SUPPLY CHAIN DISRUPTIONS AND CAPITAL RESILIENCE IN THE NIGERIAN AGRICULTURAL INDUSTRY

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Abstract
This study investigated how supply chain disruptions impact capital resilience in Nigeria's agricultural sector, focusing on three dimensions namely, supply chain orientation, risk management, and resource configuration capabilities. Using a cross-sectional survey design, data were collected from 369 employees across production, procurement, logistics, marketing, and warehousing departments of Okomu Oil Plc and Presco Plc in Benin City. The study used the questionnaire as an instrument to elicit primary data from the respondents. The reliability of each questions for each variables were ascertained with chroncba alpha values, 0.84, 0.83, 0.92 and 0.86 respectively. Descriptive and inferential statistics were employed for analysis. Findings reveal that supply chain orientation and risk management significantly enhance capital resilience by improving integration, coordination, and proactive risk mitigation. However, resource reconfiguration capabilities showed no significant impact, suggesting flexibility alone is insufficient without broader strategic alignment. The study recommends strengthening supply chain collaboration, visibility, and redundancy to bolster resilience. Additionally, firms should invest in robust risk management frameworks, including regular assessments and contingency planning, to mitigate disruptions effectively. These insights highlight the importance of holistic supply chain strategies in Nigeria's consumer goods sectors, emphasizing proactive measures over reactive resource adjustments.
Keywords: Supply Chain Disruptions, Organizational Resilience, Risk Management, Strategic Resilience, Capital Resilience, Relationship Resilience

Introduction

The critical importance of resilience in managing supply chain disruptions cannot be overstated. Organizations that develop resilience capabilities demonstrate reduced vulnerability to operational shocks and enhanced capacity to respond effectively when disruptions occur (Mishra, Singh & Subramanian, 2022). Such resilient enterprises maintain business continuity by ensuring consistent delivery of products and services despite supply chain challenges. Sheffi and Rice (2005) emphasize that building resilience is essential for addressing unpredictable and potentially catastrophic risks, making it imperative to identify the key drivers of organizational resilience in disruption scenarios.

Extant literature positions resilience as both a risk mitigation strategy and recovery mechanism for supply chain interruptions (Ambulkar *et al*., 2015; Chopra & Sodhi, 2014). However, significant gaps remain in understanding the specific approaches organizations employ to cultivate resilience (Moosavi, Fathollahi-Fard & Dulebenets, 2022). This knowledge gap prompted the development of strategic resilience theory, which moves beyond reactive

recovery to emphasize proactive adaptation and continuous organizational renewal (Hamel & Välikangas, 2003). Unlike conventional resilience models focused on stability, strategic resilience involves anticipating potential threats and implementing preventive measures (Välikangas, 2016). Despite being conceptualized two decades ago, this research domain continues to evolve, with contemporary scholars identifying proactive resilience as a fundamental dimension of organizational resilience (Casprini *et al*., 2022; Raetze *et al*., 2021b). The strategic resilience framework comprises two core elements: organizational capabilities (including anticipation and preparedness) and resource foundations (Duchek, 2020; Lengnick-Hall & Beck, 2005). Anticipation, defined as the capacity to predict and prevent potential disruptions (Wildavsky, 1991), enables firms to identify emerging risks and adapt their operations proactively (Duchek, 2020). Within Nigeria's agricultural sector characterized by climate vulnerabilities, market instability, and infrastructure limitations capital resilience (financial stability during disruptions) emerges as a critical success factor (Mishra, Singh & Subramanian, 2022). While operational resilience has received considerable academic attention, the financial aspects remain under-researched (Ambulkar *et al*., 2015; Moosavi *et al*., 2022). This study bridges this gap by investigating how supply chain orientation, risk management practices, and resource configuration affect capital resilience in Nigerian agricultural firms including Okomu Oil Plc and Presco Plc. The research specifically examines whether strategic alignment and proactive risk management contribute more significantly to financial resilience than operational flexibility alone. The findings are expected to inform resilience building strategies for agribusinesses operating in volatile environments. Thus, this study seeks to answer three questions as follows; what is the impact of supply chain orientation on capital resilience? to what extent does resource configuration influence capital resilience? how does risk management impact capital resilience? Hence, the study's aim is to examine the impact of supply chain disruption on capital resilience among selected quoted agriculture firms in Nigeria.

Review of related Literature

Capital Resilience

Organisations rely largely on capital resilience to secure their long-term existence and success. They play a significant role in the global economy, providing employment, stimulating innovation, and contributing to economic advancement (Urbano, Audretsch, Aparicio & Noguera, 2020). They do, however, typically face specific challenges, such as limited resources, unexpected market conditions, and the need to handle complex business situations.

In this context, capital resilience refers to company's ability to efficiently manage their financial resources and adapt to changing conditions in order to survive economic shocks and achieve long-term sustainability.

Financial management is an important component of capital resilience. It entails keeping a healthy mix of debt and equity, managing cash flow efficiently, and ensuring that working capital is sufficient to fulfill day-to-day operating demands (Nwankwo & Osho, 2010). A well-planned financial strategy may assist organisations in weathering economic downturns and seizing development opportunities as they occur. Another essential feature of capital resilience is access to funding. Due to perceived risks or a lack of collateral, businesses sometimes struggle to get loans or investments. In times of need, cultivating ties with banks, venture capitalists, angel investors, or investigating other funding sources such as crowdfunding and peer-to-peer lending might be critical. Diversifying funding sources can help to lessen dependency on a single source while also increasing resilience.

Furthermore, to strengthen their capital resilience, organisations must embrace technology and innovation (Aldianto, Anggadwita, Permatasari, Mirzanti & Williamson, 2021). Modernising procedures, implementing digital technologies, and utilising data analytics may aid in the optimisation of operations, cost reduction, and overall efficiency. These technology improvements not only make companies more competitive, but also better prepared to adjust to unanticipated business challenges. Incorporating risk management techniques is also critical for capital resiliency. Organisations should identify possible dangers and prepare contingency plans to limit their effect (Obrenovic, Du, Godinic, Tsoy, Khan & Jakhongirov, 2020). Companies may better prepare for unforeseen issues such as supply chain outages, market volatility, or unexpected regulatory changes by performing extensive risk assessments and adopting risk mitigation techniques. Summarily, capital resilience is critical for long-term success. It entails excellent financial management, diversification of financing sources, technological adoption, risk mitigation, and human capital investment. Companies may position themselves to excel in a dynamic and often uncertain business environment by concentrating on these characteristics.

Supply Chain Disruption

Supply chain disruption is a multifaceted concept that has attracted significant scholarly and industrial attention, particularly in logistics, operations management, and continuity planning. It refers to unforeseen events such as natural disasters, political unrest, logistics failures, regulatory shifts, and health crises that interrupt the normal flow of goods, services,

and information, often resulting in delays, rising costs, and customer dissatisfaction (Craighead *et al*., 2007; Azadegan *et al*., 2020; Stecke & Kumar, 2009). Among the most impactful recent disruptions is the COVID-19 pandemic, which caused major disturbances to global supply chains. Governments enforced lockdowns and trade restrictions that paralyzed manufacturing activities, delayed raw material deliveries, and created labor shortages (Butt, 2021). These disruptions revealed structural vulnerabilities and contributed to price volatility. Ivanov (2020) described COVID-19 as the most severe health-related challenge in recent decades, highlighting its role in widespread supply network collapses. In Nigeria, industries like food, tourism, and retail were especially hard-hit. Lockdowns triggered significant declines in demand and output, with the food sector experiencing an 80-100% drop in sales (Magzter, 2020). The pandemic emphasized the importance of resilience and flexibility in supply chain design to better anticipate and absorb future shocks. Three dimensions of supply chain disruption and how they impact strategic resilience are discussed in this section. These include supply chain orientation, resource configuration capabilities, and risk management.

Supply chain orientation

Supply chain orientation refers to an organizational mindset focused on fostering cooperation, coordination, and integration among all participants in the supply chain. It involves aligning the goals and actions of suppliers, manufacturers, distributors, and customers to achieve overall efficiency and performance (Jadhav, Orr & Malik, 2019). This strategic approach acknowledges the interdependence of stakeholders and promotes synchronized efforts across the supply network. A supply chain-oriented organization adopts a holistic view of its operations, ensuring that information, materials, and resources flow seamlessly from end to end (Tukamuhabwa, 2023). This orientation enhances visibility, communication, and responsiveness, which are critical when responding to disruptions. Strong collaboration allows firms to pool resources, access alternative supply options, and develop contingency plans, thereby improving agility and adaptability (Hussain *et al*., 2023). Moreover, supply chain orientation encourages resilience by embedding redundancy and flexibility into supply chain structures. This may include maintaining multiple sourcing arrangements, having backup production facilities, or designing versatile logistics systems. Such proactive design choices enable firms to continue operations despite unexpected disturbances, strengthening both operational continuity and competitive advantage. Thus, the hypothesis is developed as follows:

H_{o1}: *There is no significant relationship between supply chain orientation and capital resilience*

Resource configuration capabilities

Resource configuration capabilities refer to an organization's ability to adapt and reconfigure its internal resources in response to environmental volatility and disruption. Effective resource management is crucial for navigating high-uncertainty scenarios such as supply chain shocks, market entry, or innovation transitions (Ambulkar *et al*., 2015; Bode *et al*., 2011). Organizations that can reassess and realign their resource portfolios including personnel, processes, and technology are better positioned to respond to external challenges. This involves not only leveraging existing assets but also acquiring new resources, discarding obsolete ones, and rethinking operational models. Such flexibility fosters innovation and strengthens the organization's capacity to maintain continuity under adverse conditions (Vega, Arvidsson & Saiah, 2023). Thus, the hypothesis is developed as follows:

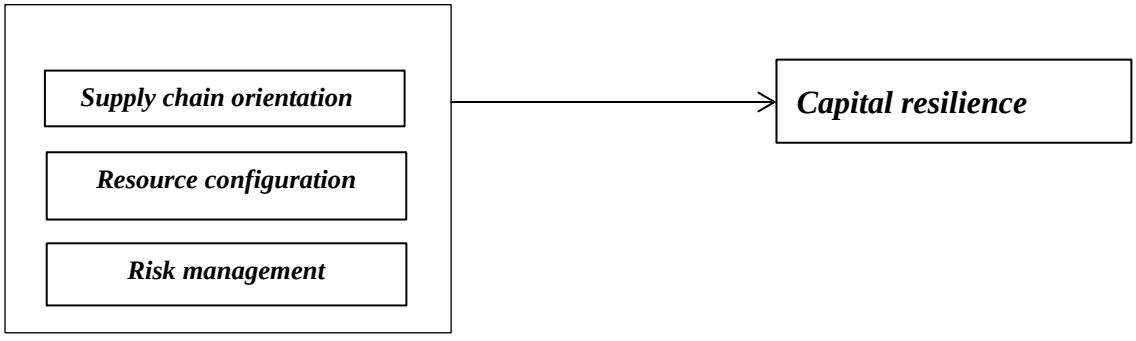
H_{o2}: *There is no significant relationship between resource configuration capabilities and capital resilience*

Risk management

Supply chain risk encompasses the uncertainty and variability of potential adverse events that may disrupt the flow of materials, information, or finances within a supply network (Ambulkar *et al*., 2015). These disruptions can affect both human and physical resources and impair operational efficiency. Sitkin and Pablo (1992) describe risk as the degree of uncertainty surrounding the realization of potentially negative or disappointing outcomes. Zsidisin *et al*. (2005), in their study of the aerospace industry, define supply risk more specifically as the likelihood of a disruption in the inbound supply from a specific supplier or the broader supply market, which could hinder a firm's ability to meet customer demand or even pose risks to customer safety. The hypothesis is developed as thus:

H_{o3}: *There is no significant relationship between risk management and capital resilience*

Conceptual framework; (Researcher's construct, 2025)



Theoretical foundations

This study is anchored on the dynamic capabilities theory, a strategic management concept developed by scholars such as David Teece, Gary Pisano, and Constance Helfat. Teece (2014), a key proponent of the theory, has been instrumental in advancing its development and application in understanding how firms sustain competitive advantage in dynamic environments. The dynamic capabilities theory posits that firms can intentionally develop, reconfigure, and leverage their internal competencies and resources to adapt to shifting environmental conditions and uncertainties (Kapoor & Aggarwal, 2020). These capabilities enable organizations to respond to emerging opportunities and threats, thereby enhancing resilience and long-term performance. Core elements of this theory include the ability to sense changes, seize opportunities, and reconfigure assets accordingly. According to the theory, strategic decision-making and organizational learning are critical to fostering dynamic capabilities. Firms must invest in acquiring new skills, restructuring operations, and reallocating resources to remain competitive. Learning processes enhance a firm's ability to integrate new knowledge, refine existing practices, and respond to environmental shifts (Blome, Schoenherr & Rexhausen, 2013). Despite its relevance, the theory faces criticism for being vague in definition and difficult to operationalize. Critics argue that it may overemphasize internal capabilities while underestimating the role of external factors such as industry structure, market dynamics, and institutional influences (Beske, Land & Seuring, 2014; Barreto, 2010; Kuuluvainen, 2012).

Methods

This study employed a cross-sectional survey research design. The rationale for its usage in this study is that it is less expensive and provides important insights into the features of a population (Lee, Kang & You, 2021). This research design helps to enhance the systematic gathering of information from respondents for the purpose of understanding and/or predicting some aspects of the behaviour of interest (Tull & Albaum, 1973). The population for this study comprises employees in production, procurement, warehousing, logistics, and marketing departments of quoted firms in Benin City operating within the agriculture sector. The firms were chosen due to the complexity and vulnerability of the firms' supply chains, which involve sourcing raw materials, processing intermediate goods, and distributing products across regions. Okomu Oil Palm Plc and Presco Plc were selected to provide a diverse representation of supply chain structures and operational environments. Okomu Oil Palm Plc and Presco Plc

are involved in the palm oil industry comprising cultivation, processing, and distribution of palm products.

Table 1: Description of research population

S/N	Company	Sector	Nature of Business	Company Address	Date Incorporated	Date Listed	Staff Strength
1	Okomu Oil Palm Plc.	Agriculture	Development of Oil and Rubber Plantations. Palm oil Milling, Palm Kernel Processing and Sale of Wet Cup Lumps	The Okomu Oil Palm Company Plc, Okomu-Udo, Ovia South West L.G.A Edo State, Nigeria	3/12/1979	9/9/1997	4011
2	Presco Plc	Agriculture	Palm Plantation and Processing	Obaretin Estate, Km 22, Benin Sapele Road, Ikpoba/Okha LGA, Edo State, Nigeria	24/09/1991	10/10/2002	6079

Source: Nigeria Exchange Group (NGX): https://ngxgroup.com/exchange/trade/equities/listed-companies/

The population of the study is represented by the total number of staff which is 10,090. Therefore, the population of the study is 10,090. In determining the sample size of the study, Yamane's (1973) formula which is the application of normal approximation with 95% confidence level and 5% error tolerance was used. The formula is given as:

$$n = \frac{\mathrm{N}}{1 + \mathrm{N}(e^2)}$$

Where: n = sample size; N= population =10,090; e = level of significance = 0.05

$$n = \frac{\mathrm{N}}{1 + \mathrm{N}(e^2)} = \frac{10{,}090}{1 + 10{,}090(0.05^2)} = 384.74 \cong 385$$

The formula showed that the sample size is three hundred and eighty five (385). Purposive sampling, a non-probability sampling method, was used in administering the copies of the questionnaire to employees working in production, procurement, warehouse, logistics and marketing departments of the selected quoted firm operating in Benin City. The use of purposive sampling gives room for researcher to deliberately choose specific individuals, cases, or elements for inclusion in a sample based on a particular purpose or criteria. The major criteria for selecting target respondents will be based on their knowledge and familiarity with supply

chain related issues of their organisations. It is believed that employees of companies working in production, procurement, warehouse, logistics and marketing departments would possess such knowledge.

The model for this study is an adaptation and modification of model formulated in the works of Ambulkar *et al.* (2015) and Chen *et al.* (2021) which contains the fundamental constructs of supply chain disruption and strategic resilience. In this study, supply chain disruption consists of three variables or constructs which served as the independent variables while strategic resilience was measured as the dependent variable. The models for this study are therefore stated functionally as:

$CAR = (SCO, RMG, RCO)$ ……..…….…. (1)

Mathematically, the models are specified as follows:

$CAR_i = \beta_0 + \beta_1 SCO_i + \beta_2 RMG_i + \beta_3 RCO_i + \varepsilon_i$ ……..…… (2)

Where:

SCO = Supply chain orientation

RMG = Risk management

RCO = Resource configuration capacities

CAR = Capital Resilience

β_0 = Constant

ε = Error term

And a priori expectations: $\beta_1 \ldots \beta_3 > 0$

The study's variables were operationalized and measured according to their classification as dependent or independent variables. Each variable was assessed using a five-point Likert scale to ensure consistent quantification. Table 2 provides the operational definitions of these constructs along with their reliability scores, which were derived from established methodologies in prior research. This approach ensures methodological rigor and alignment with existing literature.

Table 2: Operational definitions of variables, item source and reliability values

Variable	Operational definition	Item Source	Reliability values
Supply chain orientation	It connotes company's strategy that stresses the necessity of cooperation, coordination, and integration within the supply chain network	Ambulkar *et al.* (2015)	0.84

Variable	Operational definition	Item Source	Reliability values
Resource configuration capabilities	It represents company's ability to efficiently manage and utilise available resources to optimise its supply chain operations.	Ambulkar *et al.* (2015)	0.83
Risk management	It represents the process a company uses in identifying, assessing, and mitigating potential risks and uncertainties that can disrupt the smooth flow of goods, services, and information across the supply chain network.	Ambulkar *et al.* (2015)	0.92
Capital resilience	This represents company's ability to withstand and recover from disruptions by efficiently managing available financial resources.	Chen *et al.* (2021)	0.86

Source: Researcher's compilation (2025)

Data presentation and analysis

The data collected was evaluated using descriptive statistics such as frequency distribution, mean, and standard deviation using Statistical Package for the Social Science (SPSS) version 24 software. The regression method was used to estimate the research model.

Table 3: Questionnaire distribution to sampled manufacturing firms

S/N	Company	Questionnaire		Response Rate
		Administered	Valid	
1	Okomu Oil Palm Plc.	166	153	92.2
2	Presco Plc.	233	212	91.0
	Total	399	369	91.75

Source: Researcher's computation (2025)

Table 3 shows that 399 copies of questionnaire were administered while 369 copies of the questionnaire were found to be valid and usable. The response rate for the company is: Okomu Oil Palm Plc (92.2%) and Presco Plc (91%), overall total response rate stands at 91.75%.

Table 4: Demographic information of respondents

S/N	Items	Category	Frequency	Percent
1	Gender	Male	171	73.3
		Female	62	26.7
		Total	233	100.0

S/N	Items	Category	Frequency	Percent
2	Age	20years and below	38	16.4
		21 - 30years	45	19.2
		31 - 40years	58	24.9
		41 - 50years	63	26.9
		Above 50years	29	12.6
		Total	233	100.0
3	Educational Qualification	NCE/Diploma/OND or Equivalent	100.9	43.3
		HND/B.Sc or Equivalent	132.1	56.7
		Total	233	100.0
4	Department	Production	86	36.7
		Procurement	23	9.7
		Warehouse	40	17.2
		Logistics	23	9.7
		Marketing	62	26.7
		Total	233	100.0

Source: Researcher's computation (2025)

The study's participant demographics reveal a predominantly male sample, with 171 male respondents (73.3%) compared to 62 female participants (26.7%), as presented in Table 4. Age distribution analysis indicates that most respondents fall within the 31-50 age range, comprising 51.8% of participants, while younger age groups (20 and below, 21-30) account for 35.6%, and those above 50 represent 12.6% of the sample. Educational background analysis shows that 56.7% of respondents hold bachelor's degrees or equivalent qualifications (HND/B.Sc), while 43.3% possess diploma-level certifications (NCE/Diploma/OND). The research targeted employees across five key operational departments, with production staff constituting the largest respondent group at 36.7%, followed by marketing personnel (26.7%), warehouse employees (17.2%), and equal representation from procurement and logistics departments (9.7% each). This distribution confirms appropriate coverage of all relevant functional areas specified in the study design.

Preliminary analyses of data

The preliminary analysis was conducted using normality test. Normality test was done using skewness and kurtosis as reported in Table 5 below:

Table 5: Normality test

Variables	N	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
SCO	369	3.729	1.054	-0.475	0.127	-0.914	0.253
RMG	369	3.683	1.104	-0.457	0.127	-0.906	0.253
RCO	369	3.323	1.168	-0.322	0.127	-1.017	0.253
CAR	369	3.253	0.921	-0.133	0.127	-0.899	0.253

Source: Researcher's computation (2025)

The results in Table 5 shows that the mean scores for the variables are 3.729, 3.683, 3.323 and 3.253 for supply chain orientation (SCO), risk management (RMG), resource configuration capabilities (RCO), and capital resilience (CAR) respectively. The absolute values of skewness ranged between 0.133 and 0.475 while the absolute values of kurtosis ranged between 0.899 and 1.017. This shows that the data are normally distributed in line with Kline's (2011) benchmark of 3.0 and 8.0 for skewness and kurtosis, respectively.

Correlation analysis

The study employed bivariate Pearson correlation analysis to examine the relationships between all variables under investigation. These correlation coefficients, which measure the strength and direction of linear associations between variable pairs, are presented in Table 6. The analysis provides quantitative evidence of how the study's key factors interrelate, establishing foundational insights before more complex multivariate examination.

Table 6: Pearson correlation coefficients among research variables

Variables	CAR	SCO	RMG	RCO
CAR	1.000			
SCO	0.206**	1.000		
RMG	0.230**	0.478**	1.000	
RCO	0.222**	0.676**	0.586**	1.000

Note: Correlation is significant at the 0.01 level (2-tailed).

The interrelationships between study variables were analyzed using Pearson's correlation coefficients, as displayed in Table 6. Following Bryman and Cramer's (1997) guideline that correlation coefficients (r) exceeding 0.80 may indicate problematic multicollinearity, our analysis confirms no such concerns, as all observed correlations remained below this threshold. The results demonstrate statistically significant positive associations between capital resilience (CAR) and several key constructs: supply chain orientation (SCO) ($r = 0.206$, $p < 0.01$), risk management (RMG) ($r = 0.230$, $p < 0.01$), and resource configuration

capabilities (RCO) (r = 0.222, p < 0.01). These findings suggest meaningful relationships between capital resilience and other operational factors while confirming the absence of multicollinearity in our analytical model.

Estimation of measurement and structural models

Table 7: Measurement model

Variable	Indicator	Mean	Estimate	C.R.	AVE	Cronbach Alpha	Composite Reliability
Supply chain orientation (SCO)	SCO1	3.74	0.802	***	0.757	0.937	0.844
	SCO2	3.78	0.793	30.781			
	SCO3	3.65	0.779	29.156			
	SCO4	3.75	0.653	22.309			
Risk management (RMG)	RMG1	3.86	0.721	***	0.755	0.922	0.842
	RMG2	3.77	0.732	20.137			
	RMG3	3.66	0.794	22.908			
	RMG4	3.45	0.775	22.453			
Resource configuration (RCO)	RCO1	3.33	0.737	***	0.721	0.926	0.764
	RCO2	3.39	0.725	28.047			
	RCO3	3.25	0.700	26.348			
Capital resilience (CAR)	CAR1	4.11	0.834	***	0.758	0.740	0.845
	CAR2	3.16	0.673	3.222			
	CAR3	2.71	0.769	3.237			
	CAR4	3.04	0.756	3.217			

Source: Researcher's computation (2025)

Regression Model Results

The regression analysis tested the hypotheses. Results are presented in Table 8.

Table 8: Regression Results

Hypothesis	Path	β	SE	t-value	p-value	Decision
H_{01}	SCO → CAR	0.147	0.063	2.345	0.009	Supported
H_{02}	RCO → CAR	0.423	0.269	1.574	0.058	Not Supported
H_{03}	RMG → CAR	0.368	0.048	7.671	0.000	Supported

R^2 = 0.718 (71.8% variance explained); Source: Researcher's computation (2025)

Discussions

The study's analysis provides critical insights into how different dimensions of supply chain disruptions influence capital resilience in Nigeria's agricultural sector. The findings reveal that supply chain orientation (SCO) and risk management (RMG) significantly enhance capital resilience, while resource configuration capabilities (RCO) do not exhibit a statistically significant impact. The positive and significant relationship between SCO and CAR ($\beta = 0.147$, $p < 0.05$) supports the argument that firms with a strong supply chain orientation are better positioned to manage financial disruptions. This aligns with Christopher and Peck's (2004) assertion that organizations emphasizing coordination, visibility, and collaboration within their supply chains develop adaptive mechanisms to absorb shocks. In the Nigerian agricultural context, firms that actively monitor supply chain risks and integrate contingency planning into their operations demonstrate greater financial stability. For instance, companies that diversify suppliers and maintain strategic partnerships can mitigate raw material shortages, ensuring uninterrupted cash flow even during crises.

Risk management (RMG) emerged as the strongest predictor of capital resilience ($\beta = 0.368$, $p < 0.01$). This finding corroborates Ambulkar *et al*.'s (2015) research, which highlights that structured risk assessment frameworks enable firms to preempt disruptions, allocate financial buffers, and sustain liquidity. Nigerian agricultural firms that implement proactive risk strategies such as hedging against price volatility, securing alternative logistics routes, and maintaining emergency funds exhibit greater resilience against supply chain shocks. The COVID-19 pandemic underscored this, as firms with robust risk protocols adapted faster to lockdown-induced disruptions compared to those relying on reactive measures. Contrary to expectations, RCO did not significantly influence capital resilience ($\beta = 0.423$, $p > 0.05$). While resource flexibility is theoretically linked to resilience, this study suggests that mere reconfiguration of assets without complementary financial and strategic adjustments may not suffice. For example, a firm might realign production resources to address a disruption but still face liquidity crunches if it lacks access to emergency financing. This aligns with critiques of dynamic capabilities theory, which argue that internal adaptability alone cannot guarantee resilience without external enablers like stakeholder collaboration or government support (Beske *et al*., 2014).

Conclusions

The study underscores the critical role of resilience in mitigating the impact of supply chain disruptions within the Nigerian agricultural industry. By examining the interplay between

supply chain orientation, risk management, resource configuration, and capital resilience, the research highlights how proactive strategies can enhance an organization's ability to withstand and recover from disruptions. Supply chain orientation emerges as a pivotal factor in fostering capital resilience. Organizations that prioritize coordination, collaboration, and integration within their supply chains are better equipped to navigate disruptions, ensuring financial stability and operational continuity. This alignment with supply chain partners not only enhances visibility but also builds adaptive mechanisms that are crucial during crises. Similarly, risk management proves indispensable for capital resilience. Firms that implement structured risk assessment frameworks and proactive mitigation strategies, such as diversifying suppliers and maintaining financial buffers, demonstrate greater resilience. The ability to anticipate and address potential disruptions before they escalate ensures sustained liquidity and operational efficiency, even in volatile environments. However, the study reveals that resource configuration capabilities alone do not significantly influence capital resilience. While the ability to reconfigure internal resources is theoretically linked to resilience, its impact is contingent on complementary financial and strategic adjustments. This finding suggests that resilience requires a holistic approach, integrating internal adaptability with external enablers like stakeholder collaboration and supportive policies. In summary, the research emphasizes the importance of integrating supply chain orientation and robust risk management practices to build capital resilience. Organizations that adopt these strategies can better navigate disruptions, ensuring long-term sustainability in an increasingly uncertain business landscape. Future research could further explore the interplay between these dimensions and their collective impact on resilience across different industries and contexts.

Recommendations

1. Firms should prioritize building strong relationships with supply chain partners, including suppliers, distributors, and logistics providers. Enhanced collaboration and integration can improve visibility, coordination, and responsiveness, enabling quicker adaptation to disruptions. Initiatives such as joint planning and information-sharing platforms can foster a more resilient supply chain network.
2. Organizations should develop and implement robust risk management strategies that include regular risk assessments, contingency planning, and scenario analysis. Proactive measures such as diversifying suppliers, maintaining financial buffers, and securing alternative logistics routes can help mitigate the impact of unforeseen disruptions.

3. To bolster capital resilience, firms should focus on maintaining healthy cash flow, optimizing working capital, and diversifying funding sources. Establishing emergency funds and exploring alternative financing options (e.g., crowdfunding, peer-to-peer lending) can provide financial stability during crises.
4. Leveraging digital tools such as data analytics, IoT, and blockchain can improve supply chain visibility and efficiency. Technology adoption can help firms monitor risks in real-time, optimize resource allocation, and streamline operations, thereby enhancing overall resilience.
5. While resource flexibility is important, firms should ensure that reconfiguration efforts are aligned with broader strategic objectives. This includes integrating financial planning with operational adjustments and fostering a culture of continuous improvement to adapt to changing environments effectively.

References

Abel, R., Suleika, B., Indre, M., Clarissa, E., & Hendrik, W. (2020). Tensions in portfolios of temporary organisations: how project portfolio maturity attenuates the negative effects of portfolio ambidexterity. In *Research in the sociology of organizations. Tensions and paradoxes in temporary organizing*, ed. T. Braun, J. Lampel, 209–231. Emerald. https://doi.org/10.1108/S0733-558X20200000067015.

Ambulkar, S., Blackhurst, J., & Grawe, S. (2015). Firm's resilience to supply chain disruptions: Scale development and empirical examination. *Journal of Operations Management, 33*, 111-122.

Azadegan, A., Mellat Parast, M., Lucianetti, L., Nishant, R., & Blackhurst, J. (2020). Supply chain disruptions and business continuity: An empirical assessment. *Decision Sciences, 51*(1), 38-73.

Bode, C., Wagner, S. M., Petersen, K. J., & Ellram, L. M. (2011). Understanding responses to supply chain disruptions: Insights from information processing and resource dependence perspectives. *Academy of Management Journal, 54*(4), 833-856.

Butt, A. S. (2021). Strategies to mitigate the impact of COVID-19 on supply chain disruptions: A multiple case analysis of buyers and distributors. *The International Journal of Logistics Management*, Vol. ahead-of-print No. ahead-of-print.

Casprini, E., Pucci, T., & Zanni, L. (2022). From growth goals to proactive organizational resilience: First evidence in women-led and non-women-led Italian wineries. *Review of Managerial Science, 17*, 1017–1036.

Chen, R., Xie, Y., & Liu, Y. (2021). Defining, conceptualizing, and measuring organizational resilience: A multiple case study. *Sustainability, 13*(5), 2517.

Chopra, S., & Sodhi, M. S. (2014). Reducing the risk of supply chain disruptions. *MIT Sloan Management Review, 5*(2), 239-249.

Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *International Journal of Logistics Management, 15*(2), 1-13.

Craighead, C. W., Blackhurst, J., Rungtusanatham, M. J., & Handfield, R. B. (2007). The severity of supply chain disruptions: Design characteristics and mitigation capabilities. *Decision Sciences, 38*(1), 131-156.

Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research, 2*, 215–246.

Hamel, G., & Välikangas, L. (2003). The quest for resilience. *Harvard Business Review, 81*(9), 52-63, 131.

Hussain, G., Nazir, M. S., Rashid, M. A., & Sattar, M. A. (2023). From supply chain resilience to supply chain disruption orientation: The moderating role of supply chain complexity. *Journal of Enterprise Information Management, 36*(1), 70-90.

Ivanov, D. (2020). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak (COVID-19/SARS-CoV-2) case. *Transportation Research Part E: Logistics and Transportation Review, 136*, 101922.

Jadhav, A., Orr, S., & Malik, M. (2019). The role of supply chain orientation in achieving supply chain sustainability. *International Journal of Production Economics, 217*, 112-125.

Kochan, C. G., & Nowicki, D. R. (2018). Supply chain resilience: A systematic literature review and typological framework. *International Journal of Physical Distribution & Logistics Management, 48*(8), 842-865.

Lengnick-Hall, C. A., & Beck, T. E. (2005). Adaptive fit versus robust transformation: How organizations respond to environmental change. *Journal of Management, 31*(5), 738-757.

Mishra, R., Singh, R. K., & Subramanian, N. (2022). Impact of disruptions in the agri-food supply chain due to COVID-19 pandemic: Contextualized resilience framework to achieve operational excellence. *The International Journal of Logistics Management, 33*(3), 926-954.

Moosavi, J., Fathollahi-Fard, A. M., & Dulebenets, M. A. (2022). Supply chain disruption during the COVID-19 pandemic: Recognizing potential disruption management strategies. *International Journal of Disaster Risk Reduction*, 102983.

Raetze, S., Duchek, S., Maynard, M. T., & Kirkman, B. L. (2021b). Resilience in organizations: An integrative multilevel review and editorial introduction. *Group & Organization Management, 46*(4), 607-656.

Sheffi, Y., & Rice Jr, J. B. (2005). A supply chain view of the resilient enterprise. *MIT Sloan Management Review*. Available on: sloanreview.mit.edu

Sitkin, S. B., & Pablo, A. L. (1992). Reconceptualizing the determinants of risk behavior. *Academy of Management Review, 17*(1), 9-38.

Stecke, K. E., & Kumar, S. (2009). Sources of supply chain disruptions, factors that breed vulnerability, and mitigating strategies. *Journal of Marketing Channels, 16*(3), 193-226.

Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies, 45*, 8-37.

Tukamuhabwa, B. R. (2023). Supply chain orientation and supply chain risk management capabilities: Mechanisms for supply chain performance of agro-food processing firms in Uganda. *Journal of African Business*, 1-24.

Välikangas, L. (2016). Strategic resilience. In *The Palgrave encyclopedia of strategic management* (pp. 1-4). Palgrave Macmillan.

Vega, D., Arvidsson, A., & Saiah, F. (2023). Resilient supply management systems in times of crisis. *International Journal of Operations & Production Management, 43*(1), 70-98.

Wildavsky, A. B. (1991). *Searching for safety*. Transaction.

Zsidisin, G. A., Melnyk, S. A., & Ragatz, G. L. (2005). An institutional theory perspective of business continuity planning for purchasing and supply management. *International Journal of Production Research, 43*(16), 3401-3420.