Chapter 4

The Nexus Between Firms' Innovativeness and Export Performance: A Narrative Review of Practical Implications

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Abstract

This review synthesizes practical implications found in empirical articles on the relationship between firms' innovativeness and export performance. The narrative review covers broad range of subjects such as the impact of various innovation types on export outcomes, firm capabilities and strategic orientations mediating export success, contextual moderators, and inferences for businesses. A systematic selection of empirical research spanning industries, regions, and methodologies was analysed to integrate evidence on innovation-export dynamics. Findings reveal that combined product, process, and organizational innovations consistently enhance export performance. Besides, firm-level capabilities such as absorptive capacity and managerial skills mediate those effects. Strategic orientations like export market focus and innovation integration critically drive export competitiveness as well. Moreover, contextual factors including country development, institutional environments, and industry characteristics significantly moderate innovation-export relationships. On the other hand, inconsistencies in conceptualization and limited longitudinal data constrain unified frameworks despite robust evidence. The synthesis underscores the need for integrated, context-sensitive strategies that align innovation capabilities with export objectives. These insights inform managerial decision-making by emphasizing tailored innovation portfolios and strategic orientations to optimize export performance, while highlighting gaps for future research on dynamic capabilities and multi-level contextual influences.

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1. INTRODUCTION

Research on the relationship between firms' innovativeness and export performance has emerged as a critical area of inquiry due to the increasing globalization of markets and the strategic importance of innovation in achieving competitive advantage abroad (Bıçakcıoğlu-Peynirci et al., 2019; Love & Roper, 2015). Over the past decades, studies have evolved from examining isolated innovation activities to integrating innovation with export strategies, highlighting the role of innovation in enhancing export intensity and firm growth (Du et al., 2022; Freixanet, 2014). The significance of this field is underscored by data showing that innovative exporters, particularly SMEs, tend to grow faster and achieve higher productivity than non-innovators (Love & Roper, 2015; Nguyen et al., 2024). Moreover, the dynamic interplay between innovation types and export outcomes has practical relevance for firms seeking sustainable international success (Çalışkan & Aysan, 2025; Pinera-Salmeron et al., 2023).

Despite extensive research, a specific problem persists in understanding how innovation translates into improved export performance across diverse contexts (Chen et al., 2016; Chugan & Singh, 2014). The literature reveals fragmented findings and inconsistent empirical results regarding the strength and nature of this relationship, with debates on whether innovation drives export success or vice versa (Li, 2020; Kim, 2024). Some studies emphasize the mediating role of strategic orientations such as export market orientation and competitive advantage (Bıçakcıoğlu-Peynirci & İpek, 2020; Muhammad & Chelliah, 2023), while others highlight moderating factors like firm capabilities and country-level culture (Escandón et al., 2023; İpek, 2018). This fragmentation creates a knowledge gap in synthesizing practical insights for managers and policymakers aiming to leverage innovation for export growth (Chopra et al., 2024; Chabowski et al., 2018; Freixanet & Federo, 2023). The consequences of this gap include suboptimal resource allocation and missed opportunities for firms in international markets (Navaia et al., 2024).

Prior research highlights that product, process, organizational, and marketing innovations positively affect export performance, particularly when combined innovation strategies are employed. Product innovation, for instance, frequently enhances export pricing and quality, while process innovation supports operational efficiency, and organizational or marketing innovations facilitate market adaptability and customer engagement (Bıçakcıoğlu-Peynirci et al., 2019; Bogetoft et al., 2024; Carboni & Medda, 2024; Mathias et al., 2024; Pinera-Salmeron et al., 2023).

Beyond the types of innovation themselves, firm-level capabilities are crucial, as factors like absorptive capacity, innovation persistence, managerial competencies, and export market orientation mediate the innovation-export link. These capabilities enable firms to leverage innovation effectively in export markets. In a similar vein, strategic orientations, including export market orientation and cost leadership strategies, significantly influence export success, often serving as the critical channels through which innovation translates into performance (Bıçakcıoğlu-Peynirci et al., 2019; Bıçakcıoğlu-Peynirci & İpek, 2020; Freixanet & Federo, 2023; Navaia et al., 2024; Muhammad & Chelliah, 2023).

This relationship is further complicated by external contextual factors, given that country culture, industry characteristics, market maturity, and institutional support also shape the innovation-export performance relationship. Studies show that cultural dimensions can moderate strategic orientation effects, while legal-political environments and export market barriers influence export outcomes variably across regions (Bıçakcıoğlu-Peynirci et al., 2019; Bıçakcıoğlu-Peynirci & İpek, 2020; Chugan & Singh, 2014; Escandón et al., 2023). Moreover, emerging markets often face unique resource constraints that affect both innovativeness and export success (Li, 2020).

Furthermore, the innovation-export link is not a one-way street. The learning-by-exporting (LBE) phenomenon, for example, underscores how export activities can reciprocally contribute to a firm's innovation capabilities and productivity improvements. This reciprocal relationship is moderated by firm-level human capital and technological capabilities, reflecting a dynamic interaction where export engagement drives innovation, which in turn enhances export performance (Freixanet & Federo, 2023; Li, 2024; Zaman & Tanewski, 2024).

A specific and holistic form of innovation -business model innovation (BMI)- encompassing changes to value creation, delivery, and capture is also shown to enhance export performance, especially when coupled with a CEO's dynamic managerial capabilities. Both novelty- and efficiency-centered BMI forms contribute to competitive advantages in foreign markets, with international experience and relational embeddedness influencing BMI effectiveness (Merín-Rodrigáñez et al., 2024; Najafi-Tavani et al., 2023).

Given these findings, research emphasizes the practical importance of cultivating an export market orientation, developing innovation capabilities, and fostering adaptive communication and cultural sensitivity. Consequently, firms are advised to develop integrated innovation strategies, leverage cost

advantages, and nurture managerial skills to sustain competitive export performance (Bıçakcıoğlu-Peynirci et al., 2019; Çalışkan & Aysan, 2025; Navaia et al., 2024; Muhammad & Chelliah, 2023).

Beyond driving growth, innovation also plays a critical defensive role in firms' export market survival, especially during crises such as financial downturns, by enhancing product competitiveness and reducing export hazards. This is not without its limits, however, as diminishing returns to innovation suggest that strategic investment balancing is needed (Kim, 2024).

Focusing on firm size, SMEs exhibit unique innovation-export relationships. While often constrained by resources, they can benefit significantly from innovation capabilities, particularly when combined with export persistence and knowledge acquisition. Therefore, SME internationalization and innovation support mechanisms, including public policy and institutional aid, are vital for their export growth (Calheiros-Lobo, et al., 2023; Love & Roper, 2015; Pastelakos et al., 2022; Srisomwongse et al., 2025).

In the macro-context, sector-specific efficiencies and regional innovation ecosystems significantly influence how innovation translates into export outcomes. Indeed, diverse sectors and regions exhibit varying effectiveness of product and process innovation, underscoring the need for vertical innovation policies and regional ecosystem development (Cassini, 2024; Mariev et al., 2023). Also, the growing digital economy has created new processes that are changing how innovation contributes to export performance. Digital platforms are reprogrammable digital infrastructures that facilitate interactions between different actors, such as firms, customers, and partners, allowing value creation, innovation, and collaboration across networked ecosystems (Gawer, 2021; Nambisan et al., 2019). These platforms not only promote the commercialization of innovations, but they also enhance firms learning-by-exporting capabilities through continuous data feedback, user analytics, and cross-border market interaction. Similarly, regional innovation ecosystems, which include clusters of firms, research institutions, universities, and supportive government policies, provide the infrastructural and relational underpinning required for long-term innovation-based competitiveness. Within these ecosystems, closeness to information sources and specialized human capital improves absorptive capacity and collective efficiency, allowing firms to leverage local innovation potential into worldwide market success. Furthermore, network-based collaborations, which include strategic relationships between firms,

suppliers, research institutes, and international agents, serve as relational channels through which firms gain access to external knowledge, share risks, and co-develop innovations for foreign markets.

In light of above-mentioned extant research, the purpose of this narrative review is to synthesize the practical implications for businesses arising from the innovativeness-export performance nexus. It aims to consolidate fragmented findings, clarify the roles of different innovation types and strategic orientations, and identify actionable insights for firms seeking to improve export outcomes through innovation. This contribution addresses the identified gap by providing a comprehensive, integrative perspective that informs both academic understanding and managerial practice.

2. METHOD AND OVERVIEW

To achieve the objectives of this study and identify the relevant body of empirical evidence, a systematic narrative review was conducted. The literature search covered the years 2005–2024, reflecting the period in which the empirical research on innovation and export performance expanded significantly and became more methodologically diversified.

The search was performed in leading academic databases—including Elsevier, Emerald, JSTOR, Sage, Springer, Taylor & Francis, and Wiley—using a comprehensive set of keywords such as "innovation," "innovative capability," "export," and "export performance". Only empirical studies were included, while conceptual papers, qualitative research, books, book chapters, reports, and conference proceedings were excluded in accordance with the review scope. Titles, abstracts, and keywords were screened systematically, reference lists of the identified papers were examined through backward snowballing, and duplicates or non-eligible studies were removed.

Following this procedure, a total of 71 empirical studies initially met the criteria; after full-text assessment, 59 studies remained for detailed analysis. Together, these studies provide a rich empirical foundation for understanding how innovation influences export performance. The excerpts of the implications sections drawn from these studies were evaluated to ensure a synthesis of the state-of-the-art literature.

Table 1. The Relationships Innovation Types and Export Performance

Authors	**Innovation Type**	**Key Empirical Findings**	**Key Implications**
Lages et al. (2009); D'Angelo (2012); Zhang & Zhu (2016); Ringo et al. (2023)	Product Innovation	Product innovation enhances firms' differentiation ability and facilitates entry into international markets by delivering higher value-added offerings. Empirical evidence consistently underlines its direct and positive influence on export intensity and export propensity, especially among manufacturing SMEs.	Policies should support R&D programs focused on new product development and export-oriented design adaptation. Managers should invest in continual product development aligned with target market preferences.
Kirbach & Schmiedberg (2008); Haddoud et al. (2021); Tandrayen-Rogobour (2022)	Process Innovation	Process innovation improves production efficiency, cost-effectiveness, and quality consistency, indirectly supporting export performance. However, its empirical effect varies across country contexts—positive in efficiency-driven economies but weaker or neutral where innovation investments are resource-constrained.	Export promotion policies should incentivize efficiency-enhancing innovation. Firms should view process upgrading as a strategic tool for sustaining competitiveness in price-sensitive export markets.
Costa et al. (2015); Azar & Crabuschi (2017); Rua et al. (2019); Zhang & Jedin (2022); Barbosa & Paramo (2022)	Organizational/ Managerial Innovation	Organizational and managerial innovations involve restructuring decision processes, knowledge management, and firm-level coordination mechanisms. These changes facilitate the strategic integration of innovation within business models, enhancing adaptive capacity and long-term export competitiveness.	Policymakers should encourage programs that build firms' managerial capabilities and organizational learning systems. For practitioners, embedding innovation orientation into strategic management processes is key to sustaining export growth.
Silva et al. (2017); Rodil et al. (2016); Ayob et al. (2023)	Marketing Innovation	Marketing innovation encompasses new methods of product promotion, customer relationship management, branding, and distribution approaches in export markets. The evidence is mixed—while it enhances export scope and market penetration in certain settings, its impact may be context-dependent or secondary to technological innovation.	Export support frameworks should help firms develop market intelligence and brand differentiation strategies. Managers should leverage digital marketing and localized branding to translate marketing innovation into tangible export gains.
Zhau & Zou (2002); Silva et al. (2017); Salmeron et al. (2023)	Technological Innovation	Technological innovation—R&D-driven improvements in product and process technologies—empowers firms to penetrate knowledge-intensive export markets. It contributes to both export diversification and competitiveness through improved technical capabilities and product sophistication.	Policymakers should align R&D funding, technology transfer, and export promotion instruments. Firms should strategically align technology upgrading with long-term internatio

As seen in Table 1 above, a dominant theme in the literature is that "innovation" is not a monolithic concept. The strategic implications for managers differ significantly based on the type of innovation pursued, primarily distinguishing between product, process, and non-technological innovations.

The most emphasized path to export prosperity is product innovation. This is often presented as the most direct route to success, representing the firm's core market offering (Azari et al., 2017). Product innovation is consistently framed as a strategy of differentiation rather than cost. For firms targeting high-standard markets, such as the intra-EU market, product upgrading is considered a superior strategy for market entry compared to cost-reduction (Caldera, 2010). This is particularly true for high-technology small and medium-sized enterprises (HTSMEs), which are advised to focus on product innovations to materialize their technological resources and build a competitive advantage in export markets (D'Angelo, 2012). Policies aimed at product innovation are also seen as more likely to cause entry into export markets than those favoring other types (Becker & Egger, 2013). Furthermore, product innovation appears to have a more immediate, positive impact on short-term profitability (Kongmanila & Takahashi, 2009).

While product innovation often takes precedence, process innovation is presented as a critical, and at times contextually more important, driver of export success. Its primary role is linked to achieving a cost advantage (Pinera-Salmeron et al., 2023). Managers are advised to foster innovations in business processes with a clear orientation toward improving their cost position relative to competitors (Pinera-Salmeron et al., 2023). In some contexts, such as for Polish family firms, process innovation's link to cost advantage was found to be key to export intensity, while product innovation was surprisingly irrelevant (Haddoud et al., 2021). This finding serves as a crucial reminder that findings from developed economies cannot be uniformly extended to all contexts. Process innovation is also tied to a different export dimension; it is suggested to be a more important input for increasing export depth (higher sales in existing markets), whereas the link to market entry is less clear (Filipesceu et al., 2013). The financial returns from process innovation may also be realized over a longer time horizon, given the substantial initial investments required (Kongmanila & Takahashi, 2009).

A significant body of implications urges managers to look beyond these technological innovations. Great emphasis is placed on organizational, management, and administrative innovations. Managers are advised to

devote as much attention to developing innovations in strategy, structure, and administrative procedures as they do to products (Azar & Ciabuschi, 2017; Azar & Drogendijk, 2016). These organizational innovations are vital for ensuring adaptive behaviour in foreign markets (Azar & Ciabuschi, 2017) and are particularly crucial when entering culturally distant markets, where they help firms access unexploited opportunities (Azar & Drogendijk, 2016).

For resource-scarce firms, especially SMEs in emerging economies, non-technological innovations are highlighted as a means to gain access to international markets without substantial, high-risk investments (Ayob et al., 2023). This includes marketing innovation, such as using social media, creating unique product stories, and developing environmentally friendly packaging (Chumme, 2022). Managers are advised to place significant emphasis on marketing innovation (Ringo et al., 2023) and even to adopt a combination of types, such as process innovation (for cost-efficiency) and marketing innovation (to address customer needs and open new markets) (Edeh et al., 2020).

Ultimately, the implications do not suggest an "either/or" choice but rather point toward synergy and balance. The complementary effect of pursuing product and process innovation simultaneously is often stronger than the effect of one type alone (Hwang & Dong, 2015; Tandrayen-Rogobour, 2022). Firms that are "ambidextrous" -combining exploration (technological innovation) with exploitation (non-technological innovation)- tend to outperform others (Pérez et al., 2019). This balance also extends to the scale of innovation. Managers are cautioned against an exclusive focus on radical breakthroughs; adopting a higher number of smaller, incremental innovations can enable firms to better adjust to new foreign environments (Azar & Ciabuschi, 2017). At the same time, for high-aspiring firms in emerging markets, there is a call to take a leap from "exploitative R&D" (low-risk, generic products) to "exploratory R&D" (high-risk, high-capital projects) to achieve a breakout in performance (Bhat & Momaya, 2020).

The literature moves beyond what to innovate and provides extensive guidance on how to build the underlying capacity for innovation. This involves a mix of internal development, external knowledge acquisition, and the fostering of specific organizational cultures.

The foundation of innovation capability often rests on internal investment in R&D and technology (Lopez-Rodriguez & Garcia-Rodriguez, 2005). Internal R&D is deemed critical for export performance (Rauf & Bao, 2024), and managers are advised to allocate funds and human resources

to R&D departments (Altuntas et al., 2018). However, this strategy is not without risk. Managers must be aware of the high costs and uncertain outcomes (Aarstad et al., 2015) and carefully weigh the risks and benefits of large R&D investments (Bhat & Momaya, 2020). The focus should not just be on R&D spending, but on the practical use of technology, such as Advanced Manufacturing Technology (AMT) (Altuntas et al., 2018). This internal capacity is built by coordinating all strategic assets, including R&D personnel, capital, and information (Cieślik et al., 2018). Employee skills, in particular, are vital not only for technical development but also for the commercial success of innovative products (Ganotakis & Love, 2011). Protecting these investments through patenting is also recommended to expand competitiveness (Zucoloto et al., 2017).

Firms, especially SMEs, are strongly advised not to innovate in a vacuum. A major theme is the use of external networks and knowledge sources. Managers are encouraged to foster cooperation with universities (D'Angelo, 2012). HTSMEs, for example, can absorb know-how from external R&D sources like universities and exploit it in export markets (D'Angelo, 2012). SMEs can partner with universities to revamp processes or outsource R&D, leveraging a knowledge base they lack internally (Haddoud et al., 2023). This extends to other external networks with large companies and governments (Kazemi et al., 2023). For firms in developing countries, importing or licensing foreign technologies is a key strategy (Haddoud et al., 2023; Rauf et al., 2023). This allows access to state-of-the-art solutions and conserves internal resources (Haddoud et al., 2023). However, the selection of this technology is critical; the recommendation is to import technologies appropriate to national conditions, such as labor-using technologies that are easier to internalize in labor-abundant countries (Rauf et al., 2023; Rauf & Bao, 2024). External knowledge can also come from attracting foreign investment (Aarstad et al., 2015) and collaborating with suppliers and competitors (Haddoud et al., 2023).

Perhaps the most sophisticated set of implications relates to building the intangible, cultural assets that foster innovation. Managers are urged to develop a market-oriented culture (Zhang & Zhu, 2016), which involves creating processes to collect and disseminate market intelligence (Kazemi et al., 2023) and using business intelligence systems to observe customers and competitors (Kolbe et al., 2021). This must be balanced with a technology orientation, or a sensitivity to technological advancements (Kazemi et al., 2023). Alongside these, managers should boost organizational learning capability by fostering experimentation, risk-taking, interaction with the environment, and participative decision-making (Fernandez & Alegre,

2015). This means encouraging employees to share and implement their ideas (Fernandez & Alegre, 2015). This links directly to entrepreneurial orientation (EO) and risk-taking propensity. Managers need EO skills to proactively seek new opportunities, not just react to foreign orders (Ribau et al., 2017). This requires developing a positive attitude toward risk and understanding that failure can be a necessary step to success (Ringo & Tegambwage, 2024). Finally, for an international business model to succeed, firms must acquire the intangible resource of a "global mindset" (Chang & Huang, 2022).

The implications repeatedly warn that the innovation-export relationship is not universal. Its success is contingent on a host of factors, including the firm's own characteristics, its relationships, and the external environment in which it operates.

Firm-specific factors are paramount. SMEs, in particular, face significant resource limitations (Alegre et al., 2022; Ayob et al., 2023; Edeh et al., 2020). This has several implications: SMEs may need to focus on one innovation capability (e.g., technology, marketing, or design) at a time (Alegre et al., 2022),or focus on less costly non-technological innovations (Ayob et al., 2023). SME managers must be careful not to spread limited resources too thin by investing in an innovation portfolio that does not fit their internal characteristics (Edeh et al., 2020). SMEs also tend to prioritize immediate interests, meaning their innovation activities often affect export performance in the short term, unlike large enterprises (LEs) which may only see benefits after a lag (Hwang & Dong, 2015). While firm size is an important moderator (Lweseya & Anchanta, 2023), it is not always the primary driver; in science-based industries, small firms can perform exceptionally well in global markets (Pla-Berber & Alegre, 2007).

Beyond size, international experience is a critical asset that must be balanced with innovation capability (Oura et al., 2016). Managers are advised to proactively seek this experience by participating in trade fairs, visiting customers, and increasing the number of countries served (Oura et al., 2016). In fact, managers should be financially and psychologically prepared for an initial decrease in performance (a "J-curve") in the first years of exporting, using this time to learn about the market and develop resources (Ogasavro et al., 2016). The type of resources also matters. While financial resources are essential, institutional resources (like special privileges) can paradoxically undermine the positive value of innovation for exporting (Wu et al., 2022).

Innovation does not succeed in a vacuum; its effectiveness is moderated by customers, competitors, and partners. A strong customer and importer orientation is a critical success factor. The positive link between tech-innovation and export performance is stronger when the firm has a greater orientation toward its importer, such as by understanding their needs and monitoring satisfaction (Silva et al., 2017). The key is to be both "inwardly proficient" (with tech-innovation) and "externally responsive" (with customer focus) (Silva et al., 2017). Managers are also advised to explore low-cost relationship capabilities, as building solid, trustable relationships with importers, suppliers, and distributors allows firms to realize their products' full market potential (Lages et al., 2009; Rodriguez et al., 2013). This leads to a crucial distinction: product quality is often just a "qualifier" or a minimum requirement for survival. It is product innovation that plays the major role in enhancing economic performance and providing a differential advantage (Lages et al., 2009).

Finally, the macro-environment and national context are paramount. The level of market competition modifies strategy; in highly competitive markets, creative capabilities may be less useful for export performance, forcing managers to find alternative advantages (Zhang & Jedin, 2023). In contrast, in dynamic, turbulent markets, a market orientation is more effective as it encourages innovation to cope with change (Zhang & Zhu, 2016). National context is king: strategies are not universally applicable (Haddoud et al., 2021). Firms in emerging economies face different resource constraints (Ayob et al., 2023) and may benefit more from adopting or adapting existing innovations at low cost (Tandrayen-Rogobour, 2022). The institutional environment is a major factor (Chen et al., 2016). In many regions, major obstacles like access to finance, corruption, electricity constraints, and political instability must be addressed before firms can effectively innovate (Tandrayen-Rogobour, 2022). In a unique finding, Corporate Social Responsibility (CSR) is positioned as an enabler of exploratory innovation; using CSR principles can force companies to pursue new knowledge and change old routines (Costa et al., 2015). This suggests investing in socially and environmentally responsible products can itself be a differentiation strategy (Martos-Pedrero et al., 2023).

3. DISCUSSION AND CONCLUSION

The collective implications synthesized from the literature demonstrate that the relationship between innovation and export performance is not a simple, linear path. It is a complex, contingent, and multi-dimensional process. Several key tensions and meta-themes emerge.

First is the dynamic interplay between product and process innovation. The literature suggests a 'division of labor': product innovation is often the key to market entry and differentiation (Becker & Egger, 2013; Caldera, 2010), while process innovation is a primary driver of cost advantage (Pinera-Salmeron et al., 2023) and market depth (Filipesceu et al., 2013). The most effective firms, however, do not choose between them but find ways to achieve complementarity and synergy (Hwang & Dong, 2015).

Second, the review reveals a strong consensus to move beyond technological innovation. The repeated emphasis on organizational, management, marketing, and even CSR-driven innovation (Azar & Ciabuschi, 2017; Pérez et al., 2019; Costa et al., 2015) suggests that competitive advantage is no longer found purely in the "widget" itself. It is found in the firm's adaptive structure, its novel strategies, its customer relationships, and its societal values. The ideal firm is both "inwardly proficient" with its technology and "externally responsive" to its customers and stakeholders (Silva et al., 2017).

Third, the implications repeatedly invalidate any "one-size-fits-all" strategy. The right path for a large enterprise in a developed economy (Hwang & Dong, 2015) is fundamentally different from that of a Polish family firm (Haddoud et al., 2021), a Moroccan SME (Haddoud et al., 2023), or a Turkish manufacturer (Altuntas et al., 2018). Factors like firm size, resource constraints, institutional quality, and market competition fundamentally alter the innovation-export equation.

Fourth, the literature agrees on the idea that innovation is necessary but not sufficient. Innovation capability alone does not guarantee export success (Oura et al., 2016). It must be supported by a constellation of complementary assets and capabilities. These include tangible resources, but more importantly, intangible assets like international experience (Oura et al., 2016), market orientation (Zhang & Zhu, 2016), organizational learning (Fernandez & Alegre, 2015), relationship capabilities (Lages et al., 2009), and a risk-taking culture (Ringo & Tegambwage, 2024).

In this regard, a conceptual framework emerges that explains how the multilayered interactions among innovation types, firm capabilities, and contextual conditions form a holistic mechanism influencing export outcomes. Primarily, product, process, organizational, and marketing innovations constitute the fundamental inputs through which firms achieve competitive advantage in international markets. However, the transformation of these innovation activities into superior export performance largely depends on the firm's dynamic capabilities, absorptive capacity, strategic orientations toward markets and technology, managerial competencies, and

the effectiveness with which external networks are leveraged. Through these mediating mechanisms, innovation can, in some contexts, enable market entry via differentiation, while in others it drives sustainable export success through cost advantages, operational efficiency, or enhanced adaptability. Nevertheless, the strength and direction of this relationship are consistently shaped by contextual factors. Firm size, resource constraints, international experience, industry competition intensity, market dynamism, and country-level institutional structures—particularly access to finance, bureaucratic conditions, cultural distance, and the maturity of the innovation ecosystem—either amplify or constrain the extent to which innovativeness translates into export performance. This integrative model reveals that the effect of innovation on export outcomes is not a linear process but a multidimensional and context-contingent mechanism, emphasizing that achieving export success requires configuring a firm's innovation portfolio in alignment with its strategic orientations and environmental conditions.

Based on the synthesized evidence, several practical implications can be drawn for managers and policy makers seeking to enhance export performance through innovation. Managers should not prioritize a particular type of innovation. Instead, they should create innovation portfolios that balance product differentiation and process efficiency. Firms that enhance product characteristics while lowering operational costs are more likely to gain market access and maintain export depth. This ambidextrous strategy is especially important in competitive global sectors when differentiation and cost reduction alone are insufficient. Given that competitive advantage is increasingly derived from organizational flexibility, managerial skills, marketing capabilities, and CSR-driven differentiation, firms should broaden their innovation activities beyond technological advancement. To improve foreign market response, managers should spend resources for redesigning internal structures, strengthening cross-functional cooperation, developing brand narratives, and incorporating social responsibility into innovation plans. Lastly, managers should see export efforts as part of their overall innovation strategy rather than as an end result because exporting creates knowledge, feedback, and market insights. Structured methods for collecting consumer feedback, monitoring foreign competitors, and learning from overseas partners will allow businesses to fine-tune their innovation processes and remain competitive over time. When comes to the policy makers side, they should create programs that assist firms in matching appropriate innovation types with their existing skills and industry conditions. This could involve training programs, innovation audits, or capability-development grants, particularly for SMEs. Governments

must reduce bureaucratic barriers, improve access to capital, and promote national innovation ecosystems Because institutional quality influences the innovation-export nexus. Improving these contextual elements increases the possibility that firm-level innovation will lead to export competitiveness.

In sum, the journey from innovation to export performance requires a holistic approach. For managers, this means building an ambidextrous organization that balances product and process innovation, technological prowess with market-oriented, non-technological adroitness, and internal development with external collaboration. Ultimately, sustainable international success is found not in a single innovative act, but in the dynamic alignment of the firm's internal capabilities, its external strategies, and the specific environmental context in which it operates.

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