. The population was gotten from National Bureau of Statistics. The sample of 384 was derived using Krejcie and Morgan Sampling Table. The reliability of the instrument was determined using the Cronbach's alpha test instrument with the aid of Statistical Package for Social Sciences (SPSS) version 23 and it stood at 0.98 higher than the benchmark of 0.7. The data collected for this study were analyzed through descriptive and inferential statistics. The Spearman Rank Order Correlation Technique was employed to test the various hypotheses formulated through the aid of Statistical Package for Social Sciences (SPSS) version 23.0

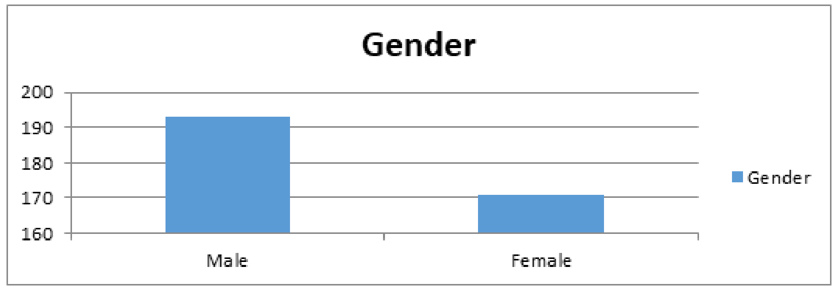
DATA ANALYSIS AND RESULT

Table 1: Distribution and Retrieval of Research Questionnaire

Respondents	Questionnaire Distributed	Percentage Distributed	No Filled and Returned	No of Not Returned	% Not Returned
Youths	384	100%	364	20	2.4%
Total	384	100%	364	20	2.4%

Source: Field Survey, 2022.

A total of three hundred and eighty-four (384) copies of the questionnaire were administered to the respondents, out of which, a total of three hundred and sixty four (364) copies were completed and returned in analyzable form representing 97.6%, while the other 20 representing 2.4% were wrongly filled and hence could not be used for analysis.



Source: Field Survey, 2022.

The above chart shows the gender distribution of the respondents. Those who are male represent frequency and percentage of 193 (53.0%) while the female represents 171 (47.0%). This shows that majority of the respondents are male.

Table 2: Relationship between Talent Acquisition and Standard of Living

			Talent Acquisition	Standard of Living
Spearman Rank (rho)	Talent Acquisition	Correlation Coefficient	1.000	.723*
		Sig. (2 tailed)	.	.001
		N	364	364
	Standard of Living	Correlation Coefficient	.723*	1.000
		Sig. (2 tailed)	.001	.
		N	364	364

*Correlation is significant at 0.05 levels (2 tailed)
Source: SPSS-generated Output

The output above presents the result of the correlation between talent acquisition and standard of living of youths in South-South, Nigeria. The result shows that the two variables have a positive relationship (rho = .723*) and the symbol * indicates that the relationship between the two variables is significant at 0.05 level. As a result of this, we then reject the null hypothesis and

accept the alternate hypothesis which states that there is significant relationship talent acquisition and standard of living of youths in South-South, Nigeria.

Table 3: Relationship between Talent Acquisition and Standard of Per-capita Income

			Talent Acquisition	Per-capita Income
Spearman Rank (rho)	Talent Acquisition	Correlation Coefficient	1.000	.649*
		Sig. (2 tailed)	.	.002
		N	364	364
	Per-capita Income	Correlation Coefficient	.649*	1.000
		Sig. (2 tailed)	.002	.
		N	364	364

*Correlation is significant at 0.05 levels (2 tailed)
Source: SPSS-generated Output.

The output above presents the result of the correlation between talent acquisition and per-capita income of youths in South-South, Nigeria. The result indicates that talent acquisition and per-capita income have a positive relationship (rho = .649*). The symbol * as display from the SPSS output indicates that this relationship is significant at 0.05 level of significance. As a result of this, the null hypothesis is rejected and the alternate hypothesis is accepted. This means that there is significant relationship between talent acquisition and per-capita income of youths in South-South, Nigeria.

Table 4: Relationship between Talent Development and Standard of Living

			Talent Development	Standard of Living
Spearman Rank (rho)	Talent Development	Correlation Coefficient	1.000	.692*
		Sig. (2 tailed)	.	.003
		N	364	364
	Standard of Living	Correlation Coefficient	.692*	1.000
		Sig. (2 tailed)	.003	.
		N	364	364

*Correlation is significant at 0.05 levels (2 tailed)
Source: SPSS-generated Output

The output above presents the result of the correlation between talent development and standard of living of youths in South-South, Nigeria. The result indicates that talent development is positively correlated to standard of living (rho = .692*) and the symbol * indicates that this relationship is significant at 0.05 level. Consequently, the null hypothesis is rejected and the alternate hypothesis is accepted. This means that there is significant relationship between talent development and standard of living of youths in South-South, Nigeria.

Table 5: Relationship between Talent Development and Per-capita Income

			Talent Development	Per-capita Income
Spearman Rank (rho)	Talent Development	Correlation Coefficient	1.000	.727**
		Sig. (2 tailed)	.	.002
		N	364	364
	Per-capita Income	Correlation Coefficient	.727**	1.000
		Sig. (2 tailed)	.002	.
		N	364	364

**Correlation is significant at 0.01 levels (2 tailed)
Source: SPSS-generated Output

The output above presents the result of the correlation analysis carried out between talent development and per-capita income of youths in South-South, Nigeria. The result indicates that talent development have a positive correlation with per-capita income of youths in South-South, Nigeria (r = .727**) and this correlation is significant at 0.01 level as indicated by the symbol **. Consequently, the null hypothesis is rejected and the alternate hypothesis is accepted. This means that there is significant relationship between talent development and per-capita income of youths in South-South, Nigeria.

DISCUSSION OF FINDINGS

From the analysis carried out, it was discovered that a strong and positive relationship exist between talent acquisition, per-capita income and standard of living of youths in South-South, Nigeria. This finding is in line with the study of Garg and Rani (2014) asserts that talent management begins with identification and recognition of individuals for their unique strengths. They opine that talent acquisition entails workforce planning, recruitment and selection. Planning is a composition of how appropriate individuals are selected on the basis of their skills, knowledge, pragmatism, maturity and ensuring that they are smoothly fitted into their assigned roles as well as the overall system.

From the analysis, it was also discovered that a strong and positive relationship exist between talent development, per-capita income and standard of living of youths in South-South, Nigeria. This finding is in line with the study of Thunnissen (2016) who asserted that when management is

able to marry their concern for employees and the organizational interests, employees tend to be motivated in the development phase with certain practices that eventually boosts employees' professional development and involvement. This is basically why it is the duty of the organization to create a clear career path so talent will be attached to future needs.

CONCLUSION AND RECOMMENDATIONS

The study examined the relationship between talent management and economic wellbeing of Youths in South-South, Nigeria. Dimensions of talent management as used in the study were discussed elaborately. The result of the test of hypotheses revealed that talent management showed a strong, positive and significant relationship with economic wellbeing of Youths in South-South, Nigeria. The study concluded that economic wellbeing of youths is dependent on effective talent management via talent acquisition and development. In line with the findings and conclusion; the study recommends as follows:

i. Training and development programmes must be adequately monitored to ensure that those who need them are the beneficiaries.
ii. Government and organizations must ensure that they attract, recruit and select youths with talents and mentor them until they make the best out of them.
iii. Also, non-governmental organisations must ensure they seek adequate data on unemployed youths and identify the area of interest of many people before embarking on empowering them. This will ensure the right people get the right skill, and society will become better for it.
iv. Furthermore, the training and development should be carried out using technology.

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WORKPLACE CONFLICT MANAGEMENT: AN INHERENT LEADERSHIP IMPERATIVE

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ABSTRACT

From a literature decomposition perspective, the study gleaned the implicit role of conflict management as a core but unlisted function of every leader, whether trained or not on the skills-set required for effective conflict management. From the preponderance of literature evidence, the onus for conflict management rests on leadership at all levels. No leader can recuse himself on the grounds that it is not stated in the letter of engagement-it is implied. Therefore, the study concludes that workplace conflict management is an inherent leadership imperative. Following it is recommended that organisations should invest in training their leaders on optimal conflict management skills. Furthermore, leaders must apprehend the inherent nature of the task of conflict management at all levels of leadership and thus strive to acquire the needed skill-set on their own, even when no provision is made by the organisation, as well as ensuring a behavioural disposition that optimizes conflict management.

Keywords: Inherent, conflict, leadership, management, effect

INTRODUCTION

Technological advances, skills set spread and high labour mobility across geo-national boundaries have increased the level of workplace diversity. Specialised labour is increasingly being sourced from around the globe for corporate competitive edge. Also, driven by cost minimization goals for competitive advantage, firms source for cheap labour from other climes in the non-specialized fields. Driven by poverty occasioned by underdevelopment and conflict, migrant workers are seen traversing the continent in search for greener pastures. These and related developments have created a diverse workplace with various nationals with their respective identities. See (Patrick & Kumar, 2012; Podsiadlowski et al., Grö2013; Amaliyah, 2015; Dhuppar, 2015; Emma, 2018). Also, within country variations, spanning ethno-religious lines, have created workplaces characterised by diversity. The resultant effect of this is inevitability of conflict. As espoused by (Leon-Perez, Medina, Arenas, & Munduate, 2015; Danielsson et al., 2015; Bai et al., 2015; Ayoko, 2016) conflict within the workplaces is inevitable.

Interestingly conflict is a common denominator in life, owing to the concept of uniqueness of everyone. No two individuals are completely the same. Hence, conflict amongst siblings, spouses, communities, within same ethnic groups, religious sects, etc. This makes the concept of conflict universal and the imperative for efficient management to minimize its downsides and optimize the inherent benefits from it. Thus, this paper explores the construct of conflict, its inevitability, impact, management strategies, overview of the leadership construct and anchors why workplace conflict management is an inherent leadership imperative.

THE CONFLICT CONSTRUCT

The concept of conflict has attracted a lot of scholarly works. The extant literature is inundated with keen research interest on conflict. Despite the huge interest spanning scholars to all other

interest, the conflict construct has commonality of meaning. There are no divergent views on the meaning of the construct. To Ayoko (2016), conflict is the product of the cooperation between two or more parties that indicates the lack of compatibility in goals and interest. Similarly, Modh (2014), had noted earlier that not only are the goals and interests of conflicting parties discrepant, their behaviour commensurate those differences. Conflicting parties are interdependent and perceive each other as interfering in pursuit of their goals (Hopkins and Yonker, 2015). Conflict is an ensuant of social interaction. It is the behavioural manifestation of the observed differences that conflicting parties have about each other. According to Al-Sibaie, Alashwal, Abdul-Rahman, & Zolkafli, (2014), conflict occurs when one party perceives the actions and inactions of the other to be an obstruction. This invariably implies disagreement or lack of consensus between individuals or amongst groups.

According to Hopkins and Yonker (2015), conflict is expressed by the emotional disposition of conflicting members, and for that matter, such negative emotions influence an individual's emotional intelligence. Meng, Fulk, & Yuan (2015) argued that conflict has an adverse effect on the effectiveness of team communication. Hence, conflicting members undermine their ability and willingness to work together as team towards achieving set goals. Furthermore, workplace conflict (Saeed, Almas, Anis-ul-Haq & Niazi, 2014) has the potential to negatively affect an individual's organizational citizenship behaviour. Given that conflicting parties are unwilling to share an idea, communicate, and corporate with each other, their willingness to exhibit deviant behavior is enhanced, and for that matter, their willingness and ability to perform non-functional roles (Chung, 2015). The causative factors of conflict are numerous. There are both common, as well as distinctive uniqueness that God had imposed on man, creating variety even amongst siblings raised under the same roof. For Ayub, AlQurashi, Al-Yafi, and Jehn (2017), conflict is an indication of the disagreements that exist between team members, and thus requires the employment of effective conflict management strategies to mitigate the adverse effects of conflict.

Inevitability of Workplace Conflict

The inevitability of conflict and in particular workplace conflict is well anchored in the extant literature. As previously noted, the distinctive nature of man, enhanced further by variations in socio-cultural milieu has enacted a world with variations in perspectives. The degree of entrenchment of our socio-cultural and religious proclivities ensures non monotonous behaviour. The ease of mobility necessitating global labour migration has created such a diverse work environment that conflict resonates across workplaces. For instance, Leon-Perez, Medina, Arenas, & Munduate, (2015) observed that conflict is an inevitable part of workplace life. This position had earlier been observed by Zhou and Shi (2014). To them the prevalence of team member conflict in the workplace is a necessity (see also Nicotera et al., 2015). Thus, the observation by Chung (2015) that since employees spend part of their day at the workplace, it is essential for team members to maintain cordial working relationship in the workplace.

In a USA based study by Danielsson et al. (2015), fifty percent (50%) of participants in the study indicated that they had been in some type of conflict situation with colleagues. Thus, McKenzie (2015) observed that conflict in the workplace might arise from differences of opinion with regard to a process or procedure etc. Ayoko (2016) argued that this phenomenon is pervasive in the workplace and has a detrimental effect on individuals. Bai et al. (2015) indicated that workplace conflict is inevitable in the interactions between team members. Also throwing the evitability of conflict are the works of (Litterer, 1966; Nelson, 1989; Ohbuchi & Fukushima, 1997; Ren & Gray 2009; Sadri, 2012; Omisore & Abiodun, 2014; McKibben, 2017). The literature is inundated with the reality that conflict is synonymous with the workplace with implications for the organization dependent on how it is resolved.

From the extant literature, the implications of conflict are dichotomized into two-negative and positive. Interestingly, there is preponderance of the negative effect as documented in the literature. This aligns the aura of negativity often evoked by the mere mention of the word conflict. To Short (2016), conflict is costly. The balance is skewed to the negative as opposed to the positive effect. However, in some instances conflict is required to harness optimal outcome, and when properly managed the downsides of conflict can be mitigated.

Negative impact of conflict

Conflict in every instance has impact in several dimensions. This could be between or amongst the actors in terms of interpersonal and in the workplace in terms of attainment of objectives. In this regard, Zhou and Shi (2014) indicated that workplace conflict produces a net adverse effect on the individual as well as the team. Contributing in furtherance of earlier research outcomes, Sheppard & Aquino, (2017) reported that workplace conflict among team members can be dysfunctional and lead to unhealthy competition. On their part, Meng et al. (2015) observed that successful team performance depends on how well team members cooperate and share ideas. No doubt workplace conflict causes disaffection amongst colleagues and if not properly managed can derail corporate goals.

The deposition of Schaeffner et al. (2015) also supported the fact that workplace conflict results in tension and performance-impeding behaviour detrimental to successful team performance. For organizations to achieve stated goals, managers must implement strategies that help in managing workplace conflict and motivate team members to be cooperative in the discharge of their work responsibilities. Negative effects of workplace conflicts arise because organizational members concentrate on reducing the threats of conflict or focus on enhancing their power rather than enhancing productivity (Danielsson et al., 2015).

Conflict situations can have an adverse effect on individuals' job performance, team performance, organizational citizenship behaviour, and can enhance deviant behaviors among members of the organization (Chung, 2015). Conflict can act (Dundon & Dobbins, 2015) as a retrogressing factor in ensuring cooperation among team members. It affects the productivity level and financial well-being of an organization. In addition, it portends an adverse net effect on the psychological and physical state of individual members (Ford, Myrden, & Kelloway, 2016). Maximin, Moshiri, and Bhargava (2015) noted that despite the difficulty in determining the true financial cost of workplace conflict in the US, it is estimated that approximately $359 billion is lost to conflict.

Similarly, Anastasio and Rose (2014) noted that workplace conflict has an adverse impact on

relationship building. To, Modh (2014) conflict affects the behavioural disposition of the parties involved. Workplace conflict, therefore, affects the overall attitude of conflicting individuals, and sometimes people around them. Positive social change occurs through the reduction of the cost of resolving conflicts as alluded to by Rohani et al., (2018). Al-Sibaie et al. (2014) pointed out that conflict is significantly correlated with performance. Furthermore, Jungst and Blumberg (2016) observed that variations in perceptions by team members on core firm values, there is the probability of conflict, which ultimately affects the way in which they relate with each other. Babalola et al. (2016) further stated that when conflict erodes the harmony and camaraderie that exist between individual team members (relationship conflict), individual's focus shifts from work task/duties/roles, thereby negatively affecting work outcome and performance.

The foregoing research conclusions have indicated that conflict has negative potentials for work performance. Conflict can be costly to organizations if the conflict is left uncontrolled or not adequately resolved. Unresolved conflict leads to job dissatisfaction and subsequently increase employee turnover rate Watty-Benjamin and Udechukwu (2014). The cost of replacement for skilled employees can be enormous, both in terms of production delays, recruitment costs and new salaries to attract new skilled employees as observed by Maximin et al. (2015). Ford et al. (2016) further noted that other financial costs of workplace conflict to an organization, manifests in the cost associated with low productivity, absenteeism, litigation and in some cases violence. Added to the aforementioned is the value related to delays in delivery, miscommunication, cumbersome, and uncoordinated processes (Al- Sibaie et al., 2014). Thus, although individuals engage in conflict at the workplace (Friedman et al., 2000; Brewer et al., 2002; Passos & Caetano, 2005; Gupta & Sasidhar, 2010; Almost et al., 2010; Watty-Benjamin and Udechukwu, 2014; Al-Sibaie et al., 2014; Ford, Myrden, & Kelloway, 2016) when such conflict escalates, the financial cost is almost always absorbed by the employer.

The financial cost is not the only cost manifestation of workplace conflict as alluded to by Jungst and Blumberg (2016). According to Jungst and Blumberg (2016), workplace conflict leads to an increase in the stress and anxiety levels of individuals because of the psychological effect arising from the perception of tension. Therefore, Ford et al. (2016) stressed that the cognitive state of conflicting parties' results in anger, which is manifested in the aggressive behavior exhibited by the individuals involved. The overall conclusion from the extant literature is that unresolved conflict has negative implications for both employees and corporate wellbeing. Thus, the preponderance of the conclusion from the extant body of literature is the negative endings of unresolved conflict. It would seem that this dominance of negativity forecloses any form of positive impact from conflict, but as can be seen from the preceding section, there is an aspect or some degree and type of conflict that should be encouraged. However not much is documented in the literature on this perspective.

Positive Fallouts of Conflict

Few literatures acknowledge that some degree and type of conflict is good. In this vein Reade & Lee, (2016) observed that a well-managed conflict can benefit the organization. Contributing in this regard, Ayoko (2016) also argued that a conflict can be dysfunctional or functional contingent upon how it is managed. Invariably implying that poorly managed conflict bears negative consequences while, well managed conflict can result in positive outcome for the organization. Vollmer (2015) insisted that although conflict can stifle innovation, the constructive management of conflict can be the catalyst to enhance workplace innovation.

According to He, Ding, and Yang (2014), the cognitive aspect of conflict enhance innovation because organizations are offered the opportunity of synthesizing the competing ideas of the conflicting parties. In effect, the divergent perspectives of conflicting parties become apparent, meaning the availability of alternative conceptions (He, Ding, & Yang, 2014). The implication is that conflict allows for variations in perspectives and enhances alternatives that adds value to informed and improved decision making. Thus, when conflict is constructive, individuals enhance their innovative behaviour because of their exposure to different ideas and approaches (Reade & Lee, 2016).

The search for alternative causes of action is enhanced when variations in thoughts are encouraged. Decomposing what may seem like an outlandish idea may be the turning point for creativity. Most innovative enactments were a result of variations in cognitive conflict, as ideas are harvested from these divergent views canvassed by group members. Batra (2016) advocated for some form of cognitive conflict because the quality of ideas is low whenever team members think alike; hence, stifling innovation. Therefore, Way, Jimmieson, and Bordia (2016) noted that by constructively managing conflict, not only does that encourage and enhance the innovative behaviour amongst co-workers, but also reinforces the empowerment, commitment, and teamwork levels of individuals. Hence, the type of conflict and how leaders manage conflict determines the nature of impact. It is a mirror reflection of how leaders manage workplace conflict. See (Alper et al., 2000; Jehn & Mannix, 2001; Jehn & Bendersky, 2003; Axelrod & Johnson, 2005; Chen, 2006; De Dreu, 2006; De Dreu, 2008; Tjosvold, 2008; Lee, 2008; Bezrukova et al., 2009) for further literature evidence of the outcome of conflict.

Conflict Management Milieu

The import of conflict on corporate goals attainment requires that it must be dealt with to mitigate the negativity from it. Meng et al., (2015) had argued that given the imperative of conflict in workplaces at its expectant outcome, organization leaders must deploy the requisite strategy to deal with the aim of creating a harmonious work environment, improving performance, and ultimately enhancing the quality of products presented to the consumer. Similarly, Babalola et al. (2016) posited that the way leaders at various levels of the organization address conflict situations will determine the pattern of outcome on group members and the entity. Hence, conflict management strategies constitute the array of ways and means of resolving conflict, build peace, and channelling of team efforts to corporate objectives.

As submitted by Yang et al. (2016), the essence of any conflict management method is to help conflicting parties to return to pre-established goals. The direction of the effect, whether dysfunction or positive, is contingent on the appropriateness of methodology deployed by the leader manager. This view was rigorously canvassed by Beitler et al. (2016). Extending the argument for appropriate strategy Yeung et al. (2015) are of the view that the strategy deployed should be determined by the role of the conflicting parties. To them, the strategy to be deployed should be signified by the situation. In furtherance of this strand, Beitler et al. (2016) stated that the dual concern theory is the bedrock of the different conflict management strategies. To Beitler et al., (2016) the dual concern theory illustrates the concern for all conflicting parties in the selection

of an approach. Equity consideration is required, which entails consideration for the concerns for one's aspirations and the concern for others in building a healthy working relationship.

Enclaved in the dual concern theory as espoused in the body of literature are five main conflict management strands. These are: (i) accommodating (obliging), (ii)avoiding, (iii) collaborating (integrating), (iv) compromising, and (v) competing (dominating). See (Brewer et al., 2002; Callanan et al., 2006; Lee, 2008; Osisioma et al., 2012; Nischal & Bhalla, 2014; Gbadamosi et al., 2014; Vollmer, 2015; Yeung et al., 2015; Burgos-Cienfuegos et al., 2015; Goncalves et al., 2016; Beitler et al. 2016; Goncalves et al., 2016; Bonache et al., 2016; Bang, 2016; Wu et al., 2017; Wu et al., 2018).

Deployment of the appropriate tool in each conflict instance enhances relationship-building via strengthening all channels of communication as canvassed by Bonache et al., (2016). To Beitler et al. (2016), these strategies can be either active or passive, constructive or destructive. The scholarly works of (Rahim, 1983; Floyd & lane, 2000; Chan et al., 2006; Trudel & Reio, 2011; Al-Hamdan et al., 2014; Omisore & Abiodun, 2014; Al-Hamdan et al., 2016) did document also the existence a milieu of methodologies in managing conflict. Thus, as espoused by Goncalves et al. (2016) the choice of approach might either aid a manager to confront or avoid conflict or in the same way, ensure that conflict produces a constructive or destructive effect on team relationship. Thus, each strategy depending on the dynamics can produce a different outcome, it largely depends on the style of the leader.

Overview of the Leadership Construct

Quaquebeke and Felps, (2018) argued that leadership as a construct has been a significant element of human society for centuries. Leadership is a concept that has defied a universal definition; as there are as many definitions of the concept as there are scholars that are willing to enter the discourse on leadership (Igwe & Ateke, 2019). This is because leadership has many definitions (Witts, 2016; Li et al., 2016). Hence, Li et al. (2016) opined that leadership is the ability to influence the behaviour of others and prepare followers for strategic success. Similarly, Witts (2016), conveyed the leadership construct as the outcome of a chain of interactions which results in the collective willingness of individuals to achieve stated goals. The view canvassed by Sharma et al. (2017) also reflects this same undertone as they espoused that leadership involves creating an environment that fosters individuals' job satisfaction and ultimately results in championing group objectives. Social interactions generate leadership roles that require leaders to emerge from a group, and the means of assuming such leadership roles, apart from inheritance or coup, include appointment, election, or emergence (Witts, 2016). From this it is obvious that leadership involves gaining the support of a people either willing or otherwise and getting them to channel their efforts to predetermined goals. The leader is an influencer, a controller, a motivation, a problem solver, a team builder and a goal getter.

The Inherent and imperativeness of Leadership Role in Workplace Conflict Management

According to Copeland (2015), a leader's behaviour has a significant bearing on his or her followers' workplace behaviour. Nichols (2016) also indicated that a leader's traits influence his or her attitudes towards work and followers. In the same way, a leader's leadership skills and approaches are critical in enhancing the value and support that followers attach to the leader's performance (Pryce, 2016). The workplace is one of the most critical places in an employee's work life, (Chung, 2015) because of the importance of the workplace to the employee, leaders must ensure a positive work relationship to promote a positive work attitude and outcome. Saeed et al. (2014) also explained that harmony is a prerequisite condition for success within an organization.

Leadership is basically getting things done through people. Nowhere is this more apparent than in the workplace. When corporate goals are crafted and resources garnered, it is the expectation of stake holders that these resources would be properly deployed by leaders at various levels of the corporate world towards attainment of the crafted goals. It is expected that the leader would understand the implicit requirements for conflict management in attaining his assigned responsibilities. While, often not clearly stated in letters of engagement, but inherently implied is that every leader is a workplace conflict manager. Achieving organizational goals requires an environment that helps to promote harmony between peers, as successful organizational leaders are those who help to create a harmonious work environment. The responsibility of organizational managers is to ensure a workplace without conflict among team members (Saeed et al., 2014).

The current globalized, borderless, competitive market landscape requires innovativeness to gain competitive advantage, requiring leadership behaviour that shapes individuals to exhibit creative outcomes (Afsar et al., 2017). The type of leadership required in such an environment is one that transcends all divisions. Such leadership has no boundaries and is culturally sensitive. The creative behavioural dispositions of followers is therefore, a function of a leader's follower psychological empowerment and motivational behavior (Afsar, et. Al., 2017). Leadership behavioural pattern has significant implications for employees' job satisfaction and motivational levels (Kiarie et al., 2017). Furthermore, Hirst et al. (2016) indicated that behaviours such as helping followers develop openness, trust, learn, build skills, and plan are among the responsibilities of effective leaders. In other words, effective leadership is necessary for addressing the various problems such as workplace conflict that organizations may encounter.

Leadership behaviour that empowers followers result in improved job satisfaction and follower commitment to the organization (Kong et al., 2016). Demirtas et al., (2017) further indicated that ethical leadership behaviour leads to high performance, trust, extra effort, and affective commitment. In addition, ethical leadership behaviour enhances follower attitudes such as motivation, voice behaviour, organizational citizenship behaviour, and relationship building behaviour (Demirtas et al., 2017). By encouraging internal creativity and innovation, organizations position themselves to gain a competitive advantage in a competitive market, (Kiarie et al., 2017) and the role of leaders is critical in achieving any form of leverage. Effective leadership is critical to organizational success, especially with the presence of a culturally diverse workforce (Huguet, 2017). Effective leadership enhances the level of entrepreneurial activities, outcomes of mergers and acquisitions, and employee behavioral attributes such as motivation, absenteeism, and engagement (Huguet, 2017). Therefore, effective leaders create a supportive work environment and culture that sustain organizational change and ultimately improve performance (Baškarada et al., 2017).

Despite the numerous benefits of leadership behaviour for organizational performance and success, it is worth noting that the self-disrupting behaviours of leaders have a negative impact on their organizations. For example, Hoption (2016) indicated that although leaders' use of humour can help to reduce stress, create a pleasant work climate, enhance cohesion, improve

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communication, and enhance positive outcomes, aggressive humour may result in self-deprecating leadership behaviour that can negatively affect the work environment. The impact of such negative behaviour is threefold: (a) impact of the leader, (b) organizational cost, and (c) those harmed by such behavior (Williams et al., 2013). Consequently, active leadership is competency driven and critical for organizational success (Brogan-Baranski, 2018). Hence, although leaders may adhere to organizational principle, their behaviour defines their effectiveness or ineffectiveness.

Hopkins and Scott (2016) argued that managers have the responsibility to reconcile individual differences, create an environment that fosters coexistence, and direct individual energy toward group goal attainment. Of particular importance in a global marketplace is the need to gain competitive advantage (Bock et al., 2015). Bai et al. (2015) stressed the need for managers to ensure a high-performance level in employees. Bai et al., (2015) posited that, a high level of employee performance is mostly a product of the strategies that managers employ to control workplace conflict because of its inevitability in workplace relationships. Hendel et al. (2005) noted that leadership style influences how conflict is managed. Similarly, Grubaugh & Flynn (2018) argued leadership skills shape conflict management in work settings.

From the literature evidence, it can be inferred that optimal conflict management is an inherent and implied responsibility of every leader, as acrimony and mistrust amongst team members would definitely undermine corporate efforts. In an unhealthy workplace characterized by open conflict, mutual distrust and sabotage becomes the hallmark. No leader can attain set goals without putting out the fire in the team or group. The reality is that those who emerge as leaders in the various instances and in particular the workplace may not have received training on conflict management. However, it is expected that a leader who fails to rein in conflict in his team to the detriment of corporate goals but allude the excuse of it not being written in his letter of engagement, cannot be exonerated. It is a given for all leadership positions irrespective of the domain of leadership.

CONCLUSION AND RECOMMENDATIONS

By the inevitability of conflict at individual and group levels, team cohesion required for united corporate effort can only thrive if conflict is properly managed. Implied from the role of leadership is that by his actions or inactions, the leader must not be a stoker of conflict. By virtue of the position, the leader is implicitly expected to rise above his personal idiosyncrasies and covey in no ambiguous terms the need for a team spirit. A leader who stokes ethno-religious conflict via preferential conduct at the corporate level cannot get things done. A good example is what is happening currently in this country. As a nation corporate, it is expected that every Nigerian president (leader) owes the nation an implicit responsibility of driving inclusiveness by managing our diversity in a manner to minimize conflict for the purpose of attaining our national aspirations. However, from the print media and electronic media reports of daily happenings in Nigeria, the current leadership failed to realize the inherent responsibility of managing conflict, but rather through ethnocentric and religious idiosyncrasies stoked division in the nation thus endangering our corporate existence.

Not all leadership responsibilities are written down in letters of engagement or elevation at work places. Some are implicit by virtue of the position. This is why as people occupy positions of leadership, failure to identify the inherent requirements is a recipe for failure. Leadership at all levels require managing humans, with inherent propensity for conflict, which must be mitigated to foster the channelling of all efforts towards corporate goals attainment. For instance, at the level of leadership in the department or faculty level in a university system, it is implied that the leaders must ensure conflict is mitigated so that departmental and or faculty objectives are not jeopardized, as variations in academic perspectives and allegiance to academic mentors is a great source of conflict. This argument can be cascaded down to even leadership at the family level.

It is inherently expected that the head of the family must not be seen to stoke conflict in anyway. The family leader must be seen to enhance cohesiveness by mitigating siblings' rivalry and other forms of conflict that are inevitable. Even at the religious levels, particularly amongst Pentecostals, failure of the founders to recognize the implicit responsibility of managing conflict and dealing with it is one of the core reasons for the frequent breakaways. This underscores the universality of conflict management in all instances of two or more persons.

From the preponderance of literature evidence, the onus for conflict management rests on leadership at all levels. No leader can recuse himself on the grounds that it is not stated in the letter of engagement-it is implied. Therefore, the study concludes that workplace conflict management is an inherent leadership imperative. Following it is recommended that organisations should invest in training their leaders on optimal conflict management skills. Furthermore, leaders must apprehend the inherent nature of the task of conflict management at all levels of leadership and thus strive to acquire the needed skill-set on their own, even when no provision is made by the organisation, as well as ensuring a behavioural disposition that optimizes conflict management.

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MOONLIGHTING IMPACT AND EMPLOYEE SURVIVAL: NIGERIA PERSPECTIVE

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ABSTRACT

The study examined the moonlighting impact and employee survival using Nigeria perspective. The study investigated the economic, financial, government policy and programme, entrepreneurial, and personal/self-actualization motives cause employee moonlighting. The study population was obtained by a public health institution and it adopted the random sampling method and simple regression analysis was used to predict the extent at which the objectives could cause employee to moonlight. The study found that the economic, financial, government policy and programme, entrepreneurial and personal/self-actualization motives caused employee moonlighting. The study recommended that, organization should create enabling environment that will minimize moonlighting.

Keywords: Moonlighting & Employee Survival,

INTRODUCTION

As the Nigeria currency continues to be devaluating and inflation rate increases by 20.52% the need for moonlighting continue to increase as well, especially without increase in salaries and wages. Idowu (2022) additional streams of income continue to dominate the mind of employees for survival especially through moonlighting. Witzel (1999) moonlighting is a second job often done at night in addition to primary day job. It is otherwise known as part-time job in addition to full-time job (Bett & Paterson, 2006). Moonlighting has become a common practice among employee to meet up with the financial needs and wants. The need for additional income, training and benefits spur employee to engage in an alternative source of valuable jobs, (Factor 1999; Stutz & Hobbs 2010). Moonlighting changes employee thinking, decision-making attitude and as such has effect on employee performance, absenteeism and turnover in its full-time job (Aebi 1998; Dave & Brown 1970; Habbe 1957). Engaging in more than one job reduces employee commitment and performance (Adelugba, 2019).

According to the World-Bank (1997) most developing countries continue to wallow through economic, socio-political development, the need to uphold maintenance of job integrity, meeting workplace demand, eradication of workplace corruption and achieving effectiveness and efficiency begin to arise. Aiyede (2002) as crises continue to be worsened government responsibility is to salvage the effect for employee concentration and performance. There is an increasing evidence of work deteriorating in public services in Africa due to moonlighting (Oyelaran-Oyeyinka 2006). Moonlighting is unethical in nature in the Africa continent (Lewis 2006; Dablane and Wane 2008; Champion 2010; Mortkowtz 2010; Shetz & Hobbs 2010). Most researchers paid little or no attention to moonlighting implication rather the monetary aspects. Few empirical evidence have been found that supported the study of moonlighting (Bett al et 2006; Adelugba 2019). The little evidence found that professionals, politicians, civil servants and informal artisans involve in moonlighting without considering its implication on performance.

There is an indication that moonlighting is mostly common among academic staff and medical doctors. Due to the effect of multiple jobs, the study seeks to evaluate its impact on employee surviving rate in the Nigeria perspective, using the following objectives economic, financial, government policy and programme, entrepreneurial, and personal/self-actualization motives.

Contemporary of Moonlighting

According to Adelugba (2019) moonlighting is a critical issue that deserves the attention of researchers; such attention is expected to be directed towards identifying it determinants, its economic effect, the policy implication; and demographic characteristics of moonlighters. Question of who is a moonlighter and who is large in moonlighting has continues to gain attention by various scholars. But there is a contradiction to what moonlighting means by different authors. Witzel (1999) defined moonlighting as holding a several jobs, often at night, in addition to a primary day job. While Betts (2005) defined moonlighting as one who is having a several job, mostly part-time, in addition to primary job or full-time job.

Moonlighting affects a significant part of an adult workforce in some developed and developing economies (Pouliakas et al., 2017). In the most industrial economies like United State, 4.9% of their workers engaged in multiple jobs aside their primary employment and in 2015 4% of the 28 European Union member states employed workers also involved in multiple job holder. It is relatively higher in Nordic countries such as Iceland 12%, Norway 10%, Sweden 9%, Finland 6% and Demark 7% respectively. Russian moonlighting perceived to be the highest in the world which accounted 70% especially in an informal sector (Pouliakus et al, 2017). But moonlighting is also one who involves in multiple part-time jobs.

According to Hardeep and Kavita (2020) reasons for employee moonlighting are wages increment, bigger network, hardworking employees and improving one's skills. There are other reasons employee engage in moonlighting for survival. These may include:

Economic Motive: Employees engage on moonlighting when they cannot longer manage with the economic realities especially continuous increase in inflation and interest rate, and undue taxation in an economy (Paul, 2021). When economic program, policies and activities seek not to improve the economic well-being and quality life of the people moonlighting must be practiced. Opportunities that lower economic hardship and improved effectiveness and efficiency of an organization reduce multiple jobs. Wikipedia (2022) the sole aim of team that control better economic situation would minimize moonlighting through local indigenous and non-indigenous governments, chamber of commerce, technology or business incubators, provincial and federal government community colleges, universities and research institution. Mismanagement of economy causes increase in multiple jobs (Taylor, Mc-Clintock, Baines and Newel, 2004).

Financial Motive: Employees are forced to multiple jobs due to differences of individual and family needs. Financial motivation pushes an individual towards a secondary job (Böheim & Taylor, 2005; Conway & Kimmel, 1998; Dickey, Watson & Zangelidis, 2011; 2015; Heineck & Schwarze, 2004; Kats & Goldberg, 1982; Kawakami, 2019; Nunoo et al., 2018; Sakyi & Agomor, 2021; Winters, 2010). The call for addition income always set in to meet some financial demands. Moonlighting is the surest way to meet increase in price of consumer goods (Nunoo et al., 2018). Example of such country is Nigeria where inflation rate 20.52% and average personal income rate is 9% growth. In US, Betts (2005) opines that moonlighting provides an alternative source of valuable work related income. It was added that moonlighting is considered as primary workplace is not a sole supplies of income. People are using moonlighting and overtime to deal with the severe financial difficulties generated by lower income from primary occupation due to the Covid-19 pandemic (Asravor, 2021). In New Zealand, Taylor and Mc-Crosstie (1995) found that multiple job holding is an important source of additional income to sustain farming income after the farm crises of 1980. Pere (2007) moonlighting is a buffer mechanism of previous financial stresses and strains to meet future needs and fulfillment. Banerjees'(2012) moonlighting and her classification are the subject to blue moonlighting, quarter moonlighting, half moonlighting and full moonlighting, underlying the transition from finding a second job to complement financial needs

Government policy and programmes: Employee ability to predict government inconsistency in policies and programmes contribute to multiple job-holding. The government policy or decision ranges from non-increment of salaries, delay in promotion and payment of financial and fringe benefits, un-prioritized spending of public funds and other utilities, these consequences lead to loss of jobs. Most policies and programs are politically motivated, especially political ramification of wealth inequality. Country like India wealth and consumption inequality have been constantly be on the increased. The top 10% controls almost 70% of the national wealth and government policies to favor the powerful individuals (Akshita, 2022). When organizational policy is static, and that corporate policy has been more tolerable, expansive, and sometimes, apathetic to the practice of moonlighting, keeping in abeyance, regulations that condemn multiple jobholding, and turning askance to enforcement of punitive regulations; it is also noted that indecision over the issue may undercut practice, and that non-action are prone to oblique interpretations (Adetuji & Kamal, 2021)

Entrepreneurial Motive: Relationship exists between moonlighting and entrepreneurial abilities of workers. Entrepreneur is a person with vision and mission of creating, innovating, dominating and implementing new ideas to improve business performance (Isaiah & Chijioke, 2017). Rotar, (2014) survival and enterprising are two major motives of moonlighting in transitional countries. It was added that enterprise construed to mean exploitation of opportunities. People moonlight to use human capital strength to exploit higher return of investment available within their environment in the informal sector of the economy in order to boost streams of income. According to Okoye (2021) people participate in multiple jobs for employment security, self-reliance, practice of new skill, additional streams of income, retirement purpose and structural adjustment program. This is of particular relevance to entrepreneurship and business support policy, and the need for such policies to be sufficiently attuned and tailored to local business environments (North and Smallbone 2006; Thompson, Jones-Evans, and Kwong 2012). According to Nwoye (2007) attempt to moonlight engages employee to involve in entrepreneurial activities such as additional streams of income, additional employment, and self-reliance, practice of learned skills, providing neighborhood services and making use of an idle and scare resources.

Personal/Self-Actualization: The non-pecuniary motivations such as skill development, career growth, passion, personnel development, enjoyment of another work, social recognition, job insecurity, gaining experience for a new occupation. All are equally important attraction for an individual to be involved in moonlighting. Incidence of multiple jobs holding is for self-actualization and personal gains. Moonlighting basically is for three reasons; to secure against the uncertainty of the future, for networking globally and nationally, and to enhance personal development and academic ranking (Adebisi, 2019). Alden (1971) self-employment dominates the secondary job of workers. Emotional attachment also was the additional reason for multiple jobs; multiple job holding is having emotional or other attachment to a specific sector or job that leads to higher earning. Alessandra and Byung-Yeon (2004) considered moonlighting as self-

insurance, mechanism that is used for alternative to precautionary savings to run smooth consumption and fluctuating earning. It serves as an experience to build up personal or organizational gains. Individual uses moonlighting to salvage house hold expenditure. Allen (1998) individuals who face labour market constraints as a result of lack of finance involve in multiple jobs. On the contrary, despite the different motives for moonlighting, the decision of moonlighting may also be affected by the key hurdles such as; an individual is not interested in moonlighting, individual like to moonlight but he could not get another job, an individual is interested in the moonlight but he could not find a secondary job with attractive features (Dickey et al., 2009). Moonlighting is necessary for networking, improvement of intellectual capacity and promotion of academic ranking at national levels (Georges, M.K. & Safary, WaMbaleka, 2017).

Moonlighting Evidence: Dabalen and wane (2011) examined gender moonlighting, and it was found that male moonlighting behaviour does not fluctuate but female does. Kimmel and Powell (2001) female workers have higher moonlighting rate than the male counterpart. Allen (1998) unmarried persons were prevalent to moonlighting due to demographic peers, unique familiarity and economic circumstances. Mc-Clintock et al (2004) multiple jobs holding affect lives outside work especially family activities participation and community involvement. Parham and Stephen (2011) moonlighting has negative effect on teachers' personal lives and health. Amuedo-Dorantes and Kimmel (2009) moonlighting rises during economic downturn as a result of economic difficulty. Guariglia and Kim (2016) it is an effective way of setting up new self-employed business by providing long-term benefits to the economy. According to Dolado and Felgneroso (2008) moonlighting leads to more occupational adjustment. Tansel (1996) wages earners at all levels of education participate in second job. Amuedo-Dorantes and Kimmel (2007); Champion (2008) found that uncertainty foster moonlighting activities. Panos et al. (2011) dual job holding facilitate job transition as it may act as a stepping stones towards new primary job particularly self-employment. Dabalen et al. (2008) workers engaged in more informal job due to short fall of perceived fear of wages. Galiardducci and Naticchioni (2009) found that politicians who moonlight are less committed to parliamentary activities in terms of voting attendance and their constituents loose more in basic amenities. Geys and Mause (2011) evidence of German parliamentarians and university staff showed that both are important determinant of moonlighting. Heineck and Schwarze (2004) examined German and Uk levels of moonlighting, it was believed that moonlighting is a persistent phenomenon in both countries. Wilson (2008) education allows small business owners to work outside the venture (moonlighting) at higher wages. Saini, Vikas, and Garima (2011) organizational Commitment has a mediating effect between Job Satisfaction & Moonlighting Intentions. Rajesh (2017) found out that, in India, one of two office workers moonlights. Kaukab and Akbar (2016) the major findings of the study revealed that there is significant impact of moonlighting on job satisfaction sub variables which are additional income, blocked promotion, skill diversity and job autonomy.

METHODOLOGY

This research was conducted to show the relationship moonlighting and employee survival rate in health service providers the study used both qualitative and quantitative methods. Perhaps, descriptive method was used to make study convenient for conducting research. To measure the causes of moonlighting on employee survival, the questionnaire developed by was Adelugba, Dabo, Ajayi, and Arogundade (2020) were employed. The population of the study was drawn from healthcare institutions. All the doctors and nurses were randomly selected. At second stage, sample was drawn from all the departments. The questionnaire had 15 items with reliability coefficient of 0.89 (Cronbach alpha). Statistical data analysis was linear regression analysis was applied.

RESULTS AND INTERPRETATION

The finding showed that, the model had an R-value 0.385, which manifested a poor linear relationship between the dependent (moonlighting) and independent variables (economic motive). The $R^2 = 0.146$; $P > .000$) which depicted that 14% for the changes in the dependent variable. The adjusted R^2 showed the specific contribution of the independent variable. The F-value of 59.067 showed is significant at .000 which indicated a good explanatory strength of the independent variable.

Table 1: Regression coefficient and analysis of variance of economic motive on moonlighting

Model	R	R Square	Adjusted R Square	F	Sig.
1	.266[a]	.071	-.068	25.839	.000[b]

Predictors: (Constant), Entrepreneurial Motive
Source: Data Analysis (2022)

The finding showed that, the model had an R-value 0.404, which indicated a weak linear relationship between dependent (moonlighting) and independent variables (personal/self-actualization motive). The $R^2 = 0.163$; $P > .000$) which depicted that 16% for the changes in the dependent variable. The adjusted R^2 showed the specific contribution of the independent variable. The F-value of 66.032 showed is significant at .000 which indicated a good explanatory strength of the independent variable.

Table 5: Regression coefficient and analysis of variance of personal/self-actualization motive on moonlighting

Model Summary

Model	R	R Square	Adjusted R Square	F	Sig.
1	.404[a]	.163	-.161	66.032	.000[b]

Predictors: (Constant), personal/self-actualization Motive
Source: Data Analysis (2022)

DISCUSSION OF FINDINGS

The study empirically investigated impact of moonlighting and employee survival in Nigeria perspective. The first hypothesis result indicated that economic motive only caused 14% employee to engage in moonlighting. It also explained that, to achieve economic of scale employees are likely to involve in multiple jobs. The study agreed that, employees engage on moonlighting when they cannot longer cope with the economic realities especially where undue taxation, inflation and interest rate are high in an economy (Paul, 2021). Amuedo-Dorantes and Kimmel (2009) moonlighting rises during economic downturn as a result of economic difficulty. The second hypothesis showed that, a weak prediction of financial motive on moonlighting at 22%.

The result further explained that, financial motive contributed why employee found themselves

in moonlighting in the establishment. The study is also in conformity with the study of Dabalen et al (2008) workers engaged in more informal job due to short fall of perceived fear of wage; and Kaukab and Akbar (2016) four factors of sub-variables of job satisfaction. The third hypothetical result reveals that, government policy and program showed only 2% effect on moonlighting. The result showed that there is positive significant impact of government policy and program on moonlighting. This is as result of 10% of top influential people control almost 70% of the national wealth and government policies to favor the powerful individuals (Akshita, 2022).

That is, workers get to know about government policies and programmes during implementation and not formulation process. The hypothesis four results showed that, the model had an R-value 0.266, which indicated a weak linear relationship between dependent (moonlighting) and independent variables (Entrepreneurial motive). The result showed 71% prediction that entrepreneurial motive has on moonlighting. Strong positive significant was observed that entrepreneurial motive has impact on employee moonlighting. The hypothesis five results revealed that there was significant impact of personal/self-actualization motive on employee moonlighting. Though, the result only predicted 16% influence between personal/sel-actualization impacts on holding multiple jobs.

CONCLUSION AND RECOMMENDATION

Moonlighting and employee survival rate are quite related. The study was necessitated to examine the impact of moonlighting on employee survival. Therefore, employee can engage in multiple jobs due to economic, financial, entrepreneurial, government policies and programs and personal/self-actualization motives. The study concluded that, economic motive is an essential reason for holding multiple jobs to enable employee to maintain their status. The financial motive also provides the willingness to second job; government policy and program has low motive for staff moonlighting; and the zeal for entrepreneurial motive had led to an important aspect why employees are found in moonlighting; personal/self-actualization motives were essential contributor to multiple job holding in an organization. This is in part agreement with Kimmel and Powell (2001) that both male and female participate in moonlighting because the study environment comprises with both genders.

Consequent upon the finding and conclusion, the study suggested that, as individuals are different so as their quest to engage in multiple jobs are different. Hence, organization should create enabling environment that will minimize moonlighting which diverse full attention of their employees.

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PART C: MARKETING/SUPPLY CHAIN MANAGEMENT TRACK

OPPORTUNITY-SEIZING CAPABILITY AND BUSINESS PERFORMANCE AMONG SMALL AND MEDIUM-SCALE ENTERPRISES IN AGRIBUSINESS

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ABSTRACT

This study was examined the relationship between opportunity-seizing capability and business among SMEs in Agribusiness. Opportunity-seizing capability was utilized as unidimensional variable; while business performance was viewed multidimensionally, and decomposed into customer-base enlargement, profitability and portfolio expansion. The study adopted an explanatory research design, and collected primary data through cross-sectional survey, using a structured questionnaire whose validity and reliability was confirmed through exploratory factor analysis and Cronbach's Alpha test respectively. The population of the study comprised SMEs in agribusiness in Rivers State. 90 SMEs in agribusinesses in Rivers State were surveyed as the accessible population. After data cleaning, data collected from 77 respondents were found usable for analyses. Pearson Product Moment Correlation served as the test statistic, relying on Statistical Package for Social Science (SPSS) version 24.0. The study found that opportunity-seizing capability has very strong, positive and statistically significant relationship all the indices of business performance used in the study. The study therefore concluded that opportunity-seizing capability drives improved business performance among SMEs in agribusiness in Rivers State; and that improved business performance of SMEs in agribusiness in Rivers State depends on their opportunity-seizing capability. The study recommends that SMEs in agribusinesses in Rivers State that seek improved business performance (customer-base enlargement, profitability and portfolio expansion) should develop and optimally utilize the capability exploit or take advantage of sensed current and emerging opportunities in their operating environment.

Keywords: Business performance, portfolio expansion, customer-base enlargement, opportunity-seizing capability, profitability

INTRODUCTION

The operating environment of firms is growing increasingly dynamic and complex; presenting both threats and opportunities (Stern et al., 2007), such that sustained business growth and robustness becomes a function of the ability to adjust, reposition, refocus or redirect marketing programmes smartly, and in response to market-dynamics (Ateke & Nwulu, 2021). As firms get exposed to increased amount of information about the content and structure of the business environment; increased environmental turbulence; and improved information processing capabilities orchestrate convoluted business practices, processes and programmes; the surest and most sustainable route to company growth and survival is increased propinquity to, and capability to obtain, combine, and deploy idiosyncratic resources in ways that augment the firm's marketing environment (Ateke & Nwulu, 2021; Morgan et al., 2009).

Thus, firms must have entrenched marketing capabilities that promote adaptability, and also contrive constructive ways to face the future, in order to escape entropy. This assertion aligns

with the position that business survival and growth in the new economy is anchored on ability to anticipate, provide for, respond appropriately and adapt to gradual and sudden disruptions in the business environment (Ebenuwa, 2021). This further suggest that adequately developed and studiously harnessed dynamic marketing capabilities (DMCs) will drive continuous learning and knowledge accumulation through ongoing collection of intelligence that facilitate superior value creation and delivery (Ateke & Didia, 2017); reiterates the perception that DMCs orchestrate improved responsiveness to market needs; facilitate the conception and implementation of requisite marketing strategies that confer competitiveness (Linjconsin & Jaaji, 2010); and facilitate organizational renewal, resilience, innovativeness and growth (Ateke & Nwulu, 2021; Cirjevskis, 2019; Alharbi & Wang, 2016).

Business performance is a first-order objective of small and medium-scale enterprises (SMEs), and even large corporations. It is a key objective that dictates firms' strategies and programmes of actions; as a business concern that is not growing is threatened. Business performance or wellness describes the health of a firm as an outcome of management processes measured against nominated objectives or compared to the health of competing firms (Ateke & Didia, 2017); and a measure of a firm's capacity to achieve desired objectives by optimally utilizing available resources and capabilities. Business performance also captures the outcome of firm's' marketing strategies and programmes, as well as their dexterity in terms of enlarging their customer base, growing their profitability, expanding their business portfolio, developing new markets, etc.

Attempts to explain performance differences among firms in an industry and across industries have been a source of debate among scholars and industry practitioners (Cyfert et al., 2021); even as marketing literature recognizes long-term survival and sustainability as strategic feats in business. More than half of new businesses do not survive beyond five years; and some businesses close shop as curiously as they entered the business-scape; though others stride for decades (Ateke & Amangala, 2020). Ateke and Nwulu (2021) submit that what separate the "successes" from the "failures" may be the DMCs possessed by one and which the other lack.

Prior studies show that DMCs relate to various facets of marketing and business performance, including innovativeness (Ateke & Harcourt, 2022; Cirjevskis, 2019), resilience (Ebenuwa, 2021), adaptability (Ateke & Nwulu, 2021), foreign business ownership and performance (Konwar et al., 2017), business wellness (Ateke & Didia, 2017), organizational performance (Takahashi et al., 2016), strategy development (Alharbi & Wang, 2016), competitiveness (Bruni & Verona, 2009) and international joint venture (Fang & Zou, 2009).

However, none of these studies directly probed the relationship between opportunity-seizing capability (an important dimension of DMCs) and business performance. Also, these studies were either conducted in business and economic climate different from what obtains in Nigeria or are focused on firms other than SMEs. Hence, do not provide adequate explanatory power to SMEs in agribusinesses that have business performance challenges. Thus, the current study joins the discourse by probing the association between opportunity-seizing capability and performance of SMEs in agribusiness.

LITERATURE REVIEW

Sociological Baseline Theory

This study in anchored on absorptive capacity theory (Cohen & Levinthal, 1990) which holds that the ability of firms to understand the value of new intelligence; incorporate such new intelligence into their operational processes; and utilize the new intelligence is instrumental to achieving improved competitiveness. Absorptive capacity theory argue that firms become more innovative, adaptive and perform better when they incorporate new knowledge in their business practices and processes (Miles, 2012); and is founded on the assumption that sensing, assimilating, combining and utilizing new knowledge requires firms to develop a knowledge-base through "research and development; new knowledge from current operations; new knowledge from other firms or research institutions; new knowledge by purchasing new equipment, hiring new talents, or training current employees on how to utilize new technologies or methods." Absorptive capacity helps firms to absorb new knowledge in one period or market(ing) operation and use it in another. Miles (2012) opine that "successful application of new knowledge is self-reinforcing and motivates firms to continue to absorb new knowledge indefinitely."

The current study adopt absorptive capacity theory as a befitting baseline theory based on its position that "it is necessary for firms to identify, integrate and utilize new knowledge in their operations that focuses on achieving set objectives (Ebenuwa, 2021). Absorptive capacity suggests that the possession and exploitation of market-sensing capabilities help firms to build strong knowledge; and challenges firms to set up a culture that prepares organizational members to see the importance of learning and using new knowledge to attain goals; monitor the environment to identify opportunities; contrive and execute appropriate strategies to adapt the firm to environmental dictates; and monitor progress to track successes and failures. The intelligence gathered in the entire enterprise is then stored, and retrieved for use in future marketing operations.

Concept of Opportunity-Seizing Capability

Ateke and Nwulu (2021) and Takahashi et al. (2016) view opportunity seizing as a process of exploring, assessing, selecting and investing in present and emerging environmental conditions that promise profitable business growth and sustainability. Firms respond to opportunities by introducing new products, developing new markets or utilizing new channels (Wagner et al., 2017). Opportunity-seizing capability thus define firms' propensity and dexterity to expertly align operations and make decisions that enables them select appropriate business models and marketing actions aimed at taking advantage of identified opportunities (Tempelmayr et al., 2019). Min and Kim (2022) suggests that opportunity-seizing capability enable firms address real and perceived opportunities with new products, processes, or strategies; and selecting or inventing business models that define the when, where and how of investment.

Opportunity-seizing capability is essential to sustainable competitiveness of firms in today's increasingly mercurial environment with fleeting opportunities and daunting challenges. The possession of opportunity seizing capability enhances a firm's visibility and reckoning in the market; enables the creation of superior customer value (Ateke & Didia, 2017); and postures firms to continually contrive and execute appropriate marketing strategies that confer superior performance. Customers savor variety and will be favorably disposed to bonding with firms that

sense their changing preferences and create new products to fulfill them. Opportunity-seizing capability is thus, also associated with customer acquisition and customer retention and loyalty.

Identifying opportunities (market-sensing) and actually exploiting them (opportunity-seizing) requires distinct skills and expertise (Min & Kim, 2022) that manifest in the activities companies undertake in their attempt to take advantage of identified opportunities. Every decision and action taken after has an opportunity has been detected is considered an opportunity-seizing effort (Popadiuk et al., 2018). In essence, opportunity-seizing means exploiting business opportunities, and addresses firms' capacity to refine products, markets and internal processes to achieve economies of scale, efficient orchestration of resources (Ateke & Nwulu, 2021); and expertise in collecting, sharing and using market(ing) intelligence.

Business Performance

Business performance is the outcome of management efforts in relation to predetermined goals; as well as firms' ability to attain stated goals through efficient and effective use of available resources. Business performance is an important construct in determining the success of organizations; and can be considered in financial and non-financial terms (Bontis et al., 2000), and measured in terms of productivity in return on investment, profits and sales turnover. It explains a firm's success over a period of time in a given market operation. Business performance also explains a firm's success in given market operation measured in customer, market and financial achievement. Didia and Nwokah (2015) suggest that business performance is used to mean the achievement of qualitative and quantitative operational goals.

Business performance is a multidimensional construct with multidisciplinary and cross functional orientation (Didia & Nwokah, 2015). The essence of measuring the performance of a firm is to gauge the results of strategy implementation and monitoring, in order to identify areas that require improvement. Business performance is a construct often used in differing context; and understood differently between profit and non-profit organisations. This study however looks at it in the context of profit-oriented organisations and employs customer-base enlargement, profitability and portfolio expansion as a mix of non-financial and financial measures of performance of SMEs. The reason for adopting non-financial and financial metrics of performance is to gain a balanced view of performance, and also an acknowledgement of the fact that the results of most marketing efforts are non-quantitative and non-financial in nature, but facilitate the attainment of quantitative and financial indices of performance.

Customer-base enlargement

The foundation for, and sustenance of firms depends on customers. Customers are thus the lifeblood of a business and are essential to business growth (Manirakiza, 2020). Ateke and Amangala (2020) states customer acquisition, retention and expansion provide the surest guarantee for firms' survival and sustainability. This is because acquiring and retaining customers, as well as expanding the scope of business the firm has with current customers through cross-selling and upselling is the premise for creating and maintaining customer relationships; and underpins the notion of creating extra value by making existing customers increase their frequency and volume of purchase (Ateke & Amangala, 2020). The extent to which a company is successful cannot be divorced from it customer-base, the larger, the better.

Customer-base enlargement is thus a core marketing objective and salient metric of performance. A firm has only one way to grow its business: to enlarge its customer-base by acquiring new customers (Olek & Sarvary, 2001). A firm that is not acquiring new customers is threading a perilous path. This is because customers form the foundation for a business; they also guarantee the continued existence of the business (McFarlane, 2013). Customer-base enlargement will always be a crucial objective of firms because it relates to several aspects of business performance.

In mature markets, firms employ several techniques to win and retain customers. They implement programmes aimed at preventing switching behaviour and offer special customer care programmes that raises customer satisfaction (Ateke & Nwulu, 2021). The possession of a strong customer-base is a prerequisite to stable company operation, and achievement of improved business performance (Manirakiza, 2020). Research shows that having a large number of loyal customers provides a number of significant short- and long-term advantages (Manirakiza, 2020; Ateke & Amangala, 2020; McFarlane, 2013).

Profitability

Profitability is the ability of a business to make profit or the degree to which a business generates revenue in excess of cost of operations. It is a quantitative metric often used to assess a firm's ability to generate earning in excess of the combination of all the expenses it incurred on a given investment during a specific accounting period. Scholars identify Return on Assets and Return on Equity as common indicators of profitability (Ejoh & Iwara, 2014); though anyone of them can be used, depending on the objective of the user.

Profitability is an important concept in business that has arrested the interest of managers, shareholders and academic researchers alike (Ejoh & Iwara, 2014) since the dawn of commerce. It is a fundamental goal of firms because of its link to long-term survival. Morgan et al. (2009) affirm that profitability is fundamental to investors and managers alike because it indicates expected cash flows. Despite this, profitability is an infrequently used measure of business performance, and knowledge concerning the link between marketing capabilities and profitability growth is limited (Bahadir et al., 2008).

Profitability is often used to determine the attractiveness of an investment; or to compare the promise of different investment portfolios and opportunities (Bahadir et al., 2008). It is also used to measure gains and losses generated in an undertaking, especially in relation to resources invested. In calculating profitability, the benefits from an investment are divided by its costs, and the result expressed as a percentage (Farris et al., 2010). Higher profitability often means that gains from an investment compare favourably to cost of the investment.

Portfolio expansion

A business portfolio represents a business interest which develops from a firm's resources allocation and investments in areas with future potentials; and which are all governed by one corporate management; or the creation and introduction of a brand that is new to a firm or the market (Didia & Ateke, 2017; Raggio et al., 2011). Portfolio expansion offers several benefits. It helps firms choose a positioning approach that best complements existing portfolios while circumventing cannibalization, and accurately caters for the needs of current and prospective customers. Portfolio expansion is achieved through internal brand creation or external brand

acquisition (Raggio et al., 2011); and these are common practices that enable firms expand business interests within and across industries. The choice of mode of expansion is a critical element in business portfolio management; and several models that provide assistance to managers on how to analyze and manage investment portfolios exist (Didia & Ateke, 2017).

Portfolio expansion is topical in strategic management because it indicates growth, risk reduction, efficiency optimization, and performance enhancement (Puranam & Vanneste, 2016). It can be achieved by offering additional products, integrating other participants in the value chain, or expanding into other zones, regions or countries. Grant (2016) states that portfolio expansion is manifested when a firm engages with different (at least two) ways of creating and or capturing value; and each of which is associated with a distinct monetization mechanism. The achievement of corporate objectives rest on strategic thrust; and a firm may pursue different objectives in order to increase shareholders' wealth (Didia & Ateke, 2017). Kotler (2003) argue that strategic planning that lead to the attainment of corporate goals requires managing a company's business as investment portfolios. The idea of managing company business as investment portfolios refers to expanding business operations in terms of serving newer customer groups and needs, product line extension and creation of newer business units.

Firms develop business interest within and across customer groups and product lines, and also across geographies so that business risks can be spread, sources of revenue and profits are diversified; and shareholders' wealth is improved (Didia & Ateke, 2017). Portfolio expansion is especially attractive when a firm can leverage existing resources, competences and capabilities. Akewushola (2015) states that portfolio expansion fundamentally indicates business success and shows performance differential among firms; while Oladimeji and Udosen (2019) proffered that portfolio expansion leads to improved profitability, market value and shareholder wealth; and that firms' survival and prosperity is linked to the expansiveness of their business interests. Thus, increased profitability, efficient use of resources, exploitation of market opportunities, achievement of economies of scale and preferred market position all ensue from portfolio expansion (Oladimeji & Udosen, 2019; Emel & Yildirim, 2016).

Opportunity-Seizing Capability and Business Performance

The locus of opportunity-seizing is firms' ability to respond to identified market opportunities by developing new products, processes or business models that orchestrate a strategic fit between the firm and such opportunities (Ateke & Nwulu, 2021; Ebenuwa, 2021; Takahashi et al., 2016). It involves exploring, assessing and selecting present and emerging environmental conditions that promise profitable business growth and sustainability; and often result to in developing new products or markets or utilizing new channels (Wagner et al., 2017); and enable firms to expertly align their operations and make decisions that foster desired market positions (Tempelmayr et al., 2019).

O'Reilly and Tushman (2013) contend that opportunity-seizing capability develop through a firm's efforts to organize itself for innovation, as well as integrate and allocate new and existing resources to take advantage of market(ing) opportunities. So, opportunity-seizing capability enable companies refine or improve products, knowledge, and traditional markets which may be observed through internal process modifications that results in economies of scale, efficient orchestration of resources (Ateke & Nwulu, 2021); as well as expertise in collecting, sharing and using market(ing) intelligence.

Opportunity-seizing is anchored on "refining, using or optimizing existing resources, processes, competencies, knowledge, paradigms, and technologies to obtain efficiency and effectuate implementation" (Popadiuk et al. 2018). Hence, insights provided by market-sensing capability enable firms to take advantage of, or seize market opportunities. The dynamic capabilities theory implies that the ability to recognize market opportunities is not sufficient to achieve sustainability and competitiveness; rather, firms must seize those opportunities by (re)structuring business models, revising strategies or (re)combining resources to enhance their readiness to exploit the opportunities (Žitkiene et al., 2015; Kindström et al., 2013).

Hence, opportunity-seizing encompass formulating strategic response to sensed opportunities. Decision to seize market opportunities could stem from or lead to planned entry into a market. Žitkiene et al. (2015) provides that opportunity-seizing involves (re)formulating strategies that translates to: systems integration - integrating components into a functioning system, including business process (seizing customer value by integrating customer's business processes) and technical application integration (customizing technical solution to fit individual customers' needs); operational services - services for operating and maintaining products which encompass maintenance, warranty and customizing services related to product, based on individual needs; and business consulting - providing customers with design, financing, purchasing, maintaining and operating various assets (Fischer et al., 2010).

Companies' marketing strategies are mostly influenced by market conditions; and companies can enlarge their customer base, become more profitable and expand their business portfolio by seizing immediate and emerging market opportunities (Takahashi et al., 2016). This can be achieved by reconfiguring existing products and marketing operations or extending current offerings. Popadiuk et al. (2018) aver that opportunity seizing or opportunity exploitation, addresses a firm's propensity to and dexterity in refining and improving products, knowledge, and traditional markets; and is observed through internal movements that results in economies of scale, efficient orchestration of assets and resources, among others.

Thus, opportunity-seizing capability could regenerate competitive advantage (Teece, 2012) by brand enhancing performance, innovation and new product success, customer acquisition, retention and customer loyalty; and financial performance (Susanto, 2019); adaptability (Ateke & Nwulu, 2021); marketing resilience, (Ebenuwa, 2021); service innovation (Žitkiene et al., 2015); and new product adoption (Walugembe et al., 2017). Scholars are generally of the view that opportunity-seizing capability enhances firms' capacity to undertake activities required to push products through the value chain (Day, 2011); and that when adequately harnessed, enables firms deliver superior value (Lindblom et al., 2008); exploit new opportunities, engage with customers and build strong bonds with collaborators (Teece, 2012).

The foregoing raises the suspicion that opportunity-seizing capability will relate to various facets of business performance. Yet, in view of the aim of this study to undertake statistical examination and interpretation of the link between opportunity-seizing capability and business performance of SMEs agribusinesses, the following null hypotheses are formulated:

Ho_1: Opportunity-seizing capability does not significantly relate to customer-base enlargement of SMEs in agribusinesses.

Ho_2: Opportunity-seizing capability does not significantly relate to profitability of SMEs in agribusinesses.

Ho_3: Opportunity-seizing capability does not significantly relate to portfolio expansion of SMEs in agribusinesses.

METHODOLOGY

This examen focuses on examining the nexus between opportunity-seizing capability and business performance of SMEs in agribusinesses. The study adopted a pragmatist viewpoint; and aligns with the position that a researcher should focus on a research problem; and not on methods, and should use a range of approaches available to understand a problem (Creswell & Creswell, 2017). The study upholds the uncertainty and subjectivity of phenomena; the belief that the physical senses can picture true reflection of reality (realist ontology); and that knowledge is concrete, hence transferable (positivist epistemology). The study also aligns with the notion that man's interaction with his environment is deterministic in nature, hence; relied on a quantitative approach to acquire primary data (nomothetic methodology) (Johnson et al., 2007).

The study adopted an explanatory research design and was conducted in a natural setting. 90 SMEs in agribusiness in Rivers State comprised the population of the study. This study took a census in lieu of the manageable size of the population of the study and based on the conviction that a larger sample size takes a researcher closer to reality. Structured questionnaire was used to collect primary data in a cross-sectional survey.

The validity of the instrument was determined through face, content and construct validity. Face validity was ascertained by experts consisting of members of the academia within marketing, organizational studies, and measurement and evaluation; and business practitioners with expertise in the subject of the study. Content validity was achieved by ensuring that the measurement scales are derived from literature; and mostly from instruments used by other researchers, with minimal modification where necessary. Construct validity was determined using exploratory factor analysis. Table 1 presents a summary of the test results.

Table 1: Summary of Results of Test of Validity

Variables	Number of Items	Factor Loadings
Opportunity-seizing capability	8	0.926
Performance of SMEs		
Customer-base enlargement	6	0.949
Profitability	5	0.868
Portfolio expansion	8	0.960

Source: SPSS output of data analysis on opportunity-seizing capability and business performance (2022).

Table 1 shows the results of construct validity of the instrument using through Exploratory Factor Analysis (EFA). The analysis revealed that there is multicollinearity because all the variables have high factor loadings. This means, each of the items effectively measured what they were set to measure.

The reliability of the instrument on the other hand, was determined using the Cronbach's Alpha test of reliability with a threshold of 0.70 set by Nunally (1978). Table 2 provides a summary of the results of the test of reliability.

Table 2: Summary of Results of Test of Reliability

Variables	Number of Items	Cronbach's Alpha Coefficient
Opportunity-seizing capability	8	0.950
Performance of SMEs		
Customer-base enlargement	6	0.968
Profitability	5	0.957
Portfolio expansion	8	0.950

Source: SPSS output of data analysis on opportunity-seizing capability and business performance (2022).

Table 2 shows that all the variables in the study have high Cronbach's alpha coefficient. The reliability coefficients surpassed the minimum threshold 0.70 set by Nunally (1978). The instruments can therefore be considered reliable; and offering the required standard of precision and clarity. The evidence indicates the instrument adequately addresses the concerns of the study, thus admissible; and that the instrument can produce identical results if used at different times and in different contexts by different researchers.

The Pearson Product Moment correlation statistic was used to test the direction and magnitude of connection between opportunity-seizing capability and the proxies of business performance. The analyses was based on 77 copies of questionnaire, resenting 85.56% of administered questionnaire which were upon retrieval, found to reveal the absence of error cases with permissible (less than 10%) cases of missing values, and treated using mean imputations. These 77 copies were coded into the SPSS (version 24) software and used for the final analyses. The adopted confidence interval was 95%; and all hypotheses were tested based on a significance level of 0.05. Neuman's (2006) categorization scheme in Table 3 was employed to determine the magnitude and direction of relationships between variables, with a critical value = 0.01; and decision rule: reject null hypothesis if probability value < critical value and accept null hypothesis if probability value > critical value.

Table 3: Rho coefficient level of effects

Values	Interpretation
less than 0.19	Very weak relationship
0.20 – 0.39	Weak relationship
0.40 - 0.59	Moderate relationship
0.60 – 0.79	Strong relationship
0.80 – 0.99	Very strong relationship

Source: Neuman, W. L. (2006). *Social research methods: Quantitative and qualitative approaches (6th Edition)*. Allyn Bacon.

RESULTS AND INTERPRETATION

Univariate Analyses

This sub-section presents and interprets result of descriptive analysis of study variables. The statistical techniques employed here, are descriptive and focus on describing average position and experiences of respondents on manifestation of attributes of variables under examination. Hence, mean, standard deviation and variance are used to assess the central tendencies and levels of dispersion of the responses of the study elements. The interpretation used 2.5 as the base mean.

Table 4: Descriptive analysis of opportunity-seizing capability

	N	Sum	Mean	Std. Dev.	Variance
Review marketing programmes and efforts to ensure alignment with market requirements	77	308	4.00	1.136	1.289
Make changes to organizational structure in order to leverage market opportunities	77	325	4.22	1.084	1.174
Dedicate enough time to implement ideas for marketing programmes and improve current ones	77	323	4.19	.987	.975
Constantly implement new marketing policies or strategies to take advantage of identified market opportunities	77	326	4.23	1.037	1.076
At tune marketing processes to market demands	77	320	4.16	.859	.739
Organize for innovation and integrate or allocate new resources to take advantage of a market opportunity.	77	317	4.12	.959	.920
Routinely refine and improve products, knowledge, and traditional markets to remain relevant in the face of change	77	318	4.13	1.005	1.009
Innovate value in response to environmental changes	77	317	4.12	.858	.736
Valid N (listwise)	77				

Source: SPSS output of data analysis on opportunity-seizing capability and business performance (2022).

Table 4 shows results of descriptive analysis using sum, mean, standard deviation and variance. As shown on the Table, the entire responses generated high mean scores greater than 3.00. This means, most of the respondents were on the higher side of the scale. In the result, question 2 has the highest sum of 325 and hence the highest mean score of 4.22. By having the highest mean score, question 2 has the strongest influence on opportunity seizing capability. However, question 1 has the highest standard deviation of 1.136 and variance of 1.289 respectively, which means question 1 has the most data variations.

Table 5: Descriptive analysis on customer-base enlargement

	N	Sum	Mean	Std. Dev.	Variance
Experience increase in new customer acquisition	77	323	4.19	.946	.896
Achieve increase in retention of existing customers	77	329	4.27	1.120	1.254
Sell more products to existing customers	77	324	4.21	1.116	1.246
Expand the scope of business with existing customers	77	320	4.16	1.125	1.265
Frequently leverage cross-selling and upselling opportunities	77	332	4.31	1.016	1.033
Achieve increase in revenue through purchases from new customers	77	340	4.42	1.030	1.062
Valid N (listwise)	77				

Source: SPSS output of data analysis on opportunity-seizing capability and business performance (2022).

From results of the analysis on Table 5, the entire responses generated high mean scores greater than 3.00. This means, most of the respondents were on the higher side of the scale. In the result, item 6 has the highest sum of 340 and hence the highest mean score of 4.42. By having the highest mean score, question 6 has the strongest influence on customer-base enlargement. However, item 4 has the highest standard deviation of 1.125 and variance of 1.265 respectively, which means question 4 has the most data variations.

Table 6: Descriptive analysis on profitability

	N	Sum	Mean	Std. Dev.	Variance
Generate revenue in excess of cost of operations	77	315	4.09	1.066	1.136
Achieve increased return on assets	77	311	4.04	.924	.854
Achieve increased return on equity	77	309	4.01	.939	.881
Have a high capacity to make profit	77	320	4.16	1.148	1.317
Attract investors or gain loans on account of your expected cash flows	77	333	4.32	1.044	1.091
Valid N (listwise)	77				

Source: SPSS output of data analysis on opportunity-seizing capability and business performance (2022).

From results of the analysis on Table 6, the entire responses generated high mean scores greater than 3.00. This means, most of the respondents were on the higher side of the scale. In the result, item 5 has the highest sum of 333 and hence the highest mean score of 4.32. By having the highest mean score, item 5 has the strongest influence on profitability. However, item 4 has the highest standard deviation of 1.148 and variance of 1.317 respectively, which means item 4 has the most data variations.

Table 7: Descriptive Analysis on Portfolio Expansion

	N	Sum	Mean	Std. Dev.	Variance
Allocate resources or invest in areas with good future potentials	77	315	4.09	1.102	1.215
Introduce a brand or product that is new to its operations or its market	77	325	4.22	.898	.806
Expand business interests within its industry	77	317	4.12	.946	.894
Expand business interests across industries	77	326	4.23	1.087	1.181
Optimize resources by creating new business interests	77	320	4.16	.933	.870
Create new streams or sources of revenue and profit	77	324	4.21	.978	.956
Integrate other participants in the value chain with a view to expanding its business scope	77	334	4.34	1.108	1.227
Expand its business into other states, regions or zones	77	333	4.32	.938	.880
Valid N (listwise)	77				

Source: SPSS output of data analysis on opportunity-seizing capability and business performance (2022).

From results of the analysis as displayed on Table 7 shows that all responses generated high mean scores greater than 3.00. This means, most of the respondents were on the higher side of the scale. In the result, item 7 has the highest sum of 334 and hence the highest mean score of 4.34. By having the highest mean score, item 7 has the strongest influence on portfolio expansion. In the same vein, item 7 has the highest standard deviation of 1.108 and variance of 1.227 respectively, which means item 7 has the most data variations.

Bivariate Analysis

This sub-section presents and interprets results of test of linear correlation between opportunity-seizing capability and indices of business performance of SMEs in agribusinesses. The Pearson Product Moment Correlation served as the test statistic. An important requirement for the use of Pearson Product Moment Correlation in measuring relationship between variables is that there must exist a linear relationship between the variables in focus, and which must be identifiable from the data distribution. A linear relationship exists between variables when and if increase in one prompts an increase in the other; or increase in one variable leads to a decrease in the other.

Table 8: Correlation between opportunity-seizing capability and proxies of business performance

		Opportunity-seizing capability	Customer-base enlargement	Profitability	Portfolio expansion
Opportunity-seizing capability	Pearson Correlation	1	.843**	.821**	.875**
	Sig. (2-tailed)		.000	.000	.000
	N	77	77	77	77
Customer-base enlargement	Pearson Correlation	.843**	1	.823**	.911**
	Sig. (2-tailed)	.000		.000	.000
	N	77	77	77	77
Profitability	Pearson Correlation	.821**	.823**	1	.833**
	Sig. (2-tailed)	.000	.000		.000
	N	77	77	77	77
Portfolio expansion	Pearson Correlation	.875**	.911**	.833**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	77	77	77	77

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS output of data analysis on opportunity-seizing capability and business performance (2022).

Results of test of correlation in Table 8 showed opportunity-seizing capability is the treatment variable in the model, while customer-base enlargement, profitability and portfolio expansion are the outcome variables. The correlation coefficient (r) shows the magnitude and direction of relationship between the variables. The analysis revealed a correlation coefficient (r) of 0.843 on the relationship between opportunity-seizing capability and customer-base enlargement. This high correlation coefficient means that the connection between opportunity-seizing capability and customer-base enlargement is very strong. The analysis equally showed that the probability value of the relationship between the variables is less than the critical value (i.e. $p = 0.000 < 0.01$). This means, opportunity-seizing capability has very strong, positive and statistically significant relationship with customer-base enlargement ($r = 0.843$, $N = 77$, $p = 0.000 < 0.01$). In view of this significant relationship between opportunity-seizing capability and customer-base enlargement, as revealed by the analyses, the study rejected the null hypothesis which states that there opportunity-seizing capability does not significantly relate to customer-base enlargement of SMEs.

Table 8 also demonstrates that the correlation coefficient (r) between opportunity-seizing capability and profitability of small and medium-scale agribusinesses is 0.821. This high P(r) value means that the relationship between opportunity-seizing capability and profitability is very strong. Similarly, the analysis showed a probability value of 0.000 in the relationship between opportunity-seizing capability and profitability, which is less than the critical value (i.e. $p = 0.000 < 0.01$). This implies that opportunity-seizing capability has a very strong, positive and statistically significant relationship with profitability ($r = 0.821$, $N = 77$, $p = 0.000 < 0.01$). Therefore, we reject the null hypothesis which states that opportunity-seizing capability does not significantly relate to profitability of SMEs agribusinesses.

Table 8 further showed a correlation coefficient (r) of 0.875 on the relationship between opportunity-seizing capability and portfolio expansion. This very high P(r) value means that the

relationship between opportunity-seizing capability and portfolio expansion of SMEs agribusinesses is very strong. The analysis also showed that the probability value of the relationship between the variables is less than the critical value (i.e. $p = 0.000 < 0.01$). This means, opportunity-seizing capability has a very strong, positive and statistically significant relationship with portfolio expansion ($r = 0.875$, $N = 77$, $p = 0.000 < 0.01$). Therefore, we reject the null hypothesis which states that opportunity-seizing capability does not significantly relate to portfolio expansion of SMEs in agribusinesses.

DISCUSSION OF FINDINGS

This study focused on probing the association between opportunity-seizing capability and business performance. The statistical tests conducted revealed that opportunity-seizing capability has very strong positive and statistically significant relationship with business performance in terms of customer-base enlargement, profitability and portfolio expansion. The findings support that of Kachouie et al. (2016) which established a relationship between dynamic marketing capabilities and business performance through revenue growth rates, profit margins and return on investment. The current findings also align with research reports which show that opportunity-seizing capability enhances firms' capacity to undertake activities required to push products through value chains (Day, 2011); and that when adequately harnessed, enables delivery of superior customer value (Lindblom et al., 2008); exploit new opportunities, engage with customers and build strong bonds with collaborators (Teece, 2012).

The current findings are also in tandem with the view that opportunity-seizing enable firms respond to identified market opportunities by developing new products, processes or business models that orchestrate a strategic fit between the firm and such opportunities (Ateke & Nwulu, 2021; Takahashi et al., 2016). The findings cohere with the position that opportunity-seizing enable firms align operations and make decisions that foster desired market positions (Tempelmayr et al., 2019); and develops through firms' efforts to organize for innovation, as well as integrate and allocate new and existing resources to take advantage of market and marketing opportunities (Ateke & Nwulu, 2021). The findings thus corroborate the dynamic capabilities model that ability to recognize market opportunities is essential to achievement of sustainability and competitiveness (Teece, 2012). The firm must however, be able to seize such opportunities by (re)structuring business models, revising strategies and (re)combining resources to enhance their readiness to exploit the opportunities (Žitkiene et al., 2015; Kindström et al., 2013)

The current findings further support reports that ability to seize immediate and emerging market opportunities enlarge firms' customer base, improve their profitability and expand their business portfolio (Takahashi et al., 2016); especially, where the firm is able to reconfigure existing products and marketing operations or extend current offerings (Popadiuk et al., 2018). This way, opportunity-seizing capability regenerate competitive advantage (Teece, 2012) by enhancing brand performance through innovation and new product success; customer acquisition, retention and customer loyalty (Susanto, 2019); company adaptability (Ateke & Nwulu, 2021); marketing resilience, (Ebenuwa, 2022); innovation and innovativeness (Ateke & Harcourt, 2022; Walugembe et al., 2017; Žitkiene et al., 2015).

CONCLUSION AND RECOMMENDATIONS

The merits associated with identifying and responding appropriately to current and emerging market conditions that create threats and opportunities for firms, depending on their resources and how well they are able to utilize them to respond to market conditions has been canvassed extensively by scholars. This has also underscored the need for firms to keep abreast with trends in their operating environment.

Firms often perform better when they respond adequately to identified market opportunities. Firms respond to opportunities by figuring out creatively ways to obtain, combine, and deploy resources aligns their operations to environmental conditions. This is however, enhanced by their ability to continuously monitor the environment to identify and exploit current and emerging opportunities.

Firms often develop new products and processes, new strategies and business models, new markets and distribution channels, etc. to respond to sensed or identified opportunities. Therefore, firms improve their performance by monitoring, identifying and making sense out of market conditions. This study focused on assessing the correlation between opportunity-seizing capability and business performance of SMEs in agribusiness.

In view of the results of the empirical analysis and the discussion that followed; and which situated the results within extant literature, the study concludes that opportunity-seizing capability strongly relates to business performance of SMEs in agribusiness through customer-base enlargement, profitability and portfolio expansion; and that business performance of SMEs in agribusiness largely depend on their ability seize or take advantage of present of evolving market conditions. The study thus recommends that SMEs in agribusiness that seek to improve their business performance should develop the capacity to interpret market intelligence appropriately and orchestrate business models, processes, strategies and resources to exploit opportunities presented by such intelligence.

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SUPPLIER OPTIMIZATION: PATHWAY TO OPERATIONAL EFFICIENCY OF FIRMS IN DEVELOPING ECONOMIES

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ABSTRACT

Today's operating environment requires firms to be frugal when formulation and implementation initiatives meant to orchestrate seamless and efficient operations. One area of operations of firms that has been identified as a cost-saving and profit contribution center, is procurement is. Hence, procurement and supplier management activities are attended with increased sophistry and proactive initiatives in order to attain and maintain operational efficiency. This paper explores the notion of supplier optimization which is one of such initiatives pursued by firms, to unravel its association with operational efficiency. The paper specifically examined the relevance of supplier optimization to operational efficiency in terms of cost and waste reduction. Based on extensive literature review, the paper found that supplier optimization is a practice undertaken by firms to gain performance superiority; and that supplier optimization drives organizational efficiency, and confers strong market position and improved profitability. The paper concludes that supplier optimization is a potent driver of operational efficiency in terms of cost and waste reduction, optimal resource utilization and energy conservation; and recommends that firms in developing economies like Nigeria that desire to renovate their operations for improved value delivery that contributes to economic and social wellbeing of citizens should implement initiatives that streamline their supplier-base, and work with best performing suppliers in their sourcing of essential materials and other operational inputs.

Keywords: Cost reduction, developing economies, supplier optimization, waste reduction

INTRODUCTION

Today's firms are bedeviled with the challenge of conducting business operations in a highly disruptive environment. To overcome this challenge however, firms increasingly realize that they cannot operate as islands. They are instead required to operate as entities in larger business ecosystems (Riquelme-Medina et al., 2021) where they can leverage the knowledge and experience of others through alliances and outsourcing. This view reinforces the argument that nearness and ability to obtain, combine and use resources enables firms to achieve improved competitiveness (Ateke & Nwulu, 2021; Morgan et al., 2009). Competitive advantage is required for firms that want to achieve superior performance results. The key to acquiring competitive edge in the modern business world is embedded in firms' capacity to compete based on ability to reconfigure and refocus new strategic directions (Roman et al., 2012). However, organizational studies literature shows that firms' competitiveness is no longer a function of efficient effectiveness of internal processes alone, but mostly a result of firms' alignment with external suppliers relied upon for essential resources.

Evidence in literature show that strong leadership, innovation, strong bonds with partners and suppliers, technological renovations, and capital investment are effective routes to enterprise competitiveness (Drobyazko et al., 2019; Stoyanova & Angelova, 2018). Although "strong relationship with partners and suppliers" is identified as a driver of competitiveness, the relevance of optimizing suppliers in order to derive maximum benefits from procurement spend and leverage suppliers' competences is less emphasized. The turbulent complex business environment created by rapid advances in technology, increased competition and globalization of markets demonstrates that conventional arms-length transactions and peripheral relationships with multiple suppliers is no longer effective for gaining and maintaining competitiveness for enterprises.

Instead, cultivating, bonding with, and investing in few high performing suppliers with requisite competences and reputation; and then fully focusing on own areas of competitive advantage; and reallocating scarce resources to strengthen core product and market position is the way to go for proactive firms that are keen on organizational renovation and superior performance. The challenge of streamlining the firm's supplier-base to arrive at a few competent suppliers on whom to rely on and spend scarce resources and from whom to derive better value is addressed through supplier optimization.

This paper explores the concept of supplier optimization and pinpoints its relevance to operational efficiency of firms. In the succeeding sections, the paper provides literature on supplier optimization and operational efficiency. Empirical and anecdotal evidence on the nexus between supplier optimization and operational efficiency is also presented. The paper concluded by summarizing the positions of scholars on the link between the variables, made some proposition and suggested directions for future studies. The sections however started with a presentation on the baseline theory upon which the study is premised.

BASELINE THEORY OF THE STUDY

This paper is anchored on goal setting theory (Locke & Latham, 1990) which provides that all human activities are predominated by goal-directedness. A goal is an expected end at which efforts are exerted and to which resources are allocated (Locke et al., 1981). In organizational contexts, groups and teams are spurred to direct their activities toward goal attainment. Goal setting theory provides that superior performance results from difficult, but specific goals. Locke and Latham (2019) contend that goals determine performance levels by influencing over time, the direction of action, degree of effort exerted, and persistence of action.

Individuals discern from very early that they need concentration of attention and effort to accomplish a goal, and that they must keep working hard until the goal is attained (Miles, 2012). Higher goals, strong commitment to reach goals, possession of required resources, and ability and knowledge to achieve goals are essential to increased performance and enhanced competitiveness. In essence, goal setting provides a mechanism by which firms achieve results through strategies that specify clear, challenging tasks with feedback loops, which elicit commitment from individuals, teams or work units.

The argument of goal setting theory is that superior performance results when firms assign goals to individuals or teams (Hollenbeck & Brief, 1987, as cited in Miles, 2012). This suggests that when

goals are assigned, performance expectations that focus individuals or teams' performance emerge. Likewise, high performance ensues when individuals, groups, or teams set goals for themselves, given that the rationale for having a goal was carefully explained by superiors. Goal setting theory further supposes that individuals, groups, or teams with high self-efficacy set higher goals for themselves than those with low self-efficacy; and do not find satisfaction in unchallenging goals or with unimpressive performance levels (Locke & Latham, 2019).

Goal setting theory has found wide application in sports and exercise (Kingston & Wilson, 2009); coaching (Gillham & Weiler, 2013; Weinberg, 2010), and urban climate governance (Hofstad & Hansen, 2021). Locke and Latham (2013) opine that the theory has also been applied in public policy and administration studies, as well as in business and organizational studies. Herein, the theory is adopted as a foundational theory based on its thesis that setting proximal and distal goals enhance performance levels. Hence, Firms can strive to achieve specified challenging goals by employing supplier optimization.

CONCEPT OF SUPPLIER OPTIMIZATION

Buying organization frequently face the challenge of reducing or streamlining the number of active suppliers with whom they transact, and on whom they spend scarce resources; and also to derive better value from the relationship they keep with a few suppliers. Companies have achieved increased understanding that improved competitive standing does not come only from improving internal operations, but also from well-orchestrated and coordinated external suppliers. Olhager and Prajogo (2012) preferred a range of improvement initiatives that have the potential to shape internal and external processes. Supplier optimization is an improvement initiative whose relevance and applicability to different types of firms stands prominent among these initiatives is widely recognized in literature (Li et al., 2017; Olhager & Prajogo, 2012; Chen & Paulraj, 2004). Supplier optimization describes a situation where a firm maintains a limited supplier-base that promises or holds better benefits, and focusing on them to provide quality items and components and dependable deliveries (Chen & Paulraj, 2004).

Van Weele (2017) and Richard (2013, as cited in Chege & Ochiri, 2019) construed supplier optimization as studious efforts of firms to determine the right number of suppliers to keep active; and described it as a process that begins with the determination of the optimal number of suppliers a firm should maintain and then focusing on identifying the incumbents to retain in a given materials or service category. Supplier optimization constitutes an important facet of strategic partnership with suppliers in the firm's value chain; and describes the practice of limiting the firm's supplier-base to a few strategic suppliers that possess the capacity to provide high quality, reliable and dependable service (Li et al., 2017; Chen & Paulraj, 2004).

Reducing the supplier-base to a few carefully selected vendors who can, and are willing to produce and supply high-quality, low-cost components allows the firm to cultivate and nurture mutually satisfying supplier partnerships (Berger et al., 2004, cited in Chege & Ochiri, 2019). Chen and Paulraj (2004) and Narasimhan et al. (2001) suggest that supplier-base optimization enables better market penetration and has beneficial effects on business growth. Literature on supplier optimization suggests that the concept applies, and is relevant to different firms in different industries (Olhager & Prajogo, 2012). This is based on the conviction that every company require reliable vendors that possess high design flexibility and high quality items delivered at short notice and reliable delivery lead times to support their operations (Li et al., 2017).

Supplier-base optimization focuses on identifying the correct mix of vendors with requisite capabilities and developing a supply-base that offers the best overall fit for the company's operational needs (Munyimi et al., 2020). Supplier optimization is an essential procurement practice, and involves carefully evaluating suppliers, and selecting those with suitable capability. The motivation for supplier optimization is to cut purchases from peripheral suppliers while focusing on and increasing purchases from competent high-performing vendors (Olhager& Prajogo, 2012). It requires firms to classify their procurement spends and identify current and prospective suppliers for each spend category; and then consider to: (1) reduce it, (2) increase it, (3) maintain it, (4) maintain the number but alter the mix or (5) expand, rather than reduce the number (Ogden, 2009; Carter & Ogden, 2008). Thus, supplier optimization may not always result to reducing the number of suppliers; but will result in optimizing the supplier-base.

Overall, the essence of supplier optimization according to Otieno and Langat (2019) is to facilitate buying firm's operational performance, which is anchored on productivity improvements based on a robust framework that is resilient and guarantees service deliveries that surpasses customers' expectations. To gain sustained operational distinctiveness and competitiveness, buying firms must evolve strategies that supports, and result in the attainment of vital operational objectives; including cost and waste reduction, flexible production system, timely innovation and quality assurance for products. The realization of these objectives confers superior performance and enhances the agility and resilience of buying firms (Ateke & Nadube, 2017).

CONCEPT OF OPERATIONAL EFFICIENCY

Efficiency in operations relates to optimal resource utilization and cost and waste reduction. Conventionally, efficiency is a productivity domain discourse; and addresses attempts to minimize cost of operations and reduce wastes (Sodhi et al., 2009). By improving efficiency, costs of operations are controlled in order to cause increase in shareholders' returns (Nwokah, 2006). Efficiency thus focuses on improving a system's processes to run on less cost, minimize resource consumption, and reduce wastage, while providing consistent quality of services. Youn et al. (2013) provides that efficiency is essential to firm's success because it simplifies processes, free resources for alternative uses; and promotes growth and profitability.

Efficiency represents the extent to which resource utilization is optimized or resource redundancy is avoided (Bartuševiciene & Šakalyte, 2013). Firms have an ongoing need to optimize cost, quality, labour and other input variables of operations. This suggests that internal processes, structures and strategies are designed and implemented with a focus on achieving objectives with minimal use of resources. In the prevailing difficult economic conditions in most transition economies and changing competitive landscape, operational efficiency is a major concern for firms that focus on delivering customer value, while using as little resources as possible (Chang et al., 2015).

The efficiency of an enterprise is also measured by its ability to produce desired standard with minimal cost. Thus, efficiency is the ability to produce maximum output using minimal amount of input (Abiodun et al., 2022). The concept of efficiency has attracted remarkable attention in literature; as several

studies have been conducted on efficiency in various settings, including service, manufacturing, and mining operations (Abiodun et al., 2022; 2016; Nwokah, 2006).

Abiodun et al. (2022) admits that efficiency is multidimensional, and comprises productive, allocative and economic efficiencies as first tier indicators. To determine economic efficiency, technical efficiency and allocative efficiency are multiplied. At a lower level, indicators of efficiency include cost reduction, reduced order cycle time, waste reduction, optimal resource utilization, energy conservation, etc.

SUPPLIER OPTIMIZATION AND OPERATIONAL EFFICIENCY

Suppliers are the lifeline of a firm's operations. A well-optimized supplier base enhances inward and outward flow of resources, and adds value, reduces risk and promotes collaborative innovation opportunities between the firm and its best performing suppliers (Jha et al., 2018; Massini et al., 2010). Supplier optimization provides the right quantity and quality of needed materials at the right price, and terms; a firm gets the best possible return on investment, and builds strong strategic supplier partnerships that results in a flexible, responsive, efficient and resilient operations that contribute generously to goal attainment and market position strengthening.

Firms pursue a combination of short-term and long-term strategies simultaneously (Planergy (2021). Supplier optimization is a long-term strategy that involves finding ways to improve quality of supplies and performance; and explore ways of refining and optimizing the firm's supplier-base for better future performance. Thus, supplier optimization is concerned with selecting the right number of suppliers, with the right kind of performance, and price to support efficient sourcing strategy that allow firms to manage their procurement spend, and to encourage competition that is in their advantage (Munyimi et al., 2020).

Companies strive to become more efficient and less wasteful in their operations. In line with this goal, supplier optimization also prioritizes cost saving opportunities and value creation; by taking advantage of well-managed supplier relationships (Ogden, 2009). Chege and Ochiri (2019) and Lysons and Gullingham (2013) argues that supplier optimization builds companies' resilience and agility and fosters business continuity and competitive advantage; and insulate firms against economic shake-ups and value-draining problems; as well as improves spend visibility that allows for better financial analysis, forecasting, reporting, and audits (Chege & Ochiri, 2019; Chen & Paulraj, 2004).

Also, supplier optimization encourage intimate relationships, foster and entrench trust and cooperation between buying and selling firms, facilitate knowledge development and sharing, and enable firms identify and solve operational issues early (Ragatz et al., 1997, cited in Li et al., 2017). Thus, supplier optimization when properly and selectively employed enhances responsiveness to customers' needs and drive financial performance (Stanley & Wisner, 2001). Firms also achieve substantial cost savings by minimizing their supplier base and deepening relationships with top-performing suppliers (Guimaraes et al., 2002). Chen et al. (2014) and Li et al. (2017) added that by doing business with a few trusted high performing suppliers, firms avoid problems arising from managing a large supplier-base, working with many sub-efficient suppliers; and also improve their level of competitiveness and performance rating. Thus, supplier optimization passes as a cogent antecedent to competitiveness of firms.

In view of the above submissions the following propositions are made:
P_1: Supplier optimization has the potential to reduce cost operation of firms.
P_2: Supplier optimization has the potential to reduce waste of resources in firms' operations.

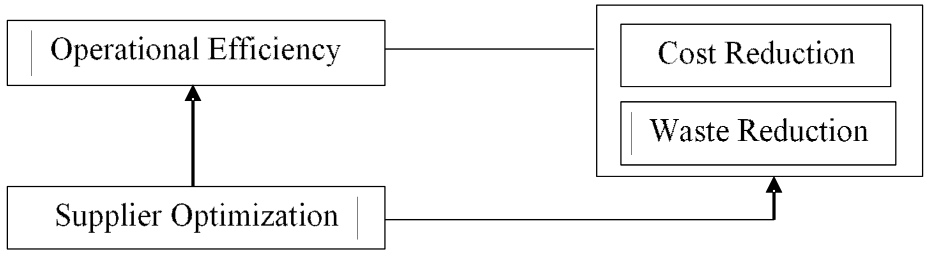

Fig. 1: Conceptual framework of supplier optimization and operational efficiency
Source: Researchers' Conceptualized from Review of Literature (2022).

CONCLUSION AND RECOMMENDATIONS

The operating context of today's firms is highly challenging; and sundry internal and external events frequently disrupt business operations and orchestrate operational and economic misalignment. Nonetheless, firms aspire to operate efficiently with sufficient flexibility and responsiveness; and to obtain market leadership that confer prosperity and survival. They therefore, experiment diverse initiatives with a view to securing uninterrupted supplies of essential materials, components and services required for seamless operations. In this enterprise, firms have realized that they must calibrate their operations to align with those of key suppliers. This is premised on the appreciation that the achievement of business wellness in today's business world is mostly contested through supply networks. Hence, today's firms engage in supplier optimization to streamline procurement spend and strengthen market positions.

This paper explored the concept of supplier optimization as well as its role in the enthronement of operational efficiency. The extensive literature review undertaken, showed that suppliers are essential to the existence of firms and that supplier optimization is associated with performance differentials of firms. It enhances the flow of resources, confers added value, reduces risks and wastes and provides opportunities of collaborative innovation. A streamlined supplier-base informs efficient operations that contribute to the attainment of strong market position and improved profitability. In addition, supplier optimization is linked to quality of supplies, cost saving and value creation opportunities, and minimized risk-exposure. It builds agility, fosters business continuity and bestows competitive edge. Furthermore, supplier optimization insulate firms against economic shake-ups and value-draining problems.

The paper concludes that supplier optimization is a potent driver of operational efficiency in terms of cost and waste reduction, optimal resource utilization and energy conservation; and leads to improved profitability and market leadership. The paper recommends that firms in developing economies like Nigeria that desire to renovate their operations for improved value delivery that contributes to economic and social wellbeing of citizens should institute and implement initiatives that streamlines their supplier-base, and work with only best performing suppliers in their sourcing of essential materials and other operational inputs.

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SALES PROMOTION AND CONSUMER BRAND SWITCHING OF MOBILE NETWORK SERVICES PROVIDERS: EMPIRICAL EVIDENCE FROM OGUN STATE

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ABSTRACT

This study examined the effects of sales promotion on consumer brand switching behaviour among mobile phones subscribers in Ogun State. The specific objectives of this study were to determine the significant relationship between data bonus and brand switching, determine the significant relationship between free airtime and brand switching, to determine the significant relationship between awuf packages and brand switching. The population of this study was the staff of the Federal Polytechnic Ilaro, Ogun State, making a total number of 814 staff. The study used Sekaran sample size standard to determine the sample size of 220 while simple random sampling techniques were adopted. The data collected were analyzed using descriptive tables and percentile, while regression analysis was used to test the hypotheses with the aid of SPSSv20. Findings of this study showed that data bonus, free airtime and awuf packages have significant effect on brand switching with a (sig. level<0.000). The study recommended that mobile phones management should adopt the right sales promotional strategies that will enhance their subscribers to be loyal and not switch away from their brand to other networks.

Keywords: Awuf packages, brand switching, data bonus, free airtime, sales promotion

INTRODUCTION

Sales promotion is commonly viewed as a brand-diminishing strategies, despite their essential purpose of speeding up sales. While consumer sales promotion accounts for a sizable portion of overall marketing spend, it continues to garner interest as a key element of the promotion mix with the goal of boosting sales in the near term. This explains why the majority of businesses in the marketing industry use discounts and special offers to win over customers from their rivals. As a result of globalization, deregulation, rising global and local rivalry, new technology, and e-commerce, the telecom business is facing more stiff competition (Daniel & Bayoh, 2017; Amankwah & Asare, 2019).

Companies are battling with one another for consumers, market share, and ultimately, their own existence. Consumers now expect more in terms of individualization, novelty, quality, and cost (Stark, 2011; Amankwah & Asare, 2019). To stay ahead of the competition in the face of the present market climate, businesses in this sector need to increase their capacity for innovation to meet the needs of consumers (Panayides, 2006; Amankwah & Asare, 2019). Continuous technological advancement and the widespread use of mobile phones in the telecommunications sector across Sub-Saharan Africa, including Ghana, have prompted several mobile network providers to

develop highly creative services and products (Aker & Mbiti, 2010; Amankwah & Asare, 2019). One of the current competitive techniques in the Nigerian telecommunications industry is the use of sales promotion packages to maintain and gain new subscribers.

Companies scramble to get into the telecommunications sector, often regarded as one of the most competitive and lucrative in the corporate world. Since cosmetics are used by so many people all across the world, the telecommunications business deserves more attention from marketers. Similarly high rates of consumption were also seen in the Nigerian market during the past decade. Customers are switching brands more frequently than ever before as a result of the increased number of brands available to them. As a result of the proliferation of online resources, shoppers can easily compare prices, learn about new deals, and compare different service options. As a result, it's reasonable to expect consumers to engage in brand switching behaviour in today's dynamic global market, particularly in the telecommunications industry, where the product cycle is often regarded as being among the shortest of all product categories (Kumar, 2006; Shamila, 2019).

It is true that different types of consumers have different perspectives and reactions to the same set of items or services. In light of the current economic situation and other external variables that affect consumer spending, many people would rather put their money toward necessities such as food, clothing, and shelter than frivolous items like electronics or even entertainment. It is not sufficient for service providers in a growing economy like Nigeria to just create and expect consumers to buy/consume their product or service without also thinking what they would gain or lose as a result. Therefore, advertising to generate business is essential. The GSM industry is struggling with the issue of product differentiation and the prevalence of rival services. Since this is the case, many GSM carriers are now employing sales promotion methods including bonus, free samples, coupons, sweepstakes, Awuf package, and discount in an effort to attract new customers and keep the ones they already have.

It has been observed, however, that some manufacturers have overlooked the significance of the marketing idea, which is a people-oriented philosophy that considers the consumers as the king and main objective of the business's existence, and has instead relied on ineffective sales promotional techniques and tactics. Telecommunications firms in Nigeria are very competitive; therefore, they've resorted to a broad variety of marketing strategies to win clients' money. These systems have put a premium on sales and marketing to stay ahead of the competition. It is against this backdrop that this study sets out to examine the effect of sales promotion on brand switching behaviour among GSM subscribers in Ogun State, Nigeria.

The main objective of this study was to determine the significant relationship between sales promotion and brand switching behaviour of selected mobile phones' subscribers in Ilaro, Ogun State. Derived from the above main objective are the following specific objectives: (1) To determine the significant relationship between data bonus and consumer brand switching behaviour. (2) To determine the significant relationship between free airtime and consumer brand switching behaviour. (3) To determine the significant relationship between Awuf packages and consumer brand switching behavior.

LITERATURE REVIEW

Theoretical Framework

This study is underpinned by the Push and Pull theory and the means-end theory. The push and pull theory holds that all promotional activities of firms may be placed into one of four buckets (such as advertisements, sales promotions, public relations, and personal sales). With a push approach, marketing efforts are focused squarely on the channels that bring in product. A product's distribution chain begins when a company's sales team promotes it to wholesalers, who then promote it to their retailer network, who finally stock the items at a retail location where customers may view and buy them (e.g. end-aisle display of unknown products). In contrast, the pull approach counts on advertising to raise product consciousness and interest, luring customers into a store to make a purchase. Both of these views have merit, and the best strategy is to employ both pull and push strategies to increase demand. Our hypothesis is pertinent to this research because it predicts that breweries who use the aforementioned strategy would not only attract new consumers and convince existing ones to buy more of their goods, but will also keep those customers around over the long haul.

The means-end theory proposed that roduct qualities are viewed as a means to a goal and as value-satisfiers when viewed through the lens of the means-end theory, a basic knowledge structure with associated meanings. The customer value hierarchy describes the means-end theory by outlining the features of items that drive customers to make a purchasing decision. The model embodies the idea of a hierarchy of abstractions, from the most concrete of qualities up to the more abstract level of "consequences," and finally to the most abstract level of "values" (abstracts). Though it appears to be the means-end theory, it is really a hierarchical model that connects values (the goals) to the essential features (the methods) of products or brands (Gutman, 1982; Ndubisi et al., 2019). The primary tenet of this theory is that consumers will choose to buy or use a product or service based on the features of that product, as well as the advantages and value that attribute will bring them. That is to say, it was created so that the motivations behind consumer choices might be better understood. Many industries, including healthcare, telecommunications, and services, have used this notion to inform their advertising and business decisions.

Concept of Sales Promotion

Everything done to get the knowledge out about a product or service to a certain demographic is considered promotional activity. Advertising, public relations, personal selling, sales promotion, exhibits, brochures, demonstrations, etc. all fall under this category (Mbaga, 2016; Ezenyilimba et al., 2019). Promoting a product is crucial since it informs consumers about its presence and benefits, as stated by Kotler and Armstrong (2008) and Ezenyilimba et al. (2019). Advertising lets buyers know that the thing they want is readily available. Sales promotion, as defined by Agbonifoh et al. 2007) and Ezenyilimba, et al. (2019), is a direct enticement that provides additional value or incentive for product to the sales force, distributors, or end customers. It is now clear that the sales force, the intermediaries, and the end user should all be the targets of sales promotion. Samples, coupons, prizes, cash refunds, price bundles, demonstrations, and contests are all examples of consumer-focused sales promotion tools.

Purchasing allowances, free goods, merchandise allowances, cooperative advertising, advertising and display allowances, and dealer sales contests are all examples of trade-focused sales promotion tools (for example bonuses, contests, sales rallies). Sales promotion is defined by Makanda (2009) and Ezenyilimba et al. (2019) as an array of short-term incentives and techniques used to increase consumer or trade *demand* for a product or service. A sales campaign is a set of temporary incentives and instruments meant to increase consumer or business demand for a product or service (Kotler & Keller, 2006; Ezenyilimba *et al*., 2019).

The term "sales promotion" is broad enough to include any additional incentive that producers, merchants, or even charities employ to temporarily alter the perceived price or worth of a brand (Shimp, 2010; Ezenyilimba et al., 2019). Promotions offering discounts of up to 50 percent and other similar schemes are only two of the numerous instances of deals common in today's industries. All of these are incentives supplied by producers or retailers to boost product sales. Incentives can come in a variety of forms, including but not limited to free samples, gifts, discount coupons, demonstrations, shows, and contests. All these actions often encourage clients to purchase more of the product, which boosts sales.

Marketing activities that temporarily enhance a product's value proposition (i.e., providing more for less) in order to increase sales, customer satisfaction, or employee motivation are known as sales promotions (Aderemi, 2013; Ezenyilimba et al., 2019). Consumer promotion, trade promotion, and sales-force promotion are all components of sales promotion. Customer marketing, defined here as "efforts targeted at influencing the trial consumer," will be the primary focus of the research. This is so because they are advertisements made by producers to buyers (Blattberg & Neslin, 2009; Ezenyilimba et al., 2019).

Data bonus

MTN also offers double data bonus. MTN which is regarded as the largest mobile network in Nigeria offers its customers a unique opportunity to get a double data bonus on data subscription plans. This double data bonus is not known to a lot of people. But thankfully, you will get to know all you need to know about it here. Truth be said, this is more like an incentive to get new customers, but who cares. As long as I can enjoy it and you can enjoy it, it doesn't matter why it was introduced. Considering the fact that MTN has the largest network coverage in Nigeria, you will argue that this data bonus will be appreciated more than similar bonus offered by other network providers. The good news is that this is not a cheap and would not require you to do any tweaking or whatever it is people do. To learn how to activate this data bonus, continue reading. Activating or subscribing to the MTN double data plan or MTN Deal Zone on new MTN SIM is actually very easy and straight forward. You will first need to purchase a new MTN SIM, and make sure it is registered.

Activating or subscribing to the MTN double data plan or MTN Deal Zone on new MTN SIM is actually very easy and straight forward. You will first need to purchase a new MTN SIM, and make sure it is registered. Next, you will be required to insert your new MTN SIM into a mobile phone. Within minutes of inserting your new SIM into a mobile phone, you will receive a message telling you that you are eligible to enjoy MTN double data. Once you receive the confirmation message, you can now dial *131# to purchase any data bundle of your choice. That's it you are now enjoying MTN double data bonus. However, there are situation where you wouldn't receive the confirmation message after inserting your new MTN SIM into a mobile. In such case, you may be required to perform some series of action to enjoy the MTN double data bonus. Keep reading to find out the action required (MTN, Nigeria website*: www.mtnonline.com last accessed on August, 2019).*

Free airtime

In order to receive your free 500MB, simply call the code whether you are using the MTN app or not. But some people said they didn't get their fair portion of the free data, so perhaps this is SIM selective. Awuf4U is a promotion that gives consumers a 400% airtime bonus on recharges of N100 or more, or a 275% airtime bonus on recharges of N1 to N99. In the future, ALL MTNN Prepaid and Postpaid customers will have access to the X5 offer. Simply make a recharge using the promo code *888*PIN# or through VTU to take advantage of this deal. It is common practise to carry out such tasks on weekends (MTN, Nigeria website: www.mtnonline.com last accessed on August, 2019).

Awuf Packages

MTN Beta Talk – Customer's Choice: As far as Mtn pricing plans go, I'd say that Beta discussion gets the most attention. It's not surprising to me that readers love it so much. Any recharge over N100 will be eligible for a 250% bonus simply by subscribing to Beta chat. So, for example, if you top off your phone with N100, you'll receive a 250% bonus plus 10 MB of extra data. If you chance to enrol to this plan and make a recharge of less than N100, you will receive a 150% bonus. Calling someone in another country is discouraged unless absolutely necessary. That isn't something that can be accommodated by this strategy. Don't even think about it, am! Seeing as how the bonus will be reduced by 40K/Sec if you go beyond.

MTN Pulse – Best for Internet Surfing: Pulse has low rates for domestic calls. The actual per-minute rate is N6.6. The MTN pulse plan is available to just a select few. As a matter of fact, it's the only plan where you may subscribe to a weekly 1 GB service for only N500. When you add N100 or N200 to your account, you'll receive a 24-hour bonus of 10MB or 20MB, respectively. Night owls, rejoice: only MTN pulse members may take advantage of N500 MB of nighttime surfing for only N25. The MTN pulse plan appears to be the most well-rounded option. You may save money while surfing, then make average-priced phone calls. This MTN package is the nicest I've seen.

MTN Trutalk+: Trutalk is a feature that many MTN customers use in conjunction with one of the company's other popular tariff plans. Customers who wish to make low-cost calls to any network at 11k/second would benefit greatly from this package. When making an international call, though, you may expect to pay around 20k/sec. A daily access fee of N5 is required to join the plan. The first call you make each day will incur this cost.

MTN Xtra Special: When it comes to MTN Tariff Plans, Trutalk is another popular choice among MTN customers. Subscribers who wish to make low-priced calls to any network at 11k/second would benefit greatly from this package. While this may seem fast, keep in mind that the international call rate is only around 20k/sec. A daily subscription cost of N5 is required to use the service. The first call you make each day will incur the daily charge.

MTN Super Saver Plus: It is not advertised that the supersaver plus provides a fixed cost of 15

kobo per second when calling from one MTN number to another MTN number. Calls to non-Mobil networks cost 40 kobo per second. This strategy doesn't seem very intriguing. But here are some perks of the supersaver plus subscription: Indulge in N100-worth of free calls to MTN phones between 02:30 and 4:30 AM (GMT+8), Monday through Friday and all weekend long (MTN, Nigeria website: www.mtnonline.com last accessed on August, 2019).

Brand Switching Behaviour

It is common knowledge that factors such as product presentation, availability, quality, dependability, pricing, promotions, responsiveness, empathy, assurance, tangibility, etc. influence consumer decisions to switch brands (Chaarlas et al., 2012; Shujaat et al., 2015). Customer loyalty is tied to the reliability of a cellular provider's service. Quality customer service, as stressed by Kouser et al. (2012) and Shujaat et al. (2015), leads to increased market share for cellular providers. Innovation, communication, and value-added services are how the telecommunications industry gauges service quality (Makwana et al., 2014; Shujaat et al., 2015). The marketplaces employ a variety of strategies, including extensive advertising, to promote brand switching. Consumers are often persuaded to switch cellular providers due to price considerations.

Finding the obstacles that management faces while trying to comprehend the industry is the most difficult task. Many consumers change brands for purely irrational, utilitarian, or disillusioned reasons. A customer's decision to move service providers is outside of the provider's control, as demonstrated by the stochastic argument. Consumers typically select a local bank or credit union when they relocate. In this method, the random reasons of individuals won't affect the likelihood that they'll buy the same brand again (Lees et al., 2005; Shujaat et al., 2015). Reasons for expectation disconfirmation include brand switching, as stated by Zeithaml (1998) as quoted by Lees et al., (2005) and Shujaat et al., (2015). Here, the buyer assesses the entire process of using the product or service.

The consumer continues down a path based on his or her level of happiness and impression of performance. For example, if a cellular brand is unable to deliver excellent services, and the user could have weak signal, then the customer might migrate towards another network service provider owing to inefficient performance and a negative experience. Value-added services, often known as "non-core services," are widely employed in the telecommunications business.

Technology in the cellular networking sector, such as mms, SMS, and data access, were formerly considered value-added services but have since evolved into core offerings (Lees *et al*., 2005). According to studies cited by Afzal et al. (2013) and Shujaat et al. (2015), customers routinely switch brands in their everyday lives depending on their impressions of the products. Consumers' focus on cost is supported by research from Sathish et al. (2011) and Shujaat et al. (2015). Providing reasonable pricing and quality service is essential if a service provider wants to build brand loyalty among their target audience (Sathish et al., 2011; Shujaat et al., 2015). Consumers care most about network quality, service quality, coverage, and voice clarity, as indicated by Ashraf et al. (2013); Shujaat et al., (2015). However, a network provider's reputation relies heavily on the efforts made by management to cultivate and sustain the brand identities associated with their services (Baohong et al., 2003; Shujaat et al., 2015).

To compete in Pakistan's highly competitive telecommunications market, cellular networking providers there are offering a wide range of discounts and deals. Sales promotions include premium prizes, coupons, etc. Consumers' propensity to swap brands is a primary target of the campaign's advertising messaging. Promotional tools help cellular networking firms win market share and new consumers (Islam & Rima, 2013; Shujaat et al., 2015). According to Kotler (2009) and Shujaat et al. (2015), the firm may reduce the likelihood that a customer would transfer brands by using tactics like offering competitive price and setting themselves apart from the competition. It is true that customers of a certain cellular network brand are more likely to remain with that brand after making a purchase due to the competitive techniques used by that company.

Operationalization of Variables

$Y = f(X)$;

$X = X_1, X_2, X_3$

$Y = \alpha+\beta_1X_1+ \beta_2X_2+\beta_3X_3+e$

Where:

Y = Brand Switching (BS)

α = Autonomous factors

X = Sales Promotion (SP)

X_1 = Data Bonus (DB)

X_2 = Free Airtime (FA)

X_3 = Awuf Packages (AP)

βi = Beta coefficients of the independent variables Xi

e= Error term, which represent other not captured variables influencing brand switching outside the three captured by this work.

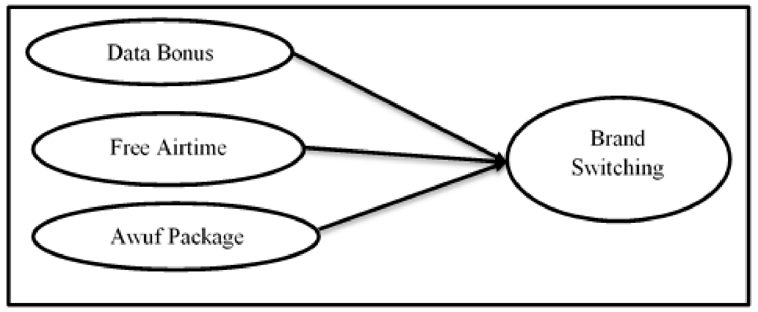

Fig. 1: Conceptual model of sales promotion and consumer brand switching

Empirical Review

Abdul et al. (2022), examined the effect of sales promotion on customer perception of Mobile Telecommunication Network (MTN) Product in Maiduguri Metropolis. In order to gather data from Mobile Telecommunication Network (MTN) subscribers in the Maiduguri Metropolis, a sample of 399 customers was drawn from the total population of 189,814 consumers in the Maiduguri Metropolis as of 2021. Data collected from MTN subscribers in Maiduguri City was analysed using multiple regression with the use of the Statistical Package for the Social Sciences, version 2.0. A strong impact on customer impression of MTN goods was shown to include contests, premiums, and price offers. In example, premium has a highly beneficial impact

(P=0.019) on how consumers see MTN's offerings. In the case of both the competition and the cost, the P value is less than p0.05 (i.e., 0.000). The research found that the deal's influence on customers' opinions of MTN goods in the Maiduguri Metropolitan Area was considerable across all three dimensions of the promotion (contest, premium, and pricing). According to the findings, mobile telecommunication networks in Maiduguri Metropolis should hold contests at regular intervals to increase brand awareness and sales.

Onyango et al. (2017) examined the influence of sales promotion on consumer brand preference for mobile phone services in Kenya. This research used a descriptive survey approach, and a combination of a structured and semi-structured questionnaire was used to compile the necessary information for analysis. Data was collected from mobile phone service customers residing in Nairobi County using multi-stage stratified random sampling. Only 387 of 500 surveys returned with a return percentage of 77.4%. Regression analysis was used to assess the study's hypotheses with F and T-tests, and correlation analysis was performed to determine the strength and direction of the link between the variables. Consumers in Kenya have a strong affinity for specific mobile phone service brands, and the study found that this preference is positively correlated with sales promotion. From the results of this research, it can be deduced that sales advertising has a substantial role in determining which mobile phone service brand consumers choose. According to the research, businesses in the mobile telecommunications services sector need to make better use of sales promotion to raise brand visibility, sway customer perceptions of the quality of their products, and boost sales right away.

Ji and Ha, (2021), investigated on how mobile promotions indirectly influence repurchase intentions, and how the level of promotions moderates the relationship between repurchase intentions and their determinants. The results reveal that three factors (brand attitude, functional quality, and internet reviews) are causally linked to repurchase intent. Although M-promotions often act as a moderator, their effectiveness might vary. The data shows that the association between functional quality and repurchase intentions, as well as that between online reviews and repurchase intentions, are the only ones in which the moderating impact of M-promotions is statistically significant. When functional quality is low and online reviews are favourable, a high M-promotion tends to enhance repurchase intentions.

METHODOLOGY

This study employed a descriptive survey research methodology since it allows for a more in-depth understanding of the research process. There are more than a thousand people working at Federal Polytechnic Ilaro in Ogun State, and all of them were considered potential participants in this study since they utilize at least one sim card from at least two distinct networks (Source: *FPI admin office*). Simple random sampling techniques were adopted since the population is homogeneous and sampling frame is available, a total of 220 participants were selected as the sample size using Sekaran sample size standard to determine the sample size. MTN, Airtel, Glo, Etisalat, and Smile users, together with clients from a fifth GSM provider in Nigeria, made up the sample. Over 85% of all mobile subscribers in the country are with one of the three major networks: MTN, Airtel, or Glo (Pyramid Research, 2010). Information used for this research work was obtained through primary and secondary sources. The primary data obtained for this study are gotten through the use of questionnaires and from FPI website. It provided first-hand data from the customers of GSM industry in Federal Polytechnic Ilaro, Nigeria. The questionnaires are administered to access their view on the personality of different GSM brand in Nigeria. The secondary data regarding this study was obtained from journals and textbooks of different scholars, encyclopedia and other online sources.

The main research instrument for this research work is a structured questionnaire, which has 3 sections (bio-data, sales promotion questions and brand switching questions). The survey included 5-9 questions per construct (5-point Likert scales with 5 points given to strongly agree and 1 point allocated to strongly disagree): brand switching (dependent variable), data bonus, free airtime, and awuf package (independent variables). The questionnaire questions were drawn from a variety of published sources and modified to better address the research questions. In order to assure that the questionnaire would be filled out and returned in a timely manner, the researcher physically distributed and collected each response. Due to this, the vast majority of responses were submitted for the survey. A total of 200 completed questionnaires were returned for analysis, representing 90% response rate.

RESULTS AND DISCUSSION

Table 1: Summary of the Reliability Test

Cronbach's Alpha	*N of Items*	*Scale*
0.890	5	Data Bonus
0.768	5	Free Airtime
0.811	5	Awuf Package
0.725	5	Brand Switching

Source: Researcher's Field Survey, 2022.

Table 1 above revealed the reliability of the questionnaire used for the survey. The Cronbach Alpha values of 0.890, 0.768, 0.811 and 0.725 respectively for a data bonus, free airtime, Awuf package, and brand switching. These values are higher than the acceptable 70%, therefore, the items are reliable.

Table 2: Coefficient table

Variable	***Coefficient***	***T***	***Sig***
Constant	*80.105*	*27.754*	*0.000*
Free Airtime	*1.037*	*13.458*	*0.000*
Awuf	*1.213*	*14.213*	*0.000*
Data Bonus	*0.341*	*13.512*	*0.001*
R = 0.624	*R-Squared = 0.3894*	*Adjusted R-Squared = 0.3671*	
F = 25.364	*Sig. = 0.000*		

Dependent Variable: *Brand Switching*

The result of the analysis as indicated in table 2 shows that in the absence of sales promotion (free airtime, Awuf and Data bonus) the brand switching behaviour of the customers stands at about 10.5%. However, for every unit increase in the free airtime as sales promotion strategy provided Awuf and data remains constant, there is about 3.7 unit increase in the brand switching behaviour with the t-value of 13.458 and the p-value less than the significance value of 5%. Similarly, for every unit increase in Awuf provided free airtime and Data bonus remain constant there is about 21.3% increase in the brand switching behaviour of the customers with t-value of 114.213 and the p-value is less than the 5% significance level. In addition, for every unit increase in data bonus there is about 34.1% increase in the brand switching behaviour among the customers of the mobile network providers with t-value of 13.512 and the p-value less than the 5% significance level. Lastly, about 38.94% variations in the customer switching behaviour could be attributed to the joint effects of the independent variables. Also, the test is sufficient and adequate at relating the dependent and the independent variables with the F-value of 25.364 with p-value less that the 5% level significance level. Hence, we can conclude by accepting the alternative hypotheses that free aitime, Awuf and data bonus have significant effect on data switching behaviour of the customers.

Table 3: Correlations between data bonus and brand switching

		Brand Switching	Data Bonus
Brand Switching	Pearson Correlation	1	.968**
	Sig. (2-tailed)		.000
	N	73	73
Data Bonus	Pearson Correlation	.968**	1
	Sig. (2-tailed)	.000	
	N	73	73

**. Correlation is significant at the 0.01 level (2-tailed).

The result for the Correlation in table 3 shows the significant relationship between data bonus and brand switching in MTN Nigeria. The correlation coefficient of 0.968 shows a strong positive linear relationship between data bonus and brand switching of MTN. The correlation value shows that about 97 percent of variations in data bonus are attributed to brand positioning. However, the result tests the null hypothesis to determine if it is statistically significant. The null hypothesis is rejected if the P value is ≤ 0.01. From the result, the model in this table is statistically significant (sig=.000) and hence the null hypothesis should be rejected and alternate hypothesis accepted. This indicates that data bonus has significant relationship on brand switching. If MTN continues to give data bonuses to their customers, they will not be able to switch from MTN to other brands. The above results of 0.968 indicates that data bonus have positive relationship on brand switching. It indicates that one standard deviation change in data bonus produces 97% changes in how customer will switch from MTN to other networks. Therefore, the results concluded that data bonus have significant relationship on brand switching.

Table 4: Correlations between free airtime and brand switching

		Brand Switching	Free Airtime
Brand Switching	Pearson Correlation	1	.828**
	Sig. (2-tailed)		.000
	N	73	73
Free Airtime	Pearson Correlation	.828**	1
	Sig. (2-tailed)	.000	
	N	73	73

**. Correlation is significant at the 0.01 level (2-tailed).

The result for the Correlation in table 4 shows the significant relationship between free airtime bonus and brand switching in MTN Nigeria. The correlation coefficient of 0.968 shows a strong positive linear relationship between free airtime bonus and brand switching of MTN. The correlation value shows that about 97 percent of variations in free airtime bonus are attributed to brand positioning. However, the result tests the null hypothesis to determine if it is statistically significant. The null hypothesis is rejected if the P value is ≤ 0.01. From the result, the model in this table is statistically significant (sig=.000) and hence the null hypothesis should be rejected and alternate hypothesis accepted. This indicates that data bonus has significant relationship on brand switching. If MTN continues to give free airtime bonuses to their customers, they will not be able to switch from MTN to other brands. The above results of 0.968 indicates that free airtime bonus have positive relationship on brand switching. It indicates that one standard deviation change in free airtime bonus produces 97% changes in how customer will switch from MTN to other networks. Therefore, the results concluded that free airtime bonus have significant relationship on brand switching.

Table 5: Correlations between free airtime and brand switching

		Brand Switching	Awuf Package
Brand Switching	Pearson Correlation	1	.925**
	Sig. (2-tailed)		.000
	N	73	73
Awuf Package	Pearson Correlation	.925**	1
	Sig. (2-tailed)	.000	
	N	73	73

*. Correlation is significant at the 0.01 level (2-tailed).

The result for the Correlation in table 5 shows the significant relationship between awuf packages and brand switching in MTN Nigeria. The correlation coefficient of 0.968 shows a strong positive linear relationship between awuf packages and brand switching of MTN. The correlation value shows that about 97 percent of variations in awuf packages are attributed to brand positioning. However, the result tests the null hypothesis to determine if it is statistically significant. The null hypothesis is rejected if the P value is ≤ 0.01. From the result, the model in this table is statistically significant (sig=.000) and hence the null hypothesis should be rejected and alternate hypothesis

accepted. This indicates that awuf packages have significant relationship on brand switching. If MTN continues to give awuf packages to their customers, they will not be able to switch from MTN to other brands. The above results of 0.968 indicate that awuf packages have positive relationship on brand switching. It indicates that one standard deviation change in awuf packages produces 97% changes in how customer will switch from MTN to other networks.

CONCLUSION AND RECOMMENDATIONS

In conclusion, businesses of all sizes and scopes, from individual entrepreneurs to multinational conglomerates, are investing in sales marketing. The Nigerian telecommunications market is not an exception. With more and more businesses believing that sales promotion is essential and plays a vital role in the customer choice making process, sales promotion has expanded dramatically in recent years across the worldwide and local telecommunication sectors. This exponential increase in advertising can be attributed to a few key factors. First, customers now consider sales promotion a legitimate factor in making purchases. It encourages indecisive people to make a choice by boosting the benefits of that brand. The second factor contributing to the expansion of sales promotion is the growing emphasis that firms place on short-term success. Additionally, product managers frequently use sales promotion as a chance to temporarily set their brand apart from the competition. Third, with the development of computing technology, businesses are able to acquire immediate reports on the effectiveness of advertisements. In a few of days, you may learn things like the coupon redemption rate or the volume of sales. Finally, the growth and influence of merchants themselves have contributed to a rise in the prevalence of sales promotion.

The study revealed that MTN Nigeria has attractive data bundles that are catchy in the eyes of the subscribers. This enables them to get different data package that has bonuses; such as social surfing; YouTube night life, eskimi, Skype etc. On free airtime bonuses the study revealed that MTN Nigeria has a good airtime bonus that is very cheap. The study revealed that awuf packages have significant relationship with brand switching. It is therefore concluded that sales promotion: data bonus, free airtime bonus and awuf packages has significant relationship on brand switching.

In accordance with the findings of this study, this section outlined some recommendations in order to prevent subscribers from brand switching in MTN Nigeria:

a) MTN management should adopt the right sales promotional strategies that will enhance their subscribers to be loyal and not switch away from their brand to other networks.
b) Telecommunication companies needs to focus towards their data bonuses, free airtime bonus, and awuf packages.
c) MTN management should make their data packages more attractive in a way to solidify the loyalty of their brand among their subscribers.
d) For Mobile Telephone Network (MTN) Nigeria to retain its current clientele and attract new ones, it must provide widespread training for its customer service representatives on how to handle customer complaints in a way that builds brand loyalty.
e) Finally, the National Communications Commission (NCC) should take a more proactive role in its regulatory monitoring of the country's telecommunications industry to raise standards for all mobile phones in Nigeria.

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GLOBAL SUPPLY CHAINS: IMPROVING ACCESS TO WORKING CAPITAL THROUGH DEEP-TIER SUPPLY CHAIN FINANCE

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ABSTRACT

The aims of this paper are to; examine the opportunities that DTSCF and its underlying technology can offer towards facilitating global supply chains access to working capital finance; a sample of models that have been successfully implemented, and the challenges and solutions to its global expansion. The research methodology adopted is narrative analysis. The findings of this study show that; despite its clear benefits, DTSCF remains relatively nascent in its development and use, with limited adoption outside a handful of jurisdictions, however, it presents a compelling solution to fill the financing gap for SMEs; there is an urgent need to shore up the stability, resilience, transparency, and sustainability of global supply chains especially access to working capital finance; key players of the economy, particularly the SMEs, are critical to development and job creation and should be given due attention. In view of these findings, it is recommended that: (i) the workings of these global supply chains must become increasingly transparent and visible for interventions to be effective. (ii) DTSCF presents an opportunity to harness the industry's knowledge, awareness, and capacity to address such needs and achieve significant development. Hence, more awareness, familiarity and clarity around DTSCF models should to be addressed for the model to scale (iii) more industry players, including anchor corporates (buyers), suppliers, financiers, DTSCF, FinTechs, multilateral development institutions, governments, and policy makers should join efforts to accelerate the adoption of DTSCF. Together, they can effectively address the key inhibitors to broader DTSCF adoption; unlock financing for SMEs throughout any global supply. Finally, Legal systems need to be made more accepting of DTSCF and incentives offered to speed its take-up.

Keywords: Deep-tier supply chain finance, global supply chain, working capital, SMEs

INTRODUCTION

Financing is an important lever used to promote stability and resilience in global supply chains. This is because it supports working capital requirements of buyers and suppliers. Shoring up the stability, resilience, traceability, transparency, and sustainability of global supply chains entails improving the position of small and medium-sized enterprises' (SMEs) (which often operate in the lower tiers of supply chain) access to working capital finance. Despite their significant, widely recognized economic contribution, SMEs are poorly served by existing processes. Often struggling to access support mechanisms especially finance, SMEs suffer global and regional shocks more acutely than larger suppliers (Aikor & Gbande, 2018).

Unfortunately, SMEs continue to struggle, particularly with access to financing. Often deemed a higher risk by traditional lenders, SMEs are underserved by existing trade finance providers and existing products. Even if SMEs find these products and learn to navigate application processes and the development of "bankable proposals" financing options are offered at prohibitive rates determined by credit, risk, and lending practices that are not best suited to serve SME clients. Consequently, the deeper tiers of supply chains are often excluded from finance. The lack of ability to obtain finance makes lower-tier SME suppliers particularly vulnerable to shocks (Global Supply Chain Finance Forum, 2016). This ultimately results in lower economic growth and fewer jobs, especially in developing countries; a reality that would not be as harsh if SMEs could access sufficient financing. Deep-tier supply chain finance (DTSCF) therefore presents a compelling solution to fill financing gaps of SMEs, while penetration into the deeper tiers of global supply chains can assist in meeting ESG and sustainability goals. Hence, the linkages associated to amplified recent shocks can be used to the advantage of supply chains and, by extension, to the benefit of the global economic system.

DTSCF is a financial solution, which leverages business relationships within supply chains that link back to a "corporate anchor," unlocking working capital to make financing accessible for suppliers throughout the ecosystem, not just those in the first tier that have access to funding (ADB, 2022). In other words, Deep-tier financing represents an opportunity for them to tap into the SME market by removing many of the structural hurdles they face today. This allows them to extend their reach deeper into supply chains, creating new opportunities to service a new tranche of companies and open up a brand-new revenue stream. Deeper-tier suppliers operate within the ecosystems of large anchor corporates with strong credit ratings and robust borrowing capacity.

At its heart, deep-tier financing is a simple concept. It's about leveraging business relationships to unlock access to cheap finance for every supplier, not just the first tier. That means taking those first-tier supplier financing options and making them available to tier two, three and four sellers. DTSF is just like supply chain finance, but with one key difference; supply chain finance at the moment only benefits the global 2000 and a fraction of their tier-one suppliers. In contrast, deep-tier financing seeks to make financing available to the whole ecosystem of suppliers.

Supply chain finance promotes stability and resilience in supply chains by supporting working capital needs of buyers and suppliers. However, SMEs continue to struggle with access to financing. The companies that fall out of the tier-one bracket do not have access to the same financial opportunities because lenders are unwilling to enroll these sellers onto financing programs, because they lack visibility into the companies, which leads to increased financial risk that makes financing just not worth it. But sellers deep in supply chains are often desperate to access cash. To get it, they have limited options: they are either forced to wait for 60, 90, or 120 days for payment or they have to turn to expensive forms of financing to plug their working capital gaps, which can often come at very high costs. They are stuck between a rock and a hard place.

Analysis by the Asian Development Bank (ADB) shows that the global trade financing gap - the difference between companies' demand for financing to support their import and/or export activities and the sum available from lenders, grew to $1.7 trillion in 2020 from $1.5 trillion in 2018. This estimate for the global gap likely increased to at least $2 trillion in the following years due to heightened economic and financial uncertainties (ADB, 2022). This is felt most acutely by SME suppliers, which represent the bulk of financing rejections and the global supply chain. Compared to larger corporations, SMEs face considerably more challenges to accessing financing because of a lack of demonstrable credit worthiness, an inability to offer collateral, and low financial and technological literacy, among other reasons.

DTSCF therefore presents a compelling solution to fill the financing gap for SMEs, while penetration into the deeper tiers of global supply chains. Consequently, a deeper understanding of supply chains through greater visibility of participants, processes, and behaviors therefore becomes very imperative. The aim of this paper is to examine the opportunities that DTSCF and its underlying technology can offer towards facilitating global supply chains access to working

capital finance, a sample of models that have been successfully implemented, and the challenges and solutions to its global expansion. The research methodology adopted is narrative analysis; narrative analysis is a form of qualitative research in which the researcher focuses on a topic and analyzes the data collected from case studies, surveys, observations or other similar methods. The researchers write their findings, then review and analyze them.

LITERATURE REVIEW

Concept of Working Capital

Working capital is an important indicator of efficiency in a supply chain. It is defined as current assets less current liabilities. Working capital significantly affects supply chains, because it has major role in company operations. It also has a positive relationship with supply chain finance; provides innovative solutions for the working capital gap faced by growing companies. It can provide potentials in businesses by accelerating cash flows, providing finance, reducing the end-to-end trade cycle, improving financial ratios, and mitigating counterparty and other risks in cross-border transactions. A better working capital management has significant influence on supply chain activities or operations from purchase of raw materials through production to cash from end consumer. A company's key focus is to make profits and thereby enhance the value of the enterprise. One area that has been neglected which has aroused a lot of interest these days the management of a company's working capital.

A company generally has two types of capital; fixed capital and working capital. The effective management of these assets make or mar the life of the company. Working capital is made up of two parts; current asset and current liabilities. Working capital management is therefore concerned with the administration of the company's current accounts; current assets and current liabilities. For example, current assets are: Debtors, bills receivables, prepaid expenses, cash at hand and in the bank, short-term marketable securities, inventories and accrued incomes. While current assets are: creditors, bills payable, outstanding expenses, bank overdraft, short term liabilities and provision for taxation; these are taken as the basis of company in maintaining her operations. Working capital therefore refers to the funds and assets used in the production of a company's goods and services. In other term, working capital reflects the life of a business; the full process of operating cycle of the business may also be referred to as working capital operating cycle. It is represented in form of a formula thus:
Working Capital = Current Assets -Current Liabilities

Concept of Supply Chain

Supply chain is a business cycle made of manufacturer, suppliers, transporters, warehouses, wholesalers, retailers, other intermediaries and customers (final consumer) as partners or players. In a typical consumer goods market, any product traded evolve from raw material to finished products through a series of successive transactions on the business-to-business market. According to Chopra and Meindl (2007) "a supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. Within each organization, such as a manufacturer, the supply chain includes all functions involved in receiving and filling a customer request. These functions include, but are not limited to, new product development, marketing, operations, distribution, finance, and customer service." The above definition aligns with Chen and Paulraj (2004), where they stated that a typical supply chain is a network of materials, information, and services processing links with the characteristics of supply, transformation and demand. However, Chen and Paulraj (2004) definition include information which is an invisible asset of a successful supply chain. For the purpose of this paper, global supply chains and SMEs are used interchangeably, since SMEs activities and presence dominate the heart of global supply chains.

Many global supply chains share the characteristic of large, powerful brands supplied by multiple tiers of suppliers, many of whom are small and medium-sized enterprises (SMEs) that are capital strapped and lack access to capital markets. Those SMEs are vulnerable to disruptions of all sorts including production stoppage due to quality issues, input material/labor shortages, and natural disasters. Their ability to recover from those disruptions and provide reliable supply to downstream buyers is largely dependent on the resources they can draw on, i.e., their working capital. A buyer typically only has a direct relationship with the tier-1 supplier and has limited visibility (visibility barrier) of the deep tiers in its supply chain (Mohammad, 2014).

Due to the lack of visibility into deep-tier supply chains and related transactions, downstream buyers have limited information about the financial status of deep-tier suppliers and thus cannot optimally devise cross-tier direct financing strategies. Therefore, downstream buyer-initiated supply chain financing (SCF) schemes are limited to helping immediate upstream suppliers and the buyers at best hope their tier-1 suppliers can in turn help the tier-2 suppliers through SCF. Successful implementation of deep-tier SCF requires the collaboration of many parties in the supply chain. Such multilateral collaboration has been challenging because:

(i) Tier-1 suppliers are reluctant to share their upstream suppliers' information with downstream buyers for fear of eroding their margins;

(ii)(ii) tier-2 suppliers are not comfortable sharing sensitive financial information (e.g., the bank account balance in our setting) due to concerns over both security and privacy, as well as equity issues in data monetization

The Role of Financial Technology (FinTech) in Supply Chains

Banks and traditional financiers have struggled to meet the rising demand for supply chain finance (SCF), including the payables finance variation. A fundamental issue many financiers face is the lack of cost-effective infrastructure, which presents a critical barrier to carrying out SCF at scale. The 2020 Global Survey on Trade Finance by the International Chamber of Commerce identified the lack of a dedicated SCF platform as the major challenge banks face in delivering SCF, with 39% of banks reporting this as a primary area of concern. The survey found that 64% of global banks currently offer SCF and the majority that do (65%) have developed a proprietary system to service their SCF offering.

In recent years, a cohort of financial technology (fintech) providers focusing on SCF have emerged. They utilized technology to help bridge the financing gap by creating platforms, which can effectively service suppliers and buyers on a global scale. There are currently around 255 FinTechs, which have developed a dedicated SCF offering, often linking their SCF offering into a broader trade digitization platform. These companies have attracted $5.6 billion in cumulative equity financing since 2000, and they continue to grow. However, these FinTechs often lack the balance sheet to act as lenders. Instead, they typically partner with financiers, often connecting with multiple financiers, to reduce risk and dependency on a single source of funding.

Concept of Deep-Tier Supply Chain Finance (DTSCF)

DTSCF was first used in China around 2016 when the peer-to-peer lending crisis sparked a strong regulatory push for inclusive finance. One of the longest established DTSCF programs in China is the JDH platform, operated by JDH Information Tech (Zhuhai) Co. Ltd. The JDH platform was launched in 2015 and is based on the transfer of JinBills or "golden bills." Their model is reportedly penetrating as deep as level 9 suppliers, with more than 12,000 companies registered by the end of 2018; more than 9,000 of them are SMEs. The JDH platform facilitates an average of CNY520,000 (around $77,600) in early payment, with the smallest amount financed being CNY100 (around $14.9) (Sung, et. al, 2019). A major milestone in the adoption of the model was the legal recognition of the JinBill, with a PRC court ruling that accepting a JinBill is a form of debt discharge.

In May 2021, the JDH platform surpassed CNY500 billion (around $74.6 billion) in trading volume and celebrated 6 years of successful operation. Banks have also initiated their own DTSCF programs within the PRC, in most cases, engaging FinTechs as technology partners. In 2019, DBS launched a blockchain-based DTSCF program for SMEs in the PRC, known as Rong-E Lian. Developed in partnership with a blockchain-based logistics platform operating in the PRC, Rong-E Lian was implemented to offer DTSCF to more than 1,000 suppliers in the logistic platforms supply chain. The platform was connected to the digital onboarding service of DBS through an application programming interface (API) so that suppliers can automatically verify credentials via the platform, reducing onboarding time by 75% and increasing supplier acquisition sixfold.

Standard Chartered has also investigated the potential of DTSCF within the PRC, in partnership with Linklogis. In August 2019, they completed their first DTSCF transaction for suppliers of Digital Guangdong, a PRC-based digital operations platform for the government. In January 2020, Standard Chartered made a strategic investment into Linklogis to support their DTSCF proposition.

Following this initial success, Standard Chartered and Linklogis jointly established Olea in August 2021, a digital blockchain-enabled trade finance origination and distribution platform headquartered in Singapore. Olea connects investors and suppliers across the globe, offering suppliers working capital based on anchor–supplier relationships and allowing investors to access trade finance as a new asset class. Olea recently expanded their offering across borders, completing their first digital cross-border receivables finance transaction in June 2022 for SUMEC, a state-owned enterprise and key member of China National Machinery Industry Corporation. In May 2022, Olea also partnered with Vayana Network to offer cross-border trade finance solutions in India.

Deep-Tier supply chain finance (DTSCF) is a financial solution, which leverages business relationships within the supply chain that link back to a "corporate anchor," unlocking working capital to make financing accessible for suppliers throughout the ecosystem, not just those in the first tier that have access to funding. (ADB, 2022). In other words, Deep-tier financing represents an opportunity for them to tap into the SME market by removing many of the structural hurdles they face today. This allows them to extend their reach deeper into supply chains, creating new opportunities to service a new tranche of companies and open up a brand-new revenue stream. Deeper-tier suppliers operate within the ecosystems of large anchor corporates with strong credit ratings and robust borrowing capacity.

At its heart, deep-tier financing is a simple concept. It's about leveraging business relationships to unlock access to cheap finance for every supplier, not just the first tier. That means taking those first-tier supplier financing options and making them available to tier two, three and four sellers. DTSF is just like supply chain finance, but with one key difference; supply chain finance at the moment only benefits the global 2000 and a fraction of their tier-one suppliers. In contrast, deep-tier financing seeks to make financing available to the whole ecosystem of suppliers (Bhalla, 2021).

The innovation in DTSCF is that it extends financing beyond the top-tier, typically larger suppliers, down the chain to small suppliers in tiers 2, 3, 4, and so on. DTSCF enables large corporates to make their supply chains more secure by improving access to working capital for downstream suppliers while enhancing transparency and visibility over the entire value chain. Improved liquidity coupled with lower financing costs linked to transparency, traceability, and the consequent lower risk assessment by lenders can lower the total cost of goods. Banks initiating DTSCF programs can also access a new customer pool at lower risk by leveraging the business relationships and the anchor corporate's credit profile while working toward social and environmental goals.

DTSCF evolved from a technique referred to as payables finance (also called buyer-centric supply chain finance (SCF), or reverse factoring), which has demonstrated clear value in the financing of trade across supply chains. DTSCF extends those familiar tools deeper into supply chains than was commonly done in the past (Botta, 2020). Platform-based DTSCF also lowers the operational cost of financing individual early payment requests, and it reduces fraud and nonperformance risk by tracing interactions and the distribution of funds. The use of technology in global trade is growing and increasingly being supported by regulations, which help banks and/or financiers to effectively service DTSCF and digitally fulfill Know Your Customer (KYC) obligations through the use of technology.

METHODOLOGY

The methodology adopted for this study is narrative analysis. Narrative analysis is a form of qualitative research in which the researcher focuses on a topic and analyzes the data collected from case studies, surveys, observations or other similar methods. Use is made of only secondary sources of data.

ANALYTICAL DISCUSSION

According to the 2020 McKinsey Global Payments Report, conceptually speaking, the potential market for SCF encompasses every invoice and receipt issued by corporates; up to $17 trillion globally (Botta, 2020). Global SCF volumes have grown from $330 billion in 2015 to $1.8 trillion in 2021, with 2021 seeing a 38% growth on 2020 volumes (BCR, 2022) The Americas have traditionally claimed the largest share of financing volume each year; however, 2021 saw the most substantial annual growth in Asia (at 43%) and Africa (at 40%). Despite its growth in recent years, SCF's impact on the financing gap is limited as it fails to reach significantly beyond large Tier-1 suppliers in most supply chains. Supply chains are deep, complex, global networks, often involving thousands of commercial relationships, with the Tier-1 supplier relying on SMEs in several lower tiers to deliver a finished good to the end buyer (Ortiz, 2022). Hence DTSCF adoption became imperative.

DTSCF has the defining feature of channeling financing to deeper tiers in the supply chain, evolving on the traditional SCF (payables finance) model by leveraging the anchor's credit profile and integrating a mechanism to distribute financing to the lower tiers. This mechanism differs between DTSCF models, but a commonality is that solutions typically adopt a platform-based approach, digitally connecting all participants. According to United Nations Conference on Trade and Development (2022) aligning with ADB (2022), this approach solves several critical issues:

(i) It gives anchor corporates an avenue to connect with and to potentially gain visibility over their suppliers down the supply chain. This is of particular importance as global buyers tend to only interact directly with their Tier-1 suppliers and thus rarely have a clear view of deeper parts of their supply chain. Lower-tier suppliers requesting financing can be referred to the platform by higher-tier suppliers, be onboarded digitally, and access financing in a relatively short period of time.

(ii) The platform produces transparency in the flow of lent capital. DTSCF platforms track the flow of capital throughout the supply chain, from request to delivery of capital to the original requester. This transparency acts as further security for the anchor corporate and the financier, and a barrier to certain types of fraud, such as duplicate invoice financing.

(iii) There is a compounding benefit in using DTSCF platforms. Using the platform generates data around the credit risk of onboarded suppliers and buyers, therefore increasing the value of the model from a risk assessment perspective.

(iv) The platform approach can greatly reduce operational costs and the risk of error. DTSCF models have not been set up to solely benefit suppliers in the lower tiers. In fact, the anchor corporate (buyer) and financier in the model stand to reap substantial benefits by participating in or enabling this form of financing. Suppliers stabilize their cash flow through improved access to financing at a favorable rate. The anchor corporate can relieve financial pressure on suppliers and increase the visibility of their supply chain, presenting an opportunity to improve and report on business operations.

(v) The buyer can also leverage such structures and their technology platforms to enhance its own working capital position, and in doing so, assure the robustness of its supply chain and its related production and delivery capability. From the bank and/or financier perspective, there is a major opportunity to expand their client base; by becoming a strategic partner in global supply chains, they can extend their reach and revenues.

(vi) Platform-based DTSCF also lowers the operational cost of financing individual early payment requests, and it reduces fraud and nonperformance risk by tracing interactions and the distribution of funds. The use of technology in global trade is growing and increasingly being supported by regulations, which help banks and/or financiers to effectively service DTSCF and digitally fulfill KYC obligations. There is a substantial opportunity for all participants to contribute and track success in managing their sustainability, commitments and responsibilities throughout the supply chain.

(vii) Suppliers can assure ongoing access to supply chains and buyer clients by demonstrating their own sustainability-aligned behaviors. This is increasingly important as more and more buyers find themselves held to account by consumers, investors, and regulators, for the behaviors of their entire supply chain on sustainability matters.

The benefits for sellers through the supply chain are clear. But deep-tier financing isn't just a one-way street: large buyers at the top of a supply chain benefit as well. For one, it gives them the opportunity to optimize working capital in exactly the same way that supplier finance does today. But the impact will be even greater given that all suppliers in the supply chain can potentially enroll in the program.

As more suppliers able to access cheap finance buyers can build more resilient supply chains. As we explored earlier, supply chains are complex ecosystems. They're comprised of companies of all shapes and sizes, each with their own unique financial position. And they're constantly evolving, especially in these unstable times. So, while a company's supplier ecosystem may be healthy today it doesn't mean it will be tomorrow. Giving all suppliers access to finance is the best way to mitigate any risk if its suppliers are struggling for cash and causing issues in your supply chain. Deep-tier financing can also help companies meet their corporate social responsibility objectives. Companies can link their finance rates directly to a supplier's sustainability and ethical practices. That way they can reward those that meet certain standards and use finance as a way to promote sustainability through their supply chain.

Finally, Deep-tier financing represents an opportunity for funders or financiers to tap into the SME market by removing many of the structural hurdles they face today. This allows them to extend their reach deeper into supply chains, creating new opportunities to service a new tranche of companies and open up a brand-new revenue stream.

Deep-Tier Supply Chain Finance Successes and challenges

The success of established models in the PRC illustrates the potential for DTSCF. Large corporates are also initiating their own DTSCF solutions in chains is key to their long-term success. Cross-border application of DTSCF is beginning to emerge; a recent example is an initiative between Citi and Stenn. In March 2022, Citigroup partnered with Stenn, a global fintech focused on SME financing in global trade, to include deep-tier supply chain financing as part of its global trade payables finance product suite. Leveraging Stenn's experience in onboarding and financing suppliers in 74 countries, the partnership aims to offer DTSCF across global supply chains.
However, to effectively service SME suppliers and address the trade finance gap, DTSCF models must be able to scale globally. Scaling challenges include differences in regulations, trade structures, and digital penetration across jurisdictions. Even so, in recent years, some fintechs have expanded DTSCF across borders. A good example is the models of banco by RABC Group, Skuchain, and KashBanc by KashLab. These models have been selected to enable a comparison of different approaches to implementing DTSCF across borders.

Table 1: A comparison of FinTechs' Approach to Global Expansion of Deep-Tier Supply Chain Finance Platforms

Model	Banco	Skuchain	KashBanc
Foundation of Financing	An Irrevocable Payment Undertaking (IPU)a is split and transferred between suppliers via the platform.	A Distributed Ledger Payment Commitment (DLPC)a is established between the buyer and tier-. supplier, which is not transferred or split.	Digital Promissory Note (DPN)a is split and transferred between suppliers via the platform.
Technology	Blockchain based – This views blockchains ability to improve transparency and traceability as critical to the platform.	Blockchain based – This views blockchain's ability to improve transparency and traceability as critical to the platform.	Not blockchain based – These views contrasting regulations/standards and supplier reluctance prohibitive to adoption.
Bank/Financier Engagement	Financier runs white-labeled platform in the People's Republic of China (PRC). Outside the PRC, banco operates a standalone platform with financier partners	Offered as a standalone platform with financier partners.	Financier runs a white-labeled platform, with each platform having one financier.
Legal	Contract law – The financing method is governed by the terms and conditions of the PU, which is signed by the financier, the anchor buyer, and the tier-. supplier	Requires uptake of the Model Law on Electronic Transferable Records for DLPC to be recognized as a standalone legally binding negotiable instrument across jurisdictions.	Contract law – The financing method is governed by the terms and conditions of an agreement signed by the financier with the buyer and tier-. separately.

Source: Asian Development Bank; BCG FinTech Control Tower; banco platform by RABC Group; Skuchain; and KashBanc by KashLab.

A common feature of all these models is that they adopt a platform-based approach, digitally connecting all parties to ensure DTSCF is both scalable and accessible. However, the way these Fintechs implement their solution is quite different. The models vary in four ways:

(i) the technology model pivots on whether blockchain is critical,
(ii) the legal models differ on whether the financing method must be governed beyond contract law,
(iii) the financial mechanism diverges on whether digital payment obligations need to be split and transferred, and
(iv) the engagement model switches between white-labeling platforms for banks and/or financiers and operating a stand-alone platform. The table below highlights those differences, and the following section will break down these models in detail.

Several other DTSCF fintech solutions exist, with some of the more established DTSCF Fintechs exploring cross-border expansion. The DTSCF fintech ecosystem is evolving quickly, and new entrants are establishing their model in markets beyond the PRC.

CHALLENGES

There are key considerations from each stakeholder that currently inhibit the adoption of DTSCF and apply across:

i) Scalability: inability to facilitate the widespread adoption of DTSCF, hence, making scaling DTSCF a difficult challenge to solve. But an effective solution requires a clear understanding of DTSCF benefits and collaboration among governments, central banks, banks, anchor corporates, and Fintechs.

ii) Differences in jurisdictions: Certain aspects are already being addressed within jurisdictions, which have proven to increase uptake of DTSCF, but appropriately tailored incentives need to be established across jurisdictions, given the significant variance in political, regulatory, and legal authorities at play, and the significant differences in commercial environments. Fintechs are also tailoring their models to address some of the pain points from suppliers. Skuchain, for example, integrates transfer the Financing Method (the Tiering Method) may also have specific legislation governing it, which can be used to benefit DTSCF.

iii) KYC requirements: These options, to a greater or lesser extent, mitigate the KYC requirements imposed on financiers, depending on the level of interaction between the financier and the payees (assuming that the financier is obliged to comply with these regulations).

iv) Financing Method: There is also interplay with the approach to the Financing Method, with consideration such as whether each transfer down the tier relates to an individual payment instrument or a transfer of part of a shared instrument. Blockchain may also be used to solve issues associated with transfer and tracking of ownership.

v) In other contexts, platforms have become insolvent. For successful DTSCF, the authors suggest conducting an analysis of the position of suppliers (and the buyer and financier, as may be applicable) on insolvency of the financier, the buyer, and the platform itself.

vi) Binding the parties: Practical considerations arise on how to bind all parties with related legal considerations for ensuring enforceable obligations and dispute resolution mechanisms. There is typically no single master agreement acting as the rule book for all parties within a specific structure, although a certain level of common terminology is typical.

vii) The nature of supply chains is inherently international. For DTSCF structures to achieve optimal scale, they need to allow the financier, the platform, the buyer, and the tiers of suppliers to be in different jurisdictions. While many DTSCF structures purport to be jurisdiction-agnostic (and not dependent on any electronic transaction act or specific legislation over and above that used by the applicable banking industry).

In order to overcome these challenges, the following actions are recommended as a possible solution to the issues affecting the delivering of a successful DTSCF globally:

i) Expanding the market: The DTSCF industry is nascent but brings clear benefits. Effectively expanding the DTSCF market will require two broad efforts: multilateral support, and legislative expansion and/or clarification. Multilateral development banks (MDBs), such as ADB, have a key role in supporting such structures through risk sharing and/or funding the financier (typically through unfunded or funded risk participations) and, therefore, sharing buyer risk to support the financing to suppliers. MDBs' SCF programs will need to extend support to DTSCF.

ii) Uniform Legal structure: To date, DTSCF does not exhibit a single legal structure, framework, or approach, either within or across jurisdictions. The solution may lie in contract law, which is broadly similar globally. The success of the Uniform Customs and Practice for Documentary Credits, including dealing with different parties.

iii) Improve market awareness: A crucial issue to overcome is the general lack of market awareness. DTSCF is still nascent outside of the PRC, making it difficult for fintech solutions to gain traction. Business owners need clear understanding of the nature of DTSCF products and how to access them. Banks need to be made aware of DTSCF successes and how to initiate their own programs. Improving market awareness is particularly important to SME suppliers. Poor experience in access to financing has resulted in low levels of engagement. Lengthy credit decision-making period, high rejection rates, and difficulties in meeting documentary requirements result in SMEs' reluctance to engage with financing. In many cases, these barriers mean SMEs that need consistent access to financing establish long-term relationships.

iv) Establish incentive mechanisms: From a bank's perspective, confidence in DTSCF models needs to be displayed to lower barriers to entry. In parallel with market education, money deposit banks could explore risk-sharing programs with banks to encourage adoption. Payment obligations used in DTSCF models (e.g., Irrevocable Payment Undertaking, Distributed Ledger Payment Commitment, Digital Promissory Note, and DigiPo) could also be publicly recognized as enforceable obligations

v) Open up access to financing more generally: DTSCF alone will not close the trade financing gap. Beyond DTSCF, it is important to address the critical barriers SMEs face in accessing financing. The industry should encourage the use of alternative SME credit scoring methods, lower the burden of documentation uploads for suppliers, and give suppliers a probability of approval based on simple metrics. Meanwhile, MDBs should extend financing programs to support portfolio-based credit rating.

CONCLUSION

Supply chain finance promotes stability and resilience in supply chains by supporting working capital needs of buyers and suppliers. However, global supply chains dominated by small and medium enterprises (SMEs)continue to struggle with access to financing. Specifically, companies that fall out of the tier one bracket are worse off in accessing the same financial opportunities because, lenders are unwilling to enroll these sellers onto financing programs, as they lack visibility into the companies, which leads to increased financial risk that makes financing just not worth it. Consequently, the deeper tiers of supply chains are often excluded from finance.

The aim of this paper therefore, is to examine the opportunities that DTSCF and its underlying technology can offer towards facilitating global supply chains access to working capital finance, a sample of models that have been successfully implemented, and the challenges and solutions to its global expansion. The research methodology adopted is narrative analysis

From the finding of this study, it can be concluded that; despite its clear benefits, DTSCF remains relatively nascent in its development and use, with limited adoption outside a handful of jurisdictions. There is an urgent need to shore up the stability, resilience, transparency, and sustainability of supply chains. Paying attention to key players of the economy, particularly the SMEs, is critical to development and job creation. SMEs, therefore, should have access to finance, particularly those in the lower tiers of the supply chains. The workings of these supply chains must become increasingly transparent and visible for interventions to be effective.

DTSCF presents an opportunity to harness the industry's knowledge, awareness, and capacity to address such needs and achieve significant development. Solutions to some of the world's most pressing problems need to be implemented through global supply chains, with the additional transparency and data generated by DTSCF and its enabling technology a potential step forward in that process. It is hoped that more industry players, including anchor corporates (buyers), suppliers, financiers, DTSCF FinTechs, multilateral development institutions, governments, and policy makers will join efforts to accelerate the adoption of DTSCF. Together, they can effectively address the key inhibitors to broader DTSCF adoption; unlock financing for SMEs throughout any global supply chain; and contribute to stable, resilient, transparent, sustainable, and inclusive supply chains agenda globally.

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IMPACT OF MARKETING MIX ON CUSTOMERS LOYALTY: A STUDY OF NATO TRANSPORTATATION KATSINA

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ABSTRACT

In today's business market, there are so many new entrants in the same industry, selling and providing the same products and services. Therefore, business providers need to compete with one another in order to survive in the industry as there are so many competitors. Business providers need to focus on the customers' needs and preferences to maintain and retain the long-term relationship. In order to make customer satisfied, business providers must know the elements in the marketing mix that they need to practice in order to attract customers especially through their buying behaviour. Thus, the objective of this study is to examine the relationship between marketing mix and customer loyalty. A questionnaire was designed based on the objectives. The completed questionnaires were processed and analyzed using the Statistical Package for Social Science (SPSS). The research made use of primary data. Primary data was obtained by administering a well-structured questionnaire to respondents in the selected travelling agency with a sample size of 100. From the hypotheses tested, the result indicated that the four dependent variables, product, price, place and promotion, two (place and promotion) have significant impact on the customer loyalty, while the remaining two variables (product and price) have insignificant impact on customer loyalty. The relationship between place and customer loyalty can be said to be significant with a p-value of 0.017. This implies that, there is positive and significant relationship between product and customer loyalty. The result further suggests that, place has less influence on the customer loyalty of traveling agency business in NATO transportation Katsina. Based on the finding, the study concludes that, product and promotion have less influence on the customer loyalty of NATO transportation Katsina. And finally, the ability of the product and price to work with proficiency cannot lead to customer loyalty.

Keywords: customer loyalty, marketing mix, price, product

DIGITAL SUPPLY CHAIN TECHNOLOGY AND SUSTAINABLE COMPETITIVENESS OF OIL AND GAS COMPANIES IN RIVERS STATE

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ABSTRACT

The study concentrated on digital supply chain technologies and sustainable competitiveness of oil and gas companies in Rivers State. A causal study was well-thought-out to handgrip the three (3) hypotheses articulated for the study. The survey research method was adopted for the study on a population comprised of two hundred and ninety-five (295) oil and gas companies registered with the Rivers State Ministry of Commerce and Industry, Port Harcourt. The appliance of the Taro Yamane's formula for the determination of sample size from a precise population, provided the study with a minimum sample size of one hundred and seventy (170). The study advocated the purposive sampling technique and the key respondents were Chief Executive Officers (CEOs) or branch managers of the companies investigated. 510 copies of structured questionnaire were distributed to the respondents, 345 copies were returned, yielding a response rate of 87.3 percent. Moreover, of the 345 copies of the questionnaire returned, resultantly, no more than 334 questionnaires with a response rate of 75.1% were measured for analysis. The multiple regression analysis was employed for data analysis. The results disclosed that the elements of digital supply chain technology (Big data analytics, Cloud computing systems and Mobile applications) studied had a strong, positive and significant influence on sustainable competitiveness. The study therefore, concludes that, entrepreneurial marketing strategies significantly influence marketing performance of soft drink distributors in Rivers State, and recommends that digital supply chain technology has a significant influence on sustainable competitiveness of oil and gas companies in Rivers State, and recommends that, to enable a new way of working with digital supply chain technology, management of oil and gas companies should adapt their organizational structures and job designs to bring the best out of their employees and DSCT to enhance sustainable competitiveness.

Keywords: Big data analytics, Cloud computing systems, Mobile application, Sustainable competitiveness

INTRODUCTION

In these modern times, many firms globally are aspiring to cope with ever-increasing competition in view of the fact that it has consequently twisted into the prime schema for these firms. A good number of firms make choices that affect their competitive position and profitability by means of technologies which is predictable to facilitate the firm's position itself in opposition to their rivals in the pursuit for upper hand. This is embarked on to help the firm position itself against its competitors in tracking down of sustainable competitiveness. Firm profitability is a utility of organizational prettiness (configuration) and the firm's relative position within the industry. A stout comparative outlook entails that the firm has a sustainable competitive increase that can be assiduous alongside incidence by competitors and transformations in the industry.

Sustainable competitiveness materializes as an indispensable dynamic in the perception of goods and services value, which ought to be calculated as fundamentals of competitiveness. As a result of the importance of sustainable competitiveness to the long-standing success of companies, the accessible literature takes in hand its content as well as its sources, and the diverse categories of strategies such as digital supply chain technologies that may help firms realize sustainable competitiveness.

In this day and age, global technologies, principally digital technologies, have turn out to be a significant utensil for businesses to sustain practicable partnerships and put together an enormous value linkage with other firms. Innovative digital technologies that are up-and-coming every day are on their line of attack to have an effect on virtually all business development and activities. The goal of the digital supply chain technology is to convert heterogeneous resources into competitive product and service offerings. Digital supply chain technology proficiency is built up of a number of core competencies required for harmonizing miscellaneous production skills and amalgamate manifold torrents of technologies. Digital supply chain technology is a result of prearranged set of competencies that amount to proactive, relational, coordinative use of technology by a given supply chain who desires to deliver specific good and service offerings to achieve sustainable competitiveness.

In research, the area of supply chain digital technology is starting to attract growing attention with some of the topics such as 'radiofrequency' and recently 'big data' being investigated by some scholars. A holistic approach to digital supply chain technology proficiency would set the course for streamlined implementation, starting with a digital strategy and a digital operating model. Meanwhile, firms need to adopt digital methodology proficiently in their supply chain system to achieve the potential of having an excellent level of organizational performance (Degroote & Marx, 2013). Even though most firms accept as true that the adoption of digital supply chain technologies would help them raise their supply chain performance some companies are still doubtful to set supply chain digital technology as their primary targets in digital strategies.

In contemporary exceedingly competitive business climate, generating sustainable competitiveness in a firm has to direct the way to achievement (Cao & Zhang, 2011). Conversely, the exploration for reciprocated appreciation of sustainable competitiveness for every single one supply chain partner is still not up till now impactful as challenge for both academics and practitioners exists (Fawcett &Waller, 2014; Halldorsson et al., 2015). Despite the fact that a budding quantity of scholarly writings (e.g. Lee et al., 2022; Marco et al., 2019), which are dedicated to the field of digital supply chain technologies in conveying additional firm's performance have accumulated, it is somehow unclear how the area of supply chain digital technology has evolved and progressed in research, with research status being unclear in linking it to sustainable competitiveness. This paper therefore, analyzes the impact of digital supply chain technology proficiency on sustainable competitiveness of oil and gas companies in Rivers State. This research aims at identifying the main elements constituting the digital supply chain technology and their impact on sustainable competitiveness.

LITERATURE REVIEW AND HYPOTHESES

Theoretical Framework

This present study is fixed firmly on the resource based view theory, which stipulates that the elementary foundations and drivers of competitive advantage and better-quality performance are predominantly linked with the traits of resources and capabilities, which are priceless and costly-to-copy (Peteraf & Bergen, 2003). The resource-based view supplies an avenue for firms to chart and implement their organizational policy by exploring the function of their internal resources and capabilities in attaining competitive advantage (Kristandl & Bontis, 2007; Sheehan & Foss, 2007). Several other investigations sustain the magnitude of this resource-based view (Hult & Ketchen Jr., 2001; Ramsay, 2001; Foss & Knudsen, 2003; Gottschalg & Zollo, 2007).

When this strategy is well-originated and put into practice, it can significantly influence a firm's level of competitiveness (Richard, 2000; Powell, 2003; Porter & Kramer, 2006). The resource based view theory as an "inside-out" progression of policy origination is therefore, a management machination fit into place to evaluate the accessible quantity of business strategic-possessions. In fundamental nature, the resource based view is anchored on the idea that the successful and resourceful use of every single one serviceable resource that a firm can pull together lends a hand in deciding its competitiveness. This theory is relevant to this study because, proficiency in espousing supply chain digital technology architecture enhances firms' competitiveness continuously.

Digital Supply Chain Technologies

Technology is altering the way companies plan their supply chain management practices. Technological and digital innovations pave the way for more interconnected actions and transparent flow of information amongst organization, its suppliers, and potential customers. This disruptive information effect is promised to deliver unforeseen values to all entities involved in the supply chain (Buyukozkan & Goçer, 2018). The most necessity of adopting a digital supply chain technology (DSCT) is not just investing in the latest digital technologies, it is more than that. Organizations must know how to align the existing digital initiatives with its supply chain objectives (Raab & Griffin-Crya, 2011).

Every organization nowadays realizes the potential of the newest technology in vogue, and this possibly will offer businesses an opportunity to enhance organizational performance and create a strong foundation to compete and outperform rivals in the vicinity and faraway (Srivastava & Sushil, 2013).This end-to-end supply chain connectivity through the epoch of digitalization could position firms in the locus of competitive advantage where they would be able to match customer shifting requirements more proficiently (Porter & Heppelmann, 2015).

In practice, it gives the impression that more businesses are at this instant spreading over different structures of supply chain digital technologies such as radio frequency identification, big data, cloud computing, Internet of Things, and artificial intelligence amongst others to fashion cohesive and self-optimizing supply chain organisms empowering them to retort proactively to the ever-changing nature of markets (Buyukozkan & Goçer, 2018). According to Bughin et al. (2018), innumerable digital technologies such as Big Data Analytics, Cloud Computing Systems, Mobile applications, the Internet of Things, Blockchain, Artificial Intelligence, Man-Machine Learning and masses of supplementary application support the advancement of the supply chain of any business. This study in line with Bughin et al. (2018), adopts data analytics, cloud computing systems and mobile applications

Big Data Analytics

Big data analytics refers to the application of innovative statistics to whichever kind of deposited electronic communication, which may consist of "messages, updates, and images dispatched to social networks, interpretations from sensors, and GPS indications from cell phones (Kache & Seuring, 2017). Big data analytics can supplement value and be responsible for an innovative stance by cultivating descriptive, predictive and prescriptive analysis and exhibiting them to boost performance in supply chains (Ikegwuru & Acee-Eke, 2020). Big data analytics momentously influence supply chain competitiveness (Tan, Carriollo & Cheng, 2013). Evidently, big data enables companies to accumulate enormous volume of data from sources such as videos, tweets, click streams, and equally facilitate decrease in order-to-delivery cycle times, and advance supply chain efficiency.

Cloud Computing Systems

Cloud computing refers to equally the applications transported as services by means of the Internet and the hardware and systems software in the data centers that offer those services (Amburst et al., 2016). Cloud computing as a tender transported as a service by means of the internet and computing resources (hardware and software) in the data centers and bestows on-demand right of entry to these resources and services, delivered by service vendors to the final user by means of pay-per-use services (Ikegwuru & Esi-Ubani, 2019). This cloud computing systems make available harmonization of supply chain management with IT system of a business that supports scalability, cost reduction, accessibility and efficiency in supply chain operations.

Mobile Applications

This refers to categories of application software premeditated to route on a wireless mobile device, such as a smartphone or tablet computer as an alternative to laptop computers or a laptop. Mobile applications are technologies that are modernizing supply chain operations. They materialize in the form of mobile payment, mobile RFID, advance bar code scanning, map routing and inventory optimization and they are greatly boosting supply chain operations. Mobile applications smooth the engendering of real-time information that shrinks inventory and can lead to progression in profits for the vendor (Cogliamo et al., 2014).

Concept of Sustainable Competitiveness

The vital rudiments of competitive advantage relating to the formation of values to customers were developed by (Jones, 2003). Competitive advantage is a fundamental underpinning for inventing business strategies to achieve sustainable increase (Simpson, Taylor & Barker, 2004). The tracking down of competitive advantage is an inspiration very much at the sensitivity of the strategic management literature (Ma, 2004; Cousins, 2005; Porter & Kramer, 2006; Barney). Understanding the sources of sustained competitive advantage has turned out to be a foremost field of study in strategic management (Flint & Van Fleet, 2005; King, 2007).The sustainability of a business is pulled off through competitive advantage; whereby upon the putting together of business strategies, it is indispensable to generate values to customers (Sultan & Mason, 2010).

A company experience competitiveness when it is depositing into practice a value generating strategy not concomitantly being put into operation by any contemporary or forthcoming competitors, and when these other companies are immobilized to duplicate the advantages of this method. Competitiveness thus stands for the matchless prospective that positions a company far away from its competitors, in that way endowing them with a superior position in the marketplace. Sustainable competitiveness materializes as an indispensable dynamic in the discernment of goods and services value, which ought to be premeditated as ground rules of competitive advantage in an enduring manner.

Empirical Review

Lee et al. (2022) investigates the effect of the digital supply chain on the supply chain and organization performance and additionally evaluates the mediating effect of supply chain performance in the relationship between digital supply chain and the organizational performance in the Malaysia manufacturing industry, by means of a quantitative research design. Data was collected through an emailed online survey questionnaire to 1160 manufacturing companies listed in the Federation of Malaysian Manufacturers (FMM) directory by way of stratified sampling technique and obtaining 56 (5.43 useful for data analysis. Data was analyzed by the use of the Partial Least Square Structural Equation Modeling (PLS-SEM). Seven hypotheses, which include all the hypotheses of moderating effect are supported. The study concludes that manufacturing companies in Malaysia can think about espousing digital supply chain in the business procedure to stay put reliable in the competitive market by making available good supply chain performance and most excellent organizational performance as a whole.

Marco et al. (2019) examined the relationship between investments in digital technologies and firm performances, by also investigating the exact technologies more prone to be associated with superior performance and ultimately the snowballing effect of technologies on performance. Supported on distinctive data assembled in 2017 on a sample of 1,149 Italian firms, outcomes demonstrate the positive impacts on adopters' performance and the function of robotics and laser cutting in this relationship.

Based on the review of literature, the following hypotheses were raised:

Ho_1: Big data analytics does not significantly influence sustainable competitiveness of oil and gas companies in Rivers State.

Ho_2: Cloud computing systems does not significantly influence sustainable competitiveness of oil and gas companies in Rivers State.

Ho_3: Mobile application does not significantly influence sustainable competitiveness of oil and gas companies in Rivers State.

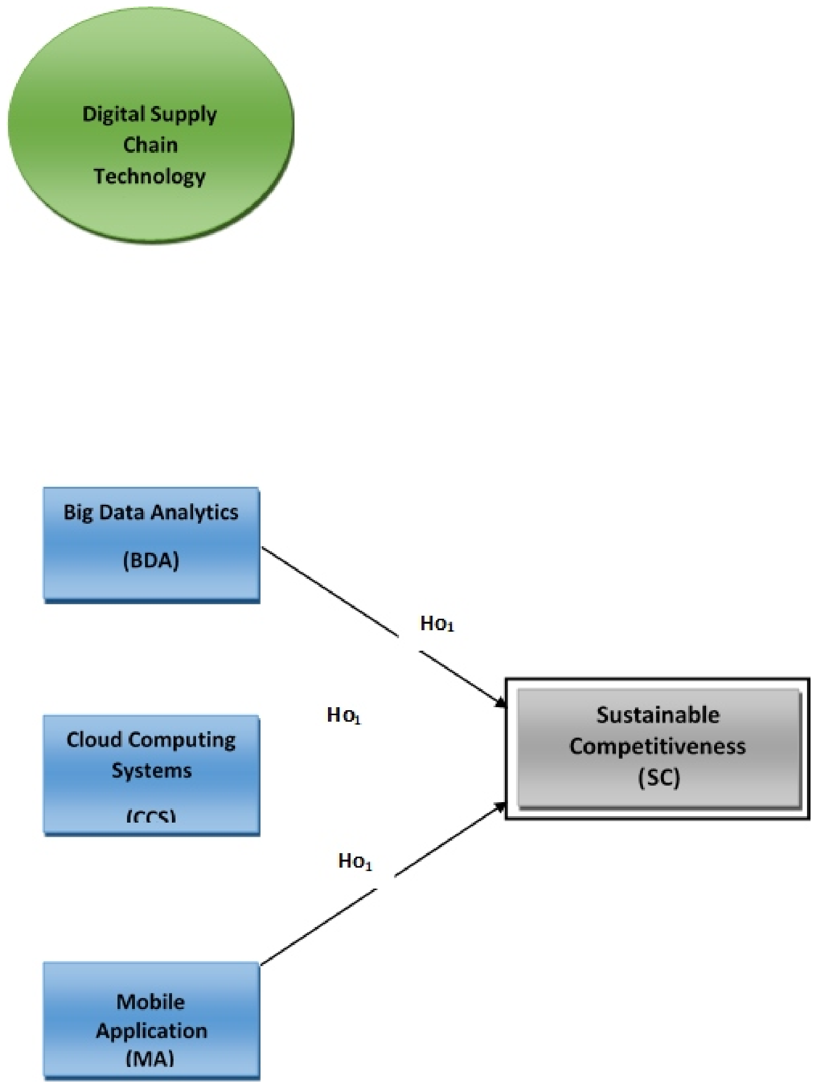

Fig. 1: Research model of digital supply chain technologies and sustainable competitiveness
Source: Designed by the researchers, 2022

RESEARCH METHODOLOGY

The population of the study consists of two hundred and ninety-five (295) oil and gas companies registered with the Rivers State Ministry of Commerce and Industry, Port Harcourt. The sample size of one hundred and seventy (170) was arrived at by means of the Taro Yamane's formula for the determination of sample size from a precise population. The appliance of the Taro Yamane's formula for the determination of sample size from a precise population, provided the study with a minimum sample size of one hundred and seventy (170).

The study adopted purposive sampling technique and the key respondents were Chief Executive Officers (CEOs) or branch managers of the firms investigated. 510 copies of questionnaire were distributed to the respondents, 345 copies were returned, yielding a response rate of 87.3 percent. Moreover, of the 345 copies of the questionnaire returned, resultantly, no more than 334 questionnaires with a response rate of 75.1% were measured for analysis. The multiple regression analysis was employed for data analysis.

The Cronbach Alpha Reliability Coefficient was computed for the composite scale and each of the subscales, and the results are reported in Table 1. As we can see, the value of the Alpha coefficient for the composite scale and the subscales are all above the threshold ($\alpha \geq 0.70$); hence, they are all reliable. Table 1 shows the reliability assessment of the variables using Cronbach's alpha. It indicates how the items for each factor were internally related in the manner expected.

Scale	Dimension	Items	Reliability
BDA	Big Data Analytics	5	0.776
CCS	Cloud Computing Systems	5	0.890
MA	Mobile Applications	5	0.754
SC	Sustainable Competitiveness	5	0.931
QDSCTSC	**Composite**	**25**	**0.975**

RESULTS AND INTERPRETATION

Table 2: Model summary of digital supply chain technology and sustainable competitiveness

Model Summary (n=334)

Model	R	R2	Adj R2	Std Error of the Estimate	F Change	dfi	df2	Sig. F Change	Durbin Watson
BDA	.690	.552	.550	4.92483	752.650	1	332	.0 00	1.869
CCS	.667	.568	.565					.000	1.969
MA	.776	.694	.681	167.596	.47649	1	333	.000	1.649

294.73	1
62.504	334

Source: SPSS 22.0 window output (2022)

a. Predictor (Constant). Big Data Analytics

b. Predictor (Constant), Cloud Computing Systems

c. Predictor (Constant), Mobile Applications

d, Dependent Variable, Sustainable Competitiveness.

Three models were tested indicating three predictors besides constant to determine the dependent variable that arrange entry requirement in the finishing equation (BDA, CCS, MA, SC). Multiple correlation coefficient measures the degree of relationship between the actual values and predicted values. Predicted values are obtained as a linear combination of X1 (Big data analytics), X2(Cloud computing systems) and X3(Mobile applications). R2 represents percentage of the variance in the dependent variable. Table 2 shows that 55.2% of the variation (model 1) in sustainable competitiveness is explained by big data analytics single-handedly, 56.8% of the variation (model 2) is explained by cloud computing systems and 69.4% of the variation (model 3) is explained by mobile applications.

Test of Model Utility

The serviceability of the overall regression statistics was tested prior to the testing of the individual hypotheses for their levels of significance. The fitness of the model can be explained by F-ratio in Table 3. The F-ratio in the model is 49.386, which is very significant at $p < 0.05$. This implies that there is significant evidence to extrapolate that digital supply chain technology is linearly related to sustainable competitiveness. The study concludes that; the regression model is useful to the extent that the predictor variables significantly predict the behaviour of the dependent variable investigated. The implication is that at least one of the independent variables has none zero coefficient. This proposes that the model is measured to be fit and that digital supply chain technology has substantial influence on sustainable competitiveness

Table 3: F-ratio Test of Digital Supply Chain Technology and Sustainable Competitiveness

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2447.670	1	815.890	49.386	.000[b]
	Residual	3271.063	333	16.521		
	Total	5718.733	334			

a. Dependent Variable: Sustainable Competitiveness

b. Predictors: (Constant), Big data analytics, Cloud computing systems, Mobile applications

Source: SPSS Window Output, Version 22.0 (2022).

Multi-colliearity Test

Table 4 indicates that big data analytics is statistically significant and account for sustainable competitiveness of oil and gas companies in Rivers State. It has a t-statistics value of 16.893. Besides, the result indicates that a cloud computing system has a statistical significant influence on sustainable competitiveness of oil and gas companies in Rivers State. It has a t-statistics of 16.640. Further the result indicates that mobile applications has a statistically significant influence on sustainable competitiveness of oil and gas companies in Rivers State. It has a t-statistics of 7.393

More sophisticated correlations in data than just the pairwise correlations allow the use of tolerance and variance inflation factors (VIF) associated with Xh. The tolerance explains the statistics used to disclose the degree to which the independent variables have linear (straight line) relationships with one another. Tolerance values heading towards zero and values of VIF exceeding 10 are cardinal signs of multi-collinearity. This decision rule enables the study to conclude that there is no threat of multi-collinearity amongst the dimensions of the independent variables.

Table 4: Multi-collinearity Test Supply Chain Technology and Sustainable Competitiveness (n=334)

Model Dimension Condition Index		Eigen value B		Unstandardized Coefficient Std error	Standardized Coefficient Beta	T	Sig	Collinearity statistics Tolerance	VIF
Constant .	.087	29.4762	.865	0.39	-	2.375	0.000	-	-
BDA	37 11	.464	.900	.044	.857	. 16893	0.000	1.000	1.000
CCS	0429	.6571	.307 .	.075	.667	16.640	0.000	1.000 .	1.000
MA	0288	.4110	.640	.067	.776	7.393	0.000	1.000	1.000

Source: SPSS Window Output, Version 22.0 (2022).

DISCUSSION OF FINDINGS

In this study the effect of digital supply chain technology on sustainable competitiveness of the company investigated are proved. Results show that the positive effect of the dimensions of digital supply chain technology (Big data analytics, Cloud computing systems and Mobile applications) became stronger. Mobile application which had significant and strong influence with sustainable competitiveness became

even more predictive, indicating that it is the most utilized digital supply chain technology amongst the studied companies.

The predictors of digital supply chain technology showcased in this study are essential catalysts that stimulate sustainable competitiveness in firms supply chains. In view of the fact that there are numerous relations and interdependencies among activities in the value chain of oil and gas companies, the aptitude to synchronize and espouse the elements of digital supply chain technology is decisive to achieving sustained competitiveness. This is because many companies in our study are determined to improve their supply chains, but the quantity of digital technologies being applied is undersized. The researchers can state that most Nigerian oil and gas companies now realize the positive potential of adopting digital elements in their supply chain.

The implementation of DSCT can help companies develop their businesses well, improve the level of services in the entire level of supply chains and achieve sustained competitiveness in the market, and always stay ahead of the changing industries besides cutting down unnecessary expenses. It is critical to note that, the presence of digital supply chain technologies in the supply chain process possibly will calculate approximately the amount of competitiveness in a firm's current market. Accordingly, digital supply chain technology can enhance the sustained competitiveness and supply chain collaboration of oil and gas companies. Therefore, this research completely supports the effect of digital supply chain technologies on sustainable competitiveness.

Our findings corroborates Lee *et al*. (2022) findings that espousal of digital supply chain in the business procedure enables firms to remain dependable in the competitive market by supplying obtainable good supply chain performance and most outstanding organizational performance in totality. Our findings are also consistent with the debate in the literature on the quintessence for the development of a supportive IT arrangement to institute collaborative connections with stakeholders (Jabbour *et al.,* 2019; Wong *et al.*, 2015);

CONCLUSION AND RECOMMENDATIONS

The study was conducted to determine the influence of digital supply chain technology (DSCT) on sustainable competitiveness of oil and gas companies in Rivers State. The DSCT consists of three constructs which are big data analytics, cloud computing analytics and mobile applications. The regression model valuation proves that digital supply chain technology enhances sustainable competitiveness as this research established that the independent variables of DSCT discussed early in this paper positively affect the dependent variable, sustainable competitiveness (H1, H2, H3 accepted). Improving digital supply chain technological efficiency plays a crucial role in any business. Operating businesses in thought-provoking profit margins points out that, any type of process enhancement can have a substantial influence on the bottom line.

Therefore, innovative technologies such as DSCT make it easier to manage the challenges of volatility and accurately forecast demand in global supply chains and ushers in sustainable competitiveness. This study therefore concludes that, digital supply chain technology significantly influence sustainable competitiveness in oil and gas companies in Rivers State, and recommends that, to enable a new way of working with digital supply chain technology, management of oil and gas companies should adapt their organizational structures and job designs to bring the best out of their employees and DSCT to enhance sustainable competitiveness in their supply chain industry.

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CUSTOMER FORESIGHT AND ORGANIZATIONAL PERFORMANCE OF FOOD AND BEVERAGES COMPANIES IN NIGERIA

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ABSTRACT

This study examined the relationship between customer foresight and organizational performance of food and beverages companies in Nigeria. The study adopted the cross-sectional research survey design. Primary data was generated through structured questionnaire. The population for this study was 13 food and beverages companies in Nigeria. The study adopted the entire population census since it was small. However, the respondents/participants in the study were sixty-five managers of the 13 food and beverages companies in Nigeria. The research instrument was validated and the researcher's supervisors vetted and approved while the reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics and the tests were carried out at a 0.05 significance level. Findings revealed that there is a significant relationship between customer foresight and organizational performance of food and beverages companies in Nigeria. Therefore, the study concluded that when food and beverages companies in Nigeria develop their capabilities of customer foresight, it will positively enhance their performance in terms of improved product innovation, enhanced market share and improved sales growth. Hence, the study recommended that managers of food and beverages companies should understand customers' hidden needs before scoping and starting a project.

Keywords: Customer Foresight, Organizational Performance, Product Innovation, Sales Growth

INTRODUCTION

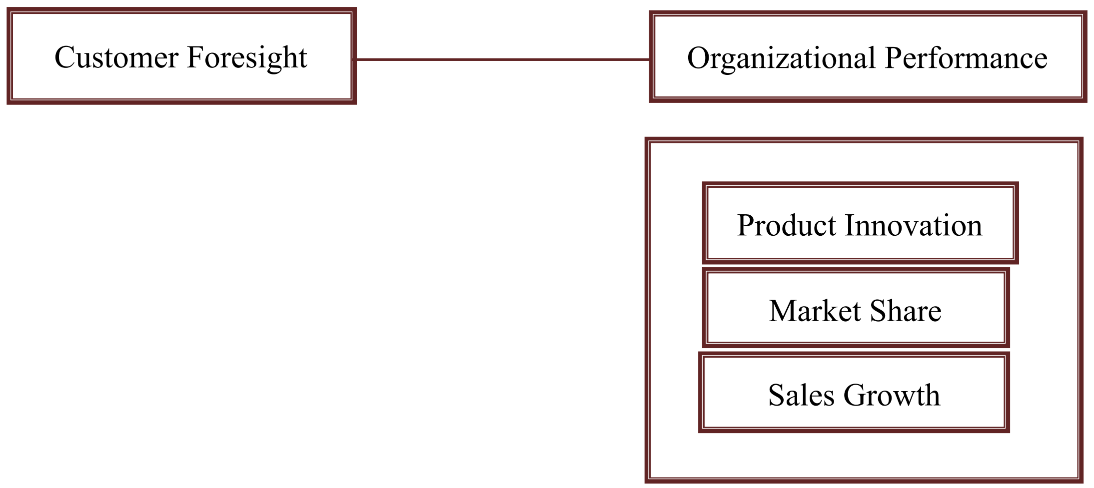
The future is uncertain. "Nevertheless, some developments can be foreseen and alternatives can be thought of. Therefore, there is the possibility of preparing for the future (with limitations) or to try to shape it actively. This is the background of foresight." (Cuhls, 2003). Indeed, the background of foresight and the importance ascribed to it may be traced as far back as early 20th century (Fayol, 1949; Knight, 1921). Within academia and consulting, foresight has been linked to performance as a scheme for managing a changing environment. Foresight has also been suggested as a device for promoting innovation and change, rather than or compared to incremental improvements and inertia.

However, few of the companies that started out the 1980s as industry leaders finished the decade as leaders or with their leadership intact (Franko, 2003; Hamel & Prahalad, 1994). Companies saw their success gradually worn away or ruined by the forces of technological, demographical and regulatory change, together with non-traditional competitors' productivity and quality gains (Hamel and Prahalad, 1994). Likewise, swift and unparalleled change in technological, economical, and political matters resulted in a progressively fluid and borderless environment (Oner & Saritas, 2005).

Certainly, a process of globalization has been marked by decreasing constraints to the international flow of technology, information, products, values, et cetera. (Kaplinsky et al., 2002), which in turn has brought challenges to the firms (Xu et al., 2007). In a global environment, some managers turn to a strategy of swift product development (March-Chorda et al., 2002). Indeed, the rate of new products launches has accelerated (Ward, 1996) (MacIntyre, 2004; March-Chorda et al., 2002; Moguilnaia et al., 2005) and there is broad consensus that rapidly changing technology and improved mass communications are two important causes of shorter product life cycles (Bayyigit et al., 1997). Globalization is forcing organizations to be more careful about customer satisfaction and profit maximization; firms are now using different tools in ensuring that customers especially those that are sensitive to price increase remain loyal to the firm in order to maximize profit (Bagshaw, 2017). Organizational performance refers to the record of achievements made by an organization at, or over a given time measurable through several indices. It is measured by the extent to which an organization achieves set objectives or executes its strategies; hence performance measures are sourced from both corporate objectives and strategies.

The study addresses the relationship between customer foresight and organizational performance of food and beverages companies in Nigeria as it test product innovation, market share and sales growth. The study was guided by the following specific objectives:

a) Examine the relationship between consumer foresight and product innovation of food and beverages companies in Nigeria.
b) Determine the relationship between consumer foresight and market share of food and beverages companies in Nigeria.
c) Examine the relationship between consumer foresight and sales growth of food and beverages companies in Nigeria.



Conceptual framework for customer foresight and organizational performance
Source: Desk Researcher (2022)

LITERATURE REVIEW

Theoretical foundation of the Study

The theoretical foundation of this study is Dynamic Capability Theory (DCT). Dynamic capability is the capability of an organization to purposefully adapt an organization's resource base. DCT, which was developed by Teece et al. (1997) was defined as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" and it examines how firms address or bring about changes in their turbulent business environment through reconfiguration of their firm-specific competencies into new competencies (Teece, 2007). DCT explained the mechanism that links resources and product markets to competitive advantage and firm survival. The DCT further explains how firms gain sustainable competitive advantage, survive in competitive and turbulence business environment in several ways. The DCT framework, works on three fundamental presumptions: firstly, the

capacity to sense and shape opportunities, secondly, to seize opportunities and thirdly, to maintain competiveness through reconfiguring the enterprise's assets (Teece, 2007). Despite the popularity and insightful theoretical foundation, the DCT approach does not answer all questions of sustainable competitive advantage.

Zahra et al. (2006) argue that there are some inconsistencies and ambiguities in the literature of DCT. Another criticism of the concept is that DCT is difficult to measure empirically. In the opinion of Ambrosini et al. (2009), to understand dynamic capabilities, the managerial perceptions of the need for change – functions of their perceptions of their firms' external and internal environments need to be considered. Thus, it is possible for a manager to misperceive the need for change and as a result fail to apply appropriate DCT.

Concept of Customer Foresight

The purpose of the customer foresight framework is to combine future realities, future customers, and their interactions, with selected tools from customer research and foresight to describe how customer foresight projects can be carried out (Eller et al., 2020). First, it is crucial that the business need (e.g., corporate strategy, innovation, product development, or production planning) is understood and that tangible research questions are defined based on business needs. It makes sense to describe the context and to understand future realities early on in the process. Above all, we have argued that trend research, scenario planning, road mapping, and science fiction are valuable tools from the field of foresight research to derive these future realities. And as customer foresight is mostly based on creating insights through interaction, study participants must be systematically identified (Eller et al., 2020).

Customer foresight combines the needs of customers with the dynamics of change and expectations of future circumstances, products and services (Schweitzer et al., 2019). The evolution of customer foresight reflects, on the one hand, the relevance of foresight in general and, on the other hand, the growing challenge of placing the customer at the center of strategy, innovation and foresight. While in the 1990s it was argued that customers are increasingly unmanageable for firms (Gabriel & Lang, 2015), this state has not improved. Approaches such as design thinking (Brown, 2008, 2009; Brown & Martin, 2015; Liedtka, 2018) and lean startup (Ries, 2012) have gained attention because of their human-centered approach to innovation.

Thus, whilst human centered approaches align business activities with the problems and needs of today's customers, strategic customer foresight aligns business activities with the problems and needs of tomorrow's customers. Insights from customer foresight (e.g., what customers may want to buy in 10 years' time) are highly sought after but hard to come by. On the other hand, creating tangible insights into customers' future realities is difficult from a methodological perspective because it deals with at least three unknown factors: How will customers evolve over time? What will everyday reality look like in the future? How will customer foresight approximate customers' future realities regarding future consumption? These three questions help us envision the customer foresight territory.

Even if we had a clear picture of future technological, political and economic developments, the question of how people will react to future realities would still be a mystery. Some techniques of customer foresight stimulate an interaction and critical engagement of particular persons (i.e., agents of the new, Hofmann, 2011) with future realities to examine how the customer of the future may want to live. The lead user method (Hippel, 2006) assumes that highly motivated and skilled customers or users may become involved in product development and thus in innovation processes, for instance by inducing technical alterations of a given product based on their usage experience and needs.

Similarly, further types of agents of the new such as early adopters or influencers are used to approximate future customer realities (Schweitzer *et al.,* 2019). The trend receivers' concept (Hofmann, 2014) focuses on particularly visionary customers who perceive changes and potentials of the new in a specific domain in a highly sensitive and differentiated way. They usually have connections in many contexts and have discerning views of what drives people and which aspects are changing. An effective way to identify trend receivers is pyramiding, where people are asked to suggest other people in their personal network who fit a particular search profile. These people suggest others, and so on (Hofmann, 2014)

Organizational Performance

Organizational performance is the measure of standard or prescribed indicators of effectiveness, efficiency and environmental responsibilities such as cycle time, productivity, waste reduction and regulatory compliance (Noum, 2007). The organizational performance construct is probably the most widely used dependent variable, in fact, it is the ultimate dependent variable of interest for any researchers concerned with just about any area of management, yet it remains vague and loosely defined (Richard *et al,* 2009). Onyenma et al. (2020) posit that firm performance is a subset of organizational effectiveness that covers operational and financial outcomes.

Firm performance from an accounting literature perspective hinges on company profitability and performance of stocks in the capital market. The measures of firm performance based on literature can be broadly classified into two, namely, the market oriented measures and the accounting oriented measures (Oparanma & Ulunma, 2019). Financial metrics have served as a tool for comparing organizations and evaluating an organization's behavior over time (Holmberg, 2000). Kaplan and Norton (2011) introduced the balanced score card, (BSC) as a more realistic measure of performance. The balanced scored card defines a strategy's cause and effect relationships and provides a framework to organizing strategic objectives into the financial perspective in line with the vision and mission. The BSC measures the financial aspect, customer services, learning and growth within the organization and internal business processes.

Product innovation

Innovation is the mechanism through which valuable new products, processes, and organizational knowledge are developed, being the foundation of intellectual capital and is considered central to the organizational capabilities to perform optimally. Ramadani and Gerguri (2011) defined innovation as a process of transforming new ideas and new knowledge into new products and services. Wang (2011) on the other hand see innovation in the developing country context as the process by which firms master and implement the design and production of goods and services that are new to them irrespective of whether they are new to their competitors, their customers or the world. Kusiak (2007) posits that the way organizations develop value through new products, processes, and organizational systems need to respond to changing markets, technologies and modes of competition as an innovation device. Through value creation, it enhances the organization's success, maintains its sustainable competitive advantages, and is critical in determining the long-term survival of organizations (Abereijo et al., 2007; Baark et al., 2011).

In a volatile environment, firm's competitive advantages rely on its capability to effectively and constantly deliver innovative products for its customers (Lin et al., 2011). The capacity to innovate is the ability of the firm to adopt or implement new ideas, processes and products successfully (Hurley & Hult, 1998). Evolving technologies and short product life cycles has affected the global business environment to consistently change as the speed of innovation increases by the day (Lin

et al., 2012). This calls for organizations to be able to integrate internal and external information from various stakeholders to enhance knowledge application and product innovation (Lin et al., 2012). As Hamel and Prahlad (2002) argued, firms that hope to take leadership in this kind of environment would have to collaborate with and learn from their stakeholders (customers, suppliers, and technology providers) wherever they are located.

Market share

According to Cole (2016), Market Share (MS) is the rate of a market either in units or in revenue, accounted for by a specific entity. Market share is calculated on a national level, as well as on more regional and local levels, to determine specific MS. The most basic way of calculating MS is to take the total number of sales for a company and then divide that number by the total sales for the industry. Essentially, MS is the percentage of consumers that a company has captured from its specific, desired market within an industry (Cooper & Nakanishi, 2014).

Sales growth

In the ever present turbulent and competitive business environment, survival is a major challenge. Firm survival is crucial during the period of business turbulence as maintaining a place in this competitive era is equally important for strategic managers (Olughor & Oke, 2014). As the main features of today's world is rapid changes, sharp shift in power, growing complexity, increasing competition and rapid advances in science and technology which threatens the survival of the firm (Enayati & Ghasebeh, 2012). When firm survival is threatened, strategic managers ought to adopt appropriate strategies to face its ever-present changing environment.

Managers of food and beverages manufacturing firms must manage the internal activities of their firms and must respond to the challenges posed by the firm's immediate and remote external environments all of which must be anticipated, monitored, assessed and incorporated in to the strategic managers' decision making. Managers of consumer goods are often compelled to subordinate the demands of the firm's internal activities and external environment to the multiple and often inconsistent requirements of its stakeholders. In order to deal effectively with everything that affects profitability and corporate survival, strategic managers must employ strategic initiatives which will position it optimally in its competitive environment by maximizing the anticipated environmental change and unexpected internal and competitive demand (Sangosanya, 2011).

Customer Foresight and Organizational Performance

Customer foresight combines the needs of customers with the dynamics of change and expectations of future circumstances, products and services (Schweitzer et al., 2019). Eller et al. (2020) successful companies are not only customer focused today but center their strategic action on the realities and needs of their future customers. The customer foresight framework points out suitable methods to study future customers, future realities, and their interaction. The customer foresight research journey illustrates how customer foresight is based on business needs and results in business value

Hahn et al. (2016) stated that customer foresight is a new research discipline. Instead of starting from scratch, it can build on insights and methods from related fields. New approaches are currently evolving at the intersection of customer research and foresight research as well as at the intersection of industry and academia. For instance, companies such as Audi use the trend receivers approach regarding future customers' realities and needs.

Hippel (2006) assumes that highly motivated and skilled customers or users may become involved in product development and thus in innovation processes, for instance by inducing technical alterations of a given product based on their usage experience and needs. Similarly, further types of agents of the new such as early adopters or influencers are used to approximate future customer realities (Schweitzer et al., 2019).

Based on the foregoing, the study thus hypothesized that:

Ho_1 There is no significant relationship between customer foresight and product innovation of food and beverages companies in Nigeria.

Ho_{12} There is no significant relationship between customer foresight and market share of food and beverages companies in Nigeria.

Ho_{13} There is no significant relationship between customer foresight and sales growth of food and beverages companies in Nigeria.

METHODOLOGY

The study adopted the cross-sectional research survey design. Primary data was generated through structured questionnaire. The population for this study was 13 food and beverages companies in Nigeria. The study adopted the entire population census since it was small. However, the respondents in the study were sixty-five managers of the 13 food and beverages companies in Nigeria. The research instrument was validated and the researcher's supervisors vetted and approved while the reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Coefficient. The tests were carried out at 0.05 significance level.

DATA ANALYSIS AND RESULTS

The level of significance of 0.05 was adopted as a criterion for the probability of accepting the null hypotheses in (P > 0.05) or rejects the null hypotheses in (P < 0.05). The level of relationship between customer foresights with each of the measures of organizational performance is to examine the extent customer foresight can impact on the outcome of each measure of organizational performance.

Table 1: Correlations matrix for Customer Foresight and Organizational Performance

			Customer Foresight	Product Innovation	Market Share	Sales Growth
Spearman's rho	Customer Foresight	Correlation Coefficient	1.000	.553**	.858**	.705**
		Sig. (2-tailed)	.	.000	.000	.000
		N	55	55	55	55
	Product Innovation	Correlation Coefficient	.553**	1.000	.724**	.567**
		Sig. (2-tailed)	.000	.	.000	.000
		N	55	55	55	55
	Market Share	Correlation Coefficient	.858**	.724**	1.000	.854**
		Sig. (2-tailed)	.000	.000	.	.000
		N	55	55	55	55
	Sales Growth	Correlation Coefficient	.705**	.567**	.854**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	55	55	55	55

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.553 on the relationship between customer foresight and product innovation. This value implies that a moderate relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in product innovation may be as a result of the adoption of customer foresight. Therefore, there is a moderate positive correlation between customer foresight and brand loyalty of organizational performance of food and beverages companies in Nigeria. Similarly displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level (p = 0.000 < 0.05). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between customer foresight and product innovation of food and beverages companies in Nigeria.

Similarly, Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.858 on the relationship between customer foresight and market share. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in efficiency may be as a result of the adoption of customer foresight. Therefore, there is a very strong positive and correlation between customer foresight and market share of food and beverages companies in Nigeria. Also displayed in the table 1 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 1, the sig- calculated is less than significant level (p = 0.000 < 0.05). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between customer foresight and market share of food and beverages companies in Nigeria.

Furthermore, Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.705 on the relationship between customer foresight and sales growth. This value implies that a strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in sales growth may be as a result of the adoption of customer foresight. Therefore, there is a strong positive correlation between customer foresight and market share of food and beverages companies in Nigeria. Also displayed in the table 4.24 is the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained from table 4.24, the sig- calculated is less than significant level (p = 0.000 < 0.05). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between customer foresight and sales growth of food and beverages companies in Nigeria.

DISCUSSION OF FINDINGS

The findings revealed that there is a significant relationship between customer foresight and organizational performance of food and beverages companies in Nigeria. This finding fails to agree with Schweitzer, Hofmann and Meinheit (2019) who examined strategic customer foresight: From research to strategic decision-making using the example of highly automated vehicles. Their paper outlines how a German car manufacturer explored customer needs in the context of highly automated vehicles by implementing corporate foresight research with visionary customers and how the findings supported the strategic decision-making process of the firm. The findings underline that highly automated vehicles are a game changer, transforming future cars into extended living and office spaces, with several implications for practitioners. The findings helped to adapt the organization's business model and branding strategy, and provided valuable insights for follow-up studies and shaped corporate communication.

In the same vein, the current study finding is in consonance with Mbole and Nyariki (2016), who argued that market intelligence plays an importance role in the competitive market processes which regulate prices charged for goods and services offered by an organization. It is observed that an intelligent gathering of market information enhances innovativeness in an organization. Similarly, Crowley (2009), posits that an efficient market intelligence system enhances operational efficiency and a firm's innovativeness by providing the required market information on buyers and sellers. It also provides information on market dynamics that marketing managers and mangers in other organizational settings can depend on in decision making to enable them remain competitive. For market intelligence to be useful, Kotler and Armstrong (1997), argued that market intelligence data needs to be received in good time and be detailed enough in order to inform optimal decision making in an enterprise.

This finding confirms previous findings by Ade et al. (2016) who posit that, marketing intelligence is considered a vital instrument for an organization that aims to survive in the marketplace and has business competitive advantage. Thus, “marketing intelligence is the systematic collection and analysis of publicly available information about consumers, competitors, and developments in the marketplace” (Kotler & Armstrong, 2013). In their study, the purpose and objective was to establish the influence of marketing intelligence on business competitive advantage with reference to Diamond Bank Plc. According to the result from the findings, there is a significant relationship between all the sub-constructs of marketing intelligence, such as internal records, competitors' sales data, marketplace opportunity, competitors' threat and competitive risk on business competitive advantage. Also, the result of the multiple regression analysis reveals that 96.3% of the variation in business competitive advantage can be explained by the sub-constructs of marketing intelligence, such as internal records, competitors' sales data, marketplace opportunity, competitors' threat and competitive risk, as the R value of 0.981 indicates that a strong and positive influence is found between marketing intelligence and business competitive advantage. Therefore, above average returns can be maintained if a company gains business competitive advantage over time in the market, and all these are attributed to the amount of market information and intelligence a company can gather, store and utilize to the best of its advantage. Such information and marketing intelligence had enabled the bank to successfully acquire more profit, expand its branch network, perform better than its rivals in the market and increase its competitive advantage.

CONCLUSION AND RECOMMENDATION

The study concludes that customer foresight positively enhances the performance of food and beverages companies in Nigeria, implying that technology-oriented competitive intelligence practice permits firms to respond to threats as well as identify and exploit opportunities resulting from technical and scientific changes. Therefore, managers of food and beverages companies should understand customers' hidden needs before scoping and starting a project. Although it sounds simple, customers' hidden needs must be understood before kicking off a new project development program. Many companies “fall in love” with an idea and develop a product that does not address the excitement needs of the envisioned key customers. As a result, these products are not well differentiated from the competition and have little chance to meet their commercial objectives. To avoid long development cycles and costly project redirections, customers' hidden needs must be identified early on.

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A HEURISTIC MODEL FOR DEVELOPING FASTER STARTING SOLUTIONS TO TRANSPORTATION PROBLEMS: AN EXCEPTION TO THE NORTHWEST CORNER RULE*

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ABSTRACT

The high cost outcome no doubt bedevils the Northwest Corner Rule (NWCR) in solving transportation problems (TPs), though with exceptions only on Monge cost functions. In this vein, many researchers in solving TPs bewail the NWCR's limitations and had worked notably hard to improve it. This paper, an extension of the search to obviate above pitfall and to further popularize the rule as an improved, efficient method, avails a heuristic model underpinned in the monge property: $C_{ij} + C_{i+1, j+1} \leq C_{i, j+1} + C_{i+1,j}$*: for all i and j values (Burkard et al, 1996) cum the inspection approach by Thierauf (1978), to transform experimentally six (6) randomly selected balance square non-monge matrices in to modified ones to enhance the rule's efficiency. This obviously points to a unique type of inquiry outside the focus of prior researches. The research findings unveil that the model makes the rule quite efficient, and that outcomes obtained were faster starting solutions to solving sample TPs studied. Though further test of method is desirable, using the model with the rule, especially to detect faster starting solutions to TPs, only on non-monge matrices were recommended.*

Keywords: Faster starting solution, heuristic model, monge property, transportation problem

INTRODUCTION

In recent times, researchers like Mhlanga et al. (2014), palaniyappa and Vinoba (2013), Deshmukh (2012) and Klinz & Woeginger (2010) have shown renewed efforts in the quest for improvement and efficiency in NWCR application to solving TPs. This research report, an extension of the search, takes on the challenge of high starting solutions sequel to the NWCR in solving Tps, though with exceptions only on Monge, which seldom exists naturally (Burkard et al. 1996).

In essence, the NWCR in obtaining starting solutions to TPs ordinarily eschews costs (Kothari, 2010). This disregard inevitably makes the rule to generate high starting solutions akin to their optimal values; and so, it (NWCR) requires nearly in all cases more iterations than anticipated to detect optimality. Although the NWCR is famous because it is quite simple to understand and convenient to apply, but above constraints in general bedevils it (Mhlanga et al, 2014). Aligned to the outlined objectives, this research paper is organized into five parts: Introduction, literature review, research method, discussion of results/summary, conclusion and recommendations.

LITERATURE REVIEW

The Transportation Problem

According to Bein et al. (1995), the transportation problem (also known as the Hitchcock problem first started by Hitchcock in 1941) is a classical and very general minimum- cost flow problem. It is a special class of linear programming problem (LPP) that deals with shipping a product from multiple origins to multiple destinations. The objective of the transportation problem is to find a feasible way of transporting the shipments to meet demand of each destination that minimizes the total transportation cost, while satisfying the supply and demand constraints. (Palaniyappa & Vinoba 2013).

Mathematical Formulation

In linear programming terms, suppose there are **m** origins $O_1,\ldots, O_m$ with a supply of $a_i > O$ units at the ith origins (i = 1, … , m) and n destinations $d_i,\ldots, d_n$ with a demand of $b_j > O$ units at the **j**th destination (j=1,…,n). The cost for transporting one unit from ***i***th origin to the ***j***th destination is $C_{i,j} \geq O$. The mxn cost matrix $C= (C_{i,j})$, the *m*- dimensional supply vector $a = (a_i)$, and the *n*-dimensional demand vector $b=(b_j)$ form an instance of the transportation problem. If X_{ij} represents the units transported from origin ***i*** to destination ***j*** then, the problem is to determine the transportation schedule so as to minimize the total transportation cost satisfying s

$$\text{Minimize } \sum_{i=1}^{m} \sum_{j=1}^{n} C_{i,j} X_{i,j}$$

$$\text{Subject to } \sum_{j=1}^{n} X_{i,j} = a_i \text{ for } i = 1,\ldots,m \qquad \text{(Supply Constraints)}$$

$$\sum_{i=1}^{m} X_{i,j} = b_j \text{ for } j = 1,\ldots, n \qquad \text{(Demand Constraints)}$$

$$X_{i,j} \geq O, \quad \text{for all } i \text{ and } j$$

If these supplies and demands satisfy: $\sum_{i=1}^{m} a_i = \sum_{j=1}^{n} b_j$

then, the transportation problem is said to be balance, otherwise it is said to be unbalance. Importantly, an unbalance TP necessitates either a dummy row or column to make up its cost function. This modification in general destroys the Monge property of the cost function (Burkard *et al.* 1996). Interestingly, the two basic steps of the transportation methods are: first, determine the initial basic feasible solution; second, obtain the optimal solution using the result obtained from step 1. The methods for finding an initial basic feasible solution are well documented (see Reinfeld & Vogel 1958 in Deshmukh, 2012 and Gupta & Hira, 2008). In this research, however, discussion is strictly on the NWCR and enhancing it thereto.

The Nature of Northwest Corner Rule (NWCR)

On the evolution and use of the NWCR, Mhlanga *et al.* (2014) wrote that:

> *"The transportation problem was first stated by Hitchcock (1941). However, the solution to this problem was first offered by George B. Dantzig and published in Koopman's (1951) Monograph 13. The procedure that Dantzig used to obtain an initial basic feasible solution was later termed the Northwest Corner Rule by Charmes and Cooper (1954 to 1955)". (P.2)*

Put simply, the NWCR evolved to engender an IBFS that satisfy all constraints. It is a standard method for computing a basic feasible solution, and it does so by fixing the values of the basic

variables one by one and starting from Northwest corner of the cost matrix (Klinz & Woeginger 2010). In quantitative term, Phillips et al. (1978) opined that; the NWCR generates a feasible solution with no more than (m + n -1) positive values. The variables which occupy the northwest corner positions in the transportation table are chosen as the basic variables.

Of all allocation methods used in solving TPs, the NWCR is easiest, simplest (Bronson & Naadimuthu 1997, Monks 1996) and the most convenient (Taha 2008) on application; and so, it is readily used to derive starting solutions. However, features so unique to this rule are that:

(a) The NWCR follows certain logical sequence, i.e. always having to begin in the upper left-hand corner of the cost matrix (Thierauf 1978)

(b) The rule ignores "routing cost" associated with shipments, i.e. shipping cost along chosen route does not matter in NWCR (Sharma 2009).

(c) The NWCR is often described as the most convenient, no doubt, derives from its associated minimal quantitative procedure - i.e. the NWCR involves the least amount of computations (Taha 2008).

(d) Nearly in all cases, consequent $IBFS^{NWCR}$ do have its principal diagonal and neighborhood off diagonal cells filled in a "stair-case" manner (Hermanson 1981).

Northwest Corner Rule Allocation Process

The NWCR allocation method is sequenced logically and is summarized in Klinz & Woeginger (2010) as under:

(i) Initialize the Northwest Corner (i, j) with $i := 1$ and $j := 1$.

(ii) Send-as many units as possible from *i* to *j* by setting $x_{i,j} := \min [a_i, b_j]$

(iii) Adjust the supply $a_i; = a_i - x_{i,j}$ and the demand $b_j : = b_j - x_{i,j}$. If $a_i = 0$ then $i := i + 1$, and if $b_j : = O$, then $j := j + 1$

(v) If there still is unsatisfied demand, go back to step (ii)

Model Definition and Formulation

Model definition

One odd and disturbing aspect of a model is that model connotations by experts appear rather diffused causing usage contradictions (Kaplan 1964 in Ballantyne 2007, Bordens & Abbott 1999, Hawking 1996 in Wikipedia, 2012). Nevertheless, a common basis to explain models is by their simplified representation of objects or real things, of realities themselves or of Situations, even empirical ones (Bell 1977, Bonini *et al. 1997,* Phillips *et al.* 1996, Lucey 2002, Hartzell 2006 and Agbonifoh et al. 2012). Also, models reflect formalized ways of doing things (Agbadudu 1996). A model is simply a set of mathematical equations; and can be either a single equation model or a multiple equation model (Gujarati 2003). Yet, Agbonifoh (2008), sees a model as "an attempt to intellectually capture and present a system or some aspects of real life in a way that captures its essence and makes for easy understanding".

Model formulation

Model formulation also known as model-building or simply modeling explains the entire logical processes of abstraction of objects from real situations for investigation (Mansfield, 1982 and Sharma, 2009).

> *"According to Krolov (1984) in Ballantyne (2007), "modeling [is the] reproduction of an object's [known] characteristics in its analog, especially constructed for their study. This other object is called a model [and is isomorphic in some appropriate way to the object under indirect investigation]."*

Just as models can be represented in a variety of ways, so are models' logical procedures. Howbeit, the nucleus of modeling is in abstracting only the relevant variables that affect the criteria of the measures-of-performance of the given system and in expressing the relationship in a suitable, simplified form (Sharma, 2009 and Monks, 1996). Specifically in developing a mathematical model, Dinh (2012) in eHOW (2012), outlined ten (10) relics as guidelines to follow.

Exception to High Starting Solution by the Northwest Corner Rule

In finding an IBFS to a TP, it is common occurrence that the NWCR generates a high starting solution that is far from the optimal one (Lapin, 1985). This no doubt warrant more than anticipated iterations to drive consequent $IBFS^{NWCR}$ to optimal. This however is not in all cases - i.e. exceptional cases do exist (Philips *et al. 1978).* Researchers like Hoffman (1963) in Bein *et al.* (1995), Burkard *et al.* (1996), and Klinz & Woeginger (2010) also corroborated this same viewpoint, stating that this instance exhibit a unique cost function of the monge type. For instance, Hoffman's (1963) work: "on simple linear programming problems", shows that the NWCR greedy algorithm solves the transportation problem if and only if the underlying cost array: $C = [C_{i, j}]$ satisfies:

$$C[i_1, j_1] + C[i_2, j_2] \leq C[i_1, j_2] + C[i_2, j_1] \quad \ldots\ldots\ldots\ldots \quad (1)$$

For all rows i_1 and i_2 such that $1 \leq i_1 < i_2 \leq m$ and all columns j_1 and j_2 such that $1 \leq j_1 < j_2 \leq n$. Table (a) of this research (see appendix) epitomized Hoffman's renaissance idea of the monge property (Bein *et al.* 1995). Based on this fundamental property, Burkard *et al.* (1996) expressed that an m x n matrix C is called a monge matrix if C satisfies the so- called monge property: $C_{ij} + C_{rs} \leq C_{is} + C_{rj}$ ...... (2)

For all $1 \leq i < r \leq m$, $1 \leq j < s \leq n$. That is, (2) holds if and only if (1) characterizes the monge matrices.

Many researchers have brainstormed on ways to apply the NWCR efficiently or to improve it. For instance, Klinz & Woeginger (2010), Faigle (1993), Burkard *et al.* (1996), Rachev & Ruschendorf (1994) and Hoffman (1963) in Bein *et al.* (1995), as a perspective, eulogized the NWCR on monge cost matrix to detect optimality in solving TP_S. Another perspective, which was first introduced by Thierauf (1978), is: The NWCR and The Inspection Approach". It implies moving the rows/or columns of a transportation cost matrix around according to the NWCR. Though void of acknowledgement, Mhlanga *et al.* (2014) later applied same method as "row or column manipulation".

Nevertheless an extension of the search, this research underpinned in the monge property of the former perspective provided a quintessential anchor (i.e. a better fundamental basis) to explain the latter perspective, both meshed into a model for use. This no doubt points to a type of inquiry outside the focus of prior researches.

METHODOLOGY

The research is experimental in perspective (Kothari & Garg, 2014, Oakshott, 2006 and Borden & Abboth, 1999). For this reason, six sample TPs were selected at random from Sharma (2009), Gupta & Hira (2008), Anderson *et al.* (2001), Monks (1996), Lapin (1985) and Bell (1977) as original balance square (2X2, 3X3, 4X4 & 5X5) non-monge matrices showing Costs, supplies and demands (see tables A - F in Appendix). The researcher experimented to improve the high starting solution of the NWCR per se by the model (see figure below).

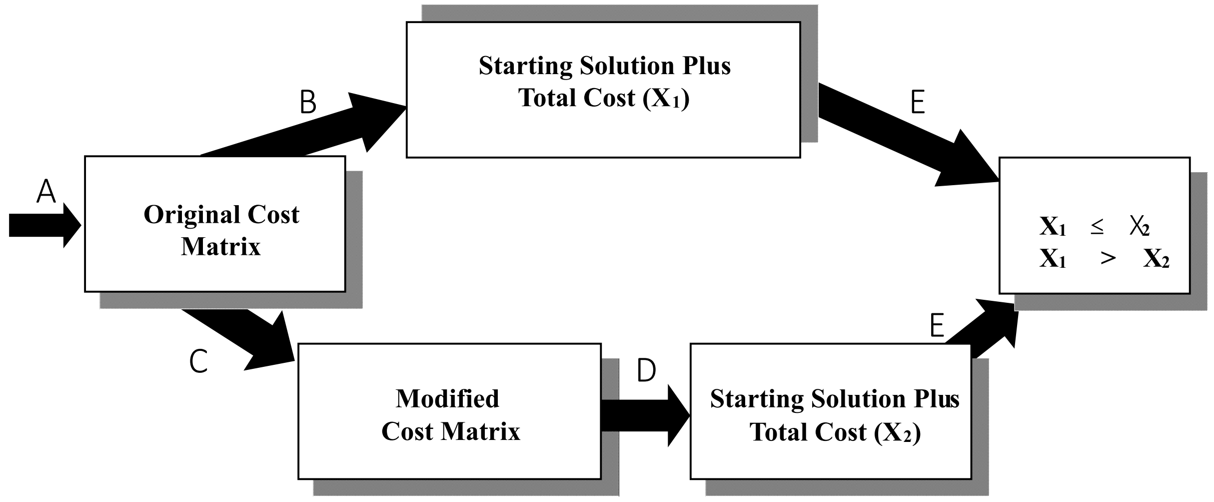

Fig: A Schematic Representation of the Heuristic Model

Activities A - E are detailed out as under:

(A) Select at random certain balance square non-monge matrices as numerical examples of TPs for use.

(B) Allocate (using the NWCR) in each cost matrix; derive a starting solution, test: M+N - 1 = filled cells, i.e. ensuring the solution is feasible (Sharma, 2009) and then determine total cost or outcome (X_1).

(C) Modify original non-monge cost matrices selected in (A) by moving columns/or rows around (Thierauf 1978) based on monge property (Burkard *et al.* 1996) as follows: intuitively detect any 2X2 sub-matrix with lowest cost that fulfills the monge property: $C_{i, j} + C_{i+1, j+1} \leq C_{i, j+1} + C_{i+1, j}$; for all *i* and *j* and placed along major or principal diagonal (Ekanem & Iyoha 2013, Dowling 2012) of selected cost matrix beginning from the northwest corner. Repeat this for the next set of sub-matrix until process terminates at the southeast corner of matrix. Resulting modified cost matrices are shown in tables' a-f (see Appendix).

(D) Repeat activity (B) on modified matrices from (C) to determine total cost (X_2).

(E) Compare total costs deduced (whether $X_1 \leq X_2$ or $X_1 > X_2$) as a basis for the model testing for practical value and functional operativeness (Routio, 2007).

DISCUSSION OF RESULTS AND SUMMARY

Summary of comparative analysis between outcomes X_1 and X_2, between each outcome and the optimal value, together with result and remark is shown in table below.\

Table: Summary of Comparative Analyses of X_1, X_2, and Optimal Value with Remark

Problem	Column (1) X_1	Column (2) X_2	Column (3) Optimal Value	Column (4) (1) -(2)	Column (5) (1) - (3)	Column (6) (2) - (3)	Remark On	
							X_1	X_2
A	1065	1035	1035	30	30	-	Far	Optimal
B	15200	10400	10400	4800	4800	-	Far	Optimal
C	49	33	33	16	16	-	Far	Optimal
D	384	373	372	11	12	1	Far	Close
E	8900	7500	7100	1400	1800	400	Far	Close
F	4284	2223	2202	2061	2082	21	Far	Close

Obviously, table above unveiled that X_2 of the enhanced NWCR were lower values comparatively and were adjudged as either "optimal" or "close to optimal" in all instances. This suggests that the NWCR enhanced by the model readily develops "faster" starting solutions instead. That means, the model makes the rule quite efficient. Therefore, it is only on certain unique cost structure - i.e. the monge types and the like (modified ones) - would exceptions to the rule be anticipated.

CONCLUSION AND RECOMMENDATIONS

The research delves into developing faster solutions to TPs by the NWCR with a model. This search in essence was to obviate the high starting solution sequel to the rule and to further popularize the rule as an efficient method. The experimental research procedure applied availed the researcher the opportunity to evolve a model and to apply same in this regard. Findings show that the NWCR enhanced by the model was efficient (rather with least amount of quantitative details), especially in developing starting solutions for the TPs studied; And that only on monge cost matrices and the like (i.e. modified ones) would exceptions to NWCR (i.e. optimal or close to optimal values) be thinkable.

The paper recommends that the model should be used with the NWCR, especially in finding faster starting solutions to TPs, only on non-monge cost matrices. Akin to Mhlanga et al. (2014) research, more trial TPs are desirable to confirm and reinforce findings in this research. Further research attention to a rather logical procedure as an option to the research intuitive approach is desirable in detecting 2 X 2 sub-matrices with lowest costs that fulfill the Monge Property cum the NWCR and the Inspection Approach. Perhaps, a Corroborative Software option would enhance anticipated selection precision in this regard. (*See flow chart in Appendix*).

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Appendix

Table (A): Original Matrix (2X2) showing cost, supply and demand figures for Sample Problem A.

	To Knoxville	To Jersey City	Supply
From plant #1	9	11	45
From plant #2	11	14	45
Demand	30	60	90

Source: *Numerical Sample problem A adopted from Monks, J.G. (1996) Op. Cit. P. 102, Problem 6.15, for the research 2016*

Table a: Modified Matrix (A) with columns interchanged subject to Monge Property

	To Jersey City	To Knoxville	Supply
From plant #1	11	9	45
From plant #2	14	11	45
Demand	60	30	90

Table (B): Original Matrix (3x3) Showing Cost, Supply and Demand Figures for Sample Problem B

	W_1	W_2	W_3	Supply
P_1	20	16	24	300
P_2	10	10	8	500
P_3	12	18	10	100
Demand	200	400	300	900

Source: *Numerical Sample Problem B adopted from Anderson, Sweeney and Williams, (2001). Op. Cit., P. 415, Problem 4, for the research, 2016.*

Table (b): Modified Matrix (B) with Columns W_1 and W_2 Interchanged Following Monge Property

	W_2	W_1	W_3	Supply
P_1	16	20	24	300
P_2	10	10	8	500
P_3	18	12	10	100
Demand	400	200	300	900

Table (C): Original Matrix (3x3) Showing Cost, Supply and Demand Figures for Sample Problem C

	A	B	C	Supply
X	7	3	4	2
Y	2	1	3	3
Z	3	4	6	5
Demand	4	1	5	10

Source: *Numerical Sample Problem C adopted from Sharma, J.K. (2009). Op. Cit. P.305, Self Practice Problems C, Question 21, for the research, 2016*

Table (c): Modified Matrix (C) with columns A and C interchanged based on monge property.

	C	B	A	Supply
X	4	3	7	2
Y	3	1	2	3
Z	6	4	3	5
Demand	5	1	4	10

Table (D): Original Matrix (4x4) Showing Cost, Supply and Demand Figures for Sample Problem D

	1	2	3	4	Supply
1	7	9	1	9	7
2	22	25	16	25	3
3	25	28	21	29	7
4	12	15	6	14	8
Demand	5	8	7	5	25

Source: *Numerical Sample Problem D adopted from Bell, C.E. (1977). Op. Cit. P.396, chapter 17 Exercise, Question 26, for the research, 2016.*

Table (d): Modified matrix (D) with rows and columns moved around subject to Monge Property.

	4	3	1	2	Supply
4	14	6	12	15	8
2	25	16	22	25	3
3	29	21	25	28	7
1	9	1	7	9	7
Demand	5	7	5	8	25

Table (E): Original Matrix (4x4) Showing Cost, Supply and Demand Figures for Sample Problem E

	U	V	W	Y	Supply
A	2	3	4	5	**200**
B	11	14	18	7	**300**
C	6	5	9	18	**400**
D	3	4	6	7	**500**
Demand	**500**	**400**	**300**	**200**	**1400**

Source: *Numerical Sample Problem E. adopted from Lapin, L.L. (1985). Op. Cit., P. 395, Problem 15-4(a), for the research, 2016.*

Table (e): Modified cost matrix (E) with rows and columns moved around following Monge Property.

	U	V	Y	W	Supply
D	3	4	7	6	**500**
C	6	5	18	9	**400**
B	11	14	7	18	**300**
A	2	3	5	4	**200**
Demand	**500**	**400**	**200**	**300**	**1400**

Table (F): Original Matrix (5x5) Showing Cost, Supply and Demand Figures for Sample Problem F

	D_1	D_2	D_3	D_4	D_5	Supply
O_1	68	35	4	74	15	**18**
O_2	57	88	91	3	8	**17**
O_3	91	60	75	45	60	**19**
O_4	52	53	24	7	82	**13**
O_5	51	18	82	13	7	**15**
Demand	**16**	**18**	**20**	**14**	**14**	**82**

Source: *Numerical Sample Problem F adopted from Gupta, P.K. and Hira, D.S. (2008). Op. Cit., P. 246. Example 3.6, for the research, 2016.*

Table (f): Modified cost matrix (F) with rows and columns moved around based on Monge Property.

	D_3	D_1	D_2	D_4	D_5	Supply
O_1	4	68	35	74	15	**18**
O_4	24	52	53	7	82	**13**
O_5	82	51	18	13	7	**15**
O_3	75	91	60	45	60	**19**
O_2	91	57	88	3	8	**17**
Demand	**20**	**16**	**18**	**14**	**14**	**82**

Table A1: Starting Solution to Problem (A)

Outcome	Starting Allocation			**Total Cost**	**Optimal Value**	**Remark**
X_1 (NWCR)	$X_{11}=30$	$X_{12}=15$	$X_{22}=45$	$X_1=1065$	**1035**	Far
X_2 (ENWCR)	$X_{12}=45$	$X_{22}=15$	$X_{21}=30$	$X_2=1035$		Optimal

Table B1: Starting Solution to Problem (B)

Outcome	**Starting Allocation**					**Total Cost**	**Optimal Value**	**Remark**
X_1 (NWCR)	$X_{11}=200$	$X_{12}=100$	$X_{22}=300$	$X_{23}=200$	$X_{33}=100$	$X_1=15200$	**10400**	Far
X_2 (ENWCR)	$X_{12}=300$	$X_{22}=100$	$X_{23}=200$	$X_{21}=200$	$X_{33}=100$	$X_2=10400$		Optimal

Table C1: Starting Solution to problem (C)

Outcome	**Starting Allocation**					**Total Cost**	**Optimal Value**	**Remark**
X_1 (NWCR)	$X_{11}=2$	$X_{21}=2$	$X_{22}=1$	$X_{23}=0$	$X_{33}=5$	$X_1=49$	**33**	Far
X_2 (ENWCR)	$X_{13}=2$	$X_{23}=3$	$X_{22}=0$	$X_{32}=1$	$X_{31}=4$	$X_2=33$		Optimal

Table D1: Starting Solution to problem (D)

Outcome	**Starting Allocation**							**Total Cost**	**Optimal Value**	**Remark**
X_1 (NWCR)	$X_{11}=5$	$X_{12}=2$	$X_{22}=3$	$X_{32}=3$	$X_{33}=4$	$X_{43}=3$	$X_{44}=5$	$X_1=384$	**372**	Far
X_2 (ENWCR)	$X_{44}=5$	$X_{43}=3$	$X_{23}=3$	$X_{33}=1$	$X_{31}=5$	$X_{32}=1$	$X_{12}=7$	$X_2=373$		Close

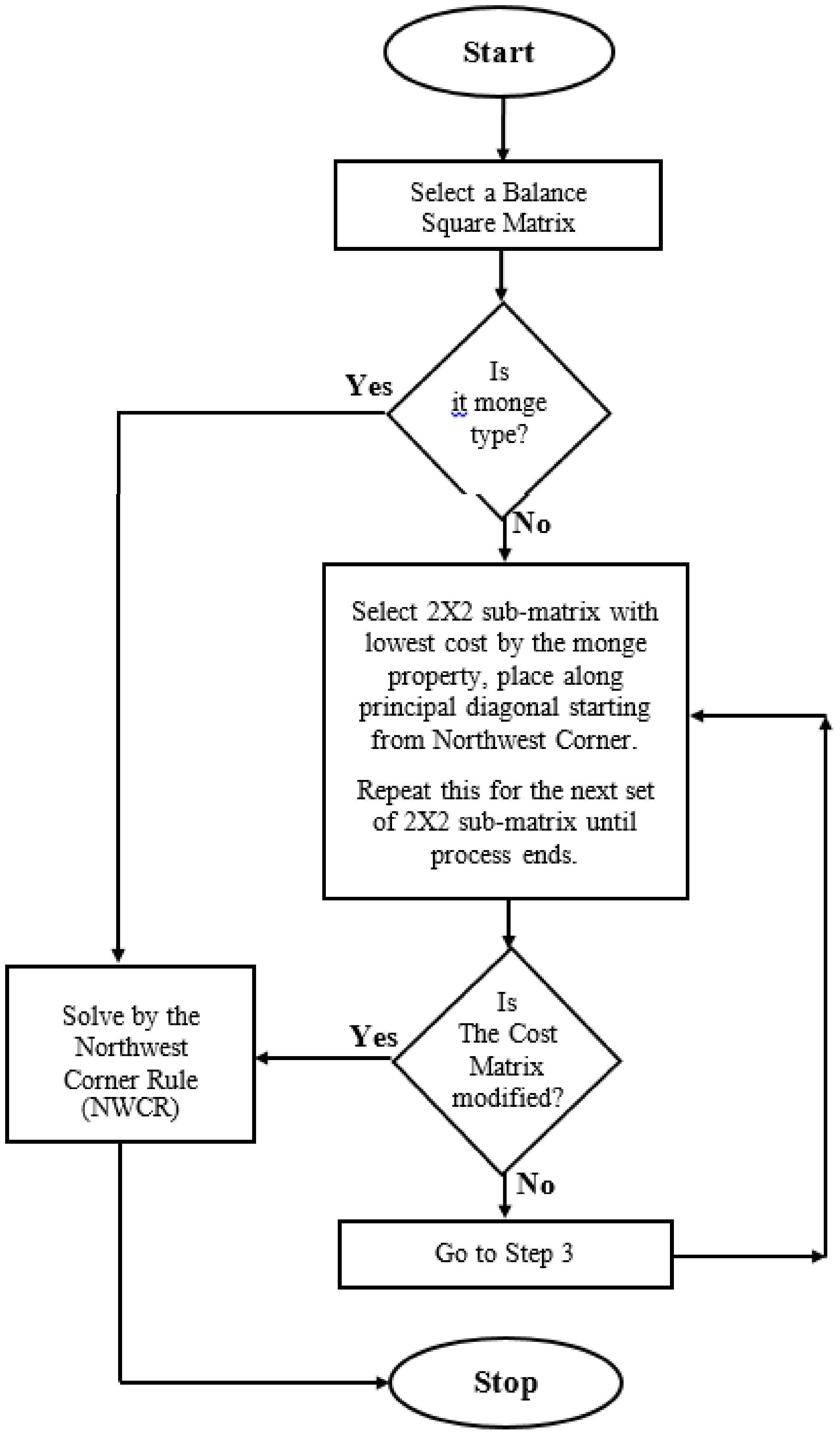
Table E1: Starting Solution to problem (E)

Outcome	**Starting Allocation**						**Total Cost**	**Optimal Value**	**Remark**
X_1 (NWCR)	$X_{11}=200$	$X_{21}=300$	$X_{22}=X_{33}=0$	$X_{32}=400$	$X_{43}=300$	$X_{44}=200$	$X_1=8900$	**7100**	Far
X_2 (ENWCR)	$X_{41}=500$	$X_{32}=400$	$X_{34}=X_{42}=0$	$X_{24}=200$	$X_{23}=100$	$X_{13}=200$	$X_1=7500$		Close

Table F1: Starting Solution to Problem (F)

Outcome	**Starting Allocation**									**Total Cost**	**Optimal Value**	**Remark**
X_1 (NWCR)	$X_{11}=16$	$X_{12}=2$	$X_{22}=16$	$X_{23}=1$	$X_{33}=19$	$X_{34}=0$	$X_{44}=13$	$X_{54}=1$	$X_{55}=14$	$X_1=4284$	**2202**	Far
X_2 (ENWCR)	$X_{13}=18$	$X_{43}=2$	$X_{41}=11$	$X_{51}=5$	$X_{52}=10$	$X_{32}=8$	$X_{34}=11$	$X_{24}=3$	$X_{25}=14$	$X_2=2223$		Close

Flow Chart on Modification of Cost Function



DRIVING CUSTOMER LOYALTY THROUGH PREMIUMS: THE EXPERIENCE OF BOTTLING COMPANIES IN RIVERS STATE

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ABSTRACT

This study examined the relationship between premium and customer loyalty for transformation of Nigerian bottling companies in Rivers State. The study adopted a correlational research design. The population of study comprised 3 registered bottling companies in Rivers State. However, census was used to obtain a sample size of 15 management staff per bottling company giving a sample size of 45 respondents. Out of 45 copies of questionnaire distributed, 39 copies were retrieved and used for the analysis. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient (r) at 0.05 level of confidence and aided with SPSS version 22.0. The study found that premium pricing help in the inducement of customers to buy a product, and subsequently remain loyal customers to the firm. It was also revealed that premium pricing are stimuli to advocacy towards product patronage. The study found that customers that are advocate can bring other customers to the organization to become loyal customers while they also show their loyalty to the organization. The study concluded that premiums significantly influence customer loyalty in Nigerian bottling companies in Rivers State. The study therefore recommends that management of Nigerian bottling companies should ensure that the premium adopted should be the kind that will be of interest to the customers to enable them repeat purchases and become advocates to the company and its products.

Keywords: Advocacy, customer loyalty, premium pricing, repeat purchase

INTRODUCTION

In today's competitive business environment, the goal of business organizations includes brand awareness, loyalty and improved corporate image. No business can survive if its products do not sell in the market. Thus, marketing in all aspects are undertaken to increase sale. Producers may spend a lot on advertising and personal selling (Kotler & Armstrong, 2010) and still achieve low sales. So incentives need to be offered to attract customers. Premiums play vital role in the marketing of products; and creates impact through the use gifts or other incentives, mostly designed to stimulate quicker purchase of products by customers (Dick & Basu, 1994; Hanssens & Donald, 2001; Koekemoer, 2005).

In today's marketing, organisations are concerned with what should be done to advance and sustain sales. The means of giving close attention to customers can be motivated through such means as rewards, incentives, leadership and importantly satisfaction they derive from sales premiums. As a matter of facts, premium is a vital factor in marketing and only the important communication variables in the marketing mix, which organisations uses to increase the sales of any product (Lawer & Knox, 2006; Bertrend, 1998; Boore & Kurtz, 1995).

Marketing managers often use advertising, personal selling and public relations to increase the effectiveness of their promotion efforts. Every incentive is geared towards increasing sales and enhances customer loyalty. These incentives may be informed of free samples, gifts, discount, coupons, demonstration, shows, contest and among others. All these measures normally motivate the customers to buy more and thus, increase sales of the products. However, to retain customers in the face of keen competition, business organisations have to develop marketing strategies that will not only win customers but help to retain them. Premiums plays important role in retaining old customers, and attracting new ones. But majority of organisations are losing customers, customers are becoming disloyal and switch allegiance from one producer to another. This may be attributed to improper use of premium strategies. This study therefore examines the relationship between premium strategies and customer loyalty for Transformation in Nigerian bottling companies in Rivers State.

In view of these, this attempt was made to address the following research questions:

i. To what extent does premium strategies relate with advocacy in Nigerian bottling companies in Rivers State?
ii. To what extent does premium strategies relate with repeat purchase of Nigerian bottling companies in Rivers State?

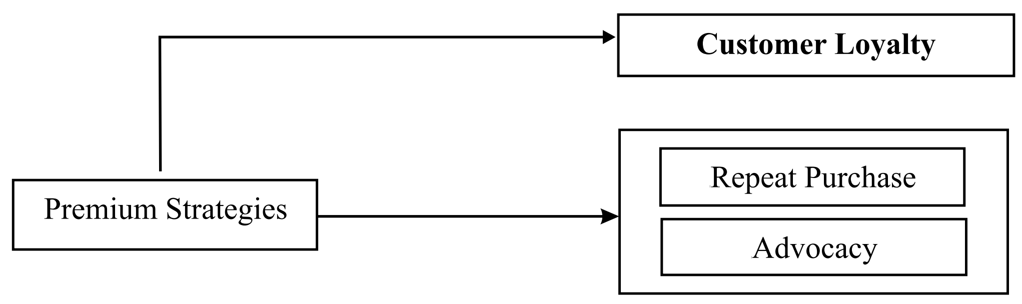

Fig. 1: Conceptual framework of premium strategies and customer loyalty

Source: Desk Research, 2022

LITERATURE REVIEW

Concept of Premium Strategies

Premium is one of the forms of sales promotional strategy. Traditionally, premium is defined as a sales promotional technique where the customers are given two or more products and they pay lower than the price of the combined products. It is an inducement for the customers to buy more products. In premium, the customers get prizes, gifts, coupons, and vouchers, etc. as incentives when a consumer purchases a product (Kotler & Armstrong 2010). When a company presents a premium, the customer pays full price for the goods or service, as opposed to coupons that grants price reductions or to samples, instead of receiving the actual product. One of the first loyalty marketing programs ever offered was a premium in which proof of purchase was redeemed for prizes or gifts. Some marketing experts believe that coupon overuse damages a brand's image, while premium can actually enhance it. The key is to match the right type of premium with the product and a predisposed buyer.

Premiums are goods that are offered for free or at low cost, as an incentive to buy a particular product (d' Astous & Jacob, 2002). There are 3 types of premiums: free gifts (go with the product inside the packaging or on the packaging); free postage premiums (consumers will get them if they submit a proof of purchase) and self-liquidating premiums (manufacturer or seller sells the product to consumer at a price much lower than regular, i.e., at a price that is at the level of costs of production or procurement). Main tasks of premiums are: encouraging existing and competitive consumers to purchase and maintenance of market share (Jobber & Fahy, 2006; Kotler & Keller, 2006). Among other things, premiums are used to stimulate the more often purchases or purchases that are larger than regular ones (Rotimosho, 2003; Obeid, 2014). In addition, they can also be used for testing new products. According to previous research results, premiums are becoming increasingly important method of sales promotion (Raghubir, 2004; Banerjee, 2009; Palazon & Delgado, 2009).

Premiums can be used to boost sales and remain a valuable consumer promotional tool. Premium fall into one of the two categories; free premiums which only require the purchase of the product, and self-liquidating premiums which require consumers to pay all or some of the price of the premium. Related literature reviewed shows that premium is a reward that is offered to encourage an exchange. It is a product offered free or at less than the regular price in order to induce the customer to buy another product.

Premium (Buy one and get some free offer) is where either the same product or another product is offered free with the purchase of existing product. E.g. "Buy toothpaste and get tooth brush free" or "buy one pack and get another pack of talcum powder free. According to Kinnear and Bernhardt (1983) a premium is the offer of some article of merchandize, either free or at a lower price than usual, as an inducement to purchase another product or visit the location where the later product is sold. Premium are promotional items - toys, collectibles souvenirs and house hold products - that are linked to a product and often require box tops, tokens or proofs of purchase to acquire (Lamb Hair & McDnniel, 2008). The customer generally has to pay at least the shopping and handling costs to receive the premium. Mostly, the effective premiums are closely tied to the product or brand being sold (Blanchard *et al*., 1999). In some instances, free samples of the product are offered free to customers in order to enable them try the product. They may be given out at local retail outlets (Ricky *et al*, 2005).

Concept of Customer Loyalty

Loyalty programs are organized marketing strategies planned by traders to urge clients to keep on shopping at or utilize the administrations of business related with each program (Sharp & Anne, 1997). These programs exist covering most sorts of business, every one having shifting elements and prizes plans (Roster, 2006; Wasserman, 2016; Speedy, 2011; Annear, 2011; Blau, 2004).

Customer loyalty is highly associated with participant retention at sport facilities (Aleandris & James, 2003) and service quality years been identified as a significant driver of that loyalty (Zeithaml, Parasuraman & Berry, 1996). Positive perceptions of sport facility services can enhance customer loyalty as they value their experiences with the facility (Park, 1996). The quality of service, including the social bonds that are part of the sport facility experience, drive up the perceived value of the membership, making customers less likely to switch to other facilities (Beathy & Kahle, 1988).

Customer loyalty to participants sport facilities has been shown to emerge from customers perceptions of high service provision that meets or exceeds participant expectations of programs

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(Alexandris & James, 2003; Roster, 2006). Customer loyalty can be defined, according to East *et a*l (2005) as repeat patronage behaviour which is the combination of attitude and behaviour. In industrial and service marketing, behavioural loyalty is viewed as retention of the brand (Reichheld, 1996 & Kumar 2000). Advocacy and repeat purchase behaviour are used in this study.

Customer loyalty is critical to conducting business in today's competitive marketplace. Customer loyalty is vulnerable because even if customers are satisfied with the service, they continue to defect if they believe they can get better value elsewhere. Customer loyalty has been studied both in the academic field and real business world for years. To keep a long-term relation with their customers is one of the most important goals of many companies in the modern business world.

Oliver (1997) and Oliver et al. (1997) defined customer loyalty as a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing despite situational influences and marketing efforts have the potential to cause switching behaviour. In the words of Soderlund (2016), customer loyalty refers to the consistent mutual relations between a customer and a vendor or service provider overtime regarding a given brand.

Advocacy

Customer advocacy is an advanced formed market orientation that responds to the new drivers of consumer choice, involvement and knowledge. Customer advocacy refers to the process of faithfully representing the customer's interests and providing them with honest information (Lawer & Knox, 2006). Building customer advocacy capabilities are response to the vulnerabilities a services and branding in the face of rising consumer empowerment. It creates new opportunities for providing customer dialogue, knowledge creation, and critically, provides a context in which the interests of a corporation and those of its customers: can be more closely aligned (Yeh, 2013). Customer advocacy refers to the willingness of customers to give strong and positive recommendations, and praise to other consumers on behalf of a products or service supplier (Will *et al*, 2006; Fullerton, 2011).

When consumers enthusiastically provide positive recommendations on products, services or brands, they are acting as advocates on behalf of that object (Anderson, 1998; Fullerton, 2003). However, it is important to state that customer advocacy takes the form of word of mouth communication which predominantly has two dimensions; the positive word of mouth and negative word of mouth advocacy. According to Anderson (1988), positive word of mouth advocacy is when consumers discuss about the product or service attributes to others by specifically describing pleasant and positive service experiences derived from the products to other potential consumers or make a formal recommendation about the product while negative word of mouth advocacy is the other way round.

A satisfied buyer is a silent advertisement. But, if the used brand does not yield desired satisfaction, negative feeling will occur and that will lead to the formation of negative attitude towards brand. This phenomenon is called cognitive dissonance. Marketers try to use this phenomenon to attract user of other brands to their brands. Advocacy is the act of telling others about a satisfactory or unsatisfactory experience with a service provider. It is an informal and non-commercial form of interpersonal communication between individuals (Gremler, Gwinner,

& Brown, 2011) or between actual and potential consumers concerning a brand or product; but is neither initiated nor directly influenced by the brand. It is brand evangelism carried out by satisfied customers; and is avowed to be a potent medium of communication for influencing consumers' attitude toward a brand (Hanaysha, 2016; Quy, 2014).

In most contexts, advocacy is perceived to be more effective in influencing consumers' purchase behavior because customers tend to rely more on it in their purchase decisions making, and is preferred by marketers because it is cost-effective (Hogan, Lemon, & Libai, 2014). Studies show that positive advocacy are likely to increase consumers' purchase intentions for innovative products by reducing risks, helps create favorable image toward the brand and the firm, and subsequently decrease a firm's overall promotional expenditures. Conversely, negative advocacy is likely to dissuade potential buyers from considering a particular product or brand, thus damaging the company's reputation and financial position (Holmes & Lett 1977).

Customer advocacy aims to build deeper customer relationships by earning new levels of trust and commitment and by developing mutual transparency, dialogue and partnership higher level of quality than relationship strategies because a company that lacks superior products that is honestly trying to represent the customers best interests cannot recommend itself. In particularly, learning about each customer and developing a relationship with them helps a company become a better advocate for their customer's needs (Urban, 2004).

If a service provider's efforts in customer advocacy are successful, it could gain a leading position in the industry that competitors may find difficult to overcome. Even when other companies try to gain customer trust, the pioneers can maintain their superior positions by continuing to innovate their advocacy programs. In contrast, choosing not to embrace advocacy can present great risks to a company if competitors are able to gain customer trust first. Advocacy marketing treats consumers like intelligent individuals who seek to make enforced decisions about the goods and services they purchase. Advocacy is a major advancement in the evolving relationship between companies and their customers.

Repeat Purchase

The phenomenon of repeat purchase is of significant interest in marketing. (Lien *et al,* 2011), argued that behavior intensions have a diagnostic value. They help management to know whether customers will switch to competitors or not. Repeat purchase is defined as the degree to which customers are willing to purchase from the same product or service. Repeat purchase is the patronage of a service provider by a consumer of the same brand name previously bought on another occasion. A repeat purchase is often a measure of retention of a brand by consumers and is often taken into account by marketing research professionals to evaluate a business (Hamilton-Ibama & Ogonu, 2022). Consumer gets brand preference only when that brand lives up to his expectation. This brand preference naturally repeats sales. Repeat purchase is aimed simply at having customers repeatedly buying a product. Increasing customer loyalty aids a company especially in difficult times as loyal customers are inclined to buy from the company even when there are competitors offering similar or better products at a lower price.

Premium Strategies and Loyalty

Premium could be seen as product offered free or at a relatively low price in return for the

purchase of one or more products (Morgeson et al., 2020). Brown and Carpenter (2000) argue that during the process of making purchasing decisions, consumers are assumed to choose on the basis of easily justified, cognitively available reasons -ideally, reasons based on important attributes for which one brand is clear superior when no decision can be made based on important attributes, consumers will turn their decision process to the field of so-called trivial attributes. A manufacture may add an unrelated premium, add a unique ingredient to a product, or create a novel association with the brand.

Thus, consumers sometimes treat trivial attributes as though they were critically important in the sense that they have a significant impact on choice (Morgeson *et al.,* 2020). One of many ways to construct trivial attributions is premium promotion; either they are complementary or not to the brand and / or the product under promotion, as premium promotions are formed as a supplementary product that people receive when purchasing certain goods or brands but do not affect the quality of those goods or brands. Minding the fact that premium promotions are trivial attributes in purchasing decisions, it is helpful to know those trivial attributes are values in a positive or negative light.

Mittal and Sethi (2011) research investigated the effectiveness of the sales promotion tools to induce different buying response among the Indian Consumers. The study revealed that the Premium (Buy one get some free) offers are the most effective tool of sales promotion in India. The study revealed that Premium offers (Buy one and get some free) were particularly effective in inducing brand switching and new product trial. Gardener and Trivedi (1998) have found premium offers effective as more of the product is included at no extra cost, they found, that the consumers can easily be persuaded to buy the product. Bell et al. (1999) studied 13 different product categories and found that an average 75% of the short-term effect of price promotion was Brand Switching and 25% was purchase acceleration. Therefore, the study hypothesized that there is a relationship between premiums and advocacy.

According to Ndubisi and Moi (2005) sales promotion tools used strategically not only increase brand awareness but also encourage consumers to buy new product. There is substantial evidence that sales promotions are associated with increased purchase quantities and shorter inter purchase times. Positive after-effects from promotions could occur if promotions attract some new consumers who would repeatedly buy later. However the evidence suggests no long-term favorable effects on brands. The reason being sales promotion attracts mostly existing infrequent buyers and a small number of new buyers have the propensity to re buy (Ehrenberg, *et al* 1994). Papatla and Krishnamurthy (1996) suggest that sales promotion reduce the likelihood of repeat purchases. Kahn and Louie, (1990) found that promotion resulted in lower purchase rates from loyal customers.

Hamilton-Ibama and Owuso (2022) examined the relationship between pricing strategy and customer loyalty of food and beverages manufacturing firms in Port Harcourt, Nigeria. The study used survey research design with the population of twenty-three (23) registered Food and Beverages firms in Port Harcourt, Nigeria. Data analyses and test of hypotheses were done with descriptive and inferential statistics and Spearman Rank Order Correlation Coefficient statistical tool was used to test the study hypotheses. The study found that a strong positive relationship exist between pricing strategy and customer loyalty of Food and Beverages firms in Port

Harcourt, Nigeria.

METHODOLOGY

The study adopted correlational research design. The study population comprised of three (3) registered and functional bottling companies in Rivers State which included seven up, Coca-Cola and Pabod Breweries. However, 15 management staff were selected from these companies which gave the sample frame of 45. Due to the population size, the entire population was adopted as sample size for the study. Out of 45 copies of questionnaire distributed, 39 copies were retrieved and used for the analysis. The hypotheses were tested using the Spearman Rank Order correlation coefficient (r) at 0.05 level of significance and aided with SPSS version 22.0.

RESULTS AND ANALYSIS

Table 1: Significant relationship between Premiums Strategies and Advocacy

Variable	Data 1	Data 2	R1	R2	D	d^2
A	116	112	4	2	2	4
B	104	118	2	4	-2	4
C	93	104	1	1	0	0
D	108	115	3	3	0	0
						$\Sigma d^2 = 8$

Source: Field Survey, 2022.

$$rs = 1 - \frac{6\sum_d 2}{n(n^2-1)} = 1 - \frac{6(8)}{39(39^2-1)} = 1 - 0.03155 = 0.9684$$

Table 1 indicated that there is a relationship between premiums strategies and advocacy. That is rs = 0.9684. This indicates that a strong positive relationship exists between premiums and advocacy.

$Z = 0.9684\sqrt{39} - 1$

$Z = 0.9684\sqrt{38}$

$Z = 5.9696$

Since the calculated z statistic (5.9696) is greater than the tabulated value (critical z value) of ± 0.9684, the null hypothesis was rejected and the alternative accepted. Having accepted the alternative hypothesis, it implies that there is a significant relationship between premiums and advocacy. Critical value of 5% level of significance with degree of freedom = 5.

Table 2: Significant relationship between Premium Strategies and Repeat Purchase

Variable	Data 1	Data 2	R1	R2	D	d^2
A	116	112	4	2	2	4
B	104	116	2	1	1	1
C	93	127	1	4	-3	9
D	108	124	3	3	0	0
						$\Sigma d^2 = 14$

Source: Field Survey, 2022.

$$rs = 1 - \frac{6\sum_d 2}{n(n^2-1)} = 1 - \frac{6(14)}{39(39^2-1)} = 1 - \frac{84}{1521} = 1 - 0.05522$$

= 0.9448

Table 2 showed that a relationship exist between premiums strategies and repeat purchase. That is rs = 0.9448. This indicates that a strong positive relationship exists between premiums and repeat purchase.

$Z = 0.94477\sqrt{39} - 1$

$Z = 0.94477\sqrt{38}$

$Z = 5.8239$

Since the calculated z statistic (5.8239) is greater than the tabulated value (critical z value) of ± 0.9448, the null hypothesis was rejected and the alternative accepted. Having accepted the alternative hypothesis, it implies that there is a significant relationship between premiums and repeat purchase behaviour. Critical value of 5% level of significance with degree of freedom = 5.

DISCUSSION OF FINDINGS

Based on the analysis, the study revealed that there exist a significant relationship between premium strategies and advocacy for transformation in Nigerian bottling companies in Rivers State. This is indicated by the critical level of =0.867. This accordingly has supported the view of Morgeson et al. (2020) that premium is an inducement to purchase a product and as well as advocating for the organization. Those customers that are advocates can bring other customers to the organization to become loyal customers while they also show their loyalty to the organisations.

This study finding also corroborates the findings of Mittal and Sethi (2011). Their research investigated the effectiveness of the sales promotion tools to induce different buying response among the Indian Consumers. The study revealed that the Premium (Buy one get some free) offers are the most effective tool of sales promotion in India. The study revealed that Premium offers were particularly effective in inducing brand switching and new product trial referral. Gardener and Trivedi (1998) have found premium offers effective as more of the product is included at no extra cost, they found, that the consumers can easily be persuaded to buy the product. Bell et al. (1999) studied 13 different product categories and found that an average 75% of the short-term effect of price promotion was Brand Switching and 25% was purchase acceleration. Therefore, the study hypothesized that there is a relationship between premiums and advocacy.

Based on the analysis, the study revealed that there exist a significant relationship between premium strategies and repeat purchase for transformation in Nigerian bottling companies in Rivers State. This is indicated by the critical level of 0.8675. This therefore means that premium strategies help in the inducement of customers to buy a product, and subsequently remain loyal customers to the firm. This accordingly has supported the view of Akinladejo and Unanoğlu, (2022) and Morgeson et al. (2020) that premium is an inducement to purchase a product again and again.

This study finding also corroborates the findings of Ndubisi and Moi (2005). According to them sales promotion tools (premium) used strategically not only increase brand awareness but also encourage consumers to repeat purchase. Positive after-effects from promotions could occur if promotions attract some new consumers who would repeatedly buy later. However the evidence suggests no long-term favorable effects on brands. The reason being sales promotion attracts mostly existing infrequent buyers and a small number of new buyers have the propensity to re buy (Ehrenberg et al., 1994). This study finding is not in line with the findings of Papatla and Krishnamurthy (1996) and Kahn and Louie (1990) who suggested that premium strategies reduce the likelihood of repeat purchases also that premium strategies results in lower purchase rates from loyal customers.

Hamilton-Ibama and Owuso (2022) examined the relationship between pricing strategy and customer loyalty of food and beverages manufacturing firms in Port Harcourt, Nigeria. The study used survey research design with the population of twenty-three (23) registered Food and Beverages firms in Port Harcourt, Nigeria. Spearman Rank Order Correlation Coefficient statistical tool was used to test the study hypotheses. The study found that a strong positive relationship exist between pricing strategy and customer loyalty of Food and Beverages firms in Port Harcourt, Nigeria.

CONCLUSION AND RECOMMENDATIONS

From the analysis of data, and interpretation, it was found that premium strategies influence repeat purchase and advocacy. The study therefore concluded that premium strategies enhance customer loyalty for transformation in Nigerian bottling companies in Rivers State.

The followings recommendations were made based on the findings and conclusion.

i. Management of bottling companies should use premium strategies to attract customers to their companies as this will encourage customers to be loyal.
ii. They should ensure that the premium strategies adopted should be the kinds that will be of interest to the customers as this will move them to repeat the purchases of the company's products and become advocates.
iii. Bottling companies need to be innovative by introducing new products and improving on existing methodologies to meet market needs.
iv. The beverage industry is experiencing intense competition with new entrants, new brands and new packages being introduced.

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