RISK EXPOSURES IN THE 21TH CENTURY AND MITIGATION STRATEGIES BY NIGERIAN SMALL AND MEDIUM-SIZED ENTERPRISES

BANJO, Kudirat Adeola
Department of Insurance and Actuarial Science
College of Applied Social Science
Lagos State University of Science and Technology, Ikorodu, Lagos
peaceadeolabanjo@gmail.com

OLUFAWO, Henry Siji
Department of Insurance and Actuarial Science
College of Applied Social Science
Lagos State University of Science and Technology, Ikorodu, Lagos

OGUNLAMI, Kayode Olayiwola
Department of Insurance and Actuarial Science
College of Applied Social Science
Lagos State University of Science and Technology, Ikorodu, Lagos

LAWAL, Sakiru Abiola
Department of Banking and Finance
Lagos State University of Science and Technology, Ikorodu, Lagos

ABSTRACT

This study's main objective is to determine how risk exposures and risk mitigation techniques impact the ability of SMEs to survive in Nigeria. The study adopted an explanatory research design strategy. The population for the study comprises 152 registered SMEs in Ikorodu and Ikeja areas of Lagos Nigeria, out of which 110 were surveyed as the samples size. The study collected primary data using a structured questionnaire. The Kendall's statistic and Ordinary Least Square (OLS) regression model were used for data analyses. The study found that SMEs' operators' crises management capacity is relatively low; and that SMEs' method of risk mitigation cannot significantly grasp risk exposures. This study recommends that SMEs' operators should have a solid grasp of their operations and engage specialists to them risk exposure evaluation and assessment techniques.

Keywords: Risk exposures, risk mitigation strategies, risk evaluation, risk management

INTRODUCTION

The owners and operators of SMEs may have a comprehensive awareness of the risks impacting their companies and take proactive steps to reduce or eliminate such risks by having a thorough grasp of the businesses they run. However, a lack of business knowledge may limit their ability to make informed choices that aim to reduce the risks that are already present in their companies. SMEs in a bid to survive, must necessarily invest time and effort into environmental analysis to understand their markets and rivals, and institute programmes of action to withstand environmental vagaries and outperform rivals. Environmental analysis enables firms to quickly identify fresh risks and contrive viable tactical responses.

Large corporations, due to their financial strength sound can hire specialists to deal with risks in their operations. However, SMEs do not have that financial strength, hence, may not be able to hire such specialist risk analysts and managers (International Labour Organisation [ILO], 2022). Nonetheless, SMEs must have risk management plans to address risk exposures. Studies show that inadequacy of capital is a major obstacle facing SMEs all over the world. However, risk exposure is increasing becoming a significant aspect of SMEs' challenges, besides the difficulties of sourcing short and long-term capital. Feridun (2018, as cited in Kagwathi et al., 2022) contends that conventional risk reduction for SMEs heavily emphasizes physical causes including fires, accidents, and fatalities.

Owners and operators of SMEs' often make decisions based on daily operations and their own perspectives and experiences. Depending on how well the decision maker understands the business, the method employed to mitigate risks may either raise or reduce the amount of risk exposure. Optimist SME operators are prone to underestimating detrimental effects of threats to their companies; and this may affect the level of risk exposures and risk mitigation strategies they employed in running their operations. Deloitte LLP (2022) states that efforts of owners and managers of firms to identify and manage risk and been very intense in recent times. However, Virdi (2018) argue that a prevalence of absence of risk management procedures exists among SMEs, suggesting that risk management has not been widely adopted by this class of firms. Ntlhane (1995) suggests that managers and owners of SMEs are ill-equipped to apply methods for risk reduction and instead opts to avoid hazards altogether. It is important to help SMEs identify different risk exposures so that they may implement solid risk management strategies that lessen their susceptibility to failure.

Studies on risk management of SMEs in Nigeria have concentrated on problems that make it difficult for SMEs to survive, such as poor business decisions, lack of market analysis, advances in technology, management errors, poor financial management, insufficient entrepreneurial skills, and a lack of a business-oriented mind-set. Three of the few studies that deal with risk exposures and risk mitigation techniques in Nigeria focused on the National Union of Road Transport Workers (NURTW) in Lagos State (Adeyele, 2022a), public employees in Ikeja and Ikorodu Metropolis (Adeyele, 2022b), and property and financial risk exposure. According to Akinola (2022), more entrepreneurs who start businesses fail than succeed as a result of both internal and external causes. Due to their high rate of job creation, SMEs are fundamentally the most important sector of Nigeria's economy. As a result, it is necessary conduct fresh research on how to preserve SMEs' ability to create jobs via prudent risk management.

Thus, the primary goal of this study is to investigate how risk exposures and risk mitigation strategies affect survival of SMEs in Nigeria. The study is guided by the following null hypotheses:

Ho_1: Operators of SMEs do not engage in extensive evaluation of risk exposure.

Ho_2: SMEs method of risk mitigation cannot significantly grasp risk exposures.

Ho_3: SMEs capacity to manage crises in the 21^{st} century cannot significantly coup the negative impact of business risk.

LITERATURE REVIEW

Small and Medium Scale Businesses

The International Finance Corporation (IFC, 2021) defines SME as a registered business with less than 299 workers, less than N2, 955, 000 in annual revenues or assets, and less than N19, 700,000 in assets. Table 1 displays the criteria used by IFC (2021) to define the sector.

Table 1: Criteria used by IFC to Define SMEs

Parameter	Micro Enterprise	Small Enterprise	Medium Enterprise
No. of Employees	Between 1 & 9	Between 10 & 49	Between 50 & 499
Value of Total Assets	Less than ₦ 19,700,000	₦ 19,700,000 lower than ₦591,000,000	₦591,000,000 lower than ₦2,955,000,000
Value of Total Annual Sales	Less than ₦ 19,700,000	₦ 19,700,000 lower than ₦591,000,000	₦591,000,000 lower than ₦2,955,000,000

Source: International Finance Corporation, 2022.

SMEs are basic components of the economic fabric of developed and emerging economies that contribute significantly to national and regional development (Keskin et al., 2010). SMEs' activities stimulate economic growth, promote innovation and enhance prosperity. They generate employment, increase national output, promote export and foster entrepreneurship; and nations rely on them to revive or strengthen their economies (Ateke & Nwiepe, 2017).

.

Risk Management and Risk Mitigation

Risk management is a fast-developing topic that draws academics from a wide range of disciplines. As a result, the term is used in various ways across disciplines (Atkin & Bates, 2019; Isimoya, 2017; Raghavan, 2018). To secure opportunities based on taking risks, risk management serves a vital role for all sorts of enterprises (Acharyya & Mutenga, 2022). According to Raghavan (2018), risk management is the proactive action taken by risk administrators to safeguard the future of an organisation or individual. The most fundamental way risk management delivers value is probably, by providing managers with the ability to make better judgments. Risk management also enhances the company's standing for strategic insight and efficiency in responding to new opportunities (Milliman Risk Institute Survey [MRIS], 2022).

Head (2020) and Mead (2022) conceive risk management is the process of resource planning, management, and control that is used to achieve corporate goals. Risk management comprises actions made to safeguard organizational assets against destruction using a variety of tools (Urciuoli & Crenca, 2022); or as actions taken to reduce losses in order to increase corporate profitability (Raghavan, 2018). This may need a strategy of outsourcing risky activities to experienced risk carriers like insurance companies. Risk management focuses on actions taken to reduce risk before an event occurs, while risk mitigation refers to the process of lowering loss severity after the event has occurred (Atkins & Bates, 2019). Peck et al. (2017) states that if business operations are not regularly reviewed, new risks that arise as companies develop may cause administrative actions to be inaccurate.

In order to mitigate risk and manage risk, terms like loss, chance of loss, peril hazard, and risk are regularly used in everyday conversation (Dorfman, 2019). Risk management activities' main objective is to reduce the possibility that a business may encounter issues that exhaust its financial resources (Dorfman, 2019). Other terms often used in risk management discourses that are relevant to this study include *risk and uncertainty*, unpredictable future events that might put the firm in a worse situation (Verbano & Venturini, 2022; Urciuoli & Crenca, 2022); *hazard and peril*, anything that has the potential to endanger a person's health or safety, cause harm to property, equipment, or the environment. This definition includes work materials, equipment, dangerous substances, workplace layouts, poor working methods, and attitudes (Isimoya, 2017); *risk assessment*, the whole process of risk analysis and risk appraisal by which managers become aware of the extent to which they are exposed to risk as well as their level of risk tolerance (Bamford & Bruton, 2018).

Theoretical Framework

The manner in which most SMEs view risks impacting their firm most of the time turns out to be different from the real threats. This study is based on human risk perception theory. Human risk perception theory holds that the idea of risk was created to help individuals understand how to handle vulnerabilities. Individuals' perceptions of risk therefore differ, depending on their knowledge of the situation at hand, which is independent of the environment and based on their ideas about the likelihood of a danger occurring and how doing such occurrence would affect them (Slovic, 2017; Peck et al, 2017). According to Atkin and Bakes (2019), everyone is on a continuum when it comes to how they react to danger.

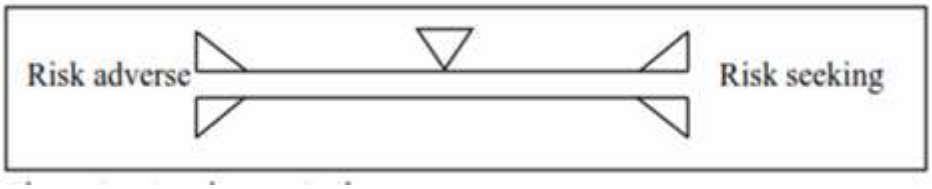

Fig. 1: Risk continuum scale

Risk averse individuals choose safer methods such as purchasing insurance, to lessen their exposure to risk; while risk receptive individuals could be found on the right-hand side of the scale and are least likely to purchase insurance. A large number of individuals are present in-between the two extremes (Atkins & Bates, 2019). However, Peck et al. (2017) stressed the importance of comprehending this unconscious process since it directly affects how people perceive danger. Human risk may thus be real or perceived. Atkins and Bates (2019) states that people do not always respond rationally to risk, as they are likely to overstate or underestimate the actual danger (which can be observed by objective risk). When judgments are made based on perceptions of danger that are considerably different from the actual risk, the outcomes can be disastrous (Peck et al. (2017).

Atkins and Bates (2019) thus raised two hypotheses in human risk perception: Familiarity hypothesis and exposure and control hypothesis. Familiarity hypothesis conjectures that people's perceptions of risk may be impacted by their awareness of the dangerous situation, which may be affected by personal experience or familiarity due to media coverage that makes the occurrence easy to recall. The result may go either way. Thus, risk exposure and familiarity with the risk can improve individuals' comprehension of the risk and cause them to overestimate its

consequences. However, those who have learned about a given risk due to media coverage are more prone to exaggerate the true amount of risk.

The exposure and control hypothesis on the other hand, conjectures that individuals may underestimate a threat if they feel in control of the situation, but they may overestimate it if they feel they have little or no control over it (Atkin & Bates, 2019). A person's level of risk exposure and control at work can significantly affect how they see risk (Krallis & Csonto, 2022). For instance, when one experiences a significant loss infrequently, they may react differently than when they encounter a minor loss frequently (Slovic, 2017). Hillson (2017) pointed out that because individual variations have an impact on decision-making, risk perception and behaviour might be connected.

METHODOLOGY

The study adopted an explanatory research design strategy. The population of the study consist 152 registered SMEs in Ikorodu and Ikeja areas of Lagos, Nigeria. The study employed the Taro Yamene (1970) formula to arrive at a sample size of 110 SMEs. The study adopted random sampling techniques to select the 110 SMEs that participated in the study. A structured questionnaire was used to collect primary data for the study. The reliability of the instrument was determined through the Cronbach's Alpha test of reliability. Table 2 below provides a summary of the results of the test of reliability.

Table 2: Result of Test of Reliability of Instrument

Reliability Statistics

Cronbach's Alpha	No of Items
.921	26

Source: SPSS 25.0 output

The reliability test result in Table 2 demonstrates that the instrument used in the study is reliabl.

Table 3: Kaiser-Meyer-Olkin (KMO) and Barlett's test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.831
Bartlett's Test of Sphericity	Approx. Chi-Square	2415.341
	Df	105
	Sig.	.001

Source: SPSS 25.0 output

The KMO and Barlett's test of sphericity was used in this investigation. The KMO assesses sampling adequacy, which establishes if the responses provided by the sample elements are sufficient or not. This value must be near 0.5 in order to proceed with a good factor analysis. According to Kaiser (1974), values for the KMO should be at least 0.5 (just acceptable), between 0.7 and 0.8 are good, and beyond 0.9 are excellent. The sample was deemed sufficient since the value of the KMO measure for the questionnaire was .87.

Another sign of how strongly the variables are related is the Bartlett's test. The correlation matrix's identification is an identity matrix used in the test. A matrix is said to be an identity matrix if all of its diagonal members are 1 and all of its off-diagonal elements (as previously

defined) are near to 0. The Bartlett's Test of Sphericity from Table 2 is noteworthy (0.001). The significance level is below 0.05. The correlation matrix is thus not an identity matrix.

For data analyses, the study utilized Kendall's statistics to test Ho_1, while Ho_2 and Ho_3 were tested using Ordinary Least Square (OLS) regression model.

Formula for Ordinary Least Square model:
$RiskExp = \alpha + \beta_1(MRM) + e.$
$BuzRisk = \alpha + \beta\ (Cap) + e.$
Where:
RiskExp = Risk Exposure
MRM. = Method of Risk Mitigation
BusRisk = Business Risk
Capacity = SMEs capacity in managing crises in the twenty-first century
α = Intercept
β = Slope
e = Error terms

RESULTS AND INTERPRETATION

Table 4: Kendall's W[a] Ranks Result

	Mean Rank
Extensive risk evaluation	1.27
Risk exposure	4.14
Capacity in managing crises in the twenty-first century	1.37

The Kendall's W[a] rank result showed that extensive risk evaluation ranked 1.27, which mean that most of the respondent agreed that SMEs has poor risk evaluation techniques, meaning that opinion of the respondent ranges between 1 and 2 (strongly disagree and disagree). Risk exposure ranked 4.14 which imply that SMEs are highly exposed to risk. Meaning that opinion of the respondents ranges between 4 and 5 (agree and strongly agree). It can therefore be concluded that most respondents agreed that SMEs are exposed to risk. From the above Table, capacity in managing crises in the 21st century ranked 1.37. This implies that SMEs' risk management capacity is relatively low.

Table 5 Test Statistics

N	104
Kendall's W[a]	.345
Chi-Square	631.24
Df	2
Asymp. Sig.	.191

a. Kendall's Coefficient of Concordance

The result showed that the Asymp. Sig. is 0.191 which is higher than 0.05 level of significance. This implies that SMEs do not engage in extensive evaluation of risk exposure.

Table 6 Model Summary for Hypothesis Two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.124[a]	.111	-.211	.21145

a. Predictors: (Constant), SMEs method of risk mitigation

The model summary shows the relationship between the SMEs method of risk mitigation and risk exposures is about 12%. This implies that the methods put in place by SMEs in risk mitigation can only grasp risk exposures up to 12%.

Table 7 Coefficients[a] for Hypothesis Two

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1.442	1.122		-1.372	.241
	SMEs method of risk mitigation	-3.134	.031	-1.317	-3.217	.172

a. Dependent Variable: Risk exposures

The intercept value of -1.442 is the estimated value of risk exposures if the independent variable (risk mitigation method) is equal to zero. SMEs method of risk mitigation shows a coefficient value of β_1= -3.134, t-test= -3.217, p = .172 > 0.05. This result demonstrates that there is a bad correlation between risk exposures and SMEs' strategy of risk reduction. This means that SMEs method of risk mitigation cannot significantly grasp risk exposures.

Table 8 Model Summary for Hypothesis Three

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.196[a]	.180	.184	32415414.2141

a. Predictors: (Constant), SMEs capacity in crisis management in the 21st Century

Source: SPSS Version 25 Output

Considering how SMEs capacity in managing crises in the twenty-first century can coup the negative impact of business risk. Model summary for hypothesis three showed that R = 0.196, which implies that there is about 20% relationship between the negative impact of business risk and SMEs capacity in managing crises in the twenty-first century. The R Square further showed that SMEs capacity in managing crises in the twenty-first century can coup the negative impact of business risk only up to 18%.

Table 10 Coefficients[a] for Hypothesis Three

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.241	34148945.045		1.264	.074
SMEs capacity in managing crises in the twenty-first century	0.411	11.2440	.341	-1.394	.054

a. Dependent Variable: Negative impact of business risk
Source: SPSS Version 25 Output

The intercept value of 1.241 is the calculated value of the impact of business risk if the independent variable is equal to zero. SMEs' crises management capacity in the twenty-first century has a coefficient value of β_1= .411; t-test = -1.394; and P-value of 0.054 > 0.05. The value indicated that a negative relationship exists between SMEs' crises management capacity in the 21th century and impact of business risk. This means that SMEs' crises management capacity cannot significantly coup the negative impact of business risk.

CONCLUSION AND RECOMMENDATIONS

The extent to which risk exposures that deplete a company's financial resources are reduced depends on the risk mitigation techniques employed by managers of the firm. The current study examined SMEs' risk exposure evaluation and mitigation methods. The study demonstrates how much operators' understanding of SMEs and risk mitigation is inadequate. Operators of SMEs do not understand the importance of backing up operational activity. The study reveal that SMEs are more likely to use effective risk management measures to avoid risk from spreading when they become knowledgeable about the potential of risk occurrence and its consequences. Despite this, it can be argued that most SMEs in the investigated areas have managers that do not have solid understanding of risks in the companies they oversee, which exposes them to a lot of risks. Thus, the following recommendations are made with a view to enhancing SMEs' operational efficiency and consolidating their contribution to economic growth:

1. SMEs operators need to have a solid grasp of their operations and they may even engage specialists to teach and retrain their employees on risk exposure, evaluation and assessment;
2. The management of SMEs should also be devoted to quality record backups of critical information pertaining to their businesses.
3. SMEs must make sure that records of credit sales to significant clients are adequately maintained to enable efficient business underwriting.

REFERENCES

Acharyya, M., & Mutenga, S. (2022). The benefits of implementing enterprise risk management: Evidence from the U.S. 2022*: Enterprise Risk Management Symposium.* (pp. 11 - 32). New York: International Association, Society of Actuaries.

Adeyele, J. (2022). Risk Exposures and mitigation method: The Eexperience of NURTW in Lagos State. *Babcock Journal of Economics, Banking, and Finance, 34*(5), 147-175.

Adeyele, J. S. (2022). Evidence from Ikeja and Ikorodu Metropolis about the health care habits and way of life of civil workers. *African Journal of International Development, 11*(2), 417-428.

Adeyele, J., Osemene, O., & Olubodun, I. (2021). Property and Financial Risk Exposures: A Study of Nigerian SMEs' Shutdown and Mitigation Techniques. *The Entrepreneurial Finance Journal, 5*(2), 147-158.

Akinola, G. O. (2022). Nigerian marketing research and sampling methods. Proceedings at *The second international conference on modern marketing issues* (pp. 341 - 362).

Ateke, B. W., & Nwiepe, N. M. (2017). Agile supply chain management practices and competitiveness of SMEs: A conceptualization. *International Journal of Social Sciences and Management Research, 3*(7), 1-10.

Atkins, D., & Bates, I. (2019). *Insurance legislation and practice.* The Chartered Insurance Institute.

Berger, A., & Udell, G. (2017). *The relevance of bank organizational structures in terms of small company loan availability and relationship lending*. Retrieved from Bank organizational structures: http://ssrn.com/abstact=285937

Bruton, G., & Bamford, C. (2019). *A foundation for success in small business management.* Thomson Press.

Chapman, C., & Cooper, D. (2020). Basic controlled internal and memory models for risk engineering. *Operational Research Society Journal, 34*(1), 51-67.

Deloitte, L. (2022, June 22). *A risk savvy approach to enterprise risk management*. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/audit/deloitte-uk-erm-a-risk-intelligent-approach.pdf.

Dorfman, M. (2019). *Introduction to insurance and risk management.* Pearson Education.

Head, L. (2020). *Why and How to Manage Risk.* Dallas: Texas-based International Risk Management Institute.

Hillson, D., & R, M.-W. (2017). Recognizing and controlling risk mentality. *Lucidus Consulting. 2021. Interpretation comment about the management of social and environmental risks in small and medium-sized businesses* (pp. 177 - 201). Hampshire: International Labour Organization World Bank Group.

Isimoya, O. A. (2017). *Application of risk management and insurance (2nd Edition)* Malthouse Press Limited.

Keskin, H., Sentürk, C., Sungur, O., & Kiris, H. M. (2010, June). The importance of SMEs in developing economies. Being a paper presented 2nd *International Symposium on Sustainable Development*, Sarajevo.

Krallis, D., & Csonto, A. (2022). The sense of risk to safe behavior. *International Journal of Insurance, 7*(3), 347-357.

Lawal, A. (1993). *Focus on management Abdul Industrial Enterprises in Lagos.* Advent Press.

Mead, D. C., & Liedholm, C. (2022). *The dynamics of small and microbusinesses in emerging nations.* World Development.

Milliman-Risk-Institute. (2022). *Enterprise risk management: Adding value.* Milliman Risk Institute Press.

Niralia, R. (2017). Review of literature How to manage enterprise risk Elk. *Asia Pacific Journal Of Finance And Risk Management, 8*(3), 10-16.

Njau, M., Kagwathi, G., Kamau, J., & Kamau, S. (2022). Risks experienced and prevention methods used by small and medium-sized businesses in Nairobi, Kenya. *Journal of Business and Management, 16*(9), 1-22.

Omorokunwa, O., & Adeyele, J. (2022). Risk preferences and empirical SME survival trends in Nigeria. *The Entrepreneurial Finance Journal, 21*(5), 64-75.

Slovic, P. (2017). *The idea of danger.* London: Earthscan Publications Ltd.

Urciuoli, V., & Crenca, G. (2022). *Ways for managing risks. Processes of decision-making that involve risks that are purely imagined.* Rovereto ISBA.

Verbano, C., & Venturini, K. (2022). A literature review and research agenda on managing risks in SMEs. *Journal of Technology Management and Innovation, 18*(2), 186 - 197.

Virdi, A. A. (2018). Executive summary of discovery study on risk management in SMEs. *Iterative Consultation Journal, 74*(17), 347 - 367.