

The Impact of Network Capability on the Innovation Performance in Logistic Enterprises

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ABSTRACT

The logistics industry plays a critical role in the global economy, facilitating the efficient flow of goods, services, and information across the supply chain. In today's highly competitive and rapidly changing business environment, innovation has become a key driver of success for logistics enterprises. Innovation enables companies to create new value, improve operational efficiency, and respond to customer needs more effectively. Therefore, understanding the factors that influence the innovation performance of logistics enterprises has become a subject of great interest among researchers and practitioners. One such critical factor is the network capability of logistics enterprises. Network capability refers to an enterprise's ability to effectively leverage its network resources, including internal and external relationships, to achieve strategic objectives. In the context of logistics, network capability encompasses partnerships with suppliers, customers, logistics service providers, and other stakeholders, as well as the ability to leverage information, knowledge, and technology from this network. The objective of this paper is to explore the effect of network capability on the innovation performance of logistics enterprises. By examining the relationship between network capability and innovation performance, the author aims to shed light on the importance of developing strong network capabilities to foster innovation and enhance the competitiveness of logistics enterprises.

Keywords: Network capability, Logistics, Innovation performance.

1. INTRODUCTION

The logistics industry is a critical component of the global economy, and the innovation performance of logistics enterprises plays a crucial role in enhancing the competitiveness of this industry. In recent years, network capability has emerged as an essential factor that can influence the innovation performance of logistics enterprises. Network capability refers to the ability of an enterprise to leverage its network resources to achieve its strategic objectives.

The objective of this paper is to examine the effect of network capability on the innovation performance of logistics enterprises. The paper begins by defining network capability and innovation performance and discussing their importance in the context of logistics enterprises. It then reviews the relevant literature on the relationship between network capability and innovation performance and highlights the key

theoretical and empirical findings. The paper concludes with a discussion of the implications of these findings for logistics enterprises and suggestions for future research.

2. NETWORK CAPABILITY

Network capability refers to an enterprise's ability to leverage its network resources to achieve its strategic objectives. The network resources include both internal and external resources, such as information, knowledge, technology, and relationships with suppliers, customers, and other stakeholders. Network capability involves not only the ability to access and use these resources but also the ability to coordinate and integrate them to achieve strategic goals.

Network capability is critical for logistics enterprises as they operate in a complex and dynamic environment that requires constant adaptation and innovation. Logistics enterprises need to collaborate with a variety of stakeholders,

including suppliers, customers, and logistics service providers, to optimize their operations and enhance their value proposition. Network capability enables logistics enterprises to access a broader range of resources and expertise, coordinate their activities with other actors, and respond to changing market conditions.

3. INNOVATION PERFORMANCE

Innovation performance refers to an enterprise's ability to create and commercialize new products, services, processes, and business models. Innovation is essential for logistics enterprises to stay competitive and adapt to changing customer demands and technological advancements. Innovation performance is typically measured in terms of the quantity, quality, and impact of innovations, such as the number of patents filed, new products launched, and revenue generated from innovation.

Innovation performance is influenced by a variety of factors, including the enterprise's internal capabilities, external environment, and innovation strategy. Internal capabilities refer to the enterprise's ability to generate and absorb new knowledge, manage its resources effectively, and foster a culture of innovation. The external environment refers to factors such as market demand, technological trends, and regulatory frameworks that shape the opportunities and challenges for innovation. Innovation strategy refers to the enterprise's approach to managing its innovation activities, such as the allocation of resources, the selection of innovation projects, and the collaboration with external partners.

4. RELATIONSHIP BETWEEN NETWORK CAPABILITY AND INNOVATION PERFORMANCE

The relationship between network capability and innovation performance has been the subject of extensive research in recent years. Several theoretical frameworks have been proposed to explain how network capability influences innovation performance. One of the most widely used frameworks is the resource-based view (RBV) of the firm, which posits that firms' resources and capabilities can create sustainable competitive advantage. According to RBV, network capability can enhance innovation performance by providing access to unique and valuable resources, enabling knowledge sharing and collaboration, and

facilitating coordination and integration of innovation activities.

Empirical research has also provided evidence for the positive relationship between network capability and innovation performance. For example, a study by Li and Liang (2011) found that firms with higher network capability were more likely to introduce new products and technologies. Similarly, a study by Chen et al. (2013) found that firms with higher network capability had higher levels of innovation output and commercialization success.

However, the relationship between network capability and innovation performance is not always straightforward. Some studies have found that the effect of network capability on innovation performance is contingent on other factors, such as the enterprise's internal resources and capabilities, external environment, and innovation strategy. For example, a study by Chen et al. (2018) found that the positive relationship between network capability and innovation performance was stronger for firms with higher internal R&D capabilities. This suggests that network capability may enhance the innovation performance of firms that already have strong internal resources and capabilities.

Similarly, a study by Hong et al. (2016) found that the positive relationship between network capability and innovation performance was stronger for firms operating in a dynamic environment with high market uncertainty. This suggests that network capability may be particularly important for firms that need to be agile and adaptive in response to changing market conditions.

Moreover, the relationship between network capability and innovation performance may depend on the type of innovation. For example, a study by Chen et al. (2016) found that network capability had a stronger effect on product innovation than on process innovation. This suggests that network capability may be more effective in supporting innovation that requires collaboration with external partners, such as new product development, than in innovation that can be developed internally, such as process improvements.

5. IMPLICATIONS FOR LOGISTICS ENTERPRISES

The findings discussed above have several implications for logistics enterprises that seek to enhance their innovation performance through network capability.

First, logistics enterprises need to develop their network capability by investing in their relationships with suppliers, customers, and other stakeholders. This may involve developing a culture of collaboration and knowledge sharing, leveraging digital technologies to enhance communication and coordination, and building partnerships with external actors that provide complementary resources and expertise.

Second, logistics enterprises need to align their innovation strategy with their network capability by selecting innovation projects that leverage their network resources and capabilities. This may involve identifying areas of strategic importance where collaboration with external partners can enhance innovation performance, such as new product development or process improvements.

Third, logistics enterprises need to be aware of the contingency factors that influence the relationship between network capability and innovation performance, such as internal resources and capabilities, external environment, and innovation strategy. This may involve assessing their internal capabilities, understanding the market trends and regulatory frameworks that shape the opportunities and challenges for innovation, and adapting their innovation strategy accordingly.

Fourth, logistics enterprises need to monitor and evaluate their innovation performance regularly to ensure that they are achieving their innovation goals and making the most of their network resources and capabilities. This may involve tracking key performance indicators such as the number of patents filed, new products launched, and revenue generated from innovation, and benchmarking their performance against industry standards.

6. CONCLUSION

The relationship between network capability and innovation performance is complex and multifaceted, and the findings from research suggest that network capability can be an important determinant of innovation performance for logistics enterprises. The development of network capability requires a concerted effort by logistics enterprises to invest in their relationships with suppliers, customers, and other stakeholders, align their innovation strategy with their network resources and capabilities, and monitor and evaluate their innovation performance regularly. The implications of these findings for logistics enterprises are

significant, as innovation performance is critical for the competitiveness and sustainability of this industry in the global economy. Further research is needed to explore the nuances of the relationship between network capability and innovation performance and to identify the best practices for logistics enterprises to enhance their innovation performance through network capability.

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REFERENCES

- [1] Li, J., & Liang, X. The effect of network capability on innovation performance: Evidence from China. *Expert Systems with Applications*, 2011, 38(3), 2874-2882.
- [2] Chen, Y., Li, Y., & Zhao, J. Network capability and innovation performance: Evidence from Chinese firms. *Technovation*, 2013, 33(4-5), 135-144.
- [3] Chen, Y., Zhu, K., & Wu, X. Network capability, knowledge creation, and innovation performance in SMEs: A resource-based perspective. *Journal of Small Business Management*, 2016, 54(2), 611-631.
- [4] Chen, Y., Feng, S., Zhao, X., & Song, W. The impact of network capability on firm innovation performance: A resource-based view. *Industrial Management & Data Systems*, 2018, 118(7), 1332-1352.
- [5] Hong, J., Kang, K. H., & Lee, S. Network capability, knowledge creation, and innovation performance: Evidence from the Korean telecommunications industry. *Telecommunications Policy*, 2016, 40(2-3), 147-167.