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The Mediating Role of Financial Innovation and Women's Entrepreneurial Practices: Bridging the Adoption of ICT with SMEs Business Performance

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ABSTRACT

This study aims to investigate the mediating role of financial innovation and women's entrepreneurship practices in the relationship between ICT adoption and women's business performance. The sample consisted of 210 women SMEs, selected from a database from the Office of Cooperatives and SMEs in West Sumatra Province, Indonesia. The findings showed that financial innovation mediates the relationship between ICT adoption and SMEs' business performance. However, the study did not find that women's entrepreneurship practices and SMEs' business performance mediate the relationship between ICT adoption and SMEs' business performance. The findings contribute to a comprehensive understanding of the mediating role in the relationships between financial innovation and women's entrepreneurial practices, thereby facilitating the integration of ICT with the business performance of SMEs. Additionally, the findings have significant implications for policymakers seeking to design an effective support system for the digitalization of SMEs' businesses, especially among Indonesian women-owned SMEs.

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1. Introduction

Access to financing is among the obstacles faced by women-owned SMEs in pursuing their business goals. This is because SMEs heavily depend on finance to sustain and enhance their operations. Limited access to financing through traditional sources has underscored the significance of financial innovation for SMEs. Consequently, financial innovation is a critical factor that SMEs need to prioritize, as it plays a pivotal role in determining their business goals and sustainability. This perspective aligns with Wellalage and Fernandez (2019) assertion that effective management and administration of SMEs' financial resources are essential for achieving business goals and sustainability.

Financial innovation refers to actions taken to create new financial instruments related to the financial market and technology to improve organizational performance (Lee et al., 2015). As a new development and implementation in the financial system, financial innovation can enhance the efficiency, accessibility, and speed of financial services. (Mehta et al., 2021). Financial innovation helps SMEs minimize the need for face-to-face payments, enabling faster and more efficient transactions (Baporikar, 2022). The ability to utilize the latest digital financial services can enhance operational efficiency and expand investments (Caballero-Morales, 2021; Pu et al., 2021).

In Indonesia, SMEs play a crucial role in driving economic growth. According to Statistics Indonesia (2022), the current number of SMEs stand at 64.2 million, contributing to 61.07% to the country's Gross Domestic Product (GDP), equivalent to 8,573.89 trillion Indonesian Rupiah. Not only that, but these SMEs also have a significant impact on the country's economy, employing 97% of the total workforce and attracting up to 60.4% of the total investment. Despite their substantial contribution, Indonesian SMEs have yet to achieve optimal performance in both domestic and international markets. According to Statistics Indonesia (2022), the majority of SMEs in Indonesia, accounting for 82.9%, have experienced a negative impact from the COVID-19 pandemic. Only a small proportion (5.9%) of the SMEs reported a positive impact from the pandemic. This situation has caused 63.9% of SMEs to experience a decrease in sales of more than 30%, with only 3.8% of SMEs reporting an increase in sales.

The transition of SMEs' business activities from conventional methods to digital technologies has become one of the strategies employed by the government to overcome the challenges posed by the pandemic era. This is particularly true for women-owned SMEs, as the adoption of information and communication technology (ICT) is believed to have a significant influence on women's entrepreneurship practices. Anggraini et al. (2023) stated that women entrepreneurs can use ICT to sustain their business performance and compete on a global scale. Isa et al. (2021) added that the rise of women entrepreneurs worldwide has garnered attention from both the business and academic sectors. The involvement of women entrepreneurs in entrepreneurship plays a significant role in transforming and empowering society by increasing women's participation in the labor market. Moreover, access to and use of information and communication technology (ICT) are crucial factors in advancing women's entrepreneurial endeavors (Ong et al., 2015).

Furthermore, ICT adoption has contributed to strengthening the financial system, leading to the development and introduction of various products with innovative ICT-based financial solutions (Comin & Nanda, 2019). ICT can influence financial innovation, including increasingly sophisticated payment systems and e-transactions. The widespread use of ICT in the global economy has resulted in the emergence of financial innovation (Lee et al., 2020). ICT has transformed financial innovation, allowing for the immediate response to the latest data and facilitating accelerated fund transfers between physically distant markets (Lechman & Marszh, 2015).

However, women-owned SMEs in the country still face significant challenges in fully recovering from the COVID-19 pandemic. The business landscape, including SMEs, has been grappling with disruptions due to the pandemic, accelerating the digitalization revolution. In this context, women-owned SMEs face limited choices and must adapt by undergoing digital transformation, a process commonly referred to as 'Go Digital.' It is crucial for SMEs to engage with digital technologies and ecosystems to access a broader market. Therefore, women-owned SMEs must be agile in responding to changes in this business model, thereby elevating their capabilities as qualified SMEs.

Past research literature has revealed several studies related to women's entrepreneurship. Meybodi et al. (2023) determined the factors influencing the success of Iranian women entrepreneurs, stating

that comprehensive quality, moral and personality traits, and social capital have contributed to their success. Salamzadeh et al. (2023) discovered a correlation between strategic foresight and women's entrepreneurship, which in turn contributes to the sustainability of businesses and their networks.

While several previous studies have focused on various aspects related to financial development, technology utilization, and business performance, such as a study by Comin and Nanda (2019), who investigated the correlation between financial development and technology diffusion, they lacked specificity regarding the types of technology involved. Lee et al. (2020) focused on changes in access to finance for innovative small firms in the UK after the 2008 financial crisis, ignoring elements of women's entrepreneurship and the adoption of ICT. Additionally, Lechman and Marszh (2015) examined the impact of ICT technologies and financial innovations, specifically focusing on the increasing penetration of ICT on exchange-traded funds in certain countries, omitting a crucial consideration of SMEs' business performance. Furthermore, Tajpour and Razavi (2022) emphasized the significance of knowledge transfer among companies for global competitiveness, but this insight did not directly address the specific gaps in understanding the interplay between financial innovation, technology adoption, women's entrepreneurship, and SMEs' business performance.

On the other side, some relevant studies on the mediating role of various factors have been revealed in the literature. For example, Asni and Agustia (2022) studied the mediating role of financial performance in modeling the relationship between green innovation and firm value, using ASEAN countries as a sample with panel analysis. Kulathunga et al. (2020) examined the position of enterprise risk management as a mediator in the relationship between techno-finance literacy and the performance of SMEs. Yunis et al. (2017) studied the impact of ICT-based innovations on organizational performance through the role of corporate entrepreneurship. Hameli and Ordun (2022) examined the relationship between emotional intelligence, self-efficacy, and organizational commitment, focusing on the mediating role of self-efficacy in the relationship between emotional intelligence and organizational commitment.

The above-mentioned literature did not explore the comprehensively interconnected factors between women's entrepreneurial practices and financial innovation, which play a mediating role between ICT adoption and women-owned SMEs' business performance. This indicates that the knowledge-based view (KBV) on how the adoption of ICT affects the business performance of small and medium-sized enterprises (SMEs) owned by women and financial innovation, as mediated by financial innovation and women's entrepreneurial practices, is still not fully explored in the current literature. This is despite the fact that ICT adoption is a key knowledge-based tool for SMEs owned by women to quickly transition to digital.

Thus, this study aims to examine the potential mediating roles of financial innovation and women's entrepreneurial practices in connecting the adoption of ICT with the business performance of SMEs. However, this study concentrated on women-owned SMEs in Indonesia, a developing nation. In a theoretical sense, the study findings would be beneficial in introducing a fresh, new model that highlights the mediating role in the connections between financial innovation and women's entrepreneurial practices, fostering the integration of ICT into the business performance of women-owned SMEs. In a practical context, these findings provide valuable insights for policymakers seeking to devise an efficient support system for the digitalization of businesses, especially those owned by women in Indonesia.

This paper divides its content into five sections. The first section gives a brief overview of the introduction. The second section reviews the existing research literature for formulating the hypotheses. In the third section, the methodology is presented along with data analysis. The fourth section presents the results and includes pertinent discussions. The fifth section concludes the study's findings.

2. Literature Review

Adoption of ICT and business performance SMEs

SMEs utilize information and communication technology (ICT) as an effective tool and strategy to improve performance (Yunis et al., 2017; Rozmi et al., 2020). The use of ICT as a new business model in SMEs has provided access to new markets and competitive advantage (Kyakulumbye & Pather, 2022; Hoque et al., 2016; Adnan & Hoque, 2017). According to Anggraini et al. (2023), adopting ICT

leads to improved business performance for SMEs and provides them with opportunities to reach more customers and access a low-cost infrastructure to expand their businesses. Chatterjee et al. (2020) conducted a comprehensive review of the relationship between ICT adoption and business performance, focusing on female entrepreneurs in Malaysia and Indonesia. Okundaye and Dwyer (2019) found that, besides the many benefits of adopting ICT for SME performance, there are also challenges for SME stakeholders in using it.

H1: Adoption of ICT is positively related to business performance

The mediating effect of financial innovation

ICT and financial innovation

The convergence of information and communication technology (ICT) and financial innovation has played a pivotal role in shaping the global landscape into a closely interconnected community and fostering economic advancement (Shehzad et al., 2021). ICT drives financial innovation's presence as a driver of global economic and financial market transactions (Pu et al., 2021). ICT facilitates technology development in business processes and specifically accelerates digital fund transfers between financial markets, resulting in performance improvement. Mushtaq et al. (2022) stated that SMEs with greater access to and use of new technologies are more likely to acquire financial resources from banks. Lechman and Marszk (2015) proved the significant influence of ICT technology and financial innovation in several countries, such as Brazil, Japan, Mexico, South Korea, and the United States. The findings demonstrated that the spread of ICT use has been uniform across all nations, and that financial markets have developed quickly in tandem. Kultathunga et al. (2020) and Pu et al. (2021) empirically demonstrated the significance of adopting information and communication technology (ICT) in promoting financial innovation among SMEs, consequently fostering economic growth and enhancing competitiveness. The use of ICT gives SMEs the potential to expand, generate employment, and make significant contributions to broader economic advancement.

H2a: Adoption of ICT is positively related to financial innovation

Financial innovation and business performance SMEs

Easy access to financial services significantly guides the prospects and growth of SMEs across the world. Financial innovation in the SME financing business is urgently needed as a source of both internal and external finance for superior performance (Tahir et al., 2018; Raimi & Uzodinma, 2020). Financial innovation encompasses the creation and execution of novel concepts, offerings, solutions, or operational frameworks within the realm of finance. Furthermore, the adoption of these financial innovations results in the advantageous expansion of assets, loans, and earnings (Mushtaq et al., 2022). Furthermore, research on financial innovation in the SME sector, such as that by Effiom and Edet (2020) and Miroljub and Branka (2021), states that financial innovation in the form of payment gateways has a positive and significant influence on SME performance.

H2b: Financial innovation is positively related to business performance SMEs

Financial innovation mediates the relationship between adoption of ICT and business performance SMEs

During a pandemic, the use of information technology is very important for SMEs. In this context, financial innovation includes the use of new and creative financial solutions that utilize technology, such as digital payment services, technology-based financing, and financial management applications (Pu et al., 2021). Through ICT integration and implementing financial innovations, SMEs can optimize operational efficiency, reduce transaction costs, and increase accessibility to financial resources (Brown et al., 2020). All of these factors collectively contribute to improving SME performance, especially in dealing with external challenges such as the COVID-19 pandemic. Kulathunga et al. (2020) assert that financial innovation refers to the emergence of new financial service models through the implementation of ICT. Financial innovation encompasses changes in financial services or payments involving new technologies, financial instruments, institutions, and markets (Lechman & Marszk &, 2021). Pu et al. (2021) have proven that ICT adaptation and

innovative financial applications play a crucial role in the operations of SMEs during the pandemic. This implies that technologically integrated and sound SMEs have flexible operations that function remotely. Technology can assist SMEs in overcoming various challenges they might encounter during COVID-19, thereby impacting their business performance. SMEs employ various financial product innovations as strategies to remain competitive with their rivals, thereby enhancing their financial performance and maintaining efficiency and effectiveness in the market (Shehzed et al., 2021). In this digital business environment, financial control innovation enables managers to navigate the global economy and identify innovative solutions to financial and business challenges (Wellalage & Fernandez 2019).

H2c: Financial innovation mediates the relationship between adoption of ICT and business performance SMEs

Adoption of ICT and women's entrepreneurial practices

The use of ICT actively enhances women's entrepreneurial practices and their participation in economic activities (Anggraini et al., 2023; Isa et al., 2021). Women entrepreneurs' practices, including entrepreneurial experience, education, entrepreneurship, management conditions, and ICT tools are crucial skills for successful ICT adoption (Ratten & Tajeddini 2018). Women's entrepreneurial practice was established based on the determinant factors and barriers faced by women in adopting ICT as entrepreneurs (Yong et al., 2015). Goswami and Dutta (2015) mentioned that the main obstacles to ICT adoption are the lack of training, attitudes, knowledge, and experience of women entrepreneurs. Furthermore, Afsana (2018) supports the notion that women entrepreneurs' knowledge and experience significantly influence their adoption of ICT. Marios et al. (2018) found that female SME operators consider ICT skills crucial for success in the 21st century, but they also feel underrepresented in the digital era. These barriers can impede and influence the confidence of women entrepreneurs in fully leveraging ICT in their business activities. Therefore, it is crucial to prioritize the use of ICT in supporting the practices of women entrepreneurs in SMEs through training programs, affordable access to equipment, and appropriate software packages to help them overcome these obstacles (Ngoa & Song, 2021).

H3a: Adoption of ICT is positively related to women's entrepreneurial practices.

Women's entrepreneurial practices and SME performance

Mathew (2010) defined women entrepreneurs as women who actively engage in and participate in economic activities. However, according to Kamberidou and Pascall (2019), the practice of women's entrepreneurship should aim to enhance business performance in line with their preferences. Thus, the practice of women's entrepreneurship serves as a source of strength to attract and inspire more new entrepreneurial talents to enhance business performance (Anggraini et al., 2022; Isa et al., 2021). Individual characteristics such as age, years of formal education, managerial skills, creativity in generating ideas, ability to deal with people, and prior industry experience are positively correlated with performance (Zeb et al., 2019). Furthermore, skills and experience enable women entrepreneurs to acquire knowledge, and their enhanced capacity to seek pertinent information and resolve issues empowers them to operate their businesses proficiently, leading to improved business performance (Isa et al., 2021; Ngoa & Song, 2021; Chatterjee et al., 2020). Thus, based on the discussions above, we propose the following hypothesis:

H3b: Women's entrepreneurial practices are positively related to SME business performance

Women's entrepreneurial practices mediate ICT adoption and SME performance

Noor et al. (2021) empirically proved to make knowledge-oriented ICT a critical element for enabling women entrepreneurs to engage with job markets and bolster women's empowerment within society, thereby augmenting their performance. Welsh et al. (2018) established a positive correlation between the practice of women entrepreneurs and family financial support, enhancing business performance among women entrepreneurs in Morocco. As noted by Yong et al. (2015), the use of e-commerce platforms for online product sales in women's entrepreneurship practices can improve performance by

streamlining transactions, deliveries, and payment processes. Ong et al. (2020) suggested that with the right ICT marketing strategy, SMEs can attract new customers and retain existing ones. Therefore, the standard of living and education level of women entrepreneurs are key factors in the success of empowering women to improve their business performance (Anggraini et al., 2022). It can be concluded that the practice of women entrepreneurs in the relationship between ICT and SME performance is helping to facilitate wider and more effective adoption of technology among SMEs.

H3c: Women's entrepreneurial practices mediates the role of ICT and business performance of SMEs.

3. Methodology

This study employed a quantitative approach with a survey method to comprehensively understand financial innovation and women's entrepreneurial practices in relation to ICT adoption in the West Sumatra province, Indonesia.

The target population for this study consisted of women-owned SMEs in the province. A random sampling method was used to ensure a representative sample across different SME sizes and geographical locations in the province. The samples were 210 women SMEs, selected from a database maintained by the Office of Cooperatives and SMEs in West Sumatra province.

A structured questionnaire was designed to capture data on financial innovation and women's entrepreneurial practices in relation to ICT adoption. The questionnaire consisted of established items that were adopted from past studies, as shown in Table 1. The questionnaire was distributed by hand in order to increase the response rate from respondents through face-to-face interview. Data collection occurred over a three-month period, from October 2023 to December 2023.

We utilized Partial Least Squares (PLS) with SmartPLS 3.0 software for testing the hypothesis in data analysis. PLS was used in data analysis as it does not require the assumption of normality or a large sample size (Hair et al., 2011). Besides that, PLS can be used to test the conceptual framework and describe the relationships among the constructs (Hair et al., 214).

Table 1. Measurement of variables

Variable Name	Definition	Items	References	Likert Scale
Financial Innovation	The process or effort to develop new ideas, products, or services aimed at enhancing efficiency, accessibility, or functionality within the financial industry.	10	Ardic et al., (2012); Ye & Kulathunga (2019)	Disagree 1 to strongly agree 5
Women's Entrepreneurial Practices	Practices implemented by women entrepreneurs consists of entrepreneurial characteristics, entrepreneurial experience, management skills, customer relations, training and education, and environment.	11	Isa et al, (2021), Ong et al, (2015).	Disagree 1 to strongly agree 5
Information Communication Technology (ICT)	ICT serves as a digital platform that creates opportunities for entrepreneurial activities by utilizing tools, such as the internet, mobile technology, and social computing.	19	Hoque et al., (2015); Isa et al, (2021)	Disagree 1 to strongly agree 5
Business Performance	SME business performance is an evaluation of the results and achievements of a small and medium enterprise (SME) in achieving its business goals. Measuring SME business performance includes sales growth, gross profit, return on investment, and growth in the number of employees.	14	Oni et al., 2019;	Disagree 1 to strongly agree 5

4. Results

All respondents returned complete responses, except for two respondents who returned incomplete responses, and these were excluded from the analysis. The total number of questionnaires processed for data analysis was 210. The results of Smart PLS demonstrate that all indicators exhibited a loading factor of 1.000, indicating that the indicators' validity fulfills the criterion of being above 0.70 (Figure 1).

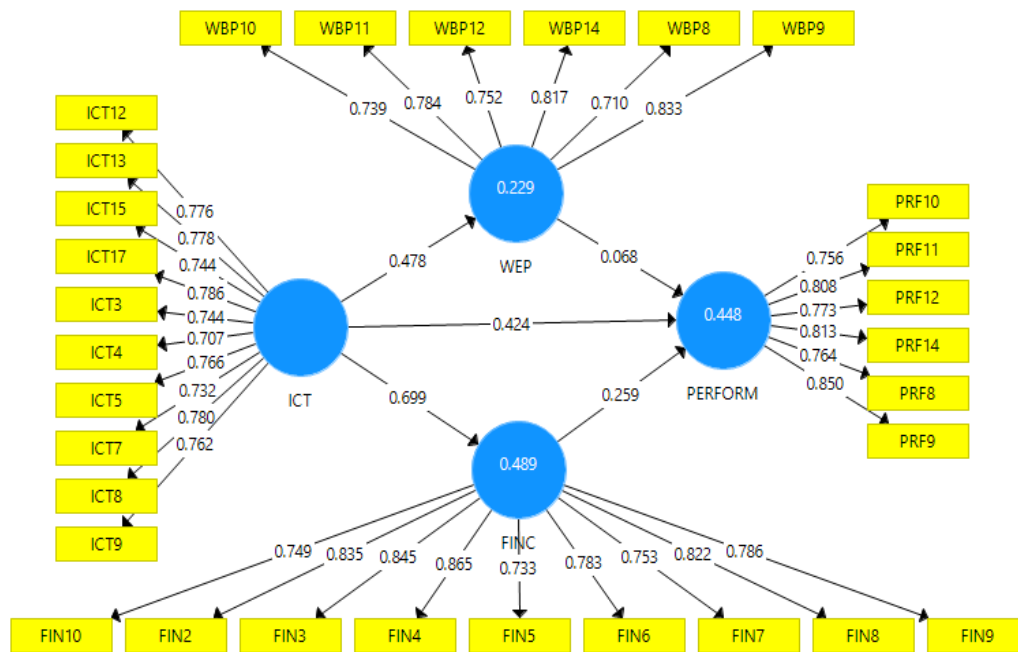


Fig. 1. Output of Smart PLS

Table 2 provides a summary of validity testing results, showing loading range values from 0.707 to 0.865. These values suggest strong correlations among construct measurements, as values above 0.7 indicate. AVE (average variance extracted) results determine convergent validity, with values over 0.5 confirming validity of convergence. Likewise, composite reliability and composite alpha test outcomes surpass 0.7, meeting the required criteria. Additionally, the discriminant validity test results were utilized to verify the distinction between individual concepts of latent variables or constructs compared to others.

The most effective recent measurement was achieved by assessing heterotrait-monotrait ratio (HTMT) values. Constructs demonstrate good discriminant validity when the HTMT value is < 0.90 (Henseler et al., 2015). The outcomes of the discriminant validity test in Table 3 reveal that all values are below 0.90, signifying strong discriminant validity for all variables.

5. Discussion

The results of the hypothesis one test in Table 4 show that there is a direct relationship between ICT adoption and SME performance with a p-value of 0.000, which means that the relationship is significant. The studies conducted by Yuni et al. (2017), Ong et al. (2020), Ab. Wahab (2020), and Isa et al. (2021) substantiate this finding. These studies state that ICT adoption can help SMEs adapt technology-based services to efficiently run their business operations, thereby creating various new profitable opportunities for business performance improvement. This research implies that SMEs should develop a comprehensive understanding of adopting, managing, and utilizing ICT resources to enhance their business performance. However, the results of this research differ from the studies conducted by Matthew (2010), and Okundaye and Dwyer (2018).

The result of hypothesis 2a testing presents a significant influence between ICT adoption and financial innovation. The findings of this study are consistent with previous research conducted by Tahir (2018), Shehzad et al. (2021), and Pu et al. (2021). The implication is that the adoption of ICT and the development of financial innovation in SMEs play a highly positive role in the economic growth of a country. It facilitates easier, faster, and more accurate access to services and expands the range of services, leading to improved SME performance. However, the results are not in line with the research conducted by Lenchman and Marszk (2015), and Pu et al. (2021), which suggests that there is no evidence of the influence of ICT adoption on financial innovation. This discrepancy might be due to the various difficulties SMEs face in implementing technology, such as their lack of knowledge and expertise in the area.

Table 2. Validity and Reliability Test Result

Constructs	Validity		Reliability	
	Factor Loading	AVE	Cronbach's Alpha	Composite Reliability
Rule of thumb	> 0.7	> 0.5	> 0.7	> 0.7
<i>Information Communication and Technology (ICT)</i>		0.575		
Speed up internet speed is a key component for implementing ICT in business (ICT12)	0.776		0.918	0.931
Management decision by the implementation of ICT provides a quick response to consumers (ICT13)	0.778			
Entrepreneurs must be acquainted with the use of ICT (ICT15)	0.744			
Having an interest in reskilling knowledge of ICT (ICT17)	0.786			
Self-confidence as a user of ICT (ICT3)	0.744			
Information communication technology and information systems are implemented regularly in business (ICT5)	0.766			
Interested in using the latest information technology to improve business (ICT7)	0.732			
Interest in increasing knowledge in the field of information communication technology (ICT8)	0.780			
The implementation of ICT lifts business profits (ICT9)	0.762			
<i>Business Performance (PERF)</i>		0.631	0.883	0.911
Building and maintaining relationships with customers influences the development of SMEs (PERF8)	0.764			
Business gross profit growth has increased over the past 1 to 5 years (PERF9)	0.850			
I need high productivity (PERF10)	0.756			
Return on business investment has increased over the last 1 to 5 years (PERF11)	0.808			
I need consistent market growth (PERF12)	0.773			
Net profit growth increased due to the use of information technology in business management (PERF14)	0.813			
<i>Women's Entrepreneurship Practices (WEP)</i>		0.599	0.866	0.899
I need the support of the internal environment, such as culture, social structure, religion and family to improve and maintain business performance (WEP10)	0.739			
Business experience and knowledge must be owned to start a business. (WEP11)	0.784			
Able to overcome obstacles, such as nature, skills, management, research and development and sustainability that contribute to business performance (WEP12)	0.752			
Training on the latest entrepreneurship methods is important to update the latest developments (WEP8)	0.710			
External support such as government, and organizational institutions to maintain business performance (WEP9)	0.833			
<i>Financial innovation (FINC)</i>		0.637	0.929	0.940
Reducing risk and facilitating transaction activities in a business (FINC10)	0.749			
Facilitate SMEs to access financial institutions that are more transparent and accountable (FINC2)	0.835			
Providing a very fast financial service process (FINC3)	0.845			
Providing added value for customers on an international scale, saving time, space and effort, and being able to compete globally (FINC4)	0.865			
Encouraging effectiveness and more stable business financial circulation Encouraging effectiveness and more stable business financial circulation (FINC5)	0.733			
Serving people who have not been served by the traditional financial industry (FINC6)	0.783			
Expand sales access globally (FINC7)	0.753			
Using digital payment systems (Internet Banking, M-Banking, SMS Banking) for sales transactions (FINC8)	0.822			
Using digital wallets (DANA, Shoop pay, OVO, Go pays, E-Wallet, E-Money, Q-RIS) for buying and selling transactions (FIN9C)	0.786			

Table 3. Discriminant validity
Heterotrait-Monotrait Ratio (HTMT)

Constructs	FINC	ICT	PERF
Information Communication Technology (ICT)	0.741		
Business Performance (PERF)	0.630	0.700	
Women's Entrepreneurship Practices (WEP)	0.474	0.528	0.433

Table 4. Hypothesis Testing Results

Direct Paths	Coefficients	Mean	SD	t-Values	p-Values	Results
ICT → PERF	0.424	0.429	0.088	4.839	0.000	H1 Accepted
ICT → FINC	0.699	0.705	0.029	24.187	0.000	H2a Accepted
FINC → PERF	0.259	0.260	0.085	3.034	0.003	H2b Accepted
ICT → WEP	0.478	0.487	0.059	8.070	0.026	H3a Accepted
WEP → PERF	0.068	0.064	0.063	1.077	0.282	H3b Rejected
Indirect Paths						
ICT → FINC → PERF	0.181	0.182	0.059	3.055	0.002	H2c Accepted
ICT → WEP → PERF	0.033	0.031	0.032	1.036	0.301	H3c Rejected

Note: significant level $p < 0.05$; SD; standard deviation; ICT, information communication technology; WEP, women's entrepreneurship practices; FINC, financial innovation; PERF; business performance

The result of hypothesis 2b testing shows that financial innovation positively and significantly impacts SME performance. These findings are consistent with previous studies conducted by Effiom and Edet (2020); Lee et al. (2015); Miroljub and Branka (2021); and Kulathunga et al. (2020). They suggest that financial innovation can enhance SME performance by facilitating access to capital, improving operational efficiency, reducing costs, managing risks, and driving business growth. Furthermore, promoting overall economic growth and collaboration among the government, financial institutions, and the private sector encourages the widespread adoption of these financial innovations among SMEs. However, the results do not agree with the research conducted by Rahmi and Uzadinma (2020).

The result of hypothesis 3a testing provides empirical evidence that ICT adoption is significantly related to various dimensions of women's entrepreneurial practices, for example, customers, training and education, skills, and internal support factors like culture, social structure, religion, and family. Additionally, it also includes external environmental factors such as government and association institutions as part of women's entrepreneurial practices. This finding is consistent with previous research highlighting that women's adoption of ICT has opened up diverse opportunities for their business development, thus, empowering women in the global business landscape (Afsana 2018; Ngoa & Song 2021; Anggraini et al., 2023; Isa et al., 2021). However, these results are inconsistent with the findings of Goswami and Dutta (2015) and Yong et al. (2015), which suggest that there is no significant relationship between ICT adoption and women's entrepreneurial practices. The discrepancy in results could be due to differences in research methodologies, contexts, or sample sizes in the respective studies.

The result of hypothesis 3b testing reveals that there is no significant relationship between women's entrepreneurial practices and SME performance. Challenges confronted by women's entrepreneurship practices, such as limited education levels, insufficient technology training, and the high cost of technology equipment, can impact the effectiveness of these practices in enhancing SME performance. The results of this study align with research conducted by Isa et al. (2021); Ngoa and Song (2021); and Chatterjee et al. (2020), underscoring the notion that empowering women in entrepreneurship introduces diverse perspectives and innovative capabilities to the management and advancement of SMEs. Furthermore, the findings are different from research by Kamberidou and Pascal (2019), and Zeb et al. (2019), who underscored the significance of women's entrepreneurial practices and reveal performance disparities between Western and Asian countries. This demonstrates the similar effectiveness of women entrepreneurs in these two regions when it comes to business management.

The results of hypotheses 2c testing indicate the first mediation test provides evidence that financial innovation acts as a mediator in the relationship between ICT adoption and SME performance. Research shows that ICT adoption can open access to various forms of financial innovation, such as online financing or digital payment systems, which can have a positive impact on the development and growth of SMEs. Therefore, the mediation of financial innovation plays an important role in bridging the influence of ICT on SME performance through better integration between technology and financial

aspects. The findings are consistent with previous research conducted by Ong et al. (2020); Noor et al. (2021); Welsh et al. (2018).

The results of hypothesis 3c testing specify that mediation analysis regarding women's entrepreneurial practices has significant effects. These findings suggest that women's entrepreneurship practices cannot play a role in introducing new technologies, especially ICT-based technologies, to the SMEs that they are managing. They can become agents of change, possessing an understanding of the potential of technology to improve efficiency, productivity, and market access for SMEs. These results are consistent with previous research conducted by Yong et al. (2015), Anggraini et al. (2023), Ong et al. (2020), and Noor et al. (2021). They also highlighted the positive influence of women's entrepreneurial practices on business performance.

6. Conclusion

This study has successfully examined the potential mediating roles of financial innovation and women's entrepreneurial practices in connecting the adoption of ICT with the business performance of SMEs.

In a nutshell, the study found that women's entrepreneurial practices and SME business performance do not mediate the relationship between ICT adoption and SME business performance due to limited access to ICT infrastructure, level of education, government policies related to SMEs, and market conditions. Nonetheless, financial innovation was found to mediate the relationship between ICT adoption and SME business performance.

The results of this study can contribute to a thorough comprehension of the mediating function in the relationships between financial innovation and women's entrepreneurial activities. This facilitates the smooth integration of ICT with SMEs' business operations. This result also offers empirical evidence that the resource-based view (RBV) theory, in examining corporate strategies for developing human resources as a competitive advantage, helps businesses endure and resist easy defeat by competitors.

Apart of that, this study's implications can provide invaluable insights to create a suitable support structure for the digitalization of women-owned SMEs in Indonesia. It also offers guidance for improving the performance of small and medium enterprises (SMEs) in a dynamic business environment, indicating that financial innovation has become a business strength to enhance efficiency and effectiveness, as well as to sustain competitiveness through financial transactions in business.

Since the findings were obtained from respondents within the context of a developing country such as Indonesia, it is crucial to recognize that the outcomes might differ from those observed in studies conducted in developed countries. Future studies are recommended to evaluate gender differences and include additional variables like entrepreneurial orientation, financial literacy, and SME sustainability post-pandemic in the context of developing countries. Besides that, recommendations for further studies include increasing the sample size and focusing on specific sectors, such as SMEs in the automotive, fashion, handicraft, and tourism industries. It would also be interesting to conduct future research on the differences between financial innovation and financial orientation in SMEs' business performance.

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