

PROCUREMENT RISK MANAGEMENT AND SUPPLY CHAIN RESILIENCE IN MANUFACTURING FIRMS IN PLATEAU STATE, NIGERIA

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ABSTRACT

Supply chain disruptions have become a major challenge for manufacturing firms, especially in developing economies where businesses face unstable infrastructure, fluctuating exchange rates, policy inconsistency, and supplier-related problems. Despite the growing importance of procurement risk management, few studies in Nigeria have examined how procurement practices contribute to supply chain resilience in manufacturing firms. This study, therefore, examined the effect of procurement risk management on supply chain resilience among selected manufacturing firms in Plateau State, Nigeria. A descriptive survey design was adopted. Data were collected through structured questionnaires administered to staff involved in procurement, logistics, production, inventory, and operations activities. Descriptive statistics and simple linear regression were used for data analysis. The findings revealed that manufacturing firms moderately adopted procurement risk management practices such as supplier evaluation, risk identification, contingency planning, supplier diversification, and continuous monitoring. The study further found that procurement risk management has a significant positive effect on supply chain resilience. The study concludes that firms that proactively manage procurement risks are more capable of responding to disruptions and sustaining operations during periods of uncertainty. The study recommends that manufacturing firms should strengthen supplier evaluation systems, improve contingency planning, and establish continuous monitoring mechanisms to enhance resilience and operational stability.

Keywords: Procurement Risk Management, Supply Chain Resilience, Manufacturing Firms, Supplier Risk, Nigeria

Introduction

Global supply chains have become increasingly complex and vulnerable to different forms of disruption. In recent years, organizations across the world have experienced supply chain interruptions arising from pandemics, geopolitical tensions, inflation, transportation failures, cyber threats, climate-related disasters, and sudden government policy changes. These disruptions have affected the movement of raw materials, production schedules, transportation systems, and customer service delivery. The COVID-19 pandemic especially exposed weaknesses in global and local supply chains and demonstrated that many organisations were unprepared for large-scale disruptions. According to Ivanov and Dolgui (2020), modern supply chains now operate in environments characterised by uncertainty, interdependence, and vulnerability, making resilience a critical organisational capability.

The manufacturing sector is one of the sectors most affected by supply chain disruptions because manufacturing activities depend heavily on the timely availability of raw materials, machinery, spare parts, and logistics services. Any disruption affecting procurement activities can delay production, increase operational costs, reduce product quality, and weaken customer satisfaction. In many developing economies, these challenges are even more severe because firms operate within unstable economic and infrastructural conditions. Manufacturing firms in Nigeria frequently face problems such as unstable electricity supply, poor road networks, exchange rate fluctuations, inflation, import dependence, insecurity, and inconsistent government policies. These challenges increase procurement risks and threaten organisational sustainability.

Procurement activities occupy a strategic position within manufacturing firms because they determine the availability, quality, and cost of production inputs. Procurement is no longer viewed merely as a routine purchasing activity but as a major strategic function that directly influences organizational performance and competitiveness. According to Monczka, Handfield, Giunipero, and Patterson (2020), procurement management plays an important role in ensuring operational continuity and minimising supply disruptions. Effective procurement systems support cost efficiency, supplier reliability, quality improvement, and organizational resilience.

Procurement risk management refers to the systematic process of identifying, assessing, controlling, and monitoring risks associated with procurement activities. These risks may arise from unreliable suppliers, transportation delays, price fluctuations, poor-quality materials, contract failure, political instability, cyber risks, or market uncertainty. Procurement risk management enables organizations to anticipate disruptions, develop contingency measures, and reduce the negative impact of supply chain interruptions. According to Ho, Zheng, Yildiz, and Talluri (2015), procurement risk management has become increasingly important because organizations depend heavily on external suppliers and global sourcing systems.

Supply chain resilience refers to the ability of firms to prepare for disruptions, respond effectively during crises, recover quickly after disruptions, and continue operations with minimal interruption. Christopher and Peck (2004) explained that resilient supply chains possess capabilities such as flexibility, collaboration, adaptability, visibility, and responsiveness. Similarly, Ponomarov and Holcomb (2009) described supply chain resilience as the adaptive capability of organizations to prepare for unexpected events, respond to disruptions, and recover successfully while maintaining operational continuity.

The increasing uncertainty in business environments has forced organizations to shift attention from efficiency alone to resilience and sustainability. In the past, many organizations focused mainly on reducing procurement costs and maintaining lean inventories. Although these strategies improved efficiency, they also increased vulnerability to disruptions because

organizations depended heavily on limited suppliers and minimal inventory buffers. Modern organizations now recognize that excessive dependence on single suppliers or unstable sourcing channels can expose firms to severe operational risks during disruptions.

Manufacturing firms in Nigeria are particularly vulnerable because many organizations depend on imported raw materials, foreign exchange availability, and external logistics systems. Delays at seaports, exchange rate instability, transportation challenges, and inflation significantly affect procurement activities and production continuity. According to the National Bureau of Statistics (2023), fluctuations in inflation and foreign exchange rates continue to affect manufacturing costs and operational performance in Nigeria. These economic realities make procurement risk management highly important for manufacturing organizations.

Plateau State hosts several manufacturing firms involved in food processing, plastics, beverages, packaging, and consumer goods production. Like firms in other parts of Nigeria, manufacturing firms in Plateau State experience procurement-related challenges such as supplier unreliability, transportation delays, fluctuating material costs, and inventory shortages. These challenges increase operational uncertainty and threaten supply chain stability. Consequently, manufacturing firms must develop effective procurement risk management systems to strengthen resilience and improve competitiveness.

Several studies have examined supply chain resilience and risk management in developed economies. Ivanov (2022) observed that firms with strong digital risk management systems recovered faster during supply chain disruptions. Similarly, Christopher and Peck (2004) emphasized the importance of proactive risk management, collaboration, and flexibility in improving supply chain resilience. However, many studies conducted in Nigeria focus more on logistics management, inventory management, or general supply chain practices without paying adequate attention to procurement risk management as a strategic driver of resilience.

Although procurement activities directly influence supply continuity, supplier reliability, operational flexibility, and production stability, limited empirical studies have specifically examined the relationship between procurement risk management and supply chain resilience among manufacturing firms in Plateau State, Nigeria. This creates a knowledge gap, especially within the context of emerging economies where supply chain disruptions occur frequently.

The present study therefore seeks to examine procurement risk management and supply chain resilience among manufacturing firms in Plateau State, Nigeria. Specifically, the study investigates procurement risk management practices adopted by manufacturing firms and examines the effect of procurement risk management on supply chain resilience. The study is important because it will provide useful insights for manufacturing firms, procurement managers, researchers, policymakers, and supply chain professionals seeking to improve operational continuity and resilience in uncertain business environments.

Objectives of the Study

The study was guided by the following objectives:

1. To examine procurement risk management practices adopted by manufacturing firms in Plateau State, Nigeria.
2. To determine the effect of procurement risk management on supply chain resilience among manufacturing firms in Plateau State, Nigeria.

Research Questions

1. What procurement risk management practices are adopted by manufacturing firms in Plateau State, Nigeria?

2. What effect does procurement risk management have on supply chain resilience among manufacturing firms in Plateau State, Nigeria?

Research Hypothesis

H0: Procurement risk management has no significant effect on supply chain resilience among manufacturing firms in Plateau State, Nigeria.

Literature Review

Concept of Procurement Risk Management

Procurement risk management is the systematic way in which organizations recognize, evaluate, control and monitor risks involved in procurement. Risks can occur if suppliers fail, transportation is disrupted, the exchange rate changes, materials are not of acceptable quality, inflation occurs, contracts are not fulfilled, there are cyber risks, or there are inconsistencies in government policies. Procurement risk management can be used to mitigate the uncertainty of operations, preserve supply continuity and enhance organizational performance while disruptions occur (Monczka et al., 2020). Procurement processes have a direct impact on product availability, productivity, inventory stability and customer satisfaction in manufacturing organizations. As a response, companies increasingly come to rely on systems for supplier evaluation, contingency planning, contract management and continuous monitoring to reduce disruptions and enhance operational stability (Ho et al., 2015)

As supply chains have grown more complicated, procurement risk management has become even more significant in today's business. Modern manufacturing companies increasingly depend upon third parties for their supply chain and on the global supply system for their supply of goods and services, which means that they are becoming more vulnerable to the impacts of procurement disruption. By managing procurement risks effectively, firms can prepare for risks, make more informed procurement choices, spread risk among suppliers, and gain flexibility in operations when uncertainty arises (Heizer et al., 2020). Ineffective procurement risk management can lead to production delays, higher operations costs, poor supplier performance and lower competitiveness for organisations. According to Jidda et al. (2025), ERP in procurement systems enhances supply chain performance and boosts organizational resilience, thereby improving the resilience of organizations. Likewise, Akpan et al. (2022) noted that companies that have robust dynamic capabilities and risk management systems are more resilient in the face of disruption.

Procurement risk management is crucial in developing economies like Nigeria, where manufacturing companies face a risky and unstable economic and infrastructural environment. Inflation, exchange rate fluctuations, inadequate transportation services, reliance on imports and government policy uncertainty are all common issues faced by manufacturing firms that make procurement more uncertain and make them more vulnerable to the challenges of the operational environment. To ensure operational continuity and minimize disruptions, firms implement diversification of suppliers, sourcing from the local community, buffering inventory and monitoring procurement (Raphael & Obioma-Ekeanyanwu, 2026). Also, Abiji et al. (2026) stated that the manufacturing companies which have an effective procurement risk management system are more equipped to keep their supply chain stable and enhance the performance of the organization in the manufacturing business in Nigeria.

Concept of Supply Chain Resilience

Supply chain resilience is the ability of an organization to anticipate disruption, manage during a crisis, recover from disruption and remain operational during uncertainty. Disruptions are becoming more common in the world, including pandemics, geopolitical conflicts, cyber attacks, inflation, climate change, and transportation issues, and therefore the role of resilience in supply

chain management (Ponomarov & Holcomb, 2009) has become even more critical. The resilient supply chains have the qualities of flexibility, adaptability, visibility, collaboration and responsiveness which allow organizations to withstand shocks and ensure stable operations in the face of disruption (Christopher & Peck, 2004). Resilience is becoming a critical factor for manufacturing companies' long-term competitiveness and sustainability.

In the modern context, there is a greater emphasis on resilience as overreliance on lean procurement and few suppliers makes organisations more vulnerable during crisis. A flexible supply chain is able to modify their sourcing, rethink their operation and react quickly to uncertainty in the environment. Cooperation also helps to facilitate information sharing and coordinated responses in the event of disruptions by bringing suppliers, manufacturers, distributors, and logistics providers together. Organizations that are resilient to supply chain disruptions have strong adaptive capabilities and are better equipped to manage risks, which help them to resume operations more quickly (Ivanov 2022). Likewise, Igudia (2023) established that pro-innovation operating systems are crucial to the resilience and adaptability of manufacturing firms in Nigeria in times of uncertainty in the business environment.

The issue of supply chain resilience is still significant in the manufacturing industry in Nigeria, considering the economic and infrastructural constraints that the industry has been facing. Inflation, volatility of foreign exchange, poor roads, unstable electricity supply, insecurity and import dependence are some of the challenges that frequently cause disruptions in manufacturing organizations. These disruptions have a negative impact on procurement, production continuity, inventory management, and delivery of customer services. As a result, businesses are increasingly implementing local sourcing strategies, inventory buffering systems, supplier collaboration mechanisms, and operational flexibility measures to enhance resilience (Raphael & Obioma-Ekeanyanwu, 2026). Akpan et al. (2022) noted that resilient organisations can still perform their operations in the face of uncertainty in the environment, whereas Abiji et al. (2026) reported that resilient supply chains have a positive influence on the performance of manufacturing organisations in Nigeria.

Relationship Between Procurement Risk Management and Supply Chain Resilience

There is close correlation between procurement risk management and supply chain resilience, since the procurement process has direct impacts on supply continuity, operational flexibility, production stability and organisational responsiveness. Manufacturing companies are highly reliant on their suppliers for their raw materials, their equipment, their spare parts, and their logistics services; so, when their procurement is disrupted, so is their organizational performance and customer satisfaction. Procurement risk management helps foster resilience by helping to understand procurement vulnerabilities, create contingency plans, diversify suppliers, and ensure operations are continued in times of disruption (Monczka et al., 2020). A forward-thinking approach to procurement risk management can typically better help companies minimize uncertainty and respond effectively to disruption.

Organizations are not only turning their focus toward sustainability, but toward resilience in the wake of the uncertainties in global and local supply chains. Having a robust procurement risk management system in place can lead to more reliable suppliers, greater sourcing flexibility, better decision-making and quicker recovery in times of disruption. Christopher and Peck (2004) noted that proactive risk management, flexibility, and cooperation are important elements to build supply chain resilience. Likewise, Ivanov (2022) noted that companies with robust risk management frameworks are quicker to bounce back from disruption due to having effective operational adjustment capabilities. Additionally, Jidda et al. (2025) found that integration of

enterprise risk management has a positive impact on resilience capability and the performance of the overall supply chain.

For instance, in the Nigerian manufacturing context, procurement risk management has gained significance due to the uncertain economic and business environment of manufacturers which include the problems of inconsistent policies, inflation, delivery delays, exchange rate fluctuation and supplier unreliability. Such problems can cause production instability and disruption in manufacturing companies. This has led to a growing trend of diversifying supplier base, real-time procurement tracking, and implementing local procurement agreements alongside inventory buffering strategies to enhance resilience and continuity in operations (Raphael & Obioma-Ekeanyanwu, 2026). Igudia (2023) found that firms that proactively manage procurement risks demonstrate stronger adaptability and operational sustainability during uncertainty, while Abiji et al. (2026) noted that effective procurement risk management contributes significantly to organizational performance and supply chain stability within Nigerian manufacturing firms.

Theoretical Framework

This study is anchored on the Dynamic Capabilities Theory developed by David J. Teece, Gary Pisano, and Amy Shuen in 1997. The theory was introduced to explain how organizations build, integrate, and reconfigure internal and external competencies in response to rapidly changing business environments (Teece et al., 1997). The Dynamic Capabilities Theory emerged as an extension of the Resource-Based View (RBV), which focused mainly on valuable organizational resources as sources of competitive advantage. However, Teece et al. (1997) argued that possessing valuable resources alone is insufficient in highly unstable and competitive environments. Organizations must also develop the capability to continuously adapt, innovate, and respond effectively to environmental changes in order to sustain performance and competitiveness.

The central assumption of the Dynamic Capabilities Theory is that organizations operate in dynamic environments characterized by uncertainty, technological changes, market volatility, competition, and environmental disruptions. As a result, firms must continuously sense environmental changes, seize opportunities, and transform organizational processes to maintain operational stability and competitive advantage. The theory emphasizes organizational flexibility, learning, adaptation, innovation, and strategic responsiveness as important drivers of long-term survival. According to Teece et al. (1997), firms that possess strong dynamic capabilities are better able to identify risks, respond to disruptions, and redesign operational systems in ways that improve organizational performance and sustainability.

The theory is highly relevant to procurement risk management because procurement operations are constantly exposed to uncertainty arising from supplier instability, transportation failures, policy inconsistency, inflation, foreign exchange volatility, and market fluctuations. Manufacturing firms operating in Nigeria particularly experience severe procurement disruptions due to unstable infrastructure, insecurity, import dependency, and changing economic conditions. The Dynamic Capabilities Theory explains that firms can survive and remain resilient when they develop capabilities that enable them to anticipate procurement risks, respond rapidly to disruptions, and continuously improve procurement systems. Procurement risk management therefore becomes a strategic capability that strengthens operational continuity and supply chain resilience.

The theory is built around three important dimensions, namely sensing, seizing, and transforming capabilities. Sensing capability refers to the ability of organizations to identify threats and opportunities within the business environment. In procurement activities, firms sense risks by monitoring supplier performance, evaluating market conditions, tracking transportation systems,

and assessing policy changes that may affect procurement operations. Organizations that effectively sense procurement risks are more capable of preparing preventive strategies before disruptions escalate into major operational problems (Teece et al., 1997).

Seizing capability involves the ability of firms to respond quickly and effectively after identifying potential risks or opportunities. Within procurement operations, firms apply seizing capability by switching suppliers, adjusting procurement schedules, increasing inventory buffers, renegotiating contracts, or implementing contingency measures during supply chain disruptions. Firms with strong seizing capability are more responsive, flexible, and adaptive during uncertain conditions. This improves operational continuity and strengthens resilience within manufacturing supply chains.

Transforming capability refers to the ability of organizations to continuously improve, redesign, and reconfigure organizational processes in response to environmental changes. Manufacturing firms strengthen resilience by redesigning procurement systems, introducing digital procurement technologies, improving supplier collaboration, and applying lessons learned from previous disruptions. Continuous organizational learning enables firms to improve procurement efficiency and sustain operations during future disruptions. Akpan et al. (2022) explained that dynamic organizational capabilities significantly improve resilience and operational adaptability among manufacturing firms operating in uncertain environments.

The Dynamic Capabilities Theory is applicable to this study because procurement risk management involves continuous identification, assessment, response, and monitoring of procurement risks in changing business environments. Manufacturing firms that possess strong sensing, seizing, and transforming capabilities are more capable of managing procurement disruptions and maintaining supply chain resilience. The theory therefore provides a suitable explanation for how procurement risk management practices influence resilience among manufacturing firms in Plateau State, Nigeria.

Despite its relevance, the theory has certain limitations. One major criticism is that the theory is broad and difficult to measure empirically because dynamic capabilities vary across organizations and industries. Another limitation is that the theory focuses heavily on internal organizational capabilities while giving limited attention to external environmental constraints such as government policies, infrastructure deficiencies, and economic instability. Nevertheless, the theory remains highly useful for explaining how organizations adapt to uncertainty and strengthen operational resilience in volatile business environments.

Empirical Review

Ivanov (2022) conducted a study on digital transformation and supply chain resilience with the primary objective of examining how digital technologies improve organizational response to supply chain disruptions. The study was anchored on the Dynamic Capabilities Theory and employed a conceptual and analytical research design using secondary data from global supply chain disruption cases. The study found that firms with advanced digital risk management systems, predictive analytics, and real-time monitoring mechanisms recovered faster from disruptions than firms with weak digital systems. The study concluded that digital integration significantly improves supply chain visibility, flexibility, and resilience. The study recommended that organizations should strengthen digital procurement systems and invest in predictive technologies to improve disruption management. However, the study focused mainly on developed economies and paid limited attention to procurement risk management practices within manufacturing firms in developing countries such as Nigeria.

Nyamah et al. (2022) examined procurement process risk and organizational performance among manufacturing firms. The objective of the study was to investigate how procurement controls influence operational performance and uncertainty reduction. The study adopted the Risk Management Theory and utilized a survey research design through structured questionnaires administered to procurement personnel. Regression analysis was employed for data analysis. The findings revealed that procurement controls, supplier evaluation, and procurement monitoring significantly improve operational performance and reduce supply uncertainty. The study concluded that effective procurement risk management strengthens organizational efficiency and operational continuity. The researchers recommended that firms should strengthen procurement monitoring systems and establish proactive supplier evaluation procedures. However, the study concentrated mainly on procurement controls without specifically examining supply chain resilience within manufacturing firms in Plateau State, Nigeria.

Ponomarov and Holcomb (2009) investigated the concept of supply chain resilience with emphasis on organizational adaptability during disruptions. The study aimed to develop a clearer understanding of resilience within supply chain systems. The research adopted a conceptual methodology based on extensive literature review and resilience theory. The findings showed that resilient supply chains are characterized by flexibility, adaptability, collaboration, and recovery capability. The study concluded that organizations with strong adaptive capabilities respond more effectively to disruptions and sustain operational continuity during uncertain conditions. The study recommended that firms should improve collaboration and flexibility within supply chains to strengthen resilience. Nevertheless, the study remained largely conceptual and did not provide empirical evidence from manufacturing firms operating within developing economies.

Christopher and Peck (2004) examined strategies for improving supply chain resilience in uncertain business environments. The study aimed to identify practical mechanisms through which organizations can reduce vulnerability to supply chain disruptions. The study employed a conceptual research approach and was anchored on Supply Chain Management Theory. The findings revealed that proactive risk management, supplier collaboration, visibility, and operational flexibility significantly improve supply chain resilience. The study concluded that resilient organizations possess strong adaptive systems capable of minimizing operational interruptions during disruptions. The authors recommended that firms should adopt collaborative procurement strategies and improve visibility across supply chains. However, the study focused largely on global supply chains and provided limited attention to procurement-related challenges facing manufacturing firms in Nigeria.

Adamu et al. (2025) conducted a study on procurement risk management and supply chain performance among sachet water producers in Makurdi, Benue State, Nigeria. The main objective of the study was to determine the effect of procurement risk management practices on supply chain performance. The study adopted the Dynamic Capabilities Theory and utilized a descriptive survey research design. Data were collected through questionnaires administered to procurement and operations staff within selected manufacturing firms. The findings revealed that supplier diversification, procurement monitoring, and contingency planning positively influenced supply chain performance. The study concluded that effective procurement risk management improves operational continuity and organizational efficiency. The researchers recommended that manufacturing firms should strengthen procurement planning and supplier evaluation systems. However, the study focused primarily on supply chain performance rather than supply chain resilience.

Abdulsalam et al. (2026) investigated the effect of supply chain risk management strategies on the operational performance of manufacturing firms in Dangote Cement Plc, Obajana Plant, Kogi State. The study aimed to examine how supply chain risk management strategies influence operational efficiency and organizational stability. The study adopted the Systems Theory and employed a survey research design using structured questionnaires. Descriptive statistics and regression analysis were used for data analysis. The findings showed that risk identification, supplier management, contingency planning, and continuous monitoring significantly improve operational performance. The study concluded that effective risk management strengthens organizational responsiveness and operational continuity during disruptions. The study recommended that manufacturing firms should improve procurement flexibility and establish stronger supplier collaboration systems. However, the study concentrated on operational performance without specifically addressing supply chain resilience.

Yunus and Swanta (2026) examined the effect of supplier relationship management on supply chain resilience in Nestlé Nigeria Plc. The study aimed to determine how supplier collaboration influences organizational resilience and operational continuity. The research adopted the Relational Exchange Theory and utilized a descriptive survey design. Data were analyzed using regression analysis. The findings indicated that effective supplier communication, trust, collaboration, and information sharing positively influence supply chain resilience. The study concluded that strong supplier relationships improve flexibility and recovery capability during disruptions. The researchers recommended that manufacturing firms should establish long-term supplier partnerships to improve resilience. However, the study focused mainly on supplier relationship management without examining broader procurement risk management practices.

Akinsola and Akinde (2024) conducted a study on enhancing software supply chain resilience with emphasis on mitigating software supply chain security risks. The primary objective of the study was to examine strategies for improving resilience against cyber-related supply chain disruptions. The study adopted a conceptual methodology using secondary data and cybersecurity frameworks. The findings revealed that proactive risk assessment, system monitoring, and security continuity mechanisms improve resilience against digital supply chain disruptions. The study concluded that organizations should continuously strengthen monitoring systems and cybersecurity capabilities to sustain operational stability. The authors recommended the adoption of integrated risk management frameworks within supply chains. However, the study focused mainly on software supply chains and did not address procurement-related risks within manufacturing firms.

Okafor et al. (2024) examined software supply chain security through secure design properties and resilience frameworks. The study aimed to analyze how organizations can strengthen supply chain security against operational vulnerabilities. The study employed a systematic review methodology and was anchored on Security Systems Theory. The findings indicated that continuous monitoring, adaptive systems, and proactive risk management significantly improve supply chain resilience. The study concluded that organizations require integrated security and risk management systems to sustain operational continuity during disruptions. The study recommended that firms should strengthen monitoring frameworks and improve supply chain adaptability. However, the study concentrated mainly on software supply chain security and paid little attention to manufacturing procurement systems.

Overall, the reviewed studies established that procurement risk management significantly contributes to operational continuity, organizational adaptability, and supply chain resilience. Most studies emphasized supplier evaluation, risk identification, contingency planning, monitoring

systems, supplier collaboration, and operational flexibility as important determinants of resilience. However, despite the growing body of literature on supply chain resilience and risk management, limited empirical studies have specifically examined the effect of procurement risk management on supply chain resilience among manufacturing firms in Plateau State, Nigeria. Additionally, several studies focused mainly on operational performance, digital systems, supplier relationship management, or software supply chain security without adequately examining procurement risk management as a direct predictor of resilience within manufacturing organizations operating in unstable environments. This identified gap therefore justifies the need for the present study.

Methodology

The study adopted a descriptive survey research design. The population consisted of staff involved in procurement and supply chain-related activities in selected manufacturing firms registered with the Plateau State Ministry of Commerce and Industry. The study focused on manufacturing firms in the food processing, plastics, and consumer goods sectors because these industries depend heavily on procurement activities for production continuity. A sample size of 50 respondents was selected using purposive sampling to ensure that only staff directly involved in procurement, logistics, inventory, production, and operations activities participated in the study. Data were collected using a structured questionnaire titled “Procurement Risk Management and Supply Chain Resilience Questionnaire (PRMSCRQ).” The instrument was validated by experts from the Department of Business Administration, Abubakar Tafawa Balewa University, Bauchi, and procurement practitioners in Plateau State. A pilot test conducted among staff of a manufacturing firm outside the sampled firms produced Cronbach Alpha coefficients above 0.70, indicating acceptable reliability. Data were analyzed using descriptive statistics such as mean and standard deviation, while simple linear regression was used to test the hypothesis at a 0.05 level of significance.

Results and Discussion

Procurement Risk Management Practices Adopted by Manufacturing Firms

The study examined the procurement risk management practices adopted by manufacturing firms in Plateau State, Nigeria. The responses obtained from respondents are presented in Table 1.

Table 1

Mean Scores on Procurement Risk Management Practices

S/N	Procurement Risk Management Practices	Mean	Std. Deviation	Decision
1	Supplier risk identification practices are regularly conducted in the organization	4.02	0.81	Agree
2	The organization carries out supplier evaluation and assessment before procurement decisions are made	4.10	0.76	Agree
3	Alternative supplier arrangements are maintained to reduce supply disruptions	4.05	0.83	Agree
4	The organization develops contingency plans for procurement-related disruptions	3.98	0.79	Agree
5	Continuous supplier monitoring is carried out to improve procurement performance	4.01	0.74	Agree
	Grand Mean	4.03	0.79	Agree

The result presented in Table 1 revealed that manufacturing firms in Plateau State moderately adopt procurement risk management practices. The grand mean score of 4.03 indicates that respondents generally agreed that procurement risk management practices are implemented within their

organizations. The highest mean score of 4.10 was recorded for supplier evaluation and assessment, indicating that firms place considerable attention on evaluating supplier reliability, quality standards, and performance before entering procurement agreements. The result also showed that alternative supplier arrangements recorded a high mean score of 4.05, suggesting that firms attempt to reduce excessive dependence on single suppliers in order to minimize operational disruptions.

Furthermore, the findings revealed that firms engage in supplier risk identification, contingency planning, and continuous supplier monitoring as mechanisms for managing procurement-related uncertainties. The relatively high mean scores across the variables indicate that manufacturing firms recognize the importance of proactive procurement risk management in maintaining operational continuity and reducing supply chain vulnerability during disruptions.

Effect of Procurement Risk Management on Supply Chain Resilience

Simple linear regression analysis was conducted to determine the effect of procurement risk management on supply chain resilience among manufacturing firms in Plateau State, Nigeria.

Table 2

Regression Analysis on Procurement Risk Management and Supply Chain Resilience

Model Summary

Model R R Square Adjusted R Square Std. Error of Estimate

1 0.684 0.468 0.457 0.521

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.742	1	11.742	29.387	0.000
Residual	13.258	48	0.276		
Total	25.000	49			

Coefficients

Variable	Unstandardized Beta	Standardized Beta	t-value	Sig.
Constant	1.214	—	3.281	0.002
Procurement Risk Management	0.632	0.684	5.421	0.000

Table 2 shows the result of the regression test which shows a positive and statistically significant relationship between procurement risk management and supply chain resilience among manufacturing companies in Plateau State, Nigeria ($\beta = 0.632$, $t = 5.421$, $p < 0.05$). The R-value of 0.684 shows that there is a strong positive correlation between procurement risk management and supply chain resilience. The R^2 value of 0.468 suggests that procurement risk management accounts for about 46.8% of the variability of the supply chain resilience of the manufacturing companies sampled.

The value of the F statistics is 29.387, at the significance level of 0.000, which also indicates that the regression model is statistically significant. The value of the p-value is less than the significance level (0.05) so the null hypothesis, which includes that procurement risk management has no significant impact on supply chain resilience among manufacturing companies in Plateau state Nigeria was rejected. The study therefore concludes that effective procurement risk management can greatly enhance the supply chain's resilience.

Discussion of Findings

The results of the study showed that manufacturing companies in Plateau State implement procurement risk management practices like supplier evaluation, supplier diversification,

contingency planning, supplier monitoring, and procurement risk identification. Overall, the values of the mean scores across the variables indicate that manufacturing companies are aware of the importance of the procurement risk management as a means of ensuring continuity of operations and minimizing the risk of disruption in supply chain systems. The results are found similar to the study made by Adamu et al. (2025) which showed that supplier diversification, procurement monitoring and contingency planning are found to have a great impact on the performance of the supply chain among manufacturing companies in Nigeria. Likewise, Abdulsalam et al. (2026) discovered that supply chain risk management approaches like supplier management and ongoing monitoring have a positive impact on operational performance and organizational stability.

This study also revealed that the effect of procurement risk management on the resilience of manufacturing companies in Plateau State is positive. The results of the regression analysis showed that procurement risk management explained variations in supply chain resilience, implying that companies that proactively recognise procurement risks, assess suppliers and define contingency plans are better able to respond to disruptions and sustain their supply chain's operational continuity. These findings align with Ivanov's (2022) claim that better supply chain risk management systems enable the organization to recover from supply chain disruptions rapidly by boosting responsiveness and operational flexibility. The discovery also serves the work of Yunus and Swanta (2026) which showed that good supplier relationship management is a significant factor that can enhance the resilience capability and continuity in the manufacturing organization.

The outcome also supports the conclusions of Christopher and Peck (2004) that proactively managing risks, being flexible, working together, and having visibility of the supply chain can increase resiliency during uncertainty. Similarly, Ponomarov and Holcomb (2009) argued that resilient organizations have adaptive characteristics that allow them to proactively plan for disruptions, respond effectively during emergency events and rapidly recover from operational disruptions. Therefore, the present study concludes that procurement risk management plays an important role in enhancing resilience as a result of lowering procurement uncertainty and increasing the organizational adaptability.

This study's results are very congruent with the Dynamic Capabilities Theory of Teece et al. (1997). The theory focuses on how organizations in environments of instability can respond to the challenges of disruptions by sensing, seizing and transforming. The procurement risk identification practices of manufacturing companies are actually the sensing capability of organisations to identify potential procurement threats in the business environment. Likewise, the use of diversification of suppliers and contingency planning reflects the ability of firms to respond effectively to risks and/or disruptions that have been identified.

In addition, the practice of continuous monitoring and enhancement of suppliers shows how the Dynamic Capabilities Theory's transforming capability is reflected in the implementation of supplier management. Besides, the application of continuous monitoring and improvement of suppliers to suppliers' management shows how the Dynamic Capabilities Theory's transforming capability is reflected. As environments and operations evolve, manufacturing organizations continuously evolve their procurement systems and supplier relationships. The study, therefore, validates the applicability of the Dynamic Capabilities Theory to explain the role of procurement in enhancing the resilience of manufacturing firms in Plateau State, Nigeria amidst procurement risk management practices.

Conclusion

The study focused on the procurement risk management and supply chain resilience of manufacturing companies in Plateau State, Nigeria. The findings confirmed that the practices of procurement risk management are moderately adopted by manufacturing companies including supplier evaluation, supplier diversification, contingency planning, identification and monitoring of procurement risk by the companies and continuous monitoring of supplier. It was discovered that these practices played a key role in supporting operational continuity and organizational responsiveness when there is a disruption.

The study also confirmed that procurement risk management has a positive and statistically significant impact on supply chain resilience. Companies that anticipate procurement issues, plan for alternate sources, gauge supplier performance, and build contingency strategies can better adapt to disruptions and continue operations in an uncertain business landscape. The results thus show that procurement risk management is not just a purchasing activity but a management tool that contributes to resilience and sustainability of the organization. The relevance of the Dynamic Capabilities Theory in explaining the development of adaptive capabilities of the manufacturing companies in response to environmental uncertainty was also confirmed. Companies that remain vigilant regarding procurement risks, are quick to take advantage of operational change opportunities, and continually improve procurement systems are more likely to deal with supply chain risks and remain competitive. With the growth of complexity and uncertainty in today's Supply Chain, manufacturing companies in Nigeria now need to make procurement Risk Management a critical part of their organizational strategy. Investing in strengthening procurement systems, maintaining better supplier relations, implementing continuous monitoring systems and strengthening contingency planning will greatly increase the resilience and operational stability of manufacturing organisations.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Manufacturing firms should strengthen supplier evaluation and risk assessment processes to reduce supplier-related disruptions.
2. Firms should establish contingency plans and maintain alternative suppliers to improve operational continuity during disruptions.
3. Organizations should implement continuous monitoring systems for supplier performance and procurement activities.
4. Management of manufacturing firms should provide regular training for procurement staff on risk management practices and supply chain resilience.

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