

Management Innovation for Cross-Border Trade Resilience

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Abstract

Trade volatility has changed so much that a leader must now lead rather than manage risk. The decline of merchandise trade in 2023; the increasing number of trade regulations; and the increasing fragmentation of global supply chains all require leaders to anticipate disruption, move quickly to respond to changes, make implementation decisions quickly, and continuously learn via feedback and other methods. The LFTVN model set forth in this paper provides leaders with a solid framework for developing these abilities because it is based on the theory of dynamic capability, the science of leadership, and several pieces of current empirical evidence. The six leadership types described in this paper (transformational, adaptive decision-making, redesigning supply chains, financial options strategy, creating talent, and digital intelligence) do not represent either/or leadership choices; rather, these are complementary capabilities that can be used more effectively together in a unified portfolio of leadership approaches that is appropriate for the organization's unique risk profile and strategic timing. Future research should explore the applicability of LFTVN performance across multiple industries and the extent to which LFTVN can be applied to small and medium-sized enterprises

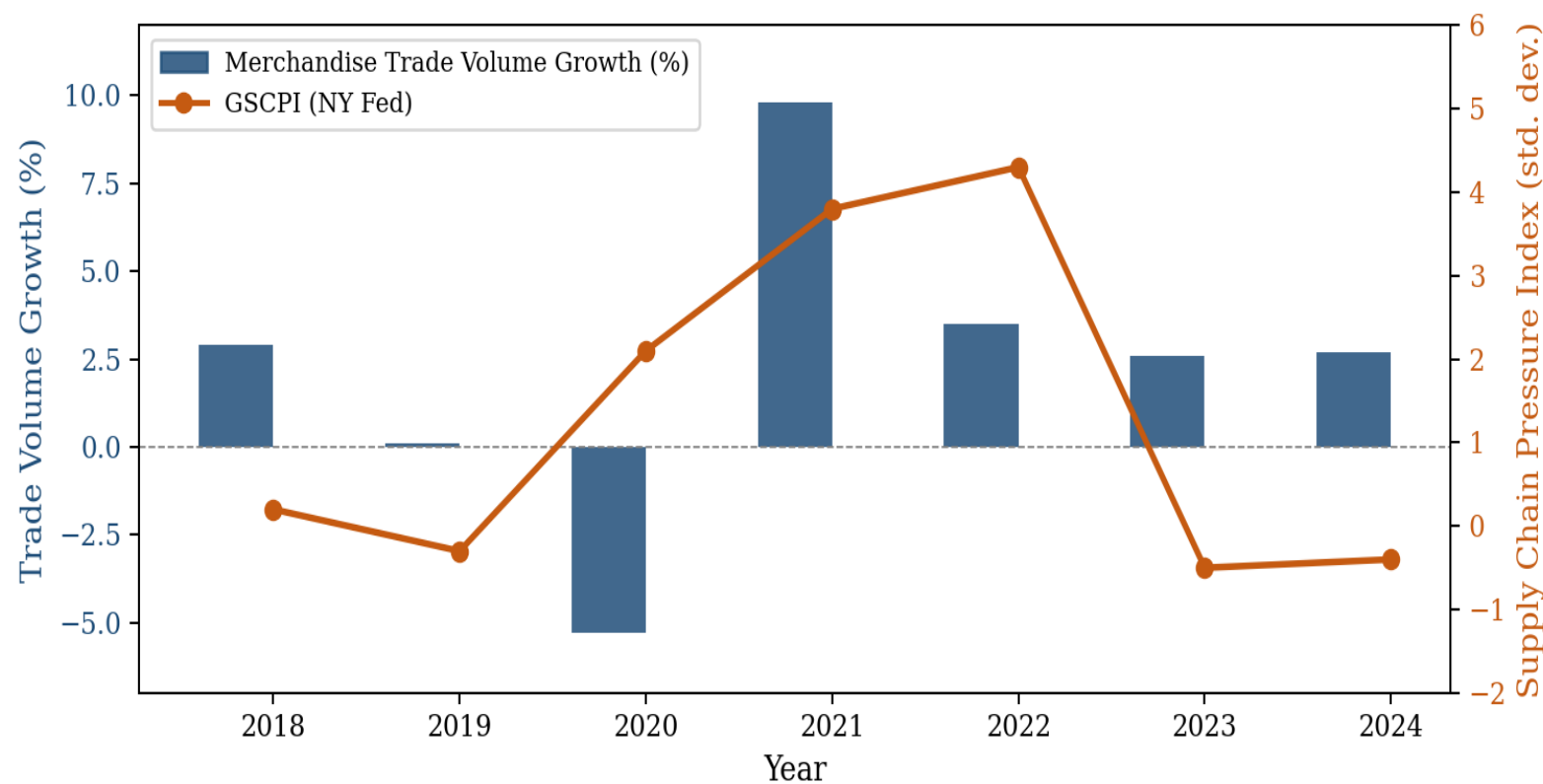
(SMEs) and emerging markets, where portfolio resources may be limited.

Introduction

Global merchandise trade is the approximately US\$24 trillion market that provides the connection between all global economies [5]. However, the global economy has been affected by the three systemic shocks over the past ten years—the US-China trade tariff dispute, the impact of COVID-19 on supply chains, and the disruption to commodity prices that resulted from the Russia-Ukraine conflict—showing that conventional trade management methods are subject to unpredictability. When many risk factors occur at once, companies whose operation models are designed for an established way of conducting business and are focused on operating effectively, will have difficulties surviving much less prospering. Management Innovation - or the intentional and systematic alteration of organizational behaviour, design elements and decision-making processes is now not only a strategic option for international trade business but an operational imperative. Management innovation includes rethinking the technology processes that can drive innovation but also organizational behaviours and structures and thought

systems. When businesses face uncertainty regarding how international trade will be conducted, they will need to develop dynamic capabilities in order to have a competitive advantage. Dynamic capabilities will allow a business to identify environmental change and to act on those changes to create new business opportunities and alter its internal resource configuration. This article creates an all-encompassing

management innovation framework that will increase resilience to disruptions that occur in cross-border trade. It begins by analyzing empirical data that shows changes to international trading are due to some level of disruptiveness, after which we provide a proposed architecture, strategic management variables, and implementation recommendations based on data-driven fact and peer-reviewed research.



Sources: World Trade Organization, Global Trade Outlook (2024); Federal Reserve Bank of New York, GSCPI (2024)

Figure 1: Global merchandise trade volume growth vs. supply chain pressure index (2018–2024) sources: world trade organization (2024); federal reserve bank of New York, GSCPI (2024) [2]

Figure 1 illustrates a significant inverse correlation between supply chain pressure and trade volume growth: while there was a dramatic spike in supply chain pressure in 2021 and 2022, the volume of international traded goods grew markedly until the end of 2021 due to the rebound effect; however, between the first and third quarters of 2022, the volume of traded goods declined at significant rates. By early 2023, the volume of globally traded goods had dropped to the level of normality; however, the supply chain will continue to be an ongoing and semi-structural characteristic of the contemporary global economy and there it is appropriate for organization management practices will also be recalibrated accordingly.

Theoretical Foundation: Dynamic Capabilities and Trade Resilience

The theoretical premise of our framework is based on the following three theoretical foundations. The understanding of how firms build sustainable competitive advantage derives from the dynamic capabilities perspective of Teece, Pisano and Shuen (1997). Sustainable competitive advantage does not come from static resource positions, but the ability of firms to reconfigure operational or strategic configurations continues could provide an opportunity to grow. In the case of cross-border trade, it means the company is able to change supplier networks, modify trade financing structures, and change logistics routes in real-time. Additionally, Sheffi (2005) suggests that there are two

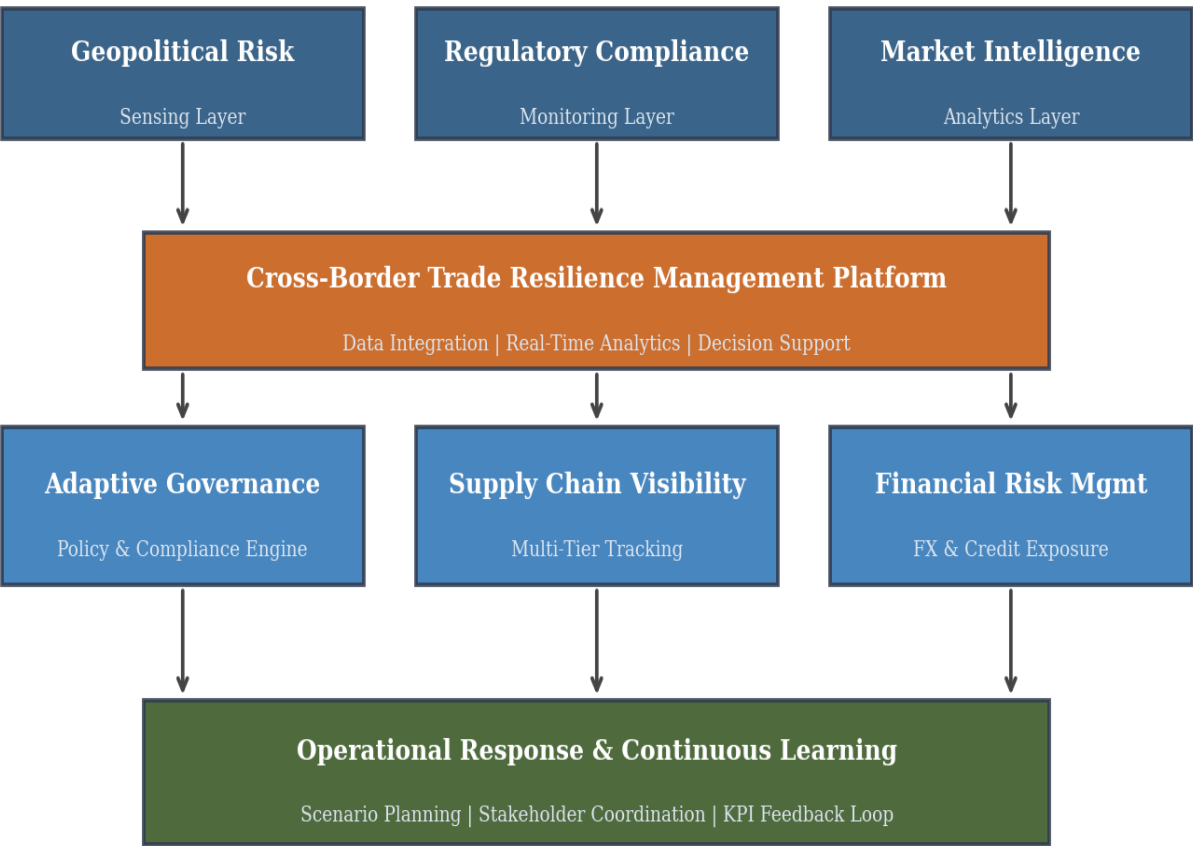
different types of resilience - redundancy-based resilience and flexibility-based resilience. Redundancy-based resilience may involve having excess inventory; dual-sourcing of materials and financial buffers as a way to absorb disruption; whereas flexibility-based resilience provides companies with the ability to switch trade lanes, seek alternative contracts, and re-deploy capacity at a lower cost in steady-state environments, but requires an organization and supply chain partners to be fully configured and ready for such actions. High-performing trade organizations leverage both types of resilience, adapting the mix to match the shifting profile of risk. Lastly, Gereffi (2018) provides a theoretical framework for analyzing the power imbalances and flows of information in the global value network, as they pertain to trade. Resilience in GVCs will necessitate not only the ability of individual focal firms, but also coordinated actions among the entire business ecosystem of firms, which will help to form the collaborative governance structures discussed in Section 3. Together, the three frameworks suggest that trade resilience as a result of management innovation is both an organizational, network and institutional level challenge [3].

A Five-Layer Resilience Architecture

Figure 2 is a model of the Management Innovation Architecture for Cross-Border Trade Resilience as developed by the authors and based on a combination of the experiences of

practitioners and the literature on the topic of foresight. The architecture contains five layers that work together to yield

effective resilience capabilities and supply actionable information to the operational responses of the organization.



Source: Authors' own elaboration (2025)

Figure 2: Management innovation architecture for cross-border trade resilience source: authors' own elaboration (2025)

Layer One (Sensing): Organizes geopolitical risks; notices changes in regulations and tracks relevant macro-economic events into a composite database that may integrate structured and unstructured information. Layer 2 (Monitoring) uses compliance tracking engines that achieve regulatory

harmonisation between places in real-time. Layer 3 (Analytics) turns raw signals into market intelligence by employing predictive models and scenario analysis tools to generate rich data. Layer 4 (Integration Platform) acts as the glue of an organization— a cloud-based hub that enables multiple

departments to share data, coordinate their actions and prioritise through Artificial Intelligence (AI) support. Layer 5 (Response) brings closure to the stakeholder coordinating protocols, scenario-based response playbooks and ongoing feedback processes to build an organization that is continually improving its ability to learn. The structure of this architecture does not allow for siloed, functional, one-time risk management; rather, it is a function of an integrated system with multi-directional visibility. The defining characteristic of this strategy is the principle of bi-directional learning: the data generated from responding to disturbances creates better models and methods for subsequent monitoring and sensing functions. Consequently,

the organization is equipping itself with the capability for resilience as a core competency, rather than as a project [1].

Strategic Management Dimensions

Table 1 identifies six key strategic management dimensions that define the shift from a traditional to a resilience-based approach to trade operations. This set of dimensions — governance, risk monitoring, supplier relationships, regulatory compliance, technology integration and financial hedging — constitutes the organizational variables firms must proactively develop in order to achieve systemic resilience.

Table 1: Traditional vs. resilience-oriented trade management dimensions

Management Dimension	Traditional Approach	Resilience-Oriented Approach	Key Benefit
Governance Structure	Centralized, static hierarchies	Adaptive, distributed decision-making networks	Faster crisis response
Risk Monitoring	Periodic, siloed reporting	Continuous, integrated real-time dashboards	Early disruption detection
Supplier Relationships	Transactional, cost-driven	Collaborative, strategic partnerships	Shared risk absorption
Regulatory Compliance	Reactive, jurisdiction-specific	Proactive, cross-border unified compliance engine	Reduced regulatory risk
Technology Integration	Legacy ERP systems	Cloud-native, API-driven interoperability	Scalable agility
Financial Hedging	Currency-specific instruments	Multi-currency dynamic hedging strategies	Reduced FX exposure

Source: Authors' synthesis based on Sheffi (2005), Christopher & Peck (2004), and Gereffi (2018) [4].

Governance and technology integration have the greatest effect on resilience; governance will provide a structure that allows for decisions made at the subsidiaries or regionally to be independent of the headquarters authorization process. This will result in faster response capabilities in times of disruption when

decisions are required (port closures, customs delays, currency turmoil, etc.).The integration of technology is an important part of eliminating disruption from the supply chain by integrating ERP systems with customs platforms and logistics providers

through API-driven interoperability, to fill gaps in information so that there is no increase in the impact of disruption.

Because of volatility in the current marketplace with regard to exchange rates, financial hedging is a growing area of consideration. Kang, Lessard and Reavis (2022) show in their research that companies with dynamic, multi-currency hedging strategies, rather than static hedging strategies with one instrument at a time, reduced volatility from foreign currency exchange in earnings on average by 34% for the period of 2020 until 2023 due to the heightened levels of currency turbulence, which provides evidence to support that there is more than one way to build resilience. Resilience can be built from operational activities but also from financial engineering.

Implementation Pathways and Conclusion

The architecture of resilience must be turned into reality within an organization as a result of sequenced investments over three time horizons. In the short term (0-12 months), companies should invest in enabling supply chain visibility and digitizing trade compliance processes and put into place cross-functional resilience-focused task forces, with a committed executive sponsor. In the medium term (1-3 years), companies will begin deploying predictive analytical capabilities into their businesses, building stronger strategic partnerships with key supplier companies, and deploying dynamic financial risk models into their business processes. In the long term (3 years +), they will

embed the use of resilience KPIs into performance management systems, create data sharing agreements with partners and regulators at the ecosystem level, and work towards developing a company culture that will identify weak signals prior to developing into crisis situations. The implementation of resilience is difficult due to issues such as organizational inertia, fragmented information technology environments and partner organizations in the supply chain with asymmetric digital capabilities. Companies that have navigated these challenges successfully have used the same strategy: they treat trade resilience as a strategic capability requiring dedicated investments, organizational leadership attention, and a multi-year commitment to develop [3]. Evidence compiled in this paper—from empirical trade data that demonstrates persistent supply chain pressure, to differences in financial performance between resilience-focused companies—suggests that the management innovation imperative for cross-border trade is due to structural issues, not cyclical. Therefore, companies that are investing in adaptive governance, integrated architectures, and dynamic capabilities at this time are positioned to not only survive future disruptions but to turn those disruptions into competitive advantages in the years ahead. Those companies that wait will be dealing with crises reactively and will find themselves at a permanent structural disadvantage going forward, in a time when normalizing disruption will be a major trend.

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