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### Managing Supply Chain Disruption Risks amidst Global Instability: An Analysis of Proposed Strategies for Vietnamese Enterprises

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#### Abstract

This research addresses the critical vulnerability of Vietnamese supply chains to global disruptions, filling a gap by providing a comprehensive analytical framework specifically tailored to Vietnam's unique economic context. The purpose of the study was to systematize existing knowledge on supply chain risk, analyze globally recognized mitigation strategies, and evaluate their applicability to guide Vietnamese enterprises and policymakers toward greater resilience. To achieve this, the study employed a desk-based methodology, conducting a systematic literature review of academic journals, industry reports, and published case studies to synthesize existing evidence. The findings identified three core strategic pillars for enhancing resilience: (i) structural diversification of suppliers and markets; (ii) relational strategies focused on transparency, partnerships, and technology-driven visibility

(e.g., AI, IoT); and (iii) financial and operational preparedness, including hedging, contingency planning, and cybersecurity. The research also highlighted that while government support and Free Trade Agreements present opportunities, significant challenges remain, particularly the limited financial and technological capacity of SMEs and persistent institutional bottlenecks. The significance of these findings lies in their actionable implications. For businesses, the research advocates for a crucial mindset shift from cost-centric 'just-in-time' models to resilience-focused 'just-in-case' approaches, urging investment in digital capabilities and a proactive risk management culture. For policymakers, it recommends simplifying regulations, enhancing support for SMEs, and strategically developing domestic supporting industries to reduce critical import dependencies and bolster national economic security.

**Keywords:** Disruption Risk, Global Instability, Supply Chain Risk Management, Supply Chain Resilience, Vietnamese Enterprises

#### 1. Introduction

The contemporary context of globalization has rendered supply chains more complex and interconnected, yet it has simultaneously increased their vulnerabilities. In recent years, a series of macro-level instability events, such as the COVID-19 pandemic, geopolitical conflicts, and trade protectionism, have continuously challenged the stability of global supply chains (Yu *et al.*, 2022) <sup>[35]</sup>. These shocks have exposed critical weaknesses, causing widespread interruptions and disruptions that negatively impact the flow of goods, information, and finances. Economic and geopolitical risks, including political instability, border conflicts, and changes in trade policies, have been identified as primary drivers of disruptions and increased costs within supply chains, sometimes even surpassing the impact of energy price fluctuations (İşlek & Ağan, 2024) <sup>[15]</sup>.

Within this global landscape, Vietnam, as a significant manufacturing and production hub in regional and global supply chains, faces considerable challenges. A heavy reliance on imported raw and auxiliary materials from specific markets makes Vietnamese enterprises, particularly small and medium-sized enterprises (SMEs), especially vulnerable to external shocks. Research by Phan *et al.* (2023) <sup>[20]</sup> has indicated that barriers such as financial resource shortages, a lack of alternative distribution channels and supply sources, and limitations in supply chain collaboration and information sharing are major obstacles to building supply chain resilience in Vietnam.

The consequences of these disruptions extend beyond operational interruptions to directly affect financial performance, brand reputation, and the sustainable development of enterprises. Consequently, researching and implementing effective risk management strategies is no longer an option but an urgent, vital necessity to ensure business continuity and maintain a

competitive edge. The demand for a comprehensive analytical framework of risk management strategies, tailored to Vietnam's specific context, is both substantial and pressing (Yu *et al.*, 2022) <sup>[35]</sup>.

Based on the aforementioned urgency, this paper is conducted with the following specific research objectives:

1. To systematize the theoretical foundations of supply chain disruption risk, supply chain resilience, and related risk management models.
2. To analyze, synthesize, and evaluate the strategic groups for managing supply chain disruption risks that have been proposed in academic research and practice worldwide.
3. To analyze the Vietnamese context, identifying the advantages and challenges of applying these strategies, thereby proposing managerial and policy implications for enterprises and government agencies.

To achieve these objectives, this study employs a desk research methodology. Specifically, the systematic literature review method serves as the primary tool. This method requires a transparent, systematic, and comprehensive process to identify, select, and evaluate relevant research works, thereby ensuring the accuracy and reliability of the synthesized results (Simbizi *et al.*, 2021) <sup>[23]</sup>. Secondary data is collected and analyzed from reputable academic sources, including peer-reviewed scientific articles from international databases, monographs, industry reports from credible organizations, and published case studies.

## 2. Theoretical Basis

### 2.1 Core Concepts

Supply Chain Management (SCM) is understood as the integrated management of product, information, and financial flows from the initial supplier to the end consumer. However, in a volatile global business environment, supply chains face numerous risks. Supply chain risk is defined as uncertain events or factors that can negatively impact the operations, efficiency, and continuity of a supply chain (TACHA Group, 2023) <sup>[25]</sup>. Among these, supply chain disruption risk is the most severe threat, encompassing unexpected events that profoundly and suddenly interrupt the flow of materials and information, leading to widespread stagnation.

To cope with these risks, the concept of supply chain resilience has become a core competency. Resilience is not merely the ability to withstand shocks but also includes the capacity to adapt, respond, and recover quickly to return to a normal or even improved operational state after a disruption occurs (Groyyo, 2025) <sup>[12]</sup>. Practice has shown that enterprises with resilient and flexible supply chains can recover significantly faster than their competitors when faced with severe disruption events (Doan *et al.*, 2025) <sup>[5]</sup>.

### 2.2 Classification of Supply Chain Disruption Risks

Risks that cause supply chain disruptions can be classified based on their origin, including supply-side risks, internal operational risks, demand-side risks, and macro-environmental risks.

*Supply-side risks:* This group of risks originates from supply partners and includes supplier bankruptcy, delivery delays, or substandard quality of raw materials (TACHA Group, 2023) <sup>[25]</sup>. For Vietnam, this risk is particularly pronounced due to its heavy dependence on imported raw materials, such as nearly 70% of steel and electronic components

coming from China, making the domestic supply chain vulnerable to fluctuations in that market (VN Outsourcing, 2024) <sup>[30]</sup>.

*Internal operational risks:* These include incidents within the enterprise, such as production interruptions due to machinery breakdowns, labor strikes, or quality management issues (TACHA Group, 2023) <sup>[25]</sup>.

*Demand-side risks:* These relate to sudden and unpredictable changes from the market, such as a sharp decline in consumer demand or shifts in customer preferences, leading to excess or insufficient inventory.

*Macro-environmental risks:* This is the most wide-ranging and difficult-to-control group of risks, including: (i) Geopolitical Risks: Conflicts such as the Russia-Ukraine war or tensions in the Red Sea have had negative impacts, disrupting vital transport routes and altering global trade structures; (ii) Economic Risks: Exchange rate fluctuations, inflation, and changes in trade policies (e.g., the "America First" policy of the United States) can directly affect the cost and competitiveness of Vietnamese goods (VN Outsourcing, 2024) <sup>[30]</sup>; (iii) Risks from Natural Disasters and Pandemics: Vietnam is a country prone to natural disasters like typhoons and floods, which can cause severe damage to infrastructure and disrupt transportation networks (TACHA Group, 2023) <sup>[25]</sup>. The COVID-19 pandemic is a prime example of how a public health event can paralyze global supply chains (Nguyen *et al.*, 2025) <sup>[19]</sup>.

### 2.3 Supply Chain Risk Management Process and Models

A comprehensive supply chain risk management process typically includes the following basic steps: (i) Identifying and assessing risks to pinpoint potential vulnerabilities; (ii) Developing and implementing mitigation strategies; (iii) Continuously monitoring and tracking risks; and (iv) Establishing a business continuity plan to respond when incidents occur (Gembah, 2024) <sup>[11]</sup>.

Strategically, the recent unstable context has prompted a fundamental paradigm shift in management thinking. Businesses are gradually moving from the "just-in-time" (JIT) production model, which optimizes costs by minimizing inventory, to the "just-in-case" (JIC) model (Funan, 2024) <sup>[10]</sup>. The JIC model accepts higher costs to maintain safety stock and diversify supply sources, aiming for the higher goal of ensuring the continuity and resilience of business operations in the face of unforeseeable shocks (Burke, as cited in Funan, 2024 <sup>[10]</sup>). Leading corporations like Apple and Toyota have been investing heavily in building strategic inventories and expanding their supplier portfolios as part of this JIC strategy.

## 3. Analysis of Strategies and Applicability in Vietnam

### 3.1 Restructuring and Diversification Strategies

In an increasingly uncertain global business environment, fundamental supply chain restructuring strategies have become an urgent requirement to enhance resilience. These strategies are not just temporary measures but a repositioning of supply structures, markets, and inventory systems to proactively mitigate risks. For Vietnam, a nation aspiring to move up the global value chain, actively restructuring and diversifying its supply chains is considered a crucial strategic direction to attract investment, advanced technology, and become an indispensable link in the global supply network (VCCI, 2024) <sup>[26]</sup>.

### 3.1.1. Supplier Diversification

The strategy of diversifying supply sources is a top priority for Vietnamese enterprises to reduce dependence on a single supplier or country, thereby minimizing disruption risks. A survey by Vietnam Report indicated that 72.7% of participating businesses identified finding new suppliers as a goal for the near future (Vietnam News, 2023) <sup>[28]</sup>. Over-reliance on a single source, especially China, has exposed critical weaknesses. Vietnam's textile and garment industry is a classic example, with about 50-55% of its raw materials imported from China (Vietnam Briefing, 2022) <sup>[27]</sup>. This dependence has caused Vietnamese textile enterprises to face production and delivery delays when China implements strict policies, leading to congestion at seaports (Vietnam Briefing, 2022) <sup>[27]</sup>. Furthermore, using a large proportion of Chinese materials is a major obstacle preventing Vietnam's textile products from qualifying for tariff preferences under the rules of origin of key free trade agreements (FTAs), such as the EVFTA (VnExpress International, 2019) <sup>[29]</sup>. Despite being aware of the risks, many businesses still struggle to find new suppliers due to the competitive price advantage of Chinese suppliers (Vietnam News, 2023) <sup>[28]</sup>.

### 3.1.2. Export Market Diversification

Parallel to diversifying supply sources, diversifying output markets is a crucial strategy to mitigate demand-side risks and avoid dependence on a few major markets. Vietnam's participation in new-generation FTAs like the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the EU-Vietnam Free Trade Agreement (EVFTA) has opened up enormous opportunities for businesses. These agreements facilitate access for Vietnamese goods, especially agricultural products, to international markets through tariff reductions (Duane Morris Vietnam, 2023) <sup>[6]</sup>. With the CPTPP, many key export items such as seafood, fruits, vegetables, and rice enjoy a 0% tax rate immediately or over a 3-5 year roadmap in large markets like Canada, Japan, and Mexico. Similarly, the EVFTA also helps to gradually reduce tariffs on a range of agricultural exports to the EU to 0% (Duane Morris Vietnam, 2023) <sup>[6]</sup>. This strategy has yielded positive results, as evidenced by the record export turnover of agriculture, forestry, and fishery products reaching US\$53 billion in 2022, with seafood exports to CPTPP markets accounting for 27% of the country's total seafood export turnover. However, to fully leverage these opportunities, businesses need to overcome the challenge of a lack of in-depth understanding of the commitments in FTAs, an issue highlighted in a VCCI report where more than half of the enterprises were not well-informed about the EVFTA (Vietnam News, 2023) <sup>[28]</sup>.

### 3.1.3. Building Strategic Inventories

Maintaining a safe level of inventory for critical raw materials is an effective defensive strategy against sudden shocks. This strategy marks a shift in management thinking from the "just-in-time" model to a "just-in-case" approach, accepting higher storage costs in exchange for ensuring the continuity of production activities. In Vietnam, large corporations have begun to place greater emphasis on the effectiveness of inventory management as a solid foundation for development. Vinamilk is an example; the company views an effective management process, including inventory management, as a key factor in ensuring financial stability, building investor confidence, and enhancing business operational efficiency (ALS, 2022) <sup>[2]</sup>. Although popular

inventory management models like JIT are still applied, the unstable global context demands a more flexible approach that combines cost optimization with building a safety buffer through strategic inventories.

## 3.2 Collaboration and Transparency Strategies

Beyond physical restructuring strategies, building strong relationships and enhancing transparency throughout the supply chain is a non-structural yet profoundly effective defense mechanism. A comprehensive and proactive approach to risk management requires businesses to increase visibility and collaboration within their supply chains (TACHA Group, 2023) <sup>[25]</sup>. These strategies focus on improving information flow and building trust, thereby creating a flexible ecosystem capable of collectively responding to fluctuations.

### 3.2.1 Building Strategic Partnerships

Transitioning from purely transactional buyer-seller relationships to strategic partnerships with suppliers and logistics partners is a key element in enhancing resilience. Close collaboration allows parties to jointly participate in planning, sharing risk information, and developing common response plans. International practice has demonstrated the effectiveness of this strategy. For example, electronics manufacturer Jabil, when facing market volatility risks, implemented close collaboration with its suppliers to jointly forecast and respond to potential incidents, thereby maintaining uninterrupted production (Vietnam Logistics Review, 2025). In Vietnam, the case of Vinamilk highlights the importance of strengthening relationships with stakeholders. Through the implementation of sustainable development initiatives, Vinamilk has not only enhanced coordination among its internal departments but also strengthened cooperative relationships with external stakeholders, creating a highly motivated partner network ready to support the company in implementing its long-term strategies (Dairy Sustainability Framework, 2023).

### 3.2.2 Enhancing Supply Chain Visibility

Supply chain visibility, or the ability to track and monitor the flow of products and information in real-time, plays a foundational role in the early identification of and response to risks. The application of digital technologies is a decisive factor in achieving this capability. The integration of Artificial Intelligence (AI), the Internet of Things (IoT), and Big Data allows businesses to analyze patterns, forecast potential incidents, and make timely decisions (Vietnam Logistics Review, 2025). Specifically, AI helps analyze data to identify potential risks, IoT sensors monitor the operating conditions of equipment and storage environments, while Blockchain technology can be used to enhance transparency and traceability, minimizing the risk of fraud and errors (Vietnam Logistics Review, 2025). Research shows that the synergistic integration of technologies such as AI, IoT, Blockchain, 5G, and Cloud Computing is revolutionizing the supply chain management industry in Vietnam, helping to increase efficiency, transparency, and resilience (IJSRST, 2025). However, to fully exploit this potential, Vietnam needs policies to invest in digital infrastructure such as data centers and 5G networks, while also developing a workforce skilled in digital supply chain management and cybersecurity (IJSRST, 2025).

### 3.2.3 Transparency in Governance and Information Disclosure

Transparency in corporate governance and information

disclosure is an intangible asset that helps build strong trust with investors, partners, and customers, thereby creating an important protective layer against shocks. A transparent company will more easily receive support and understanding from stakeholders when facing a crisis. The case of Vinamilk is a successful example. With a mixed ownership structure of private and state investors, Vinamilk has built a supply chain management model based on the tight management of information and financial flows across a large scale of operations (Kamereo, 2024). Vinamilk's commitment to implementing sustainable development reports and actively engaging with stakeholders has strengthened its reputation and trust, ensuring the integrity and transparency of its supply chain (Dairy Sustainability Framework, 2023).

Conversely, the collapse of FLC Group is a stark cautionary tale about the consequences of a lack of transparency. Although not a risk from external shocks, the severe lack of transparency in corporate governance, violations in information disclosure, and allegations of financial market manipulation led to a complete erosion of investor and partner trust. This collapse caused a chain reaction, negatively affecting the entire ecosystem of related businesses, suppliers, and customers. This case demonstrates that risks from internal governance and a lack of transparency can be as devastating as global instability factors, underscoring the importance of building a culture of transparent and responsible governance.

### 3.3 Financial and Operational Strategies

In addition to restructuring networks and enhancing collaboration, strategies focusing on financial stability and operational preparedness serve as the final line of defense, helping businesses absorb shocks and maintain continuous operations. These strategies include using specialized financial instruments for risk hedging, developing detailed response plans, and protecting digital assets from cybersecurity threats. Operational risk management is a continuous process that involves identifying, assessing, mitigating, and monitoring risks arising from the very processes, systems, and people within an organization (Aevitium, 2025) [1].

#### 3.3.1 Utilizing Financial Hedging Instruments

In the context of international trade, Vietnamese enterprises face significant financial risks, particularly fluctuations in exchange rates and raw material prices. To cope, the use of derivative financial instruments is an effective strategy. Forward contracts are a particularly useful tool, allowing a business and its supplier to agree to buy or sell an asset at a predetermined price at a future date (FasterCapital, 2025) [8]. By "locking in" the price of raw material inputs or product outputs, forward contracts help protect the business from adverse market fluctuations, thereby stabilizing production costs, ensuring profit margins, and enhancing predictability in financial planning (FasterCapital, 2025) [8]. Financial institutions also offer other risk financing solutions such as insurance or supply chain finance programs like factoring and invoice discounting, which help businesses manage working capital, improve cash flow, and mitigate the risk of payment default from partners (Shaik, 2024) [22].

#### 3.3.2 Contingency Planning

Contingency planning is a proactive process aimed at identifying potential risks and developing specific strategies

to minimize their impact, ensuring business continuity even under the most adverse conditions (EOXS, 2025) [7]. The first and most critical step in this process is to conduct a comprehensive risk assessment, identifying threats from supplier failures, transportation disruptions, geopolitical issues, to natural disasters (EOXS, 2025) [7]. Based on the assessment results, the business needs to develop detailed crisis response scenarios. Each scenario must outline a clear chain of actions, assign specific roles and responsibilities to individuals and departments, and identify alternative options for transportation, suppliers, or production processes. The ultimate goal is to create a flexible action framework that enables the business to quickly activate appropriate response measures, minimizing downtime and financial damage (Aevitium, 2025) [1].

#### 3.3.3 Strengthening Cybersecurity

In the digital era, cybersecurity is no longer an issue for the IT department alone but has become a critical risk area for the supply chain (Lee & Lee, 2024) [16]. Supply chains are increasingly vulnerable to cyberattacks, largely due to the weak security levels of suppliers within the network, especially small businesses with limited resources. Malicious actors often exploit these "weak links" to penetrate the systems of larger enterprises (Lee & Lee, 2024) [16]. The Log4J security vulnerability incident in 2021 is a prime example, where a little-known but widely used software component was exploited, allowing hackers to infiltrate thousands of systems worldwide without valid credentials (Lee & Lee, 2024) [16]. Therefore, integrating cybersecurity into the supply chain management process is mandatory, including incorporating cybersecurity criteria into the supplier selection process and conducting ongoing assessments and support for partners' cybersecurity capabilities. Furthermore, new technologies like blockchain are also opening new avenues for managing financial risks in the supply chain, helping to enhance security and transparency in transactions (Shaik, 2024 [22]; Chen *et al.*, 2025 [4]).

## 4. Discussion on Applicability of Strategies in Vietnam

The implementation of the analyzed strategic groups to enhance supply chain resilience in Vietnam is shaped by a range of specific advantages and challenges. While policy directions from the government and opportunities from international integration create a favorable environment, Vietnamese enterprises, especially the small and medium-sized enterprise sector, still face significant internal barriers regarding resources, capabilities, and infrastructure.

### 4.1 Advantages

One of the greatest advantages is the strong commitment from the Government to developing the logistics industry and resolving bottlenecks. The Government has been promoting synchronous and decisive policies with the goal of turning Vietnam into a major logistics hub in the region, as demonstrated by the draft Strategy for the Development of Vietnam's Logistics Services for the period 2025-2035 (Ministry of Industry and Trade, as cited in Foreign Information Service, 2025). At the implementation level, directives aimed at facilitating goods circulation, especially during crises, have been issued (Ministry of Industry and Trade, 2021) [17]. Concurrently, state-led trade promotion activities have actively supported businesses in accessing new and potential markets, helping to reduce dependence on



traditional markets (WTO and Integration Center, 2025a) [33].

Second, the network of new-generation free trade agreements (FTAs) that Vietnam has signed, such as the EVFTA and CPTPP, is an undeniable strategic advantage. These agreements not only open doors to large markets with tariff preferences but also create an impetus for Vietnamese businesses to reorient their exports, increasing flexibility in the context of unstable global trade (Capital Security Newspaper, 2025 [3]; Bao Moi, 2025). The effective utilization of FTAs is seen as a fundamental solution for market diversification, a vital strategy acknowledged by the business community (WTO and Integration Center, 2025a) [33].

Third, domestic production capacity and commitment to international standards are continuously improving. The National Standards System (TCVN) currently has about 12,000 standards, with a harmonization rate with international and regional standards reaching 56% (WTO and Integration Center, 2025b) [34]. This harmonization acts as a "technical corridor," facilitating Vietnamese goods to overcome technical barriers, access demanding markets, and affirm their competitiveness on the international stage (WTO and Integration Center, 2025b) [34].

## 4.2 Challenges

Despite significant advantages, Vietnamese businesses still face many inherent challenges. The first major challenge is the heavy dependence on imported raw and auxiliary materials, especially in key industries like textiles, garments, and footwear. This dependence not only increases the risk of disruption when there are fluctuations in supply markets but also limits competitiveness and the ability to take advantage of FTA preferences due to strict rules of origin (Journal of Science and Technology, 2025).

The second challenge, and perhaps the biggest barrier, is the limited financial and technological capacity of small and medium-sized enterprises (SMEs). According to a VCCI survey, the cost of technology application, a shortage of financial resources, and a lack of digital technology infrastructure are the top constraints for SMEs (Journal of Industry and Trade, 2025). This leads to a very low level of application of digital solutions in supply chain management, reducing the visibility and responsiveness of businesses to fluctuations.

Third, infrastructure and institutional bottlenecks still exist. Vietnam's logistics costs currently account for about 17-18% of GDP, significantly higher than the world average of 10-11%, which reduces the competitiveness of goods (Prime Minister, as cited in Securities Times, 2025). The Prime Minister has identified "institutions" as the "bottleneck of all bottlenecks," indicating that despite supportive policies, implementation and coordination are sometimes inconsistent and ineffective.

Finally, effectively leveraging opportunities from FTAs or technology requires businesses to have high professional capacity. The implementation of new-generation FTAs demands an improvement in the competitiveness of the financial system and the completion of the legal framework (WTO and Integration Center, 2019) [32]. At the same time, FTAs are also accompanied by an increased risk of trade defense cases, requiring businesses to have in-depth knowledge to respond (Journal of Industry and Trade, 2021). Similarly, studies show that investment in digital

transformation is only truly effective when accompanied by corresponding risk management capabilities, an area where many businesses are still weak (Vu *et al.*, 2025) [31].

## 5. Conclusion and Implications

This study has systematized and analyzed supply chain disruption risk management strategies in the context of a volatile and uncertain global environment, while also assessing their applicability for Vietnamese enterprises. The analysis reveals that the prominent risks faced by Vietnamese businesses are diverse, including supply-side risks, geopolitical risks, natural disasters, and internal operational shocks. To cope, three main strategic groups were identified and analyzed: (i) Restructuring and Diversification, focusing on diversifying suppliers, markets, and building strategic inventories; (ii) Enhancing Collaboration and Transparency, emphasizing building partnerships, increasing supply chain visibility through technology, and transparent governance; and (iii) Financial and Operational Strategies, including the use of financial hedging tools, contingency planning, and strengthening cybersecurity. The study affirms that supply chain risk management is not a singular or reactive activity but a continuous process that requires a comprehensive and proactive approach. The effective application of risk management strategies allows businesses not only to mitigate the negative impacts of incidents but also to enhance resilience and competitiveness in the global market.

### 5.1 Managerial Implications for Vietnamese Enterprises

Based on the analytical results, this paper proposes several important managerial implications for Vietnamese enterprises:

*Shifting from a Cost-centric to a Resilience-focused Mindset:* Businesses need to accept a strategic trade-off, shifting from the "Just-in-Time" cost-optimization model to the "Just-in-Case" risk-prevention model. This requires a willingness to make initial investments in diversifying supply sources, building safety stocks, and adopting technology, aiming for the higher goal of ensuring the stability and continuity of business operations in the long term. Empirical studies in Vietnam have shown that supply chain resilience strengthens the positive link between risk management and the financial performance of enterprises.

*Enhancing Digital Capabilities:* Investing in technology is an essential requirement to increase the visibility and analysis of supply chain data. The application of Artificial Intelligence, Big Data, and the Internet of Things helps businesses forecast more accurately, detect risks early, and make timely decisions. Big data analytics expertise is considered a key strategy for Vietnamese enterprises to gain a competitive advantage. Therefore, businesses should prioritize training programs or recruit personnel with data analysis skills to effectively exploit these technologies.

*Building a Risk Management Culture:* Risk management needs to be deeply integrated into the core business strategy and become part of the organizational culture, from top leadership down to every employee. This includes establishing a clear risk management process, monitoring key risk indicators, and enhancing collaboration and information sharing with partners in the supply chain. A study in Vietnam showed that supply chain risk management has a positive and significant impact on supplier integration, internal integration, and customer integration, which are the foundations of an effective supply

chain.

## 5.2 Policy Implications for the Government and Relevant Agencies

To support businesses in enhancing their risk management capabilities, the role of the Government and relevant agencies is crucial. This paper proposes the following policy implications:

*Simplifying and Harmonizing Regulations:* Continue institutional reforms, simplify administrative procedures, and ensure consistency in goods circulation and logistics policies among localities. Resolving institutional "bottlenecks" will help reduce logistics costs, increase operational efficiency, and create a favorable business environment for enterprises.

*Supporting Enterprises in Capacity Building:* Enhance training programs, disseminate information, and provide specific guidance so that businesses, especially SMEs, can clearly understand and effectively leverage Free Trade Agreements (FTAs). At the same time, there should be policies to support businesses in accessing financial risk hedging tools and modern technological solutions.

*Promoting Supporting Industries:* To fundamentally address the issue of dependence on imported supplies, the Government needs to have strategic policies to vigorously develop domestic supporting industries. This will not only help minimize supply chain disruption risks but also increase the added value and autonomy of the Vietnamese economy.

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