

The Role of Innovation Management on Maintaining a Competitive Edge



¹Irwan, ²Dino Permana, ³Femmy Sofie Schouten

¹ITB Nobel Indonesia, Indonesia

²Universitas Pembangunan Nasional "Veteran" Yogyakarta, Indonesia

³Politeknik Transportasi Darat Indonesia-STTD, Indonesia

Email: irwan.usman0818@gmail.com

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ABSTRACT

Innovation management plays a crucial role in maintaining a company's competitiveness in an era of global disruption. With competition intensifying, organizations must be able to strategically manage innovation to create a sustainable competitive advantage. This study aims to analyze the role of innovation management in supporting the sustainability of organizational competitiveness through a qualitative approach based on literature studies (library research). Various academic sources, such as scientific journals, books, and industry reports, are used as databases to understand the key factors that influence the success of innovation management. The results show that effective innovation management depends on the organization's ability to manage the innovation process from ideation to implementation. Factors such as an organizational culture that supports innovation, visionary leadership, and technology integration are key pillars in driving innovation success. In addition, this study identifies that cross-functional collaboration and data utilization based on digital technology can increase the effectiveness of the innovation process. Challenges faced by organizations include resistance to change, lack of human resource capacity, and misalignment between innovation strategies and business goals. This research provides recommendations for companies to strengthen innovation management by building an ecosystem that supports an innovative culture, improving human resource competence, and adopting the latest technology as a tool to improve innovation efficiency and flexibility. With this strategy, organizations can maintain their competitiveness in a dynamic and ever-changing market.

1. Introduction

In an era of global disruption characterized by rapid technological developments and changing market dynamics, innovation is the key for organizations to maintain a competitive advantage. Organizations that are unable to adapt to technological changes and market needs risk losing relevance and competitiveness (Schilling, 2020). Innovation management, as a strategic process that includes the creation, management, and implementation of innovations, has become an essential element in ensuring business sustainability in various industry sectors (Tidd & Bessant, 2021). In this context, it is important to understand how innovation management can be optimized to maintain competitiveness in an increasingly competitive market.

Innovation management, or innovation management, is a strategic process that aims to create, manage, and implement innovation in an organization to achieve sustainable business goals. In the era of digital disruption, innovation is not just about developing new products or services, but also includes transforming business processes, resource management, and overall organizational strategy (Tidd & Bessant, 2021). Well-managed innovation enables organizations to respond quickly to market changes, capitalize on new opportunities, and create added value for customers. Innovation management involves various elements, including idea development, prototype testing, cross-functional collaboration, and the integration of digital technologies in the innovation process.

A key element of innovation management is a supportive culture of innovation. This culture involves the organization's ability to encourage creativity, manage risk, and give employees the freedom to experiment with new ideas. Visionary leadership also plays an important role in creating a work environment that is conducive to innovation. Leaders who support innovation are able to inspire teams, set clear visions, and provide strategic direction in facing complex business challenges (Christensen et al., 2015). Additionally, cross-

functional collaboration within the organization, as well as external collaboration with partners, suppliers, and customers, can improve innovation management success. This collaboration allows for the exchange of ideas and resources, thereby accelerating the innovation development process.

One of the key challenges in innovation management is how to integrate digital technologies in business processes to improve efficiency and flexibility. Technologies such as artificial intelligence, big data analytics, and the Internet of Things (IoT) have changed the way organizations manage innovation. This technology provides the ability to analyze data in real-time, understand market needs, and optimize production processes. However, the implementation of this technology requires a well-thought-out strategy, including human resource training, organizational change management, and significant investment (Von Krogh et al., 2020). Therefore, the success of innovation management depends not only on technology, but also on the organization's ability to adapt to change and create long-term value.

Previous research has discussed the importance of innovation in creating a competitive advantage. For example, research by Christensen et al. (2015) shows that companies that adopt disruptive innovations have a greater chance of leading the market. However, most research still focuses on technological innovation without discussing how innovation management can be holistically applied across business processes. A study by Damanpour (2018) highlights that the success of innovation management depends not only on technology, but also on organizational factors such as innovation culture, leadership, and resource management.

A significant research gap is the lack of exploration of how organizations can align their innovation strategies with long-term business goals. In addition, there is still a lack of studies that explore the role of digital technology in supporting innovation management, especially in the context of organizations operating in a dynamic environment (Bogers et al., 2019). Therefore, this study seeks to



bridge this gap by holistically analyzing the role of innovation management in maintaining organizational competitiveness.

The urgency of this research lies in the need for organizations to adapt quickly to external changes. With increasing global competition, organizations need to manage innovation not only in response to change, but also as a proactive strategy to create new opportunities (Pisano, 2015). Furthermore, this research is relevant because many companies face challenges in integrating digital technologies into their innovation processes, which is a key factor in the modern business environment (Von Krogh et al., 2020).

This research offers novelty by exploring how innovation management can combine elements such as digital technology, organizational culture, and cross-functional collaboration to create a sustainable innovation ecosystem. With a literature study-based approach, the study also provides insights into best practices that can be applied by organizations in various sectors.

The main objective of this study is to analyze the role of innovation management in maintaining organizational competitiveness, with a focus on important elements such as technology integration, human resource management, and organizational strategy. This research is expected to provide theoretical benefits by enriching the literature on innovation management, as well as practical benefits by providing strategic recommendations for companies to increase their innovation capacity.

2. Methodology

This study uses a qualitative approach with the type of literature study research (library research). This approach was chosen because it allows researchers to deeply examine the concepts, theories, and implementations of innovation management in maintaining organizational competitiveness based on relevant academic sources. Literature studies are the right method to identify and analyze the latest trends and findings in the scientific literature related

to innovation management, especially in the context of technological changes and global market dynamics (Creswell, 2014).

The data sources in this study come from secondary data that includes scientific journals, books, industry reports, and relevant policy documents. The sources are selected based on their credibility and recency, especially those published in the last five years to ensure relevance to the current context. The academic databases used include Google Scholar, ProQuest, ScienceDirect, and JSTOR, with keywords such as "innovation management," "competitive edge," "business strategy," and "technological disruption." The inclusion criteria for the analyzed literature are sources that focus on the relationship between innovation management and organizational competitiveness in various industry sectors.

The data collection technique is carried out through a systematic search of relevant literature. This process involves identifying, selecting, and synthesizing findings from selected sources. The data obtained were then analyzed using the thematic analysis method. Thematic analysis allows researchers to identify key themes emerging from the literature, such as the integration of technology in innovation management, the role of leadership in supporting a culture of innovation, and challenges in the implementation of innovation strategies (Braun & Clarke, 2006).

The steps in thematic analysis include encoding the data, grouping themes based on similarities, and interpreting the results to produce a comprehensive conclusion. This approach not only provides a deeper understanding of innovation management concepts, but also identifies best practices that organizations can apply in maintaining their competitiveness. By using this method, this research is expected to provide significant theoretical contributions and strategic recommendations for decision-makers in various sectors.



3. Result and Discussion

The following data is the result of a selection of various related articles that discuss the role of innovation management in maintaining a competitive advantage. From a number of literature reviewed, as many as 10 articles were selected based on relevance

to the focus of the research, namely technology integration, innovation culture, organizational strategy, and innovation management implementation challenges. These articles provide a comprehensive perspective on the key factors that support the success of innovation management in the context of global business dynamics.

No	Author & Year	Title	Findings
1	Tidd & Bessant (2021)	<i>Managing Innovation: Integrating Technological, Market, and Organizational Change</i>	Emphasizing the importance of integration between technological innovation, market strategy, and organizational culture to create a competitive advantage.
2	Schilling (2020)	<i>Strategic Management of Technological Innovation</i>	Technological innovation as the main driver of competitiveness; Success is influenced by the adoption of the right technology and the management of organizational change.
3	Christensen et al. (2015)	<i>Disruptive Innovation: The Key to Future Success</i>	Outlining how disruptive innovation helps organizations dominate new markets and change competitive dynamics.
4	Bogers et al. (2019)	<i>Open Innovation: Research, Practices, and Policies</i>	External collaboration and knowledge sharing across organizations are key factors in increasing innovation success.
5	Damanpour (2018)	<i>Organizational Innovation: Concepts, Measures, and Research Directions</i>	Identify key elements in organizational innovation, including leadership, culture of innovation, and human resource management.
6	Pisano (2015)	<i>You Need an Innovation Strategy</i>	Emphasizing the importance of an innovation strategy that aligns with business goals to create long-term excellence.
7	Von Krogh et al. (2020)	<i>Managing Innovation in the Digital Age</i>	Digital technologies such as AI and IoT help organizations accelerate the innovation process and improve operational efficiency.
8	Zahra & George (2017)	<i>Absorptive Capacity: A Review, Reconceptualization, and Extension</i>	An organization's ability to absorb and utilize external information is key to success in innovation management.
9	West et al. (2014)	<i>Open Innovation: The Next Decade</i>	Outlining the evolution of open innovation as an innovation management model that supports company growth.
10	Zeng et al. (2015)	<i>Relationship between Cooperation Networks and Innovation Performance of SMEs</i>	Collaboration networks between organizations have a significant impact on innovation performance, especially for small and medium-sized businesses.

The table above gives an idea that the success of innovation management does not depend on just one

element, but is a combination of strategy, technology, collaboration, and organizational management. This



study supports the importance of a holistic approach to innovation management to maintain organizational competitiveness.

The literature data table above shows that innovation management is a very important strategic element to maintain organizational competitiveness, especially in an era characterized by rapid technological change and increasingly fierce market competition. The selected articles underline that the success of innovation management involves not only technological aspects, but also the management of organizational culture, business strategy, and cross-functional collaboration. These findings demonstrate the need for a multidimensional approach to managing innovation to create a sustainable competitive advantage.

One of the key findings is the importance of technology integration in the innovation process, as outlined by Schilling (2020) and Von Krogh et al. (2020). Technologies such as artificial intelligence (AI), Internet of Things (IoT), and big data analytics assist organizations in accelerating the innovation process and optimizing operational efficiency. With this technology, companies can understand market needs more deeply, predict trends, and present relevant new products or services. However, the implementation of these technologies requires organizational readiness in terms of infrastructure, human resources, and work culture changes.

A culture of innovation is another key element highlighted in several articles, including Tidd & Bessant (2021) and Damanpour (2018). A culture that supports innovation allows organizations to encourage creativity, manage risk, and provide space for employees to experiment with new ideas. In this context, visionary leadership plays an important role. Leaders who support innovation can create a conducive work environment, motivate teams to think creatively, and ensure that innovation remains aligned with the organization's strategic goals.

The articles Bogers et al. (2019) and West et al. (2014) highlight the importance of cross-

organizational collaboration through an open innovation model. This collaboration allows organizations to share knowledge, resources, and risks in the innovation process. In addition, open innovation gives companies access to leverage external expertise that they don't have internally. This model is particularly relevant in the context of small and medium-sized enterprises (SMEs), as described by Zeng et al. (2015), where collaboration networks have a significant impact on innovation performance.

Innovation strategy is also a central theme in this study, as outlined by Pisano (2015) and Christensen et al. (2015). An effective innovation strategy must align with long-term business goals and be supported by a flexible organizational structure. Disruptive innovation, as Christensen et al. explain, offers opportunities for organizations to dominate new markets by creating completely different products or services. However, this strategy also carries risks that must be carefully managed to ensure business sustainability.

Finally, an organization's ability to absorb external information, as explained by Zahra & George (2017), is an important factor in innovation management. Absorptive capacity allows companies to take advantage of external opportunities and integrate them into internal processes. This is relevant in the context of rapidly changing market dynamics, where organizations must constantly learn and adapt. These findings underscore the importance of investing in the development of human resources who have the ability to understand and apply new knowledge.

Overall, the findings from this table show that the success of innovation management depends on the synergy between technology, culture, collaboration, and strategy. Organizations that are able to integrate these elements well have a greater chance of maintaining their competitiveness in an ever-evolving global market. This research provides important insights for decision-makers to develop a holistic approach in innovation management that focuses not

only on technology, but also on resource management and cross-organizational collaboration.

Discussion and Analysis

The global supply chain crisis has become one of the major challenges faced by businesses around the world in recent years. The crisis was exacerbated by the COVID-19 pandemic, geopolitical conflicts, and logistical disruptions, resulting in delays in shipments, rising production costs, and scarcity of raw materials. In this context, the findings from the research data above show that innovation management can be a strategic solution to increase business resilience in the face of global supply chain uncertainty. The findings of Schilling (2020) and Von Krogh et al. (2020) confirm that digital technologies, such as artificial intelligence (AI) and the Internet of Things (IoT), can help businesses to monitor, analyze, and optimize supply chains in real-time.

One of the important implications of innovation management in the face of supply chain crises is the ability of organizations to integrate technology into their operations. Technologies such as big data analytics allow companies to identify potential disruptions before they become major problems. For example, large tech companies like Amazon have successfully leveraged AI to predict market demand, optimize inventory, and reduce the risk of supply chain disruptions. These findings are relevant to the Resource-Based View (RBV) theory, which emphasizes that competitive advantage can be obtained through the management of strategic resources, including technology and data.

In addition, a supportive culture of innovation is critical in ensuring the successful implementation of innovative solutions in the supply chain. Tidd & Bessant (2021) emphasized that organizations that have a culture of innovation are better able to adapt to changes in the external environment. In this context, visionary leadership plays a key role in creating a work culture that supports collaboration, creativity, and experimentation. A vivid example is how Tesla is overcoming the challenge of semiconductor chip

scarcity by redesigning their software to support different types of chips. This shows that a culture of innovation allows organizations to respond to challenges in a creative and flexible way.

Cross-organizational collaboration is also an increasingly relevant strategy in dealing with global supply chain crises. Bogers et al. (2019) and West et al. (2014) show that the open innovation model allows organizations to share resources, information, and risks in the face of uncertainty. In the case of the supply chain, collaboration with suppliers, distributors, and strategic partners can help companies to create more efficient and sustainable solutions. For example, some automotive companies have collaborated with local suppliers to reduce reliance on international supply chains, which are often vulnerable to geopolitical disruptions.

However, the application of technology and collaboration is not free from challenges. Based on the findings of Zahra & George (2017), the ability of an organization to absorb and utilize external information, or known as absorptive capacity, is a determining factor in the success of innovation management. Many organizations, especially in the small and medium-sized enterprises (SMEs) sector, face limitations in terms of access to technology, infrastructure, and human resource expertise. This emphasizes the importance of investing in internal capacity building to support the implementation of innovation.

An effective innovation strategy must also be tailored to business needs and market contexts. Pisano (2015) warns that innovation strategies that are not aligned with long-term business goals can lead to wasted resources and loss of focus. In the context of a supply chain crisis, a successful innovation strategy is one that combines operational efficiency with sustainability. For example, many companies are now starting to implement the circular economy concept in their supply chains to reduce waste and maximize the use of raw materials.



The global supply chain crisis also opens up opportunities to develop more sustainable local solutions. Zeng et al. (2015) found that collaboration between companies and local partners can improve innovation performance, especially in the SME sector. In the Indonesian context, efforts to strengthen local supply chains through collaboration between large companies and SMEs can help reduce dependence on global supply chains that are vulnerable to disruptions.

From the author's perspective, the above findings show that innovation management is not only a tool to overcome crises, but also a long-term strategy to build business resilience. In the face of a global supply chain crisis, organizations must adopt a holistic approach that includes technology, culture, strategy, and collaboration. The authors also argue that the successful implementation of innovation management requires support from governments and policies that encourage collaboration between the public and private sectors.

Overall, the discussion highlighted the importance of innovation in managing global supply chain crises and building resilient businesses. By integrating advanced technologies, fostering a culture of innovation, and strengthening cross-organizational collaboration, companies can not only survive, but thrive amid evolving challenges. This shows that innovation management is the key to business sustainability in the future.

4. Conclusion

The global supply chain crisis has underscored the importance of innovation management as a key strategy to maintain business competitiveness amid uncertainty and changing market dynamics. Based on the analysis of the above data, effective innovation management not only focuses on the adoption of digital technologies such as artificial intelligence (AI) and the Internet of Things (IoT), but also includes managing organizational culture, cross-functional collaboration, and integrated business strategies. Digital technology allows companies to monitor and optimize supply chains in real-time,

while a culture of innovation underpinned by visionary leadership helps organizations adapt to external challenges creatively and flexibly.

In addition, cross-organizational collaboration through an open innovation model has been proven to provide strategic solutions to deal with supply chain crises. Companies that are able to establish strategic partnerships with local suppliers, distributors, and partners have higher resilience to global disruptions. However, the success of innovation management relies heavily on the organization's capacity to absorb and utilize external information, as well as on an innovation strategy that aligns with long-term business goals. Therefore, internal capacity building, both in the form of infrastructure improvement and human resource training, is an important priority to support the effective implementation of innovation.

For future research, it is recommended to explore more deeply how local cultural factors affect the implementation of innovation management in specific contexts, such as in developing countries or in specific sectors. In addition, further research is also needed to identify the long-term impact of cross-organizational collaboration on supply chain sustainability and business performance. Empirical studies on the implementation of digital technology in innovation management in the small and medium enterprises (SMEs) sector will also provide valuable insights, especially in the face of increasingly complex global uncertainties. Thus, these studies can provide more specific and relevant strategic guidance to support businesses in the era of global disruption.

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