

Integration of E-Commerce and Managerial Innovation in Improving the Competitiveness of Small Businesses

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Abstract

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Small enterprises face major challenges in the evolving global market competition. The integration of e-commerce and managerial innovation emerges as two strategic factors that can significantly enhance the competitiveness of small businesses. This study aims to examine the role of e-commerce technology integration and innovative management approaches as driving forces for productivity and operational efficiency in small enterprises. The research employs a literature review method by analyzing 14 international journal articles that are relevant to the topic. The analysis reveals that the synergy between e-commerce and managerial innovation enhances flexibility, market penetration, and the adaptability of small enterprises to changes in demand and technology. The strategic implications of these findings highlight the importance of strengthening digital capacity and management responsiveness to the dynamics of the digital market. Policy recommendations emphasize the need for training programs, digital transformation assistance, and supportive ecosystems that foster managerial innovation in the small business sector.

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1. Introduction

Small businesses hold a very important and strategic role in driving economic growth and creating jobs in various countries around the world. This central role makes the small business sector the backbone of the economy, especially in developing countries and countries with an economy based on the informal sector. However, in an era of massive and rapidly developing globalization and digital disruption, small businesses are facing increasingly complex and dynamic competitive challenges. Changes in consumer behavior, new technologies, and the intensity of market competition require small business owners to continuously adapt and innovate sustainably. One of the main strategies that has emerged as a concrete solution to these various challenges is the integration of information technology through the implementation of an e-commerce system (Song et al., 2019). This system allows for the digitalization of business processes that were previously carried out manually, making them more efficient and adaptive to modern market needs.

This integration must be simultaneously accompanied by the application of adaptive, flexible, and data-based managerial innovation as well as changes in the external environment. Without a suitable managerial approach, the utilization of sophisticated technology will not provide maximum results. E-commerce provides enormous new opportunities for small business owners to access a wider, more efficient, and faster market. Through the use of rapidly developing digital platforms, small business owners can market their products, conduct buying and selling transactions, and build direct and continuous customer interactions without geographical boundaries that have been a barrier. According to a study by Sutomo

et al. (2020), the adoption of e-commerce by small businesses has been proven to significantly increase market penetration and operational efficiency, especially in the aspects of marketing and distribution which previously required high costs and time.

However, the presence of technology alone is not enough if it is not accompanied by innovation in managerial practices. Managerial innovation refers to a new, more modern, and flexible approach to managing resources, a decision-making process based on actual information, and the formation of a more dynamic and adaptive organizational culture to change. Ulas (2019) emphasizes that the combination of the digitalization process and a new managerial approach can truly create added value through process efficiency, reduction of operational costs, and a significant improvement in the quality of customer service. Furthermore, the simultaneous integration between e-commerce and managerial innovation is known to produce a strong synergistic effect on increasing the competitiveness of small businesses.

In a study by Lányi et al. (2021), it is explained that small businesses that adopt digitalization simultaneously with an innovative managerial approach are proven to have higher resilience to rapid market changes and uncertain global economic fluctuations. The problem that then arises is the low level of simultaneous adoption of these two strategic elements by the majority of small businesses. Factors such as limited financial and human resources, low digital literacy among small business owners, and minimal access to relevant and sustainable managerial training are the main obstacles. Sombultawee (2020) highlight that the main obstacles to

technology adoption by small businesses are often structural and require policy interventions and strategic assistance from the government and related institutions.

In line with this, this research aims to deeply examine recent literature on the role of e-commerce and managerial innovation integration in increasing the competitiveness of small businesses. The main focus of this research includes an analysis of the benefits resulting from this integration, the various real challenges faced in its implementation in the field, and the policy implications needed to support a broader, more effective, and sustainable implementation in the small business sector. This research is expected to provide relevant theoretical and practical contributions for stakeholders in formulating and developing strategies for strengthening small businesses in today's competitive and rapidly changing digital era.

2. Literature Review

2.1. The Role of E-Commerce in Small Business Competitiveness

E-commerce has significantly revolutionized the way small businesses carry out their business activities, especially in the aspects of marketing and distribution of products or services. This technology facilitates much wider market access at a relatively low cost compared to conventional methods. In a study by Sutomo et al. (2020), it was found that e-commerce directly helps small businesses in increasing interaction with customers and efficiency in supply chain management. Through the use of various digital platforms, small businesses can effectively reduce their dependence on traditional distribution systems and quickly adjust business strategies

according to the ever-changing dynamics of market demand. Lányi et al. (2021) revealed that the adoption of e-commerce not only increases competitiveness through operational efficiency aspects alone, but also genuinely opens up opportunities for product differentiation.

For example, the use of digital analytics allows business owners to understand consumer preferences and behavior in real-time, which ultimately drives the birth of product innovation based on customer data. In addition, e-commerce also has an important role in maintaining business continuity in the midst of economic uncertainty, such as what happened during the pandemic. However, the level of e-commerce adoption among small business owners is still relatively low. A study by Sombultawee (2020) shows that many small business owners experience difficulties in technical aspects such as managing digital platforms, online transaction security, and integrating digital systems with existing internal processes. This challenge shows the importance of targeted public policy support and a comprehensive increase in digital literacy in the small business sector.

2.2. Managerial Innovation as a Catalyst for Business Transformation

In addition to the digitalization process, managerial innovation is also an important and crucial component in efforts to increase the competitiveness of small businesses (Yuleva–Chuchulayna, 2021). This innovation includes various things, including the development of a more flexible organizational structure, the application of data-based decision-making processes, and the adoption of new business models that are more responsive to the dynamics of changes in the business environment. Ulas (2019) states that small businesses that successfully carry out

managerial innovation generally have a high level of adaptability, especially in responding to rapid changes in consumer behavior and preferences that are constantly evolving.

In a study conducted by Gavurova et al. (2020), it was found that managerial transformation has a direct link to the ability of small businesses to build strong strategic collaborations, both internally within the organization and externally with business partners. This kind of collaborative strategy is considered capable of facilitating the process of new product development, increasing efficiency in the supply chain, and expanding market penetration into wider and more diverse segments. Jatmiko et al. (2021) added that managerial innovation also plays a very important role in shaping an organizational culture that is more open to change and renewal. This is very important, given that the success of technology integration often depends on the internal readiness of the organization. Therefore, continuous training, the development of visionary leadership, and strategic change management are the main pillars in supporting the realization of effective managerial innovation.

2.3. The Synergy of E-Commerce and Managerial Innovation: The Path to Sustainable Competitiveness

The combination of e-commerce and managerial innovation creates a strategic synergy that directly affects the competitiveness of small businesses. The integration of these two elements allows small businesses to optimize limited resources, increase service speed, and create added value for customers. Sutomo et al. (2020) also noted that e-commerce without managerial innovation will only result in short-term growth. On the other hand, when digital technology is applied with a

strategic management approach, the result can be a long-term competitive advantage. For example, a digital-based customer relationship management (CRM) strategy combined with service innovation has been proven to significantly increase customer retention.

Research by Effendi and Subroto (2021) mentions that this synergy also helps small businesses to enter new markets more quickly. The use of data from e-commerce can be used as a basis for making strategic decisions such as market segmentation, price adjustments, and production capacity planning. This is what is called data-driven transformation which is increasingly crucial in the context of global competition. However, the challenges in creating this synergy are still great. One of them is the limitation in competent human resources. According to Purbasari et al. (2021), even though the technology is available, many small business owners do not have the managerial capacity to manage it optimally. Therefore, investment in managerial training and strengthening the innovation ecosystem is an urgent need.

3. Method

This research uses a systematic literature review method as the main approach to study the integration of e-commerce and managerial innovation in increasing the competitiveness of small businesses. This approach was chosen because it allows researchers to critically collect, evaluate, and analyze the results of previous research from trusted sources to obtain a comprehensive and in-depth understanding of the topic being studied. The data source in this study is international scientific journal articles obtained through the Google Scholar search engine with keywords such as

“e-commerce adoption in SMEs”, “managerial innovation and competitiveness”, “digital transformation small business”, and “integration of technology and innovation in SMEs”. The articles used are scientific publications that have gone through a peer-review process, were published between last five years, are written in English, and are published by reputable international journals. A total of 15 articles were selected purposively based on the suitability of the topic, empirical relevance, and contribution to the discussion of e-commerce and managerial innovation integration in the context of small and medium enterprises (SMEs).

The inclusion criteria included a focus on small and medium enterprises, a discussion of the integration or implications of using e-commerce or digital technology, and the inclusion of elements of managerial innovation or digital management strategies. Meanwhile, articles that only discuss e-commerce or managerial innovation separately without a direct link to small businesses, were not included in the analysis. The analysis process was carried out thematically (thematic analysis) by identifying the thematic patterns that emerged from each article, then grouping them into three main focuses, namely the role of digital technology in small business operations, innovative managerial strategies, and the integration of the two in creating competitive advantage. The findings from the selected literature were synthesized to build a conceptual understanding and formulate a framework that can be used as a basis for further research and in formulating strategic policies. The validity of the analysis was maintained by tracing each finding back to its original source and cross-comparing the literature to ensure the consistency and reliability of the results. This method provides a solid, evidence-based argumentative basis that

can be used for decision-making in the strategic development of digital-based small businesses.

4. Results

The results of the literature study show that the integration between e-commerce and managerial innovation is a strategic combination that is capable of providing a real and significant impact in increasing the competitiveness of small businesses in the midst of an increasingly competitive business environment. This integration not only contributes to an increase in operational efficiency in the short term, but also directly plays a role in expanding market access, encouraging product innovation processes, and creating a long-term and sustainable competitive advantage. E-commerce as a modern tool in digital distribution and marketing has played a central role in opening up market access that was previously unreachable by small business owners. Through digital platforms such as websites, marketplaces, and social media, business owners now have the ability to interact directly with consumers, expand their business's geographical reach, and at the same time minimize promotion and distribution costs that were a huge burden in the past.

In a study by Sutomo et al. (2020), it was found that the use of e-commerce can truly increase the effectiveness of communication with customers and accelerate the transaction process which previously took a lot of time and money. This automatically increases the level of customer satisfaction and provides a great opportunity to build long-term consumer loyalty. In addition, small business owners who actively use the analytical features available in the e-commerce system also get

a strategic advantage in the form of a deeper and more detailed understanding of the behavior, preferences, and consumption patterns of their consumers. This data can be used to precisely adjust product offerings, design more effective and targeted marketing strategies, and optimize inventory management to be more efficient and in line with market demand.

On the other hand, managerial innovation is also proven to be one of the main levers in the digitalization process of small businesses. Research conducted by Ulas (2019) states that the success of digital transformation in small businesses is highly influenced by the presence of adaptive leadership, flexible organizational structures, and a strong culture of innovation. Small businesses that have innovative managerial capabilities and dare to make strategic changes tend to be more capable of navigating market changes quickly and effectively. The managerial innovation in question includes various new approaches in data-based decision-making processes, more efficient management of human and financial resources, and adaptive long-term strategic planning to changes in technology and the market (Olayinka, 2019).

One of the important factors that consistently appears in various literatures is that the success of e-commerce implementation does not only depend on the availability of the technology itself, but is highly dependent on the managerial readiness of the business owners. In a study by Lányi et al. (2021), it was found that many small businesses failed in their digital initiatives due to a lack of strategic vision from the management and a low level of understanding of the overall digital transformation process. On the other hand, business owners who are considered successful in digital transformation generally have a data-based management system,

proactive leadership, and a work culture that supports continuous change and learning.

Research by Sombultawee (2020) also strongly highlights the importance of an integrated approach between technology and managerial management. They show that the use of digital technology separately without innovation in management can actually create additional complexity in business operations. For example, the use of an e-commerce system without the support of an efficient and integrated inventory management system can lead to an imbalance between market demand and the availability of goods in the warehouse. On the other hand, if digital technology is used simultaneously with an innovative and structured managerial approach, the result is higher operational efficiency, improved customer service quality, and an increasingly positive business reputation in the eyes of consumers.

One concrete example of the application of this integrative strategy is the combination of a Customer Relationship Management (CRM) system with an e-commerce platform. A study by Gavurova et al. (2020) shows that an integrated digital CRM system allows small business owners to track and analyze customer behavior, manage communication in a more structured and personal way, and build stronger and more loyal relationships with their customers. This approach not only increases customer satisfaction and loyalty, but also generates invaluable feedback for future product development and service improvements.

In the context of product development, integration between e-commerce and managerial innovation allows for a faster, more responsive, and data-based product innovation process. By using sales data and customer preferences obtained from

digital platforms, business owners can modify or innovate products in real-time according to market trends. This approach makes small businesses more adaptive and competitive, especially in a market that is increasingly dynamic, complex, and oriented towards consumer needs.

In addition to operational and strategic aspects, the literature study also emphasizes the importance of the human resource dimension in the success of e-commerce and managerial innovation integration. A study conducted by Purbasari et al. (2021) reveals that the lack of competent labor in the digital and managerial fields is one of the main obstacles in the transformation process of small businesses towards a digital ecosystem. Therefore, training programs, capacity building, and managerial coaching become very important to be prioritized, especially those that focus on increasing the capacity of digital leadership, strategic planning, mastery of technology, and analytical and evaluative skills.

On the other hand, the results of Jatmiko et al. (2021) research reinforce the finding that small businesses that have an open and collaborative organizational structure are much more ready and resilient in facing the challenges of digital transformation. They note that a participatory approach to decision-making, effective two-way communication between management and staff, and flexibility in the implementation of operational strategies are characteristics of small businesses that successfully integrate e-commerce and managerial innovation in a balanced and mutually supportive way.

A study by Effendi and Subroto (2021) also shows that the synergy between these two elements, namely digital technology and managerial innovation, can

encourage small businesses to accelerate their innovation cycle and expand their business model significantly. Many small businesses that initially only focused on selling physical products are now starting to develop digital-based services, such as online consulting services, digital training, and the provision of paid digital content. This transformation proves that the integration of digital technology and innovation in management not only strengthens the competitiveness of small businesses, but also opens up new opportunities for diversification of income and business expansion based on knowledge and creativity.

However, a number of studies also show that there are disparities in the application of this integration strategy. For example, research conducted by Cui et al. (2021) notes that although many small business owners have access to digital technology, not all have the courage or mental readiness to make the necessary changes to their managerial structure. This is usually related to psychological factors, such as fear of disruptive change, uncertainty about the results of the digitalization process, and limited understanding of how the digital process can be integrated into the existing management system. Therefore, the active role of external institutions, business associations, and educational institutions and government as companions is needed to provide technical guidance, motivation, and examples of best practices to encourage the courage to carry out a comprehensive transformation.

Research by Rachinger et al. (2019) also strongly underlines the importance of support from a wider ecosystem. This includes the existence of regulations that support digital transformation, the availability of equitable and reliable digital infrastructure, and access to financing that supports the adoption of technology in

the small business sector. Without adequate systemic support, small businesses will find it difficult to maintain the sustainability of the digital transformation and managerial innovation that has been carried out.

Finally, the summary of the findings from all of this literature concludes that the success of the integration between e-commerce and managerial innovation in increasing the competitiveness of small businesses is determined by three main, mutually complementary factors, namely: internal readiness from a digital and managerial perspective; the availability of relevant resources that support transformation; and the existence of an external ecosystem that encourages innovation, collaboration, and digital transformation. By simultaneously fulfilling these three prerequisites, small businesses can optimally utilize the potential of digital technology and modern managerial approaches to achieve sustainable business growth and a competitive advantage that can last in the long term in the global market.

5. Discussion

The results of the literature analysis show that the integration between e-commerce and managerial innovation has a significant influence on increasing the competitiveness of small businesses. However, the impact is not always uniform or equal, because it is highly dependent on various internal factors such as digital readiness and managerial capacity, as well as external factors such as the support of the available business ecosystem. E-commerce as a disruptive technology brings about major changes that require a high level of adaptability, both from the technical

operational side and from the managerial strategy side (Cozzolino et al., 2018). A lack of readiness in one of these aspects can lead to a failure to reap the optimal benefits of the digital transformation process, and can even have a negative impact on the stability of small businesses.

One of the critical issues identified from previous studies is the existence of a wide digital gap among small business owners, especially related to technology literacy and managerial capacity. Some business owners only adopt digital platforms in a limited way or even as a mere formality, without making the necessary adjustments to the management structure to suit the needs of digitalization. This leads to the emergence of quite large obstacles in managing customer data, a lack of optimization of the supply chain, and weak strategic decision-making that should be data-based. These findings strengthen the argument put forward by Sutomo et al. (2020), who state that the synergy between technology and management cannot be separated in the context of digital transformation in the small business sector.

In addition, studies by Lányi et al. (2021) emphasize that managerial innovation plays a central role in determining the direction and success of digital transformation. Without a change in managerial mindset and actions, the adoption of technology tends to only be a superficial or cosmetic change, which does not have a real impact on increasing competitive advantage. The managerial innovation in question includes a number of fundamental aspects, such as data-based decision-making, more efficient and adaptive resource management, and a change in organizational structure to become more open, collaborative, and responsive to change.

Furthermore, this integration cannot be separated from the context of a wider business ecosystem. External factors such as regulatory support from the government, the availability of adequate and affordable digital infrastructure, and access to technology-based financing are also the keys to the success of transformation. Research by Purbasari et al. (2021), as well as Rachinger et al. (2019), confirms that without concrete policy support and institutions that actively facilitate the process of digital and managerial transformation, small business owners will experience great difficulty in navigating the complexity of an increasingly digital business ecosystem.

On the other hand, several studies show positive results that indicate that this integration has a real impact on the performance of small businesses. Studies by Effendi and Subroto (2021) show that integration carried out correctly can result in higher operational efficiency, wider market penetration, and an acceleration in the product innovation cycle. Thus, it can be concluded that the synergy between e-commerce and managerial innovation is a strong and essential foundation in building the competitiveness of small businesses in the digital era. However, the achievement of optimal results will only occur if there is a solid alignment between the internal readiness of the organization, continuous training, and systemic support from an external environment that is siding with and proactive in supporting the transformation of small businesses towards inclusive and sustainable digitalization.

6. Conclusion

This literature study shows that the integration of e-commerce and managerial innovation plays a significant role in increasing the competitiveness of small businesses. E-commerce provides great opportunities in expanding markets, reducing operational costs, and improving customer relationships through digital technology. On the other hand, managerial innovation strengthens internal adaptability, data-based decision-making, and creates a more flexible and responsive organizational culture. The success of the integration of the two depends on a number of important factors: the readiness of human resources, organizational capacity, and a supportive external environment. Without managerial innovation, technology is only a tool without a strategic direction. Likewise, without technology, managerial innovation will be limited to the internal scope without a strong driving force to compete globally.

This research also underlines the need for facilitative public policy interventions, such as digital entrepreneurship training, digital infrastructure support, and access to technology financing. Incubation programs and partnerships with educational institutions or the private sector are also recommended as collaborative strategies that can accelerate the transformation of small businesses towards a digital and innovative direction. Thus, the synergy between e-commerce and managerial innovation is not just a short-term strategy to increase competitiveness, but also the foundation for sustainable growth of small businesses in the digital economy era.

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