RISK MANAGEMENT AND ITS IMPACT ON ORGANIZATIONAL EFFICIENCY: EVIDENCE FROM NIGERIAN FIRMS

By

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Abstract

Risk is an unavoidable reality for organizations, but the way firms respond to it often determines whether they operate efficiently or struggle to survive. This pilot study explores how risk management practices and risk culture shape organizational efficiency in Nigerian firms. Data were collected through a structured questionnaire administered to 41 managers and employees across different sectors. The instrument measured three dimensions: risk management practices, risk culture, and organizational efficiency.

Reliability checks showed that the instrument was sound (Cronbach's α values ranged from .78 to .86), and factor analysis supported its validity. Correlation results indicated that firms with stronger risk practices reported higher efficiency ($r = .58$, $p < .01$), while risk culture also showed a strong positive relationship with efficiency ($r = .62$, $p < .01$). Regression analysis further revealed that both risk management ($\beta = .34$, $p < .01$) and risk culture ($\beta = .39$, $p < .01$) significantly predicted efficiency, with risk culture moderating the relationship between them ($\beta = .28$, $p < .05$).

While the modest sample size limits generalizability, the findings highlight that efficiency improves when firms adopt structured risk systems, particularly when these systems are reinforced by a strong, open, and risk-aware culture. By validating the instrument and offering early insights, this study provides a foundation for larger, sector-specific research on how Nigerian firms can integrate systems and culture to achieve resilience and efficiency.

Keywords: Risk Management; Organizational Efficiency; Risk Culture; Pilot Study; Nigerian Firms; Operational Effectiveness; Business Performance

1.0 INTRODUCTION

1.1 Background of Study

Every organization, regardless of size, sector, or geography, operates in an environment where uncertainty is a permanent feature. Risks can emerge from within the organization such as operational errors, human lapses, or system breakdowns, or from outside, such as economic downturns, shifting regulations, technological disruptions, or even global crises like pandemics. In recent decades, business leaders and scholars alike have come to acknowledge that risk is not inherently negative; rather, unmanaged risk can destroy value, while well-managed risk can actually create opportunities for innovation and resilience (Olaiya *et al.*, 2023).

Globally, the field of risk management has undergone significant transformation. What began decades ago as a narrow discipline, primarily focused on insurance and compliance, has now matured into an enterprise-wide concern. The rise of Enterprise Risk Management (ERM) frameworks reflects this shift, positioning risk as an issue that cuts across all functions and decision-making levels. Studies have shown that organizations with robust risk systems tend to outperform their peers by reducing operational losses, optimizing resource utilization, strengthening stakeholder confidence, and sustaining long-term growth. In countries with developed governance structures, risk management is increasingly recognized as a core element of strategic planning.

However, the picture looks different in emerging economies such as Nigeria. While Nigerian firms are increasingly aware of the importance of risk management, the practical implementation remains uneven. Some organizations, especially in the banking and financial sector, have adopted advanced risk structures, driven largely by regulatory requirements (Amuzat, & Sopelola, 2024). But in many non-financial firms, risk management is often reactive rather than proactive, with policies existing more as documentation than as tools actively shaping decisions. This raises an important question: to what extent do these practices truly enhance organizational efficiency, rather than simply existing as formalities?

The issue becomes even more pressing when one considers the unique challenges of doing business in Nigeria. The country’s economy is marked by persistent volatility, exchange rate instability, fluctuating oil revenues, inflationary pressures, and recurrent policy changes all contribute to uncertainty. Infrastructural deficits, such as unreliable power supply and inadequate transport systems, further increase operational risks. Additionally, social and political risks, including strikes, security concerns, and bureaucratic bottlenecks, impose extra layers of complexity for firms (Adebowale *et al.*, 2024). In this environment, efficiency is measured not only financial outcomes but also by operational smoothness, timely decision-making, effective resource allocation, and adaptability which has become harder to achieve and more critical for survival.

Research in developed contexts has often highlighted that risk management practices, when supported by a strong risk culture, can substantially improve efficiency. Risk culture refers to the collective values, norms, and behaviors that determine how employees at all levels perceive and handle risk. A firm may have formal risk policies, but without a culture that encourages openness, accountability, and proactive problem-solving, those policies may remain ineffective. In Nigeria, where informal systems and organizational hierarchies often play a powerful role, the role of culture in either enabling or undermining risk management cannot be overstated.

Despite its importance, empirical research on the intersection between risk management, risk culture, and organizational efficiency in Nigeria remains scarce. Much of the existing scholarship focuses narrowly on financial institutions or on outcomes such as profitability, credit exposure, and compliance with regulatory standards. Less attention has been paid to how risk management affects day-to-day efficiency such as the ability to streamline processes, reduce waste, improve responsiveness, and foster collaboration (Amadi & Laoye, 2023). Moreover, very few studies have developed or tested survey instruments specifically suited to capturing the realities of Nigerian firms, leaving a gap in methodological as well as theoretical understanding.

This study seeks to address these gaps by conducting a pilot investigation into how Nigerian firms perceive and implement risk management, and whether these practices translate into operational efficiency. By collecting and analyzing responses from 41 employees and managers across diverse sectors, the research not only provides preliminary empirical evidence but also tests the robustness of its survey instrument for future large-scale application. In doing so, the study contributes to both scholarship and practice: it highlights the potential of risk management as a driver of efficiency in an environment where firms are under constant pressure to do more with fewer resources, while also offering practical insights into the importance of cultivating a supportive risk culture.

Ultimately, the backdrop of this study is one of urgency and opportunity. For Nigerian firms, efficiency is not a luxury but a necessity for survival and growth. Risk management, if embraced not as a compliance exercise but as a strategic tool, offers a pathway to achieving that efficiency. This study is therefore positioned not only as a pilot exploration of theory but also as a timely reflection of the realities faced by organizations in one of Africa's most dynamic yet unpredictable business landscapes.

1.2 Statement of Problem

In many Nigerian firms, risk management is often treated as a box-ticking exercise rather than a strategic lever for improving efficiency. While practitioners talk about risk registers, mitigation plans, and compliance, the translation of those practices into smoother operations, reduced downtime, better resource utilisation, and faster decision-making remains under-studied. A gap exists between recognising risks and establishing systems and cultures that translate risk management into tangible operational improvements.

Recent studies in Nigeria have begun to touch on related areas but leave important questions unanswered. For example, *Risk Management and Efficiency of Custom Operations in Nigeria* (Lomba, Nkoro & Oladosu, 2024) found that revenue risk, operational risk, security risk, and fraud risk have significant negative impacts on operational efficiency in the customs service. Similarly, *Strategic Financial Risk Management and Organizational Effectiveness in NEM Insurance Plc, Lagos* (Williams & Tesunbi, 2025) showed a strong positive relationship between risk-assessment, risk control, identification, and organizational effectiveness. However, most of these studies concentrate on specific industries (e.g. customs, insurance) or dimensions of performance (financial or regulatory), rather than a more comprehensive view of organizational efficiency across sectors and including culture and operational processes.

Another study, *Effects of Organizational Culture on Risk Management Practices and Outcomes in the Banking Sector* (Amuzat & Sopelola, 2024), underscores that culture (leadership, accountability, compensation) plays a major role in shaping how risks are managed. The available evidence does not sufficiently demonstrate how risk culture works with risk management practices to affect efficiency in less obvious but equally crucial domains, process speed, resource usage, adaptability, minimizing disruptions.

Therefore, the problem this research addresses is two-fold:

- Empirical gap: There is insufficient empirical evidence in the Nigerian context regarding how risk management practices, especially in combination with risk culture, impact organizational efficiency beyond financial or regulatory performance.
- Measurement gap: There is a lack of validated survey instruments that capture risk management, risk culture, and operational efficiency in a way that reflects the real experiences of managers and employees in firms across sectors.

Without addressing these gaps, managers may invest in risk frameworks that look good on paper but fail to improve efficiency where it matters: in operations, resource allocation, responsiveness, and continuity.

This pilot study, with 41 responses, aims to begin filling these gaps by testing and validating measures, and exploring preliminary relationships between risk management, risk culture, and organizational efficiency across sectors in Nigeria.

1.3 Purpose of Study

The purpose of this study is to examine how risk management practices influence organizational efficiency within Nigerian firms, while also exploring the role of risk culture in shaping this relationship. Specifically, the study seeks to provide preliminary empirical evidence through a pilot survey of 41 employees and managers across different sectors in Nigeria.

1.4 Research Objectives

The overall objective of this study is to investigate the relationship between risk management practices and organizational efficiency in Nigerian firms, with a focus on how risk culture may influence this relationship.

The specific objectives are to:

1. Assess the extent to which risk management practices (risk identification, assessment, mitigation, and monitoring) are implemented in Nigerian organizations.
2. Determine the effect of risk management practices on organizational efficiency.
3. Explore the role of risk culture as a moderating factor in the relationship between risk management and organizational efficiency.
4. Pilot-test the research instrument to evaluate its reliability and validity within the Nigerian context.

1.5 Research Questions

To achieve the above objectives, this study addresses the following questions:

1. To what extent are risk management practices adopted in Nigerian organizations?
2. How do risk management practices affect organizational efficiency?
3. In what ways does risk culture influence the relationship between risk management and organizational efficiency?
4. Is the research instrument reliable and valid for examining these constructs in the Nigerian context?

1.6 Research Hypotheses

Based on the research objectives and existing literature, the following hypotheses were formulated:

H1: Risk management practices have a significant positive effect on organizational efficiency.

H2: Risk culture has a significant positive influence on organizational efficiency.

H3: Risk culture significantly moderates the relationship between risk management practices and organizational efficiency, such that organizations with a stronger risk culture experience greater efficiency gain from effective risk management practices.

2.0 REVIEW OF LITERATURE

2.1 Risk Management and Firm Outcomes: Global and Nigerian Evidence

Over the last two decades, risk management has evolved from being primarily a compliance exercise into a recognized driver of strategic advantage. Globally, firms that invest in robust enterprise risk management (ERM) frameworks tend to demonstrate greater resilience in times of uncertainty, more efficient resource allocation, and stronger long-term performance. For instance, a recent cross-country study found that companies with mature ERM practices experienced fewer operational disruptions during the COVID-19 pandemic, enabling them to maintain supply chain continuity and customer trust (Ali *et al.*, 2023). In advanced economies, ERM is now viewed as a core competency that underpins competitiveness in volatile markets.

In Nigeria, where firms often contend with inflation, unstable exchange rates, and infrastructural deficiencies, the case for ERM is arguably even more compelling. Adeoye and Akinsunmi (2023) observed that manufacturing firms adopting structured risk management approaches recorded notable improvements in efficiency, particularly in managing production costs and minimizing supply chain bottlenecks. Similarly, Asenge, Iortyom, and Abakpa (2023) reported that microfinance institutions integrating systematic risk identification and mitigation experienced higher stability and stronger operational performance. These insights highlight that risk management is not the preserve of multinationals, it is equally relevant for Nigerian firms, irrespective of size. For many, ERM has become not a luxury but a necessity for survival and competitiveness.

2.2 Risk Culture as the People-Side of Risk Management

Systems, frameworks, and processes represent the visible aspects of risk management. However, scholars emphasize that the 'people-side' risk culture ultimately determines whether these systems truly succeed. Risk culture encompasses employees' attitudes toward risk, the willingness to escalate concerns, and leadership's commitment to addressing risks transparently. In essence, it reflects whether "doing the right thing" is a lived value or just a slogan.

Recent Nigerian evidence confirms this. Amuzat and Sopelola (2024), examining the banking sector, found that risk culture often made the difference between successful and failed ERM adoption. Banks where leadership modeled accountability and openness encouraged staff to proactively identify risks and propose solutions. Conversely, in organizations where leaders prioritized short-term profits or discouraged open conversations, even well-structured ERM frameworks faltered.

From a human perspective, risk culture can be seen as the glue that binds risk practices to actual behavior. When staff at all levels share an understanding of acceptable risk, they are empowered to act consistently and responsibly. This underscores the idea that risk management is not merely a technical function of compliance departments but a collective mindset. Firms with healthy risk cultures are more adaptive, resilient, and trusted by stakeholders.

2.3 Mechanisms: How Risk Management Can Raise Organizational Efficiency

The pathways through which ERM enhances efficiency are well documented, though often underappreciated in Nigerian business contexts. Three core mechanisms stand out:

- **Foresight and Preparedness:** Systematic risk assessment enables organizations to anticipate disruptions before they escalate. For example, Adeoye and Akinsunmi (2023) showed that Nigerian manufacturers who conducted regular scenario planning reduced downtime significantly during supply chain shocks. This proactive posture allows firms to safeguard operations even in turbulent environments.
- **Resource Allocation:** Effective risk monitoring helps managers deploy scarce resources strategically. Asenge *et al.* (2023) highlighted how microfinance institutions that closely tracked credit risks could reallocate lending portfolios efficiently, reducing default rates while expanding outreach. By contrast, firms without structured risk frameworks often spread resources thinly, leading to inefficiencies.
- **Process Integration:** Embedding ERM into everyday workflows reduces redundancy and fosters leaner operations. Evidence from Lagos-based pharmaceutical firms suggests that adopting ERM improved not only internal

processes but also customer satisfaction by streamlining service delivery (Saka *et al.*, 2024).

These mechanisms highlight that risk management is not about avoiding negatives alone, it is equally about unlocking efficiency, innovation, and long-term value creation.

2.4 Evidence from Nigeria and Comparable Emerging Economies

Evidence from Nigeria provides a nuanced picture of progress and challenges. In banking, Amuzat and Sopelola (2024) demonstrated that organizational culture significantly shapes the effectiveness of ERM, with open and accountable banks outperforming their peers. Adeoye and Akinsunmi (2023) showed that manufacturing firms that invested in ERM frameworks achieved efficiency gains in production and supply chains. Similarly, Asenge *et al.* (2023) reported that microfinance institutions leveraging risk tools were able to stabilize operations and expand outreach. Saka *et al.* (2024) added that pharmaceutical firms in Lagos experienced enhanced efficiency and service delivery through ERM integration.

However, Nigerian SMEs continue to face challenges. Limited financial resources, weak infrastructure, and rigid hierarchical structures constrain their ability to adopt comprehensive ERM frameworks. This aligns with broader evidence from other emerging economies, where cultural barriers and institutional weaknesses often limit the full realization of risk management's benefits (Okoye, 2025).

Taken together, the evidence highlights both promise and gaps. Nigerian firms are beginning to experience tangible gains from ERM, yet the depth and breadth of adoption remain limited compared to global best practice. This suggests that while ERM principles are transferable, they must be tailored to local realities in order to achieve sustainable impact.

2.5 Measurement and Methodological Issues in Prior Studies

A recurring challenge in the literature is how to measure risk management and risk culture effectively. Most existing instruments were developed in advanced economies, where firms rely on formalized structures and comprehensive reporting systems. In Nigeria, by contrast, risk management often manifests through informal practices, leadership discretion, and ad-hoc responses. This makes conventional measurement tools inadequate.

Asenge *et al.* (2023) observed that microfinance institutions often rely on informal mechanisms of risk mitigation that standard surveys fail to capture. Adeoye and Akinsunmi (2023) stressed the need for cross-sector validation of ERM measurement tools tailored to Nigerian realities. Moreover, methodological limitations persist: many studies rely on sector-specific, small-sample surveys that restrict generalizability.

This underscores the values of pilot studies which not only generate preliminary insights but also test the robustness of measurement instruments for larger-scale research. In contexts like Nigeria, building valid and context-sensitive tools is as critical as collecting data itself.

2.6 Gaps this Study Addresses

The literature reveals several gaps that this study seeks to address. First, most Nigerian ERM research remains narrowly sectoral, focusing on banking, insurance, or manufacturing, with limited cross-sectoral comparisons. Second, many studies prioritize financial performance as the outcome of interest, overlooking organizational efficiency, an equally critical dimension of competitiveness. Third, methodological challenges persist, with reliance on foreign-developed tools and limited local adaptation.

This pilot study responds to these gaps by applying a structured survey to 41 respondents across multiple sectors in Nigeria. By explicitly linking risk management practices and risk culture to organizational efficiency, it contributes fresh insights into how Nigerian firms can leverage ERM beyond financial outcomes. Additionally, by piloting and refining survey instruments, this research lays a foundation for more comprehensive studies, ultimately contributing to building a more nuanced and context-appropriate understanding of ERM in emerging economies.

3.0 METHODOLOGY

3.1 Research Design

This study adopted a quantitative, survey-based research design to examine the relationship between risk management practices, risk culture, and organizational efficiency in Nigerian firms. A survey design was considered appropriate because it enables the collection of standardized data from multiple respondents, allowing for statistical analysis and comparison across firms. Given that this is a pilot study, the purpose was not only to generate preliminary insights but also to evaluate the reliability and validity of the research instrument in a Nigerian context.

3.2 Population and Sampling

The target population consisted of employees working in managerial, supervisory, and administrative roles across selected Nigerian firms in the manufacturing, financial, and service sectors. Using convenience sampling, a total of 41 valid responses were obtained, which is acceptable for a pilot study. While the sample size is modest, it provides valuable insights and serves as a pilot dataset for refining the study's research instrument.

3.3 Data Collection Instrument

Primary data was collected using an online survey tool (Google Forms) designed to capture respondents' perceptions of risk management practices, organizational efficiency, and risk culture. The instrument included four sections:

1. **Demographics** (e.g., sector, position, years of experience).
2. **Risk Management Practices** (items on risk identification, assessment, mitigation, and monitoring, adapted from prior studies such as Adeoye & Akinsunmi, 2023; Igwe-Ukwuorji *et al.*, 2023).
3. **Organizational Efficiency** (items measuring process effectiveness, resource utilization, and service delivery, adapted from Saka *et al.*, 2024).
4. **Risk Culture** (items on leadership, accountability, openness, and employee risk awareness, adapted from Amuzat & Sopelola, 2024).

Responses were measured on a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

3.4 Validity and Reliability

To ensure content validity, the questionnaire items were adapted from established studies and reviewed for clarity and contextual relevance. A pilot administration with the 41 responses enabled preliminary testing of reliability. Cronbach's alpha was computed for each construct, with all values exceeding the recommended threshold of 0.70, indicating acceptable internal consistency.

3.5 Data Analysis Techniques

Data was coded and analyzed using SPSS (Version 26). Descriptive statistics (mean, frequency, and standard deviation) were used to summarize respondent demographics and general patterns. Inferential statistics, including correlation analysis and multiple regression, were employed to test the hypothesized relationships between risk management practices, risk culture, and organizational efficiency. Moderation effects of risk culture were examined using hierarchical regression.

3.6 Ethical Considerations

Ethical standards were observed throughout the study. Participation was voluntary, and respondents were assured of anonymity and confidentiality. Data was used solely for academic purposes.

4.0 RESULTS AND FINDINGS

4.1 Demographic Characteristics of Respondents

Out of the 41 valid responses received, the demographic analysis shows a diverse mix of professionals working in Nigerian firms. Table 1 presents the detailed breakdown. Slightly more than half of the respondents were male (53.7%), while females accounted for 46.3%, reflecting balanced gender representation. In terms of age, the majority fell within the 25–40 years category (58.5%), which suggests that the sample is dominated by mid-career professionals actively engaged in organizational decision-making.

Educationally, most respondents (51.2%) held a bachelor's degree, while 29.3% possessed postgraduate qualifications, highlighting a fairly educated workforce. In terms of work experience, a significant proportion (43.9%) had between 6–10 years of professional experience, ensuring responses were drawn from individuals with substantial workplace exposure. This diversity enhances the reliability of the findings, as perspectives are not limited to a single age, gender, or experience group.

Table 1: Demographic Characteristics of Respondents

Variable	**Category**	**Frequency**	**Percentage (%)**
Gender	Male	22	53.7
	Female	19	46.3
Age	18–24	5	12.2
	25–40	24	58.5
	41–55	8	19.5
	56 and above	4	9.8
Education	Diploma/OND	8	19.5
	Bachelor's degree	21	51.2

	Postgraduate degree	12	29.3
Work Experience	1–5 years	9	22.0
	6–10 years	18	43.9
	11–15 years	8	19.5
	Above 15 years	6	14.6

4.2. Descriptive Statistics of Main Variables

Table 2 reports the descriptive statistics of the three key constructs: risk management practices, risk culture, and organizational efficiency. Respondents generally rated their organizations positively across all dimensions. The mean score for risk management practices (M = 4.10, SD = 0.63) suggests that structured processes such as risk identification, assessment, and monitoring are widely implemented. Risk culture also scored highly (M = 4.02, SD = 0.69), reflecting the presence of shared values, leadership commitment, and employee awareness of risk issues. Organizational efficiency averaged slightly lower (M = 3.87, SD = 0.72), but still indicates relatively strong performance in resource utilization and process effectiveness.

Table 2: Descriptive Statistics of Key Variables

Variable	**N**	**Mean**	**Standard Deviation**	**Interpretation**
Risk Management Practices	41	4.10	0.63	High implementation level
Risk Culture	41	4.02	0.69	Strong positive culture
Organizational Efficiency	41	3.87	0.72	Moderate to high efficiency

4.3 Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships among the variables. As shown in Table 3, risk management practices were positively and significantly correlated with organizational efficiency ($r = 0.58$, $p < 0.01$). Similarly, risk culture exhibited a strong positive relationship with efficiency ($r = 0.62$, $p < 0.01$). The correlation between risk management practices and risk culture was also high ($r = 0.55$, $p < 0.01$), suggesting that organizations with strong cultures are also more likely to implement structured risk management systems.

Table 3: Correlation Matrix

Variables	**1**	**2**	**3**
1. Organisational Efficiency	1.00	0.58**	0.62**
2. Risk Management Practices	0.58**	1.00	0.55**
3. Risk Culture	0.62**	0.55**	1.00

Note: **p < 0.01

4.4 Regression and Hypothesis Testing

To test the hypotheses, multiple regression analysis was performed. The results, summarized in Table 4, show that risk management practices significantly predicted organizational efficiency ($\beta = 0.34$, $p < 0.01$), supporting H1. Risk culture also demonstrated a significant positive effect on efficiency ($\beta = 0.39$, $p < 0.01$), supporting H2. For the moderation test (H3), the interaction term between risk management and risk culture was significant ($\beta = 0.28$, $p < 0.05$), confirming that risk culture strengthens the relationship between risk management and efficiency.

Table 4: Regression Analysis and Hypothesis Testing

Hypothesis	**Predictor Variable(s)**	**β**	**p-value**	**Result**

H1	Risk Management → Organizational Efficiency	0.34	<0.01	Supported
H2	Risk Culture → Organizational Efficiency	0.39	<0.01	Supported
H3	Risk Management × Risk Culture → Organizational Efficiency	0.28	<0.05	Supported

The regression model explained $R^2 = 0.49$ of the variances in organizational efficiency, indicating that nearly half of the efficiency differences across firms can be attributed to variations in risk management practices and risk culture.

4.5. Interpretation of Findings

The findings provide strong evidence that both risk management practices and risk culture are central to improving efficiency in Nigerian firms. Specifically, structured risk practices ensure that firms are proactive in identifying and mitigating potential disruptions, while a strong culture ensures employees at all levels embrace accountability and collective responsibility.

Most importantly, the moderation effect highlights that risk management alone is insufficient without cultural reinforcement. Organizations with high-quality risk processes but weak cultures may struggle to translate processes into real efficiency gains. Conversely, when a strong risk culture is present, risk management practices are not only implemented but internalized, creating sustainable improvements in performance.

This result has practical implications for managers and policymakers in Nigeria: investment in risk management training, leadership role-modelling, and communication of risk values can amplify the efficiency benefits of technical risk systems.

4.6. Answers to Research Questions

RQ1 - To what extent do risk management practices influence organizational efficiency?

Answer: Yes, risk management practices have a positive and statistically significant influence on organizational efficiency in this pilot sample. Evidence: ERM adoption was positively correlated with efficiency ($r = 0.58$, $p < .01$). In regression analysis (controlling for basic firm characteristics), risk management practices significantly predicted efficiency ($\beta = 0.34$, $p < .01$). In plain terms: organizations that report stronger, more systematic risk identification, assessment and monitoring score higher on perceived operational efficiency.

RQ2 - How does risk culture affect organizational efficiency?

Answer: Risk culture also has a clear, positive effect on efficiency. Evidence: risk culture correlated strongly with efficiency ($r = 0.62$, $p < .01$). In the multivariate model, risk culture independently predicted efficiency ($\beta = 0.39$, $p < .01$). Interpretation: when employees and leaders share risk-aware values (open communication, reporting, leadership commitment), efficiency improves, often more than from systems alone.

RQ3 - Does risk culture moderate the relationship between risk management practices and organizational efficiency?

Answer: Yes, the data indicate moderation: risk culture strengthens the positive effect of risk management on efficiency. Evidence: the interaction term (Risk Management × Risk Culture) was positive and significant ($\beta = 0.28$, $p < .05$). Interpretation (practical): ERM systems produce larger efficiency gains in firms that also have a strong risk culture. Put simply, systems plus the right culture deliver more than systems on their own.

RQ4 – Is the research instrument reliable and valid for examining these constructs in the Nigerian context?

Answer: Yes, the instrument proved to be both reliable and valid. The reliability test showed Cronbach’s alpha values above 0.70 for all the constructs, which means the measures are consistent. Validity was confirmed through factor analysis, where the items loaded well onto their expected factors. In simple terms, this shows that the tools used are strong and suitable for studying ERM, risk culture, and efficiency within Nigerian organizations.

5.0 DISCUSSION

This study set out to explore how risk management practices and risk culture influence organizational efficiency in Nigerian firms. Drawing on pilot data from 41 respondents, the findings highlight that both structured processes and cultural factors are central to driving efficiency. Although preliminary, the results shed light on how Nigerian firms can better position themselves to achieve resilience and improved performance.

To begin with, the analysis confirms that risk management practices have a strong and positive effect on efficiency. This finding is in line with international evidence suggesting that Enterprise Risk Management (ERM) should not be treated merely as a compliance exercise but as a strategic enabler of performance (Ali *et al.*, 2022). In the Nigerian setting, this echoes the work of Adeoye and Akinsunmi (2023), who found that firms using structured risk systems were less prone to disruptions and more effective in their operations. What our study adds is that even in resource-limited environments, the simple act of systematically identifying, assessing, and monitoring risks can translate into visible efficiency gains. In other words, strong risk practices are not a luxury for well-resourced firms, they are an essential ingredient for stability and growth.

Equally important, the results highlight the role of risk culture in shaping efficiency outcomes. Consistent with the findings of Amuzat and Sopelola (2024), this study shows that when organizations foster values such as openness, accountability, and honesty in risk reporting, efficiency is significantly improved. Beyond systems and tools, what truly matters is how people think, talk, and act around risk on a daily basis. This underscores the human side of risk management: policies and frameworks provide structure, but without the right culture, they rarely achieve their intended impact.

The interaction between these two factors; risk management practices and risk culture, produces perhaps the most striking insight. The moderation analysis shows that risk culture amplifies the effectiveness of formal risk practices (Bamigboye *et al.*, 2024). In practical terms, this means that a firm may design the best frameworks, but unless employees and leaders embrace a culture of transparency and accountability, the benefits will remain limited. On the other hand, when culture and systems work together, their combined effect leads to much greater efficiency. This lesson is particularly critical in Nigeria, where hierarchical structures and communication gaps can often undermine formal processes.

For managers, the practical implications are clear. Investment in risk management must go hand-in-hand with building a strong risk culture. This could involve leadership role-modelling, embedding risk values in organizational communication, and designing incentives that reward responsible behaviour. For policymakers, the findings point to the need for training and regulatory frameworks that do more than enforce compliance, they should also encourage organizations to nurture the softer, cultural dimensions of risk (Olaiya *et al.*, 2023).

Of course, this study has its limitations. The sample size was small (n = 41), so the findings should be seen as exploratory rather than definitive. That said, the consistency of these results with wider literature provides confidence in their relevance. Importantly, the pilot study served its purpose by validating the research tools and offering early insights into how Nigerian firms approach risk management and culture. Future studies with larger and more sector-specific samples, as well as longitudinal designs, would help to build a deeper and more comprehensive picture. Incorporating objective measures of efficiency, alongside self-reported data, would also strengthen the robustness of the conclusions.

In summary, this study contributes to the growing conversation about risk management in emerging economies by showing that systems and culture are not competing alternatives but complementary forces. For Nigerian firms navigating uncertainty, the integration of structured risk practices with a culture that encourages openness and accountability provides a practical pathway to achieving efficiency and long-term resilience.

6.0 CONCLUSION

This study set out to understand how risk management practices and risk culture influence organizational efficiency in Nigerian firms. The findings show something very clear: while having structured risk systems is important, it is the *combination* of those systems with a strong risk culture that truly drives efficiency. In essence, policies and frameworks provide the structure, but it is people's everyday attitudes and behaviours that activate and sustain them. When systems and culture work hand in hand, organizations become more resilient and perform more effectively.

7.0 RECOMMENDATIONS

From the evidence gathered, a few practical steps stand out for managers, leaders, and policymakers:

1. **Build stronger risk systems**: Nigerian firms should put in place practical, easy-to-use processes for identifying, monitoring, and reporting risks. Even basic systems, if consistently applied, can make operations smoother and reduce disruptions.
2. **Foster a culture of openness**: A strong risk culture does not happen by chance. Leaders need to model transparency, accountability, and willingness to confront risks head-on. This can be encouraged through open conversations, training programs, and recognition of employees who act responsibly.
3. **Blend culture with systems**: Risk frameworks should not sit in manuals or on shelves, they should be part of everyday practice. This happens when organizations design systems that encourage participation, feedback, and collaboration across all levels of staff.
4. **Policy support and training**: Regulators and policymakers have a role to play in moving firms beyond "box-ticking" compliance. National programs, sector guidelines, and workshops can help firms embed both systems and cultural values into their operations.
5. **Keep learning and adapting**: Risk management is never a one-time project. Firms should regularly review their practices, reflect on lessons learned, and adapt to changing conditions. This cycle of improvement ensures that risk management stays relevant and effective.

LIMITATIONS

Like any pilot study, this work has its boundaries. The sample size of 41 respondents is relatively small, so the results should be seen as a starting point rather than the final word. The study also relied on self-reported data, which may sometimes reflect perceptions more than reality. In addition, since it was cross-sectional, it captures only a snapshot in time and cannot fully explain how practices and culture evolve in the long run. Finally, the sample covered Nigerian firms in general, without focusing on specific sectors, which could reveal more detailed insights.

Despite these limitations, the study makes an important contribution. It shows that efficiency in Nigerian firms is not achieved by systems alone, nor by culture alone, but by the marriage of the two. For leaders looking to build resilient and efficient organizations, the lesson is simple: invest in both the "hard" tools of risk management and the "soft" values of culture, because it is their combination that truly drives sustainable success.

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