# EFFECTS OF TECHNOLOGICAL AND MARKETING ALLIANCES ON PERFORMANCE OF DEPOSIT MONEY BANKS IN MAKURDI, NIGERIA

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## ABSTRACT

The study examined the effects technological alliance and marketing alliance on performance of deposit money banks in Makurdi, Benue State, Nigeria. Primary data was obtained from a sample of 167 respondents with the aid of a systematic questionnaire. Both descriptive (i.e., chart and tables) and inferential (i.e., multiple linear regression) statistics were used to evaluate the data and determine how a technological and marketing alliances affect deposit money banks' performance. The outcome of the regression analysis shows that performance of the deposit money banks in Makurdi is significantly positively affected by technology alliance and marketing alliance. It was determined that technology advancements and marketing alliances are factors influencing banks' performance. The study thus suggests that deposit money banks that seek improved performance form and strengthen technological and marketing alliances.
**Keywords:** Alliance, banks' performance, marketing alliance, technological alliance

## INTRODUCTION

Organizations all over the world continually explore innovative strategies to successfully access existing new and potential markets. One of the main strategies for extending the reach of a corporation is to form alliances. Gulati (2019) and Lavie et al. (2017) defines alliances as any cooperative agreement between two (dyadic alliances) or more (multi-partner alliances) businesses that involves exchange, sharing, or co-development of capital, technology, or firm-specific assets.

Contrary to Mergers and Acquisitions (M&A), the partnering businesses continue to function as separate legal entities (Yoshino & Rangan, 2015). What this means is that, the organizations essentially share the advantages of joint operations because they both contribute in crucial functional or strategic areas that have been mutually agreed upon while maintaining control over other aspects of their operations (Yoshino & Rangan, 2015).

Consequently, businesses may cooperate in one area while competing in another (Hamel et al., 2019). Alliances have been utilized for many years, therefore partnerships between organizations and the exchange, sharing, or co-development of resources, goods, or capabilities are not a recent occurrence (Hagedoorn, 2013). Organizations thus, employ the tools of strategic alliances to optimize resource usage and competencies and/or discover other potentials. Partnerships in the banking sector impact organizational expenses and lead to synergistic effects, resource expansion, higher market share, improved efficiency, and growth (Gulatti, et al., 2010).

Empirical findings indicate that banks enter into alliances with a view to achieving customer satisfaction and loyalty, improved profitability and value addition. Few strategic alliances have been successful, despite the advantages and popularity of these partnerships that have prompted many banks to seek them. Arend and Amit (2015) showed that 30% to 70% of cooperative efforts fail to achieve the goals of their parent organizations or provide the functional or essential benefits they were intended to. The reason for these failures is not well explained in literature. Also, while seem to be agreement among scholars that alliances have effect on organizations' performance, the nature of this effect is unclear because some studies found positive effects while others found negative effects.

Banks enter various alliances. This study focuses on two of such alliances as examined by Enyinnah et al. (2020) namely technological and marketing alliances. The study examined how these two types of alliance relate to bank performance. The study was provoked by the poor performance of many banks as evident in their annual financial statement. The study investigated effects of technological alliance and marketing alliance on performance of deposit money banks in Makurdi, Benue State, Nigeria.

## LITERATURE REVIEW

### Concept of Alliance

Amita et al. (2011) see alliance as an arrangement that exists between two or more organizations resulting in the contribution of capabilities, resources, or expertise to achieve optimal performance, and involves sacrificing complete control by any of such organizations in exchange for the chance to maximizing gains (such as competitive advantage, higher profit, lowering costs, etc.). Akewushola et al. (2018) noted that organizations that create alliances will perform better as a whole. The fundamental source of resource sharing, learning, and ultimately securing upper hand in the competitive environment is alliance. Burgers et al. (2013) assert that alliances serve as uncertainty control mechanism that ameliorates, mitigates, and protects parties from business risks. Deposit money banks in Nigeria frequently form alliances. The most popular of these are technological alliance and marketing alliance.

**Technological alliance:** Niosi (2013) posits that technological alliance fosters a learning process that in creates dynamic economics by accelerating innovation. The absorptive capacity of a firm is gauged by its ability to gain and value external knowledge (George et al., 2001). When businesses enter into partnerships to acquire specialized knowledge required in a given industry. This is known as having an "absorptive capacity," which is a set of organizational practices and procedures that allows businesses to acquire, assimilate, transform, and exploit external knowledge (Jabar et al., 2011). Baum et al. (2000) conclude that a firm's technical affiliations impact its capabilities and others' perceptions of those skills.

**Marketing alliance:** In the view of Hsu and Tang (2010, as cited in Ateke & Simeon, 2018), marketing alliances develop when two or more companies partner to capture potential synergies by integrating marketing resources and capabilities, including access to retail systems, marketing knowledge, professional skills, and marketing activities, and for sharing risks and benefits in order to gain competitive advantages. Marketing alliances combine marketing efforts of two or more firms in a particular market (Teng & Das, 2018). Marketing expertise is required for firms in an alliance to be able to coordinate their marketing efforts and enhance the alliance's overall performance. (Day & Nedungadi, 2019). Marketing alliances are utilized as quick routes to skills/knowledge that the partners otherwise would not be able to develop on their own within a reasonable time or at a reasonable cost, such as knowledge of international markets, distribution networks, or customers (Teng & Das, 2018). Partners may collaborate on research, product development, or production in addition to marketing (Cannon & Perreault, 2019; Ye et al., 2019).

**Bank Performance**

Although bank performance has been variously defined by numerous experts and authorities with various characteristics, it is closely related to corporate effectiveness. According to Daft (2013), performance can be equated to an organization's ability to use its resources effectively and efficiently to accomplish its goals. In terms of group behaviour, performance can be determined by the manner in which groups, teams, and individuals carry out their work. Thus, Armstrong (2013) posited that it is important to take into account both inputs (behaviour) and outputs (results) when managing the performance of teams and individuals. This includes competency levels and accomplishments as well as the setting and evaluation of objectives.

Using goals, standards, evaluations, and feedback, Ababneh (2008) described bank performance as a continuous and action-oriented focus on performance improvement. According to Rouse (2017), corporate performance is an evaluation of how effectively a company carries out its most crucial objectives, which are primarily financial, market, and shareholder performance. This study analyzes the effectiveness of banks using non-financial performance indicators such as customer happiness and patronage. Customer satisfaction is a positive emotion brought on by comparing a product's perceived performance or outcomes in relation to the customer's expectations, whereas consumer patronage is the support given by customers with respect to a specific brand.

**Empirical Review**

There is ample empirical studies on effect of alliances on performance banks and other firms. Among such studies is that by Mwamuye and Ragui (2021) that investigated how strategic partnerships affect financial results of commercial banks in Nairobi, Kenya. The correlation results indicated that marketing, agency, innovation, and technology alliances had positive and significant impact on banks' profitability. According to the results of the regression analysis, brand marketing, agency, innovation, and technical partnerships combined forecast 38.3% of changes in bank earnings.

Oyewole (2020) conducted an analysis of the effect of strategic alliances on banks' performance ratings in Kwara State, Nigeria. The study found that process and marketing alliances significantly improve banks' performance ratings in the Nigerian state of Kwara. The performance rating of banks is negatively impacted by investment alliances.

Relatedly, Enyinnah et al. (2020) explored how strategic alliances affect market share of several microfinance institutions in Lagos, Nigeria. The results linked strategic alliance to a competitive advantage as it was revealed that strategic alliances have a positive effect on the market share of the microfinance institutions studied. Strategic alliance was then associated with subpar performance, including low market share, low asset returns, and a lack of innovative products of the microfinance institutions in Nigeria.

Effect of strategic alliance on local content development of oil and gas-producing companies in Rivers State, Nigeria was studied by Uko and Hamilton (2020). The findings indicate that there are variations in the relationship between local content development and strategic alliances in the oil and gas producing enterprises that were investigated. Particularly, the results showed that the two indicators of local content development—technological and skill—had a strong and significant association with strategic alliances.

Similarly, Akewushola et al. (2018) investigated the impact of strategic alliances on firm performance in Nigeria. The findings showed that while marketing alliances impact sales revenue, production has a much larger impact. Additionally, it demonstrated how valuable technological alliances can be for businesses. The study concluded that strategic alliances are a real instrument for improving organizational performance in light of findings.

Onu and Adegbola (2018) examined strategic marketing alliance and environmental perception of customer-oriented service in Nigeria Deposit Money Banks in Lagos State. Five banks were chosen from which questionnaires were administered to obtain the data needed. The results demonstrated significant positive association between strategic marketing tactics and provision of customer-focused services. Similarly, Ateke and Simeon (2018) examined marketing alliance and business wellness of deposit money banks and report that have a positive and statistically significant correlation exists between the variables.

Seyed (2017) investigated how partner attributes affect performance of coalitions with various time periods in Poland while studying strategic alliance from a distinct clime. The report of the study suggests that strategic alliance has positive and statistically significant link with customers and suppliers, access to distribution channels, and financial assets; but not statistically significant in the long-term alliances. Long-term alliances have positive and statistically significant effect on trust representation, partner reputation, and technological capability, suggesting that these characteristics affect export performance in long-term alliances more strongly than in short/medium-terms.

In view of the foregoing, we hypothesize that:
$Ho_1$: Technological alliance does not have significant effect on deposit money banks' performance.
$Ho_2$: Marketing alliance does not have significant effect on deposit money banks' performance.
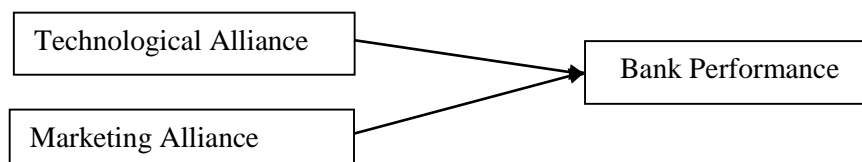


Fig. 1: Conceptual framework
Source: Adapted from Enyinnah et al. (2020).

**Theoretical Framework**
The game theory underpins this study. Game theory presupposes that businesses are (hyper) rational utility maximizers that desire to obtain the most desired outcomes from their productive activities subject to the constrained rational action of their rivals (Zagare, 1984). While there might be uncertainty regarding the plans and behaviors of competitors, a rational firm is expected to overcome it by developing competitive conjectures (alliance), subject to probabilities of rivals' plans and behaviors. By this, game theory essentially sees firms as intelligent and capable of putting themselves in the position of their competitors and reasoning from that point of view by presenting the best alliances and strategies that will ensure their successful performance in the market. Strategic alliance is thus one of the vital components of the game.

According to Crider (2012), games theory postulates a scenario whereby all players in both camps of competition are assumed to be effective. For a team to defeat its opponent, the team needs a game plan that can outwit the other (Bicchieri & Sillari, 2015). The focus of game theory is on situations where a player's outcome depends not only on their own actions but also on the actions of the other players (Straffin, 2013). Game theory, therefore, serves as the medium by which organizations describe, organize, analyze, and ultimately comprehend various strategic scenarios for surviving in a competitive market. That is the idea behind a strategic alliance.

The game theory has been lauded on the grounds that it offers a systematic quantitative approach for choosing the best strategy in competitive situations and emphasizes the significance of self-interest in the business world. In game theory, self-interest is channeled through the mechanism of economic competition to bring the system to the saddle point. (Neumann & Morgenstern, 2014). Furthermore, it aids in the

management, labour, and business problem-solving processes. In fact, businesses always try to predict competitors' tactics in order to carry out their plans more successfully (Rapoport, 2017).

## METHODOLOGY

A survey research design was adopted in this study. 15 deposit money banks operating in Makurdi with a total of 167 management and senior staff members (167) make up the study's target population; and the study took a census. Alliances are a management issue; hence the study's valid information demands can only be met by management personnel who are actively involved in alliance choices. Primary data was collected using a questionnaire designed in 5-point Likert scale.

To test for the validity of the research instrument, both content and construct validity tests were employed. While content validity test was carried out through the examination of the instrument by experts in the field, construct validity was tested with the use of a factor analytical tool that employed Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity (BTS). To establish the validity of the instrument, a pre-test study was carried out with thirty percent of the total sample of the study and the result of the pre-test study was subjected to exploratory factor analysis as presented in the following tables. Thirty percent of the study sample (i.e., 1/3) of one hundred sixty-seven (167) which is fifty (50) respondents from the banks under study were used for the pre-test study.

**Table 2: Kaiser-Meyer-Olkin and Bartlett's test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .954 |
|---|---|---|
| | Approx. Chi-Square | 7.093 |
| Bartlett's Test of Sphericity | Df | 6 |
| | Sig. | .012 |

Source: Authors' Computation, using SPSS Version 23.0

In Table 2, the factor analysis reveals that the study's variable items have a KMO measure of 0.954, with a BTS value of 6 at a level of significance of p=0.012. Our KMO result in the analysis exceeds the recommended threshold value of 0.50. (Hair et al., 1995). Our sample and data are thus sufficient for this study, and we are confident in their suitability.

**Table 3: Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 1.698 | 42.460 | 42.460 | 1.698 | 42.460 | 42.460 | 1.596 | 39.890 | 39.890 |
| 2 | 1.074 | 26.857 | 69.317 | 1.074 | 26.857 | 69.317 | 1.177 | 29.427 | 69.317 |
| 3 | .483 | 12.086 | 100.000 | | | | | | |
| Extraction Method: Principal Component Analysis. | | | | | | | | | |

Source: Authors' Computation, using SPSS Version 23.0

The variance distribution among the three potential factors is shown in the total variance explained in Table 3. It is a common standard for a factor to be useful when its eigenvalues (a measure of explained variance) are greater than 1.0 for two factors. The factors explain less information than a single item would have explained when the Eigenvalue is less than 1.0. The Eigenvalues of 1.698 and 1.074 are all greater than 1, as shown in Table 3. The variances for Components 1 and 2 were respectively 39.890 and 29.427. Two components, components 1 and 2, account for 69.317% of the variance of all study variables, as shown by rotated sum of squared loadings section. This demonstrates that the factors have strong construct validity.

**Table 4: Reliability Statistics**

| S/No | Variables | Cronbach's Alpha |
|------|-----------|------------------|
| 1. | Bank performance (BPRF) | 0.795 |
| 2. | Technological alliance (TECA) | 0.814 |
| 3. | Marketing Alliance (MKA) | 0.724 |
| **Overall Cronbach** | | **0.778** |

Source: Authors' Computation, using SPSS Version 23.0

According to reliability statistics displayed in Table 4, the overall Cronbach Alpha value is 0.782. Cronbach Alpha reliability statistics of 0.70 are regarded as sufficient and reliable for the study. As a result, the study's variables go beyond what a trustworthy instrument can measure.

A functional relationship between the study's variables based on their theoretical connection is as illustrated in the model below:

$$BPRF = f(TECA, MKA) \tag{1}$$

where:

$BPRF$ = Bank Performance
$TECA$ = Technological Alliance
$MKA$ = Marketing Alliance

Thus, the model explicitly is of the form:

$$BPRF = b_0 + b_1 TECA_i + b_2 MKA_i + \varepsilon_i \tag{2}$$

$b_0$ = Regression constant
$b_1, b_2$ = Regression coefficient
$\varepsilon_i$ = Error term

### *A priori* expectation

The performance of deposit money banks is anticipated to benefit from technological alliances and marketing alliances. This is supported by both theoretical and empirical studies. The study, therefore, anticipates that the parameter estimates obtained will be positively signed. There is no empirical or theoretical agreement on the size of the effect, but we anticipate a greater effect of 50% and higher.

A combination of statistical techniques was employed to analyze the data collected. Descriptive techniques (i.e., charts, and tables) were used for analysis and multiple regression was employed to assess the relationship between the study's variables. These were done with the aid of Statistical Package for Social Sciences (SPSS version 23.0) which was used for coding and analysis of the data.
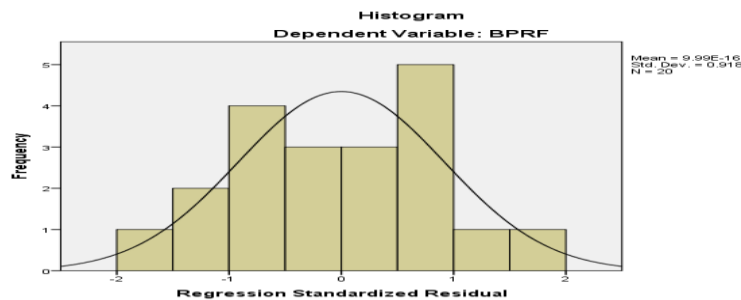
## RESULTS AND DISCUSSION



Fig. 2: Regression Standardized Residual
Source: Authors' computation, using SPSS 23.0

Fig. 2 shows a histogram of the residuals with a normal curve superimposed. The residuals appeared to be fairly normal, suggesting that the data are distributed normally. According to the pattern presented above, the residuals should be assumed to be normally distributed at each level of the dependent variable and to have a constant variance across levels of the independent variable. A perfectly smooth normal curve, like the one shown over the histogram, is very unlikely to be produced by a histogram of sample data, especially if the sample size is small. The assumption of normality is satisfied if the data is roughly normally distributed, has a middle peak, and is fairly symmetrical.

**Table 5: Model Summary**

| Model | R | R Square | Adjusted R Square | Std.Error of the Estimate |
|---|---|---|---|---|
| 1 | .909[a] | .826 | .700 | 9.57339 |

a. Predictors: (Constant), MKA, TECA
b. Dependent Variable: BPRF

Source: Authors' Computation, using SPSS 23.0

According to the result of the model summary in Table 5, the coefficient of determination $R^2$ for the study is 0.826 or 82.6%. This implies that 82.6% of the model's variations can be accounted for by its explanatory variables, while the remaining 17.4% of the variations can be attributed to factors outside the model and captured by the error term.

**Table 6: Regression coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 54.751 | 14.635 | | 3.741 | .002 | | |
| | TECA | .771 | .290 | .504 | 2.659 | .012 | .777 | 1.287 |
| | MKA | .594 | .227 | .317 | 2.617 | .023 | .851 | 1.175 |

a. Dependent Variable: BPRF

Source: Authors' Computation, using SPSS 23.0

The outcome of the multiple regression analysis in Table 6 demonstrates that technological alliance has positive impact on performance of deposit money banks in Makurdi. This impact is statistically significant and is consistent with the expectation of the study. According to the results, technological alliance significantly affects how well deposit money banks perform in Makurdi. This result concur with the results of Enyinnah et al. (2020) that technical alliance has a positive significant impact on bank performance. Our results also align with the report of Akewushola et al. (2018) and Uko and Hamilton (2020). Our result however, contrasts that of Seyed (2017) which reported that technological alliance does not positively impact performance of firms in the short-term.

Table 6 also demonstrates that marketing alliances significantly affect performance of deposit money banks in Makurdi. This result agrees with that of Mwamuye and Ragui (2021) partnerships correlate positively with financial success of commercial banks in Nairobi, Kenya. The current results also confirm the reports of Oyewole (2020), Akewushola et al. (2018) and Onu and Adegbola (2018) that marketing alliances enhance banks' performance.

## CONCLUSION AND POLICY IMPLICATION

The study looked at how alliances affect deposit money banks' performance in Makurdi, Benue State. The study found that technological and marketing alliances are significant antecedents to banks' performance. Thus, banks' efforts to build technological and marketing alliances determine how successful they will be

in raising their performance levels. Success in alliances inform bank's capacity to operate with a competitive edge.

As a result, the study concludes that technological and marketing alliances are important predictors of bank performance in the study area. In light of the aforementioned results and conclusion, it is pertinent that deposit money banks do more in forming alliances (technological and marketing) that hold the promise to improve their performance. It therefore, behooves the deposit money banks to improve their marketing strategies by going into alliances that will reduce their operating costs and improve their performance.

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