

Article

Navigating Uncertainty: The Impact of Risk Culture on Manufacturing Performance in North-Central Nigeria

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Abstract

This study examines the impact of risk culture on the performance of manufacturing firms in North-Central Nigeria. The research focuses on risk review processes as the independent variable and the performance outcomes of selected manufacturing firms as the dependent variable. Utilizing a survey research methodology, the study employed correlation analysis and ANOVA to assess the relationship between these variables. The findings indicate a positive and significant relationship between risk review practices and the performance of the selected firms. This suggests that enhancing risk review processes can lead to improved organizational performance. Thus, the study recommends that manufacturing firms in North-Central Nigeria foster a robust risk culture integrated into all organizational aspects. Establishing a risk culture that aligns with both the organization and its environment is crucial for effective risk management.

Keywords: Risk culture, performance, manufacturing firms, North-Central Nigeria, risk policies

Introduction

Risk is an inherent aspect of business operations, and without taking risks, businesses cannot create value for stakeholders. Risk management is a continuous, evolving process that is integral to business and technical management (Mariana & Fiany, 2020). This implies that risk is unavoidable in business, and organizations face various types of risks, including liquidity, credit, operational, and company-specific risks (Agyekum, 2015). Managing these risks is a critical concern in today's global business environment. Risk management plays a vital role in helping organizations avoid, mitigate, or transform risks into opportunities. Over time, risk management has shifted from traditional approaches to more modern, integrated methods (Adegbola et al., 2021).

Traditionally, organizations managed risks by assigning responsibility to business unit leaders. For example, the Chief Technology Officer (CTO) manages IT-related risks, the Treasurer handles financial risks, the Chief Operating Officer oversees production and distribution risks, and the Chief Marketing Officer manages sales and



customer relationship risks. This siloed approach to risk management, where each leader manages risks within their domain, is often referred to as stove-pipe risk management (Beasley, 2016). In recent years, many organizations have recognized the limitations of this approach and have adopted enterprise risk management (ERM) to strengthen risk oversight. ERM provides a holistic view of risks that could impact the organization's objectives, enabling proactive risk management (Beasley, 2016). According to Sorin and Anca (2020), ERM aims to create a comprehensive, top-down view of all significant risks affecting the organization.

In developing countries, institutions face greater uncertainty and risks, which can significantly impact their performance compared to developed countries (Silva, Silva, & Chan, 2019). Therefore, robust risk management systems are essential for better organizational performance in these regions.

Manufacturing firms in North-Central Nigeria face numerous risks, including insecurity from herdsmen in Plateau and Benue states, kidnapping, and poor infrastructure. These challenges disrupt the flow of raw materials, personnel, and finished goods, affecting business operations. Despite the presence of risk management practices, many manufacturing firms in the region are not performing optimally. This study evaluates the impact of ERM on the performance of manufacturing firms in North-Central Nigeria to identify solutions to these challenges.

Objective of the Study

The primary objective of this study is to examine the effect of culture on the performance of manufacturing firms in North-Central Nigeria.

Research Hypothesis

H₀₁: Culture has no effect on the performance of manufacturing firms in North-Central Nigeria.

Conceptual Review

Enterprise Risk Management (ERM)

ERM has gained popularity among modern corporate managers as a comprehensive approach to managing a wide range of risks faced by businesses (Karunaratne, 2018). COSO (2004) defines ERM as a process influenced by an organization's board of directors, management, and other personnel, applied in a strategy setting and across the enterprise. It aims to identify potential events that may affect the organization and manage risks within its risk appetite to achieve organizational objectives. ERM is a strategic business approach that identifies, assesses, and prepares for all potential risks that could disrupt operations (Aditya & Naomi, 2017). It is often referred to as Integrated Risk Management (IRM) or Strategic Risk Management (SRM), offering a holistic view of the organization's risk portfolio.

Risk Culture

Daft (2010) defines culture as a set of values, norms, beliefs, and understandings shared by members of an organization. It includes observable artefacts like symbols, stories, and rituals, as well as underlying values like beliefs and attitudes. Schein (2010) describes culture as a pattern of shared assumptions learned by a group, which guides how members perceive, think, and feel. It is passed on to new members and adapted to the external environment. Durland and Caplan (2018) emphasize that culture involves collective behaviour and social norms within a group.

Schein and Schein (2017) define organizational culture as the accumulated shared learning of a group as it solves problems of external adaptation and internal integration. This learning becomes a set of beliefs, values, and norms that guide behaviour. Risk culture, in particular, refers to the perceived value of risk management within an organization and includes both structural and behavioural indicators.

Sheedy et al. (2017) describe risk culture as the shared perceptions among employees regarding the priority given to risk management. Ring et al. (2016) view risk culture as the shared values, beliefs, and knowledge about risk among employees and leadership. Pan et al. (2017) define risk culture as the shared preferences toward risk and uncertainty among top management.

Protiviti & RMA (2013) describe risk culture as the set of encouraged and acceptable behaviours, discussions, decisions, and attitudes toward risk within an organization. Deloitte (2012) defines it as the general awareness, attitudes, and behaviours of employees toward risk and its management. Twining et al. (2010) emphasize that risk culture involves the norms of behaviour that determine an organization's ability to identify, discuss, and act on risks.

COSO (2017) states that culture pertains to ethical values, desired behaviours, and the understanding of risk within an organization. Risk culture aims to describe, measure, and change risk perception and behaviour within social groups and organizations. It influences how risks are perceived, assessed, and addressed, and it shapes how individuals and organizations respond to risks (Streicher et al., 2018).

Risk culture is believed to influence all aspects of ERM and decision-making. Klynveld (2018) highlights that risk culture is a crucial element of an organization's ERM framework, influencing and being influenced by other aspects of ERM. Organizations with a strong risk culture are better equipped to manage risks effectively (Ahmed & Manab, 2016). Wood and Lewis (2018) emphasize that a sound risk culture enhances decision-making, governance, accountability, communication, and regulatory compliance.

Growth

Starbuck (2019) defines growth as an increase in an organization's size, measured by membership or employment. Development refers to changes in an organization's age.

Growth involves expanding facilities, increasing the number of employees, and attracting more customers (Bones, 2018). Bass (2020) defines business growth as an increase in the scale of operations, resources, and output. Business growth can refer to various metrics, such as increased sales, production capacity, employment, or raw material usage (Twalambani & Arahyel, 2015). This study uses growth as a measure of performance.

Non-financial Performance

Dikolli (2020) defines non-financial performance as any quantitative information about an organization that is not measured in monetary terms. Organizations must evaluate qualitative evidence to assess performance. Non-financial performance measures, such as employee or customer satisfaction, market expansion, and product development, are leading indicators of future performance (Daniel & Okibo, 2015; Christopher & David, 2015).

Empirical Review

Candy (2021) examined the role of enterprise risk management (ERM) on rural banks' performance. ERM is measured by the structure, governance, and process in the risk management process. The bank performance as the dependent variable use measurement both financial and non-financial. This study uses a quantitative method by using primary and secondary data. Data collection is done by distributing questionnaires and collecting financial data from the rural banks' financial reports. The study sample is the rural banks in Riau Island provinces, consisting of 63 questionnaires as the data for further analysis. The result showed that ERM enhances the rural banks' performance, both financial and non-financial. It showed that the practice of ERM does well when the rural bank is well established.

Muhammad et al (2021) analysed the different performance indicators of firm, enterprise risk management and their effect on firm performance. The secondary data on Commercial Banks, Foreign Banks, Investment Banks, Insurance Companies, Development Finance Institutions (DFIs), Leasing Companies, Mutual Funds, Modaraba Companies and Housing Finance Companies are collected from Financial Statement Analysis (FSA) from 2008 to 2016 provided by Statistics and DWH Department of State Bank, Pakistan. This study used Debt to Asset Ratio (DTA) as dependent variable and dummy of firm performance while Cost to Income Ratio (CTI), Enterprise Risk Management (ERM), Equity to Asset Ratio (ETA), Enterprise Value to Asset Value (EVTAV), Leverage (LVG), Return on Capital Employed (ROCE) and Return on Equity (ROE) are used as independent variables. The research found long run relationship among the variables. OLS Regression Test that Enterprise Risk Management (ERM) implementation, Equity to Asset Ratio (ETA), Enterprise Value to Asset Value (EVTAV), Leverage (LVG), Return on Capital Employed (ROCE), Return on Equity (ROE) have significant effect on performance of financial.

Kofi (2020) examined the effect of ERM on the performance of MSMEs in Accra, Ghana. 456 MSMEs were drawn from a population of 1675 using the Taro Yamane formula. A structured questionnaire was adopted for the study using the 5 point

Likret scale. Data gotten from respondents was analysed using the multiple regression. Studies found that risk communication and risk strategy and objective setting have significant and positive effect on the performance of MSMEs in Accra, Ghana.

Chih and Inchan (2019) studying Internal Control, Enterprise Risk Management, and Firm Performance, investigates two research questions arising from the regulation of internal controls required by Sarbanes-Oxley Act of 2002 (SOX). The first research question asks whether better internal controls can enhance firm performance. To address this question, the relation between market-value and internal control is estimated by a residual income model. Firms with weak internal controls are identified as those that disclose material weaknesses in internal controls in periodic filings from August 2002 to March 2006, as required by SOX. The empirical results, based on a sample of 708 firm-years with the disclosures of material weaknesses, show that firms with weak internal controls have lower market-value. Building on the efforts for SOX to improve internal controls, more and more firms are starting to adopt Enterprise Risk Management (ERM), because sound internal control system rests on adequate and comprehensive analysis of enterprise-wide risks. In light of this trend triggered by SOX, the second research question in this dissertation asks whether implementation of ERM has an impact on firm performance? The basic approach to answer this question uses a contingency perspective, since all risks arise from the firm's internal and external environment. More specifically, the basic argument states that the relation between ERM and firm performance is contingent on the proper match between ERM and five key contingency variables: environment uncertainty, industry competition, firm size, firm complexity, and monitoring by the firm's board of directors. A sample of 114 firms disclosing the implementation of ERM in their 2005 10Ks and 10Qs are identified by keyword search in EDGAR database. In developing the proper match, high performing firms are defined as those with greater than 2% one-year excess return to develop the proposed proper match. An ERM index (ERMI) is constructed based on the Committee of Sponsoring Organizations (COSO) ERM's (2004) definition of four objectives: strategy, operation, reporting, and compliance. The contingency view is supported by the empirical evidence, since the deviation from the proposed proper match is found negatively related to firm performance.

Kakiya, et al (2020) studied enterprise risk management effect on organizational performance of state corporations in Kenya. This study was guided by agency theory. The study used explanatory cross sectional survey design. Primary data was collected from structured questionnaires. A survey was carried out on 218 state corporations in Kenya. Data collected was analyzed by use of descriptive and inferential statistics. The research hypotheses were tested using multiple regression analysis. The results revealed that risk structure, governance and process practices had positive and significant effect on organizational performance.

Genrikh, (2015) researched on the impact of ERM in Small and Medium Enterprises (SMEs). The study used data from FAME database that provided financial information on firms based in UK and Northern Ireland. Financial information sourced relates to dates of incorporation, cash flow reports, and profit and loss

statements to determine performance of SMEs in terms of cash flow volatility and return on assets. On the other hand, ERM was measured by the amount of auditors' fee, quality score, the proportion male/female board of directors and board structure to explain performance. 208 SMEs were selected according to different assumptions and analyzed. Seemingly unrelated regression was chosen as a method to allow for simultaneous correlation between errors in the 2 regression models. The results obtained drew various conclusions (i.e. number of executive directors has positive impact on performance, but also raises the level of cash flow volatility). However, no significant relation was found between cash flow and ROA.

Pedro and Miguel (2021) studied the effect of ERM on the performance of MSMEs in Madrid, Spain. Independent variable was proxy by the components of COSO 2017 ERM model. Dependent variable was measured using growth. 1237 MSMEs were extracted as population, out of which, 456 was used as sample size. The simple random technique was used to distribute questionnaire, frequencies, descriptive statistics, correlation and regression were used to analyses the data from respondents. Finding from the study indicated that Culture, Risk Assessment, Risk review and revision, and risk communication have significant and positive effect on the performance of MSMEs in Madrid.

Muttanachai et al. (2018) examined The Influence of Enterprise Risk Management on Firm Performance. Measured by the Balanced Scorecard: Evidence from SMEs in Southern Thailand the main objectives of the study reported were to (1) investigate the extent and level of ERM among SMEs in southern Thailand, and (2) test for the influence of ERM on firm performance measured by the balanced scorecard (BSC) of SMEs. Using a mailed questionnaire, a sample of 385 (out of 394) SMEs from southern Thailand were analyzed. Descriptive analysis, a correlation matrix, and multiple regression were used to analyze the data obtained. From the results, the most common element of ERM employed was information and communication followed by control activities, monitoring, risk response, internal environment, event identification, objective setting, and risk assessment. Moreover, objective setting, risk assessment, control activities, and monitoring were found to significantly and positively influence SMEs' performance measured by BSC while event identification had a negative influence on SMEs' performance. The study demonstrates that SMEs in developing countries can benefit from the adoption of ERM in the same way as large firms in developed countries.

Chairani and Sylvia (2021) aimed to examine the effect of enterprise risk management (ERM) on financial performance and firm value, as well as the moderating role of environmental, social and governance (ESG) performance. The samples in this study are listed companies in the ASEAN 5 (Indonesia, Malaysia, Philippines, Singapore and Thailand) during the years 2014–2018, with total observations of 680 firm-years. Fixed effect panel data regressions were used to test the hypotheses. The data was collected from Financial Report, Annual Reports and Thomson Reuters. The results show that ERM has a positive significant effect on financial performance and firm value. This paper also finds that ESG has a significant moderating role in increasing the effect of ERM on firm value.

Mariana and Fiany (2020) examined the influential factors of potential adoption of Enterprise Risk Management (ERM) and the impact of ERM adoption on the public listed banking firms' performances in Indonesia during 2009 to 2017. This research uses logistic regression to test four potential factors as the driving forces behind the potential adoption of ERM and linear regression to test the impact of ERM on firms' performances. The result suggests that firms with greater size, having more institutional ownership, and being part of Multinational companies are more likely to adopt ERM, while the implementation of ERM has no significant impact on the firms' performance.

Adebanji (2019) examined the effect of ERM on the performance of food processing companies in Ogun State. ERM was measured using the components of the 2017 ERM model and growth was used as a measure for performance. A total of 386 responses were obtained through questionnaire distributed to staff and management of the organizations. The study employed descriptive statistics frequencies and tables. Hypotheses were tested using multiple regression on SPSS v25. Findings from the study revealed that Risk culture, strategy and objective setting, risk assessment, risk review, risk communication and information all have significant and positive effect on the performance of food processing companies in Ogun State.

Theoretical Framework

This study is based on the Resource-Based View (RBV) theory. The RBV theory, proposed by Birger W. (1984) and developed by Jay B. Barney (1991), suggests that competitive advantage stems from an organization's resources and capabilities. RBV emphasizes the importance of internal resources and capabilities in achieving sustainable competitive advantage. Organizations leverage their resources to create value, develop new products, and enter new markets (Penrose, 1959). In the context of risk management, RBV suggests that effective risk management can contribute to organizational performance (Bailey, 2019).

Research Method

This study adopted a survey research design to identify variables and their relationships. Descriptive statistics, including mean, standard deviation, frequencies, and percentages, were used for data analysis. Regression and correlation analyses were employed to estimate the relationship between the dependent and independent variables.

Model Specifications

The study uses ERM indicants such as Risk culture. The dependent variable is performance which is non-financial and measured using growth. simple regression models, the regression model is stated as:

$$Y = a + bx$$

Where y is the dependent variable

a is constant or intercept

b is the coefficient

x is the independent variable

However, the above model is expanded to:

$$Y = \alpha + \beta_1 X + \mu - \quad - \quad - \quad - \quad - \quad 2$$

The formula is substituted with the variables and presented as follows;

$$PFM = \alpha + \beta_1 RCU + \mu - \quad - \quad - \quad 3$$

Where:
PFM = Performance (Growth)
RCU = Risk Culture
 α = Intercept or Constant
 β = Slope of the regression line with respect to the independent variables
 μ = error term

Data Presentation

The data gathered from the respondents are presented in tabular form to summarize and compare.

Table 1. Demographic Distribution of the respondents based on gender.

OPTIONS	NUMBER	PERCENTAGE %
MALE	219	65.2
FEMALE	117	34.8
TOTAL	336	100

Source: Researcher’s survey

Table 1. describes the gender of the respondents used to carry out the research from all the eight (8) companies. The result shows that out of three hundred and thirty-six (336) respondents, two hundred and nineteen (219) representing (65.2%) were male. It also shows that one hundred and seventeen (117) of the total respondents representing (34.8%) were female. This implies that male respondents constitute the highest responses.

Table 2. Demographic Distribution of the respondents based on period of employment and service.

OPTIONS	NUMBER	PERCENTAGE %
Less than a year	78	23.2
1 to 5 years	134	39.9
Over 5 years	124	36.9
Total	336	100

Source: Researcher’s survey

Table 2 presents data from the respondents as regards to their period of employment or service in their various organizations. The data shows that; out of a total of three hundred and thirty-six (338), seventy-eight (78) respondents, representing (23.2%) have spent less than a year in their organizations. One hundred and thirty-four (134) representing (39.9%) have spent from one to five (1-5) years. A total of one hundred and twenty-four (124) respondents, representing (36.9%) have spent over five (5) years in their organizations. This implies that the larger part of the respondents has spent over a year and some, over five years in the organizations. Hence, responses are from experienced employees and employers.

Table 3. Demographic Distribution of the respondents based on staff category

OPTIONS	NUMBER	PERCENTAGE %
Management Staff	46	13.7
Senior Staff	178	53
Junior Staff	112	33.3
Total	336	100

Source: Researcher's survey

Table 3. describes the staff category of the respondents. Out of the total number of three hundred and thirty-six (336), forty-six (46) respondents, representing (13%) were management staff. One hundred and seventy-eight (178) respondents, making up (53%) were senior staff. The junior staff among the respondents were up to one hundred and twelve, which constituted (33.3%) of the entire sampled respondents. This implies that the responses come largely from the senior staff in the various organizations.

Table 4. Responses regarding Risk Culture

ITEMS	SA	SA%	A	A%	U	U%	D	D%	SD	SD%	TOTAL
Your organization exercises board risk oversight	78	23.2	146	43.5	45	13.4	34	9.3	33	9.8	336
Your organization defines desired culture	35	10.4	68	20.2	89	26.5	87	23.8	57	17.0	336
The organization demonstrates commitment to core values	102	30.4	85	25.3	30	8.9	73	19.9	46	13.7	336
The organization attracts, develops and retains capable individuals	99	29.5	102	30.4	35	10.4	67	18.3	33	9.8	336

Source: Researcher's survey

Table 4 presents and summarizes responses as regards to research questions on the concept of risk culture. Responses were graded based on the respondents' opinion on each question as to whether they strongly agree (SA), agree (A), undecided (U), disagree (D) or strongly disagree (SD).

On the question of whether the organization exercises board risk oversight, seventy-eight (78) respondents strongly agreed, representing (23.2%) of the total respondents. One hundred and forty-six (146) respondents agreed representing (43.5%). Forty-five (45) of the respondents, representing (13.4%) of the entire respondents were undecided.

Thirty-four (34) respondents disagreed, representing (9.3%). Lastly, thirty-three (33) respondents, which constitutes (9.8%) of the respondents strongly disagree that their organization exercises board risk oversight. This implies that the respondents agree or strongly agree that the organization exercises board risk oversight.

The second question enquired for respondents' opinion on whether the organization defines desired culture. Thirty-five (35) respondents strongly agreed, representing (10.4%) of the responses. Sixty-eight (68) respondents, representing (20.2%) of the responses agreed. Eighty-nine (89), constituting (26.5%) of the entire respondents were undecided. Eighty-seven (87) of the respondents, which made up (23.8%) of the total respondents disagreed, while fifty-seven (57) of the respondents, constituting (17%) of respondents strongly disagreed that the organization defines desired culture. The implication of this is that a larger percentage of the responses are sloped towards agreeing and strongly agreeing that their organization defines desired culture.

The third question in table 4. enquired from the respondents, if the organization demonstrates commitment to core values. Out of three hundred and thirty-six (336) respondents, one hundred and two (102) representing (30.4%) of the respondents strongly agreed. Eighty-five (85) constituting (25.3%) agreed. Thirty (30) respondents, which made up (8.9%) of the respondents were undecided. Seventy-three (73) respondents, making (19.9%) disagreed, while forty-six (46) constituting (13.7%) respondents strongly disagreed. The implication of this is that a larger portion of the respondents agree or strongly agree that the organization demonstrates commitment to core values.

The last question obtained responses as regards to whether the organization attracts, develops and retains capable individuals. Ninety-nine (99) respondents, representing (29.5%) strongly agreed. One hundred and two respondents (102) representing (30.4%) agreed. Thirty-five (35) respondents, comprising (10.4%) were undecided, while sixty-seven (67) of the respondents, making up (18.3%) disagrees and thirty-three (33) respondents making (9.8%) strongly disagreed. This implies also that the larger number of respondents agree or disagree.

Test of Hypothesis

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.691 ^a	.682	.682	.17025

a. Dependent Variable: PFM

b. Predictors: (Constant), RCO

Table 6. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.229	.032		.917	.360
RCU	.285	.060	.284	4.757	.000

a. Dependent Variable: PFM

The results show an R-square value of 0.682, indicating that 68.2% of the variation in performance (PFM) is explained by risk culture (RCU). The F-statistic of 4572.575 suggests a significant relationship between performance and the predictor variables at a 0% significance level. The regression line $PFM = 0.229 + 0.285RCU$ indicates that a unit increase in risk culture leads to a 0.285 increase in performance. The null hypothesis, which states that risk culture has no effect on performance, is rejected.

Discussion of Findings

The study found that risk culture positively and significantly impacts the performance of manufacturing firms in North-Central Nigeria. Key aspects of risk culture, such as board risk oversight, defining desired culture, commitment to core values, and retaining capable individuals, contribute to improved performance. These findings align with previous studies by Adebajji (2019), Pedro & Miguel (2021), and Benjamin & Kofi (2015).

The findings of this study illustrate a compelling connection between risk culture and performance in manufacturing firms across North-Central Nigeria. The positive and significant impact of risk culture suggests that integrating effective risk management practices within the organizational framework can lead to enhanced operational success.

One of the key aspects identified is **board risk oversight**. The strategic role of the board in overseeing risk management is pivotal. Boards that actively engage in risk oversight are better positioned to identify emerging risks, allocate resources effectively, and steer the organization towards sustainable growth. This proactive stance enables firms to adapt to market changes, regulatory requirements, and operational challenges. Additionally, establishing strong accountability mechanisms within board structures ensures transparency in risk management processes, helping to prevent complacency and fostering a culture of continuous improvement.

Another critical element is the **definition of desired culture**. Clearly defined cultural values related to risk management enable employees to understand their roles in mitigating risks. When firms articulate and communicate their desired risk culture, employees are more likely to engage and contribute to risk management. Furthermore, this clarity encourages a cohesive approach to risk, whereby every employee feels responsible for contributing to the organization's risk profile.

The **commitment to core values** serves as a foundation for decision-making. Core values rooted in ethical risk management provide a framework for decision-making at all levels within the organization. This consistency in values ensures that employees prioritize risk considerations and ethical behavior, contributing to a resilient organization. Organizations can reinforce these core values through policies, training, and rewards that align with fostering a robust risk culture. Recognizing and rewarding those who exemplify these values can further embed them in the organizational fabric.

Retaining capable individuals is also crucial for fostering a strong risk culture. Retaining talented individuals who understand risk dynamics is essential for building a robust risk culture. Firms that invest in training and professional development are more likely to cultivate a knowledgeable workforce equipped to manage risks effectively. Additionally, facilitating knowledge sharing among employees about risk management best practices enhances collective organizational intelligence, leading to innovative solutions and improved risk assessment practices.

These findings have several practical implications for manufacturing firms in North-Central Nigeria. First, firms should develop a comprehensive risk management framework that includes clear policies, procedures, and guidelines aligned with their risk culture. This framework should be regularly reviewed and updated to reflect internal and external changes. Second, implementing ongoing training and awareness programs for employees at all levels can reinforce the importance of risk culture, thereby fostering a more informed workforce.

Creating feedback mechanisms within organizations will also allow employees to voice concerns or suggest improvements regarding risk management practices. This can lead to continuous enhancements in the risk culture as new challenges and insights emerge.

In sum, the relationship between risk culture and performance underscores the necessity for manufacturing firms in North-Central Nigeria to prioritize their risk management strategies. A commitment to fostering a positive risk culture can lead to substantial improvements in operational performance, enabling firms to navigate the complexities of today's business environment effectively. By embracing the principles outlined in this study, these firms can enhance their resilience, drive sustainable growth, and gain a competitive edge in the market.

Conclusion and Recommendation

Risk culture has positive and significant effect on the performance of selected manufacturing companies in North-central Nigeria. This means that an increase in the organizations' risk culture will lead to an increase in its performance. Hence, study found that; board risk oversight by organizations, in the aspect of managing risk by the organization's board instead of just in the area where the risk is identified; defining the desired culture of the organization in its policies; demonstrating commitment to core values of the organization as regards to risk management; attracting, developing and retaining capable individuals to man responsibilities in the organization, are aspects of the organizations' risk culture that can affect performance.

The study concludes that risk culture significantly enhances the performance of manufacturing firms in North-Central Nigeria. Firms should develop a robust risk culture integrated into all organizational aspects. Key recommendations include establishing board risk oversight, defining desired culture, demonstrating commitment to core values, and retaining capable individuals. These measures will enhance risk management and organizational performance.

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