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Information Technology Adoption and Business Model Innovation as Drivers of SME Competitiveness in Timor-Leste: A Conceptual Framework and Research Agenda

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Abstract: Small and medium-sized enterprises (SMEs) play an important role in supporting economic diversification and employment in Timor-Leste. However, their competitiveness may be constrained by limited financial resources, digital capabilities, and market access. Although previous studies have examined digital technology adoption and business model innovation, these factors are often investigated separately or in contexts that may not fully reflect the conditions of SMEs in Timor-Leste. This study aims to develop a conceptual framework explaining how information technology adoption and business model innovation may contribute to SME competitiveness in Timor-Leste. A conceptual research approach was employed through a synthesis of relevant academic literature and institutional reports on digital transformation, business model innovation, and SME competitiveness. The synthesis indicates that information technology adoption may strengthen competitiveness through improved operational efficiency, broader market access, and better information management. Business model innovation may contribute by renewing how SMEs create, deliver, and capture value. The proposed framework positions these factors as two distinct but potentially complementary drivers of SME competitiveness and formulates two propositions for future empirical testing. The study's novelty lies in integrating information technology adoption and business model innovation into a single conceptual framework specifically contextualized for SMEs in Timor-Leste. The framework provides a foundation for future empirical research and evidence-informed SME development policies.

Keywords: Information Technology Adoption, Business Model Innovation, SME Competitiveness, Timor-Leste, Conceptual Framework.

INTRODUCTION

Micro, small, and medium-sized enterprises (MSMEs) play a vital role in supporting economic growth, creating jobs, and strengthening entrepreneurial activity. In Timor-Leste, enhancing MSME competitiveness is crucial for supporting economic diversification and strengthening the non-oil business sector. An Asian Development Bank (ADB, 2025) report indicates that MSMEs in Timor-Leste continue to face various challenges, including access to finance, digitalization, and supply chain issues. In this context, the adoption of information technology can help MSMEs expand their markets and improve efficiency, while business model innovation enables enterprises to develop new ways of creating and delivering value to customers. However, the benefits of digitalization are not always realized without adequate support in terms of skills, resources, and organizational capabilities (OECD, 2021).

Numerous studies have examined the relationships among digital technology, business model innovation, and firm performance. Bouwman et al. (2019) demonstrated the importance of business model innovation in enhancing the performance of MSMEs undergoing digitalization. Eller et al. (2023) also investigated the links between information technology adoption, business model innovation, and the financial performance of MSMEs. Meanwhile, Merín-Rodrigáñez et al. (2024) found that business model innovation acts as a mediator in the relationship between digital transformation and firm performance. However, these studies have largely emphasized organizational or financial performance rather than competitiveness as a broader strategic outcome. Differences in research contexts also raise questions regarding the applicability of these relationships to MSMEs in Timor-Leste.

Another gap concerns the need for theoretical integration and the development of a more focused research agenda. Mattos et al. (2024) identify the need for a more comprehensive understanding of technological transformation in MSMEs, including its link to business model changes. Vial (2019) explains that digital transformation entails technology-driven organizational change, while Verhoef et al. (2021) emphasize the strategic implications of digital transformation for business models and organizational capabilities. Foss and Saebi (2017) also indicate that business model innovation remains an area requiring further conceptual development. Furthermore, Teoh et al. (2024) provide evidence regarding the interrelationships among digital capabilities, digital business model innovation, and MSME competitiveness in Malaysia. These findings serve as a basis for developing a conceptual framework that integrates information technology adoption and business model innovation, focusing on MSME competitiveness, particularly within the context of Timor-Leste.

Addressing this gap, this article offers a novel contribution by developing a conceptual framework that positions information technology adoption and business model innovation as complementary factors in explaining the competitiveness of MSMEs in Timor-Leste. The framework does not assume that technology usage automatically enhances competitiveness; instead, it emphasizes the importance of MSMEs' ability to leverage technology and adapt their business models. This article aims to develop a conceptual framework explaining the relationship between these two factors and MSME competitiveness, and to formulate a research agenda to guide future researchers in empirically testing and further developing the model.

METHODS

This study employs a qualitative approach using a literature review method to develop a conceptual framework regarding information technology adoption and business model innovation as drivers of SME competitiveness in Timor-Leste. The literature review method was selected because it enables the researcher to integrate findings from previous studies, identify knowledge gaps, and develop a theoretical understanding that serves as a foundation

for future research (Snyder, 2019). This approach does not aim to test relationships between variables using primary empirical data; rather, it seeks to construct a conceptual argument based on a synthesis of relevant literature.

Literature was gathered by searching for scholarly articles in databases such as Scopus, Web of Science, and Google Scholar, as well as through institutional publications relevant to MSME development and digitalization in Timor-Leste. Keywords used included information technology adoption, business model innovation, SME competitiveness, digital transformation, small and medium-sized enterprises, and Timor-Leste. Priority was given to publications from the last ten years, while also considering earlier theoretical works of fundamental relevance. Selection criteria included alignment with the research focus, clarity of the theoretical foundation, relevance of findings, and source credibility. Empirical publications were used to understand patterns of relationships between variables, whereas conceptual articles and literature reviews served to strengthen the development of the research framework. This process adhered to the principle that a literature review must be conducted in a focused and transparent manner to yield a meaningful synthesis of knowledge (Snyder, 2019).

The literature analysis was conducted through theme identification, a comparison of findings, and conceptual synthesis. First, literature on information technology adoption was analyzed to understand how technology utilization supports operational efficiency, market access, and information management within MSMEs. Second, literature on business model innovation was examined to explain shifts in business value creation, delivery, and capture. Third, these two concepts were integrated to explain their potential contribution to MSME competitiveness. This stage also took into account the findings of Fang et al. (2024), which indicate a link between digital business model innovation and MSME competitiveness, although the impact may vary depending on the specific dimension of innovation examined. The resulting synthesis was then used to identify research gaps, develop a conceptual framework, and formulate a research agenda suitable for empirical testing among MSMEs in Timor-Leste.

To maintain the consistency of the argument, the development of the conceptual framework focuses on the interrelationships between information technology adoption (as the first independent variable), business model innovation (as the second independent variable), and MSME competitiveness (as the dependent variable). This framework is developed through the lens of dynamic capabilities, which highlights the importance of an organization's ability to adapt its resources and business processes to environmental changes (Vial, 2019). The study's findings are then used to formulate conceptual propositions and recommendations for future research, including opportunities to test the relationships between variables, contextual conditions that may influence these relationships, and appropriate methodological approaches. Thus, this literature review aims to establish a systematic conceptual foundation while providing guidance for researchers wishing to test the model within the context of MSMEs in Timor-Leste.

RESULTS AND DISCUSSION

Results

Synthesis of Literature on Information Technology Adoption in MSMEs

Information technology adoption is the process of utilizing digital technologies to support operational activities, marketing, transactions, information management, and customer service. For MSMEs, this adoption can take the form of using social media, online sales platforms, digital payment systems, and applications for financial and inventory record-keeping. The OECD (2021) explains that digital technologies can help MSMEs improve efficiency, expand market reach, and overcome business limitations. Findings by Yuwono et al. (2024) also indicate that the adoption of information and communication technology

among MSMEs in developing countries is influenced by various factors, including resources and technological knowledge. Thus, the adoption of information technology relates not only to the ownership of devices but also to their utilization in supporting business activities.

Literature indicates that the use of information technology has the potential to enhance the ability of MSMEs to compete. Digital technology can facilitate customer communication, accelerate transactions, improve access to market information, and support decision-making (OECD, 2021; Kergroach, 2021). Bouwman et al. (2019) found that among MSMEs undergoing digital transformation, the allocation of resources toward business model experimentation and strategy implementation is linked to improved firm performance. Mattos et al. (2024) also emphasize that technological transformation in MSMEs is associated with processes of technology assimilation and business model innovation. This demonstrates that the benefits of technology are determined not only by the technology itself but also by the enterprise's ability to integrate it into its business operations.

Nevertheless, the implementation of information technology still faces challenges, particularly regarding limited financing, digital skills, internal resources, and supporting infrastructure (Kergroach, 2021; OECD, 2021). Sagala and Őri (2024) emphasize the importance of understanding the factors that facilitate the successful digital transformation of MSMEs, while Yuwono et al. (2024) identify resource constraints and a lack of technological knowledge as barriers to information technology adoption. In the context of Timor-Leste, an Asian Development Bank report (ADB, 2025) also highlights digitalization as a critical issue for MSME development, alongside financing and supply chains. Therefore, the ability of MSMEs to leverage technology must be understood by taking into account both business conditions and the operating environment.

Based on this synthesis, information technology adoption is positioned as a factor with the potential to support MSME competitiveness through increased efficiency, market expansion, and service improvements. However, the use of technology does not necessarily mean that MSMEs have altered the way they create and deliver value to customers. This distinction is significant because information technology adoption and business model innovation are interrelated yet distinct concepts (Bouwman et al., 2019; Mattos et al., 2024). Consequently, within this study's conceptual framework, information technology adoption is designated as the first independent variable expected to contribute to MSME competitiveness in Timor-Leste.

Literature Synthesis on Business Model Innovation

Business model innovation refers to changes in the way a company creates, delivers, and captures value from its business activities. This type of innovation goes beyond new product development; it encompasses changes in marketing strategies, customer service, distribution channels, partnerships, and revenue streams (Foss & Saebi, 2017; Bouwman et al., 2019). For MSMEs, business model innovation can be achieved by tailoring product offerings to customer needs, developing new sales channels, or implementing more effective collaborative arrangements. Thus, business model innovation represents an effort to adjust operational methods to remain relevant amidst market changes and competition.

Literature indicates that business model innovation can bolster the competitiveness of MSMEs by creating distinct value and enhancing their ability to meet customer needs. Bouwman et al. (2019) explain that business model experimentation and strategy implementation are linked to improved performance among MSMEs undergoing digitalization. Merín-Rodrigáñez et al. (2024) also found that business model innovation plays a role in the relationship between digital transformation and the performance of innovative MSMEs in Spain. Meanwhile, research by Fang et al. (2024) on Malaysian MSMEs demonstrates that innovation in value creation, value proposition, and value capture contributes to MSME competitiveness, although innovation in value delivery does not show

the same effect. These findings suggest that the impact of business model innovation can vary depending on the specific aspects of change implemented and the business context.

Business model innovation is also linked to the ability of MSMEs to adapt their strategies and capitalize on new opportunities. Mattos et al. (2024) explain that technological transformation within MSMEs encompasses both the adoption of technology and changes to the business model. An Asian Development Bank (2024) report on digital entrepreneurship across six ASEAN countries also highlights the importance of digital applications and business model digitalization in fostering business model experimentation. Thus, while technology can unlock innovation opportunities, MSMEs must still adjust how they offer products, serve customers, and generate revenue to fully harness the benefits of technology.

In the context of Timor-Leste, business model innovation is relevant for helping MSMEs expand their markets and develop business opportunities amidst the challenges regarding financing, digitalization, and supply chains identified by the Asian Development Bank (2025). However, the implementation of such innovation must be tailored to business capacity and local market characteristics. Based on this synthesis, business model innovation is positioned as the second independent variable in this study's conceptual framework, hypothesized to contribute to MSME competitiveness by renewing the ways in which value is created, delivered, and captured. This relationship is further discussed conceptually in the Discussion section.

Literature Synthesis on MSME Competitiveness

The competitiveness of MSMEs refers to a business's ability to maintain and improve its market position through value creation, operational efficiency, product quality, and the capacity to meet customer needs. Competitiveness is determined not only by competitive pricing but also by the ability to offer differentiated products, enhance service quality, and adapt to changes in the business environment (Porter, 1985; OECD, 2021). In the context of MSMEs, competitiveness also involves the ability to effectively utilize limited resources to ensure business continuity and withstand competitive pressures (Barney, 1991; Teece, 2007).

Literature indicates that the competitiveness of MSMEs is influenced by a firm's ability to develop resources, leverage technology, and adapt business strategies. Barney (1991) explains that resources which are valuable, rare, difficult to imitate, and hard to substitute can serve as the foundation for competitive advantage. Meanwhile, Teece (2007) emphasizes the importance of dynamic capabilities specifically, a firm's ability to identify opportunities, capitalize on them, and adjust its resources in response to environmental changes. In a digital context, the OECD (2021) highlights that technology adoption can help MSMEs boost productivity, expand markets, and improve customer relationships. Bouwman et al. (2019) also demonstrate the importance of business model innovation practices in enhancing the performance of MSMEs undergoing digitalization. These findings indicate that competitiveness depends not only on the resources a business possesses but also on its ability to manage and develop those resources.

Competitiveness can also be strengthened through business model innovation, enabling MSMEs to create value and offer solutions that align with market needs. Foss and Saebi (2017) identify business model innovation as a crucial area for explaining shifts in how companies conduct activities and create value. Furthermore, Fang et al. (2024) examined the relationships between digital capabilities, digital business model innovation, and MSME competitiveness, highlighting the relevance of business model transformation to the discourse on competitiveness. However, the benefits derived from technology and innovation vary across enterprises, as they are influenced by internal capabilities, market characteristics, and the business environment (Teece, 2007; OECD, 2021). Consequently, competitiveness should be understood as the outcome of an MSME's ability to effectively integrate resources, technology, and business strategies.

In the context of Timor-Leste, the competitiveness of MSMEs warrants examination because small businesses face challenges regarding access to finance, digitalization, and supply chains (Asian Development Bank [ADB], 2025). These conditions make the ability to utilize information technology and update business models two relevant aspects to investigate. Based on a synthesis of the literature, this conceptual study positions MSME competitiveness as a dependent variable reflecting a business's capacity to maintain its market position, enhance efficiency, reach customers, and respond to changes in the business environment. Accordingly, the study's conceptual framework examines information technology adoption and business model innovation as two factors conceptually expected to contribute to MSME competitiveness in Timor-Leste.

Development of the Conceptual Framework

The development of this study's conceptual framework is based on a synthesis of literature regarding information technology adoption, business model innovation, and MSME competitiveness. These three concepts are interconnected in explaining how MSMEs can navigate competition and changes in the business environment. Information technology adoption enables businesses to enhance efficiency, expand market reach, and improve access to information, whereas business model innovation relates to changes in how a business creates, delivers, and captures value (Bouwman et al., 2019; OECD, 2021; Foss & Saebi, 2017). Meanwhile, competitiveness reflects a business's ability to maintain its market position and establish an advantage over competitors (Barney, 1991; Porter, 1985). Based on these interrelationships, this study develops a conceptual framework comprising two independent variables and one dependent variable.

The first independent variable is information technology adoption. This variable describes the utilization of technology to support operational activities, marketing, transactions, and business information management. The use of technology has the potential to help MSMEs enhance efficiency and better respond to customer needs (OECD, 2021; Kergroach, 2021). However, these benefits depend on the ability of business owners to integrate technology into their business operations. Therefore, information technology adoption is positioned as a factor that can conceptually contribute to the competitiveness of MSMEs.

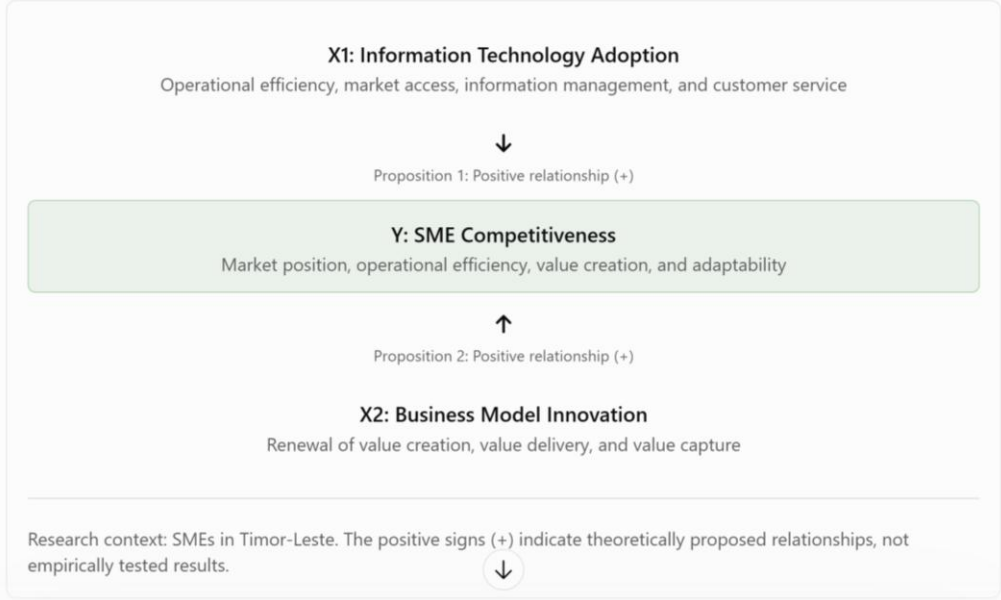
The second independent variable is business model innovation—defined as a change in the way a business creates, delivers, and captures value. Such innovation can be achieved through the renewal of marketing channels, the development of service models, the adjustment of product offerings, or changes to revenue mechanisms. Foss and Saebi (2017) explain that business model innovation is a significant area of study regarding strategic change and corporate value creation. Research by Bouwman et al. (2019) and Fang et al. (2024) further highlights the relevance of business model innovation to the performance and competitiveness of MSMEs. Consequently, business model innovation is positioned as the second independent factor expected to contribute to competitiveness.

The dependent variable in this framework is SME competitiveness. Competitiveness is understood as a business's ability to maintain its market position, enhance efficiency, offer value relevant to customers, and adapt to changes in the business environment. The resource-based perspective posits that competitive advantage arises from the utilization of valuable and inimitable resources, whereas the dynamic capabilities perspective emphasizes a firm's ability to adjust its resources in response to environmental changes (Barney, 1991; Teece, 2007). Based on these two perspectives, information technology adoption and business model innovation are expected to support competitiveness through distinct yet complementary mechanisms.

This conceptual framework is then situated within the context of MSMEs in Timor-Leste. This context is significant because challenges related to financing, digitalization, and

supply chains can influence the ability of MSMEs to leverage technology and transform their business models (Asian Development Bank [ADB], 2025). However, this study does not assume that conceptual relationships identified in literature from other countries automatically apply to Timor-Leste. Instead, the framework serves as a basis for formulating propositions and a research agenda that can be further tested empirically among MSMEs in the country.

Based on the preceding discussion, this study proposes two main propositions. Proposition 1: Information technology adoption contributes positively to the competitiveness of MSMEs. Proposition 2: Business model innovation contributes positively to the competitiveness of MSMEs. These two propositions represent conceptual arguments derived from a synthesis of the literature, rather than the results of empirical testing within this study. The proposed framework is intended to serve as a foundation for future research to examine the relationships between these two independent variables and MSME competitiveness in the context of Timor-Leste.



Research context: MSMEs in Timor-Leste. The (+) sign indicates the conceptually proposed direction of the relationship, not the result of empirical testing.

Figure 1. Research conceptual framework

Discussion

This study aims to develop a conceptual framework explaining the roles of information technology adoption and business model innovation in strengthening the competitiveness of MSMEs in Timor-Leste. Based on a synthesis of the literature, these two factors are viewed as strategic elements that can assist MSMEs in navigating market changes, resource constraints, and intensifying competition. Digital transformation extends beyond the mere use of technology; it encompasses changes in organizational processes and the ways in which companies conduct their business activities (Vial, 2019; Verhoef et al., 2021). Consequently, understanding MSME competitiveness requires considering a business's ability to leverage technology while simultaneously adapting its business strategies.

The adoption of information technology has the potential to strengthen the competitiveness of MSMEs by enhancing operational efficiency, expanding market access, and improving information management. Digital technology enables business owners to promote products via online channels, communicate more easily with customers, and obtain information that supports decision-making. The OECD (2021) and Kergroach (2021) emphasize that digitalization can create opportunities for MSMEs to boost productivity and

reach broader markets. However, these benefits are not always automatically realized, as successful technology adoption also depends on organizational readiness, digital skills, and the ability to integrate technology into business processes (Sagala & Őri, 2024; Vial, 2019). Thus, the adoption of information technology is viewed as a factor capable of enhancing competitiveness when its implementation aligns with the business's specific needs and capacities.

Beyond technology, business model innovation is a crucial factor in explaining the ability of MSMEs to withstand competition. Business model innovation enables business owners to revamp how they create, deliver, and capture value by altering product offerings, distribution channels, service patterns, partnerships, or revenue mechanisms. Foss and Saebi (2017) emphasize the importance of developing a conceptual understanding of business model innovation, while Trischler and Li (2023) highlight the need for conceptual clarity in research on digital business model innovation. Ancillai et al. (2023) further explain that advancements in digital technology are closely linked to changes in a firm's value creation, delivery, and capture mechanisms. This implies that for MSMEs, merely utilizing available technology is insufficient; they must also evaluate whether their methods of offering products and serving customers remain aligned with market needs.

The relationship between information technology adoption and business model innovation is significant because, while these two factors serve distinct functions, they can complement one another. Technology provides the means to access information, manage transactions, and interact with customers, whereas business model innovation enables MSMEs to translate these opportunities into changes in how they conduct business. Bouwman et al. (2019) highlight the importance of business model innovation practices within the MSME digitalization process. Mattos et al. (2024) further emphasize that technological transformation in MSMEs encompasses both technology assimilation and business model innovation—elements that have frequently been studied in isolation. Additionally, Merín-Rodrigáñez et al. (2024) found that business model innovation acts as a mechanism linking digital transformation to the performance of innovative MSMEs in Spain. These findings support the argument that technology adoption can yield greater benefits when accompanied by business model adjustments, although this relationship warrants further examination across different MSME contexts.

This argument aligns with Liu et al. (2024), who identify dynamic capabilities as a crucial factor in the relationship between digital transformation, business model innovation, and MSME performance. Teoh et al. (2023) explain that digital business model innovation in MSMEs can encompass updates to value creation, value proposition, value delivery, and value capture. Meanwhile, Fang et al. (2024) found that certain dimensions of digital business model innovation contribute to the competitiveness of MSMEs in Malaysia, although not all dimensions exhibit the same relationship. These differences indicate that the impact of innovation is not always uniform and may depend on the nature of the changes implemented and the characteristics of the business. Consequently, the conceptual framework of this study treats information technology adoption and business model innovation as two independent variables, each contributing to competitiveness through its own pathway, without assuming that one automatically acts as a mediator for the other.

In the context of Timor-Leste, this conceptual relationship warrants examination because MSMEs face challenges related to financing, digitalization, and supply chains. An Asian Development Bank report (2025) highlights these challenges and underscores the importance of policy support to foster digitalization and growth-oriented business development. These circumstances indicate that strengthening MSME competitiveness requires more than just promoting technology adoption; it also necessitates attention to the ability of business owners to implement changes aligned with market conditions and available resources. At the same time, the framework developed in this study does not assume

that findings from other countries are fully applicable to Timor-Leste. Instead, the results of prior research serve as a basis for formulating relationships that require further testing within the Timor-Leste business environment. Thus, the local context plays a crucial role in understanding the extent to which technology and business model innovation can support MSME competitiveness.

Theoretically, this study contributes by integrating information technology adoption and business model innovation into a single conceptual framework focused on the competitiveness of MSMEs in Timor-Leste. This approach broadens the discourse on digital transformation, moving beyond a mere emphasis on technology usage to also consider shifts in value creation strategies and the organizational capacity to adapt to the business environment (Verhoef et al., 2021; Ancillai et al., 2023). From a practical standpoint, this framework provides a basis for MSME operators to consider technology adoption and business model renewal as integral components of their business development strategies. For policymakers, the framework offers a reference point for designing support measures that combine digital skills enhancement, access to technology, business mentoring, and innovation development. However, the effectiveness of such strategies must be tailored to the specific needs of MSMEs and the institutional context of Timor-Leste.

Based on this reasoning, future research agendas should focus on empirically testing two key propositions: the positive contribution of information technology adoption to MSME competitiveness and the positive contribution of business model innovation to MSME competitiveness. Future studies could employ quantitative approaches to examine the relationships between these variables, or qualitative approaches to understand how MSME operators adopt technology and implement business model changes. Research should also account for variations in business sectors, business sizes, digital readiness levels, and regional characteristics within Timor-Leste. This is crucial because the digital transformation literature highlights a continuing need to clarify the processes of change, the conditions supporting success, and the outcomes MSMEs derive from technology investments (Mattos et al., 2024; Sagala & Őri, 2024). Consequently, the developed conceptual framework offers not only a theoretical explanation but also a foundation for empirical research aimed at identifying appropriate strategies to enhance MSME competitiveness in Timor-Leste.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This study develops a conceptual framework explaining how information technology adoption and business model innovation may contribute to SME competitiveness in Timor-Leste. Based on the literature synthesis, information technology adoption can support competitiveness by improving operational efficiency, expanding market access, facilitating information management, and strengthening customer engagement. Meanwhile, business model innovation can help SMEs adapt to changing market conditions by renewing how they create, deliver, and capture value. These two factors represent distinct but potentially complementary pathways through which SMEs can strengthen their competitive position. The proposed framework contributes to the literature by bringing both factors together within the specific context of SMEs in Timor-Leste. However, the proposed relationships remain conceptual and require empirical validation. The framework therefore provides a foundation for future research on the mechanisms through which technology adoption and business model innovation can support SME competitiveness in developing economies.

Limitations

This study has several limitations. First, it relies on a conceptual synthesis of existing literature and does not include primary empirical data from SMEs in Timor-Leste. Consequently, the proposed relationships cannot be interpreted as empirically established

effects within this national context. Second, the literature used to develop the framework includes studies conducted in different countries and institutional environments, which may limit the direct applicability of their findings to Timor-Leste. Third, the framework focuses on two independent variables and one dependent variable. Although this structure provides conceptual clarity, it does not fully capture other factors that may influence SME competitiveness, including access to finance, digital skills, infrastructure, managerial capabilities, and institutional support.

Recommendations

Future research should empirically examine the proposed relationships using quantitative, qualitative, or mixed-method approaches involving SMEs in Timor-Leste. Quantitative studies could test the proposed propositions across different sectors and business sizes, while qualitative studies could explore how entrepreneurs adopt digital technologies and modify their business models under local resource constraints. Comparative research across regions or countries could also clarify how institutional and market conditions shape the relationship between technology adoption, business model innovation, and competitiveness. Further studies may examine contextual factors such as digital infrastructure, entrepreneurial capabilities, and access to financing without necessarily incorporating them into the core framework from the outset. These efforts would help refine the proposed framework and provide evidence-based insights for SME development policies and business practices.

Author Contributions

All authors are responsible for the conceptualization, development of the conceptual framework, literature review, synthesis and interpretation of related studies, and manuscript drafting. The authors also contributed to formulating research propositions, discussing theoretical and practical implications, and revising the manuscript. All authors have approved the final version of the manuscript for submission.

AI Disclosure Statement

Artificial intelligence tools were used to assist with language refinement, manuscript organization, and the development of preliminary academic prose. The author reviewed and revised the generated material, evaluated the relevance of the cited literature, and remains responsible for the accuracy of the references, the interpretation of the literature, the originality of the arguments, and the final content of the manuscript. AI tools were used as writing support and did not replace the author's scholarly judgment or responsibility for the research.

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