

Fivi Anggraini

by 1 1

Submission date: 06-Aug-2023 04:41AM (UTC-0700)

Submission ID: 2141974693

File name: Done_65.Publikasi_JEFM_20.docx (260.18K)

Word count: 6057

Character count: 43045

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia



Feni Anggraini¹, Daniati Putri², Neva Novianti³, Silvira Helmi⁴

^{1,2,3,4} Faculty Economics and Business, Universitas Bung Hatta, Padang, Indonesia

ABSTRACT: Today, the increasing number of women entrepreneurs adopting ICTs has grown their businesses and made them more efficient. This study empirically analysed the practice of women's entrepreneurship and its relation to the adoption of Covid-19 Pandemic ICT among SMEs in West Sumatra. A quantitative approach was used to empirically prove the connection between women's entrepreneurship and the use of ICT among SMEs. The population of this study consisted of female SMEs listed in the Cooperative and SME's Office of West Sumatra Province. A random sampling technique with a simple random type was used to select respondents. Questionnaires were distributed to 210 respondents to collect data and other related information. The results of this study proved that there is an effect of women's entrepreneurship practices on ICT adoption among SMEs in West Sumatra. Several aspects of women's entrepreneurship practices, such as customers, education and training, skills, internal support (including culture, social structure, religion, and family), and external environments (including governmental and associated institutions), contributed to women's entrepreneurship. Overall, this research contributes to the empowerment of women by providing them with equal opportunities to learn, improve their abilities, and work in business professions as technology-based innovation entrepreneurs, similar to men.

KEYWORDS: adoption ICT, pandemic era, SMEs, women entrepreneurship

I. INTRODUCTION

The importance of information and communication technology (ICT) as a sign of women's empowerment has been widely recognized. ICT encompasses all hardware, software, networking elements, and operational frameworks that enable individuals and organizations to function effectively in the digital realm, including smartphones and the Internet. The accessibility and utilization of ICT have significantly increased, particularly through mobile and broadband technologies. The number of broadband customers more than doubled in just eight years, from 527 million in 2010 to 1.1 billion in 2018 (GDR 2019). Globally, the number of internet users has tripled in recent years, rising from 1 billion in 2005 to 3.2 billion in 2017 (ITU 2017). As per the latest Global Digital Report (GDR 2019), there are 4.39 billion internet users and 5.11 billion cell phone users worldwide. However, research indicates that 1.3 billion women (37 percent of the world's population) utilize the Internet, compared to 1.5 billion men (41 percent of all men), representing a difference of 200 million fewer women (World Bank, 2018).

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 (Isa et al., 2021). Access to and use of information and communication technology (ICT) are crucial factors in advancing women's entrepreneurial endeavours. In the daily operations of their businesses, ICT tools are essential instruments that enable and support women, whether they are home-working mothers or owners of small businesses in rural areas. The adoption of ICT is believed to have a substantial impact on the business performance of women-owned SMEs (Yong Yee et al., 2015). Women entrepreneurs utilize ICT to enhance and maintain their business performance. Goswami & Dutta (2015) stated that the survival of businesses today hinges on the efficiency of ICT usage. In other words, women entrepreneurs need to adopt ICT in their businesses as it opens up potential opportunities. The practice of women's entrepreneurship in this study refers to the strategies employed by women entrepreneurs to improve business performance (Isa et al., 2021). This research incorporates six dimensions of entrepreneurial practice, namely entrepreneurial characteristics, entrepreneurial experience, management skills, customer relations, training and education, and the business environment (Ong et al., 2015).

1 Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

Ramadani et al. (2013) highlighted that almost half of the world's population consists of women, indicating that a country's partial progress relies on the shoulders of women. Currently, the percentage of women entrepreneurs in Indonesia stands at 21%, significantly higher than the global average of 8%. This data is based on the Sasakawa Peace Foundation & Dalberg report from 2020. At the Southeast Asian level, Indonesia ranks highest in terms of women's participation in entrepreneurship. According to the Ministry of Cooperatives and Small and Medium Enterprises, out of the approximately 65 million MSME units in Indonesia, 52.9% of micro-enterprises are operated by women. This demonstrates that women in Indonesia are empowered individuals who play a crucial role in their economy, families, and society as a whole. Moreover, the practice of women's entrepreneurship also extends to cooperative organizations, as evidenced by the large number of cooperatives managed by women—11,199 cooperatives spread across Indonesia. Therefore, it is expected that the number of women entrepreneurs will continue to rise, further contributing to the development of the Indonesian economy.

Currently, SMEs in Indonesia are confronting significant challenges amidst the Covid-19 pandemic. The business landscape, including SMEs, is grappling with disruptions caused by the pandemic, which has accelerated the digitalization revolution. In this context, SMEs are compelled to adapt and undergo digital transformation, commonly known as "Go Digital." It is crucial for SMEs to engage with the digital ecosystem to tap into a broader market. Therefore, women entrepreneurs in SMEs must be agile in responding to changes in this business model, thereby elevating their capabilities as qualified SMEs. However, several obstacles persist, such as limited access to capital, insufficient education, and unequal opportunities compared to male-led SMEs. These challenges require more concerted attention to overcome.

This research is important because it focuses on women's entrepreneurial practices regarding the use of ICT in Indonesia. Currently, the number of ICT users in the country is still very small. For example, Susantia et al., (2020) examined the role of digital communication for women entrepreneurs (SMEs) in Padang City. Using qualitative methods, their research demonstrated that digital communication expands market reach, provides convenience in promotional activities, and increases the productivity of women entrepreneurs. Similarly, Wahyono et al. (2019) analysed the use of digital technology and social networks in social entrepreneurship among female migrant workers upon their return from abroad. However, previous research on this topic has been limited in terms of the number of studies conducted and the scope of the issues addressed. To address this gap, it is essential to conduct a more comprehensive study of women's entrepreneurial practices, considering six dimensions: entrepreneurial characteristics, entrepreneurial experience, management skills, customer relations, training and education, and the business environment related to the use of ICT in business. Therefore, conducting follow-up research based on previous studies to analyse the entrepreneurial practices of women-owned SMEs regarding the use of ICT in West Sumatra is of great importance. This research will contribute practically to women-owned SMEs in West Sumatra, enabling them to quickly respond to changes in the business model, upgrade their qualifications, and connect with a wider market. Thus, this research aligns with the government's efforts to foster and empower women entrepreneurship in SMEs, promoting digitalization as a means to enhance business competitiveness and contribute to economic recovery in Indonesia.

1 II. LITERATURE REVIEW

Women's entrepreneurship practices

The practice of entrepreneurship can be defined as the application of entrepreneurial principles in practical settings (Kuratko, 2011). Similarly, the practice of women's entrepreneurship can be understood as the application of entrepreneurship specifically by women. In other words, it refers to the entrepreneurial activities carried out by women entrepreneurs. Women's entrepreneurial practice is conceptualized across six dimensions, which include the nature of entrepreneurship, entrepreneurial practices, management skills, customer relations, training and education, and the business environment. According to Pandian and Jesurajan (2011), women entrepreneurs are specifically defined as women or groups of women who initiate, organize, and operate business ventures.

However, it is important to note that the field of entrepreneurship is not limited to a specific gender. Women entrepreneurs are no longer viewed as a burden but as an extraordinary potential for national economic growth. Empowering women entrepreneurs is believed to generate productive jobs, income, alleviate poverty, and contribute to the overall social and economic progress of the nation (Ramadani et al., 2013). In Indonesia, women play an equally important role in the country's economic and social development (Usman et al., 2015; Anggadwita & Dhewanto, 2016). Nevertheless, empirical studies have indicated that female entrepreneurs still face performance gaps compared to their male counterparts (Fairlie & Robb, 2009; International Finance Corporation, 2014; Kelley et al., 2017).

The practice of women's entrepreneurship in this study refers to the application of various practices by women entrepreneurs aimed at improving business performance (Isa et al. 2021). The success of women entrepreneurs' business performance is

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

influenced by the adoption of new technologies, such as the internet, which has transformed the way their businesses operate (Agarwal & Lenka 2018). Women's entrepreneurship practice encompasses various aspects, including entrepreneurial traits, entrepreneurial experience, management skills, customer relations, training and education, and the business environment. These practices are implemented by women entrepreneurs to enhance their business performance (Ong et al., 2015).

Entrepreneurs engage in continuous learning and exploration of entrepreneurship to improve their business performance. In the SME sector, women entrepreneurs typically focus on trade and processing industries, such as food stalls, small shops, food processing, and handicraft industries. These businesses can be conveniently operated from home, acknowledging the dual role of women as both entrepreneurs and housewives. Initially, SMEs undertaken by women entrepreneurs were often considered as supplementary income to support their husbands and contribute to household finances. However, with serious dedication, these businesses can become the primary source of household income (Isa et al., 2021).

Apart from women's entrepreneurial practices, the utilization of ICT in business processes such as e-commerce and M-commerce has a significant impact on today's global business environment (Kurnia et al., 2015). Research conducted by Yunis et al. (2017) demonstrates a positive relationship between women's entrepreneurial practices and the use of ICT, highlighting ICT as a strategic resource that contributes to sustainable competitive advantage. This study adopts a feminist perspective to provide a broader understanding of women's entrepreneurship, combining it with the Resource-Based View (RBV) theory to examine and elucidate strategic resource management as a means to establish competitive positions and enhance SMEs' ability to excel in competition and achieve optimal business performance (Yadav & Unni, 2016). According to Barney et al. (2001), the RBV theory posits that SMEs, as business organizations, must compete based on company resources that are valuable, rare, inimitable, and non-substitutable (VRIN) in comparison to their competitors.

Use of ICT in SMEs

ICT has evolved, providing entrepreneurs with a new approach to conducting entrepreneurship in a global environment. Small and medium enterprises (SMEs), which play a crucial role in a country's economic growth, can experience rapid development by harnessing ICT to create a competitive advantage and emerge as market leaders (Mustafa 2015; Rahayu & Day 2017). The utilization of ICT by SMEs facilitates strategic planning, aids in future research and business forecasting, and enhances process efficiency and effectiveness (Agwu & Murray, 2015; Vodanovich & Urquhart 2017). Furthermore, SMEs can improve their market performance and showcase real-time product or service differentiation (Tarute & Gatutis 2014). Consequently, in today's competitive environment, ICT has become an integral element of business strategy, aligning with previous findings that highlight the significance of ICT use for entrepreneurs. According to Ong et al., (2015), women entrepreneurs should leverage the adoption of ICT to overcome limitations in business, workplace boundaries, and cultural and behavioral challenges associated with working from home. Beninger et al., (2016) provide evidence that ICT empowers women entrepreneurs to connect with new markets, suppliers, and customers in ways that were previously unattainable.

The implementation of information communication and technology (ICT) can enhance the performance of SMEs. Numerous studies have demonstrated the impact of ICT on SME performance in various countries, such as Malaysia (Ong et al., 2015), Lebanon (Yunis et al., 2017), Nigeria (Okundaye, 2018), and Indonesia (Lailah & Soehari, 2020; Fatimah & Azlina 2021). These studies have indicated that the use of ICT necessitates entrepreneurs to be more innovative, not only in offering unique products but also in applying the latest technology in their business processes. According to Yunis et al. (2017), utilizing ICT in business processes can assist women entrepreneurs in increasing productivity and market share. ICT provides several benefits for SMEs, enabling them to introduce new products and services, be more customer-oriented, and respond effectively to market changes. With the dynamic capabilities of entrepreneurs, ICT serves as an efficient and innovative tool. Additionally, as highlighted by Isa et al. (2021), ICT can be utilized in business through electronic trade, encompassing processes such as e-commerce and m-commerce, which involve buying and selling. Previous literature has primarily focused on one dimension of ICT, namely electronic commerce (Kurnia et al., 2015; Turban et al., 2010), which entails the buying and selling process. Today, ICT, including broadband, mobile, and the Internet, is gaining prominence worldwide, enabling businesses to operate from anywhere and at any time. Consequently, ICT has become a key business strategy for enhancing SME performance (Etemad et al. 2010; Ong et al. 2015).

The influence of women's entrepreneurial practices on the use of ICT

Women entrepreneurs' practices, including entrepreneurial experience, education, entrepreneurship management conditions, and ICT tools, are crucial skills for successful ICT adoption (Awa et al. 2015). Studies by Costello et al. (2013) and Awa et al. (2015) emphasize that dimensions such as entrepreneurship experience, education, and training are effective teachers for women entrepreneurs when it comes to ICT adoption. Furthermore, Papastathopoulos & Beneki (2010) support the notion that women entrepreneurs' knowledge and experience significantly influence their adoption of ICT. Women entrepreneurs equipped

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

with training, education, and experience in technology competencies possess the foundation for successfully adopting ICT in their businesses. Additionally, Boxall (2013), Adnan et al. (2016), and Kurnia et al. (2015) highlight the significant impact of entrepreneurship, customer relations, and environmental training practices on ICT adoption. Based on prior research, it can be concluded that the dimensions of women's entrepreneurial practices contribute to ICT adoption in SMEs. Therefore, the following hypothesis is proposed:

H₁: There is a relationship between women's entrepreneurial practices and the use of ICT in SMEs in West Sumatra

III. RESEARCH METHODOLOGY

This study employs a quantitative approach to empirically examine women's entrepreneurial practices regarding the use of ICT among SMEs in the West Sumatra province. The random sampling technique, specifically the simple random type, is utilized to select respondents. The target population for this study comprises female SMEs registered with the Cooperative and SME Office of West Sumatra Province. Data collection and gathering of relevant information from respondents are conducted through the survey questionnaire method, utilizing face-to-face interviews. The questionnaire is distributed to respondents across all seven cities and twelve districts of West Sumatra. The respondents' businesses encompass various sectors, including culinary, fashion, agribusiness, automotive, tour & travel, creative products, salon and beauty, and electronics.

Women's Entrepreneurship Practices

This research incorporates six dimensions of entrepreneurial practice, namely entrepreneurial characteristics, entrepreneurial experience, management skills, customer relations, training and education, and the environment. The measurement of women's entrepreneurship practices includes 11 question items, adapted from the instruments developed by Ong et al. (2015). The Likert scale is utilized, ranging from strongly agree (5) to strongly disagree (1), to assess the responses. Firstly, entrepreneurial traits refer to the characteristics, personality, and behavior exhibited by an entrepreneur. Successful women entrepreneurs are often associated with specific traits that contribute to their success. Secondly, the entrepreneurial experience encompasses the accumulated past involvement of an entrepreneur in entrepreneurial activities. Thirdly, management skills pertain to the overall proficiency of women entrepreneurs in managing a business. Fourthly, customer relations focus on the practice of entrepreneurs in establishing and maintaining positive relationships with customers. Fifthly, training and education are regarded as crucial factors for entrepreneurial success. Lastly, the environment is defined by internal and external factors that impact the entrepreneur, including culture, social structure, religion, reference groups, family and institutions, as well as organizational support. A detailed definition of the construct of women's entrepreneurial practice can be found in Table 1 below.

Table 1. Constructs of Women's Entrepreneurial Practices

Constructs of Women's Entrepreneurship Practices	Definition	Author
The nature of entrepreneurship	The nature, personality and behavior of businesswomen.	Sidik et al., (2012)
Entrepreneurial Experience	Company assets and the best teachers for ICT adoption.	Awa, Baridam & Nwibere (2015)
Management skills	Ability to manage operations and business processes	Ramadani et al., (2013)
Customer relationship	Oriented towards mutual formation an understanding of customer needs and closely integrated with ICT adoption	Blomquist and Wilson (2007)
Training and education	Education level of women entrepreneurs	Awa, Baridam, & Nwibere (2015)
Milieu	Business environment pressures	Kurnia et al., (2015)

Source: Literature Review

Adoption of information communication and technology (ICT)

ICT is a digital platform that creates opportunities for entrepreneurial activities through the utilization of tools such as the internet, mobile technology, and social computing (Ngoasong & Michael, 2015). E-commerce and m-commerce are believed to facilitate entrepreneurs in effectively marketing their businesses or products by leveraging the internet and wireless

1
Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

environments. The questionnaire for information communication technology consists of 19 items that assess the frequency of ICT usage within organizations, its integration with business and work processes, as well as the support it provides in managerial decision-making and task completion. The questionnaires used in this study were adapted from Agarwal & Prasad (1998), Davis et al. (1989), and Rogers (1995), employing the Likert scale with weights ranging from strongly agree (5) to strongly disagree (1). To gain a comprehensive understanding and differentiate the usage between e-commerce and m-commerce, the definition of ICT adoption is outlined in Table 2 below.

1
Table 2. Information communication and technology (ICT) adoption construct

ICT Construct	Definition	Author
E-commerce (ECM)	The process of exchanging, buying or selling using the internet, and computer networks.	Turban, King, McKay, Marshall, Lee and Viehland, (2008)
M-Commerce (MCM)	Business mobile electronic transactions are supported by mobile devices to create a wireless business environment	Coursaris and Hassanein (2002)

Source: Literature Review

IV. RESULTS AND DISCUSSIONS

Results

The distribution of questionnaires was conducted directly among women SME entrepreneurs in West Sumatra. A total of 212 questionnaires were distributed. All respondents provided complete responses, except for two incomplete ones, which were excluded from the analysis. Therefore, the number of questionnaires processed for this study was 210. The respondents who participated in the questionnaire were primarily business owners, accounting for 51.9% (109 individuals), while 48.1% (101 individuals) held staff positions within their businesses. In terms of educational attainment, the majority of respondents had completed high school education, with 42% (88 individuals), whereas 26.7% (56 individuals) had completed junior high school. The age range of the respondents was between 26 and 35 years, comprising 35.7% (75 individuals) of the total. Regarding the type of business, the majority of SME entrepreneurs were involved in the culinary sector, accounting for 25.2% (53 individuals), followed by the fashion industry, representing 20% (42 individuals).

1
Measurement model assessment

A confirmatory factor analysis (CFA) was conducted to assess the strength of the questionnaire. The CFA involved evaluating the measurement models by examining the relationship between indicators and constructs. This evaluation aimed to assess internal consistency, convergent validity, and discriminant validity. Internal consistency was assessed using Cronbach's alpha and composite reliability. The Cronbach's alpha value was found to be higher than the recommended threshold of 0.7 (Hair et al., 2018). Additionally, the composite reliability values ranged from 0.7 to 0.91 (Hair et al., 2018) (refer to Table 1). Therefore, the questionnaire demonstrated satisfactory internal consistency. Factors with values lower than the recommended 0.7 were eliminated from further analysis. These factors include WEP1, WEP2, WEP3, WEP4, WEP5, WEP7, ICT6, ICT7, ICT10, ICT11, and ICT14, as they did not meet the required threshold for hypothesis testing. Convergent validity was assessed using the average variance extracted (AVE), which yielded results greater than 0.5 (see Table 3). Consequently, the questionnaire demonstrated satisfactory convergent validity.

1
Table 3. Measurement Model Results

Constructs	Loading Factor	Cronbach's Alpha	Composite Reliability	AVE
<i>Rule of thumb</i>	> 0.7	> 0.7	> 0.7	> 0.5
Women's Entrepreneurship Practices (WEP)		0.868	0.904	0.654
I need to build a good relationship with customers. (WEP 6)	0.791			
I need to get entrepreneurship education to improve business performance. (WEP 8)	0.778			
I need to get training in up-to-date entrepreneurial methods for business success. (WEP 9)	0.842			
I need the support of internal environments such as culture, social structure, religion and family to	0.827			

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

improve maintaining business performance. (WEP 10)				
I need external support such as government, institutional organizations to maintain business performance. (WER 11)	0.805			
<i>Information Communication and Technology (ICT)</i>		0.938	0.945	0.572
Information communication technology needs to be integrated in business processes. (ICT 1)	0.748			
The ability to manage information systems must be owned by entrepreneurs. (ICT 2)	0.729			
The use of information communication technology must be owned by entrepreneurs. (ICT 3)	0.775			
Often use information communication technology and information systems in business. (ICT 4)	0.717			
Interested in using the latest information technology to improve business. (ICT 5)	0.735			
Interest in increasing knowledge in the field of information communication technology. (ICT 8)	0.759			
Enthusiastic in finding the latest technology for business. (ICT 9)	0.720			
Need to increase internet network speed as a component of information technology. (ICT 12)	0.742			
Business profits increase due to the use of information and communication technology. (ICT 13)	0.794			
Provide a quick response to consumers because they use IT. (ICT 15)	0.789			
<i>E-commerce</i> makes purchases and payments online. (ICT 16)	0.750			
<i>M-commerce</i> makes purchases and payments using applications in <i>smartphones</i> . (ICT 17)	0.824			
M-commerce is easier to conduct business transactions to customers because equipment (smart phones) is easy to carry wherever they go. (ICT 19)	0.744			

Source: SEM-PLS, processed data (2022)

Discriminant validity

Cross-loading and the Fornell-Larcker criterion are used to test the discriminant validity of concepts (Fornell and Larcker, 1981). Furthermore, the results of discriminant validity testing include cross loading and comparing with AVE roots with correlations between constructs shown (Hair et al., 2018). Based on the results obtained in Table 4, it can be stated that the indicators used in this study already have good discriminant validity in compiling their respective variables.

Table 4. Discriminant validity

	ICT	Women's Entrepreneurship Practices (WEP)
Information Communication Technology (ICT)	0.756	
Women's Entrepreneurship Practices (WEP)	0.255	0.809

Source: SEM-PLS, processed data (2022)

Structural model assessment

The R square and Q square values of the results of this study can be seen in Table 5 as follows:

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

Table 5. Result of R Square and R Square Adjusted

	R Square	R Square Adjusted	Result
Information Communication Technology (ICT)	0.065	0.060	weak

Source: SEM-PLS, processed data (2022)

Based on table 5 of the R Square test, a coefficient value of 0.065 was obtained, thus it can be concluded that the variable contribution of women's entrepreneurial practices to the adoption of information communication and technology (ICT) is 6.5%, the contribution given by all these variables is weak, (Chin 2010). The results of the structural measurement model are shown in Figure 1 below:

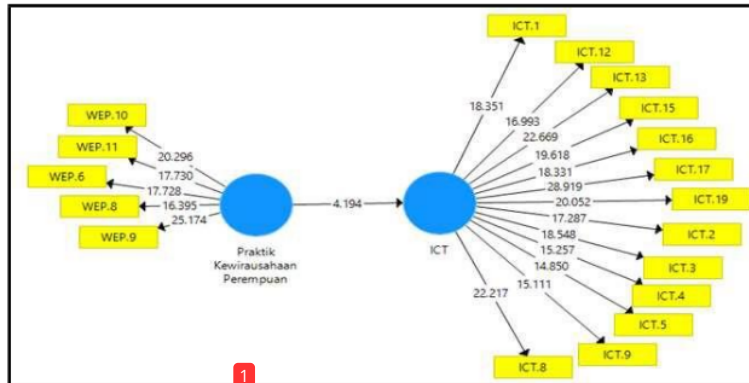


Figure 1. Structural model results

Hypothesis Test Results

The structural model or inner model is used to test the hypothesis, that is, the influence between latent variables that can be seen from the coefficients and significance of the parameters. The following Table 6 is the result of hypothesis testing.

Table 6. Hypothesis Tester Results

Type	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values	Result Hypothesis
WEP → ICT	0.255	0.276	0.061	4.196	0.000	H ₁ Accepted

Source: SEM-PLS, processed data (2022)

V. DISCUSSION

Entrepreneurship has gained significant importance worldwide, being recognized as a crucial concept in today's society. It involves taking risks to generate revenue and establish a new business, regardless of gender. Entrepreneurship encompasses a range of activities aimed at identifying opportunities and creating value (Ismail, 2016; Ratten & Tajddini, 2018). A female entrepreneur is defined as a woman who utilizes her skills, expertise, and resources to initiate a new business venture. Women face the challenge of balancing domestic responsibilities with the pursuit of economic independence through entrepreneurship (Nagarajan, 2016). The concept of women's entrepreneurship has gained prominence globally (Fielden & Davidson, 2009). Referring to Table 4 above, the results of the first hypothesis test indicate a significant influence of women's entrepreneurial practices on ICT adoption among SMEs in West Sumatra, as evidenced by the p-value of 0.000. The findings reveal that dimensions such as customer relationships, training and education, skills, and internal and external support systems (including culture, social structure, religion, family, government, and association institutions) contribute to women's entrepreneurial practices that drive ICT adoption in West Sumatra's SMEs. These findings align with previous research highlighting the role of women's entrepreneurial practices in leveraging ICT for business development and strengthening women entrepreneurs globally (Lailah & Soehari, 2020; Okundaye et al., 2019; Chen, 2013).

Thus, it is crucial for countries and economies to foster entrepreneurship and enable women entrepreneurs to compete on

1

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

equal footing with men. Empowering entrepreneurship, particularly among women, is believed to create productive jobs, generate income, alleviate poverty, and drive social and economic progress in any country (Ramadani et al., 2013). The findings of this study align with the research conducted by Consoli et al. (2012), which classified determinants of ICT adoption factors as individuals (traits, commitment of top management, high skills, learning, and education), technology, environment (customer innovation requirements), economy, and organization (human capital). These determinants have a significant relationship with women's entrepreneurial practices. The implication of these findings is that adopting ICT for business purposes offers numerous benefits for women's entrepreneurial practices. In today's context, the majority of women SME entrepreneurs in West Sumatra who utilize ICT in their organizations can leverage it to enhance competitiveness. ICT provides mechanisms to access new market opportunities and specialize in information services, thereby expanding the possibilities for business growth.

VI. CONCLUSION

This research successfully empirically demonstrates four dimensions of women's entrepreneurial practices out of the six dimensions, including customer relations, training and education, management skills, and the environment, that contribute to ICT adoption among SMEs in West Sumatra. Women entrepreneurs who possess training, education, and technological competencies are more likely to adopt ICT successfully in their businesses. In today's digital era, establishing relationships with customers makes it easier to conduct fast and accurate business transactions, thereby influencing the adoption of technology in women's entrepreneurial practices in West Sumatra. Therefore, it is essential to encourage women's empowerment, ensuring that women have equal opportunities as men to learn, enhance their abilities, and engage in professions related to ICT. Strategic programs to support the growth of women's entrepreneurial practices in West Sumatra should include capital assistance and training for validators. Additionally, the government's role needs to promote gender inclusivity in the SME sector, particularly for women. The government and relevant stakeholders should provide opportunities and resources for women's participation in innovation, particularly within the micro, small, and medium enterprises (SMEs) sector, which serves as the backbone of the Indonesian economy, especially in West Sumatra. One limitation of this study is its focus on women entrepreneurs among SMEs in West Sumatra. Further research is recommended to expand the scope to include all genders in SMEs, allowing for generalization of the study's results

ACKNOWLEDGEMENTS

This research was supported by the "National Competitive Fundamental Research Fund" from the Directorate General of Higher Education, Research, and Technology, Ministry of Education, Culture, Research, and Technology, Republic of Indonesia (Grant number:162/E5/PG.02.00PT/2022). The authors are very grateful to the Directorate General of Higher Education, Research, and Technology, the Ministry of Education, Culture, Research, and Technology, and the Republic of Indonesia for providing the fund for this research.

1

REFERENCES

- 1) Adnan, A.H.M., Jaafar, R.E., Nasir, Z.A. & Mohtar, N. (2016). Just sisters doing business between us: gender, social entrepreneurship and entrepreneurial resilience in rural Malaysia. *International Journal of Entrepreneurship and Small Business*. 27 (2-3), 273–288.
- 2) Agarwal, R., & Prasad, J. (1998). The antecedents and consequents of user perceptions in information technology adoption. *Decision support systems*. 22 (1), 15–29.
- 3) Agarwal, S. & Lenka, U. (2016). Why research is needed in women entrepreneurship in India: a viewpoint. *International Journal of Social Economics*. 45, (7).
- 4) Agwu, E.M., & Murray, P. (2015). The empirical study of barriers to electronic commerce uptake by SMEs in developing economies. *International Journal of Innovation in the Digital Economy*. 6(2), 1–19.
- 5) Anggadwita, G. & Dhewanto, W. (2016). The influence of personal attitude and social perception on women's entrepreneurial intentions in micro and small enterprises in Indonesia. *International Journal of Entrepreneurship and Small Business*. 27 (2/3), 31–148.
- 6) Afrah. S.H., & Fabiha., S.T. (2017). Empowering Women Entrepreneurs through Information and Communication Technology (ICT): A Case Study of Bangladesh, *Management*, 7 (1), 1-6.
- 7) Awa, H.O., Baridam, D.M. & Nwibere, B. (2015). Demographic determinants of electronic commerce (EC) adoption by SMEs: a twist by location factors. *Journal of Enterprise Information Management*. 28(3); 326–345.
- 8) Barney, J., Wright, M. & Ketchen, D. (2001). The resource-based view of the firm: ten years after 1991. *Journal of Management*. 27(6), 625–641.

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

- 9) Beninger, S., Ajjan, H., Mostafa, R.B. & Crittenden, V. L. (2016). A road to empowerment: social media use by women entrepreneurs in Egypt. *International Journal of Entrepreneurship and Small Business*. 27, (2) 308–332.
- 10) Blomquist, T., & Wilson, T. L. (2007). Project marketing in multi-project organizations: A comparison of IS/IT and engineering firms. *Industrial Marketing Management*. 36, 206–218.
- 11) Boxall, P. (2013). Building highly-performing work systems: analyzing HR systems and their contribution to performance. in Paauwe, J., Guest, D. and Wright, P. (Eds.). *HRM & Performance: Achievements & Challenges*, Wiley, New York.
- 12) Consoli, D. (2012). Literature analysis on determinant factors and the impact of ICT in SMEs. *Procedia-social and behavioral sciences*. 62, 93–97.
- 13) Costello, P., Jackson, M.L. and Moreton, R. (2013). Education as a determining factor in ICT adoption: a case study of ICT SMEs. *International Journal of Management Practice*. 6 (2),131–152.
- 14) Corporation, I. F. (2014). Women-Owned SMEs: A Business Opportunity for Financial Institutions.
- 15) Coursaris, C., & Hassan, K. (2002). Understanding m-commerce: a consumer-centric model. *Quarterly journal of electronic commerce*. 3, 247–272.
- 16) Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science*. 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>
- 17) Etemad, H., Wilkinson, I. & Dana, L.P. (2010). Internalization is the necessary condition for internationalization in the newly emerging economy. *Journal of International Entrepreneurship*. 8 (4), 319–342.
- 18) Fairlie, R.W. & Robb, A. M. (2009). Gender differences in business performance: evidence from the characteristics of business owners survey. *Small Business Economics*. 33 (4), 375–395.
- 19) Fatimah, Siti & Azlina, N. (2021). The Influence of Information Technology and Innovation on the Performance of Small and Medium Enterprises (SMEs) (Study on Online-Based SMEs in Dumai City). *Journal of Accounting and Banking Research*. 15 (1), 6–20.
- 20) Fielden, S. L. & Davidson, M. (2009) *International handbook of women and small business entrepreneurship* (Part 4). Edward Elgar Publishing.
- 21) Ismail, D. M. (2016). Challenges and solutions: A literature on women entrepreneurship in Indian context. *Primax International Journal of Commerce and Management Research*, (Special issue), 6-11.
- 22) Goswami, A., & D. (2015). ICT in women entrepreneurial firm- A literature review', *Journal of Business and Management*. (17) 38-41.
- 23) Hair, J. F., B. Black, B. Babin, (2018). *Multivariate data analysis*. 8th ed. Upper Saddle River, New Jersey USA: Pearson Prentice Hall.
- 24) International Finance Corporation (2014) *Women-Owned SMEs: A Business Opportunity for Financial Institutions* [online] <https://yali.state.gov/wp-content/uploads/sites/4/2016/03/WomenOwnedSMEs+Report-Final.pdf> (accessed August 17, 2022).
- 25) ITU. (2017). *World Telecommunication Development Report*. ICT Indicators Database. <https://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtd.aspx>
- 26) Isa, F. Maheran Nik.M.N, Azizah, A. & S. N. (2021). Effect of ICT on Women Entrepreneur Business Performance: Case of Malaysia. *Journal of Economics and Business*. 4, (1) 137–146.
- 27) Kelley, D.J., Baumer, B.S., Brush, C., Greene, P.G., Mahdavi, M., Majbouri, M., Cole, M., Dean, M. and Heavlow, R. (2017). *Global Entrepreneurship Monitor Women's Entrepreneurship 2016/2017 Report* [online] <http://www.babson.edu/Academics/centers/bank-center/global-research/gem/Documents/GEM%202016-2017%20Womens%20Report.pdf> (accessed August 11, 2022).
- 28) Kuratko, D. F. (2011). Entrepreneurship theory, process, and practice in the 21st century. *International Journal of Entrepreneurship and Small Business*. 13, (4) 8–17
- 29) Kurnia, S., Choudrie, J., Mahbubur, R.M. & Alzougool, B. (2015). E-commerce technology adoption: a Malaysian grocery SME retail sector study. *Journal of Business Research*. 68, (9) 906–1918.
- 30) Lailah, F. A., & Soehari, T. D. (2020). The Effect of Innovation, Information Technology, and Entrepreneurial Orientation on Business Performance. *Academic*. 9, (02) 161–176.
- 31) Mustafa, H. H. (2015). The role of ICT management is to achieve organizational innovation. *International Journal of Organizational Innovation*. 7, (4): 48–56.
- 32) Nagarajan, N. (2016). The rural women entrepreneurial problems in India. *Primax International Journal of Commerce and Management Research*, (Special issue), 15-18
- 33) Ngoasong, & M. (2015). Digital Entrepreneurship in Emerging Economies: The role of ICTs and local context. *Conference*. 42, 16–18.
- 34) Okundaye, K. F. S. & D. R. (2018). Impact of information and communication technology in Nigerian small-to-medium-sized enterprises. *Journal of Economics, Finance and Administrative Science*. 24, (47) 29–46.
- 35) Ong, S.Y.Y, Habidin, N.F, Salleh, M.I. & Fuzi, N. (2015). The relationship of WEP towards ICT adoption. *International Journal of Innovative Research and Creative Technology*. 1, (1) 88–91.

Effect of Women's Entrepreneurship Practices on Information Communication Technology (ICT) Adoption During the Covid-19 Pandemic: A Case Study in West Sumatra, Indonesia

- 36) Pandian, K. & Jesurajan, V. (2011). An empirical investigation on the factors determining the success and problems faced by women entrepreneurs in Tiruchirapalli district–Tamilnadu. *Interdisciplinary Journal of Contemporary Research in Business*. 3, (3) 914–922.
- 37) Papastathopoulos, A., and Beneki, C. (2010). Organizational forms based on information & communication technologies (ICTs) adoption. *Research in Business and Economics Journal*. 2, 1–18.
- 38) Rahayu, R. and Day, J. (2017). E-commerce adoption by SMEs in developing countries: evidence from Indonesia. *Eurasian Business Review*. 7(1), 25–41
- 39) Ramadani, V., Gërguri, S., Dana, L. & Tašaminova, T. (2013). Women entrepreneurs in the Republic of Macedonia: waiting for directions. *International Journal of Entrepreneurship and Small Business*. 19, (95) 121–130.
- 40) Ratten, V., & Tajeddini, K. (2018). Women's entrepreneurship and internationalization: Patterns and trends. *International Journal of Sociology and Social Policy*, 38(9/10), 780-793.
- 41) Rogers, C. (1995). *A way of being*. H. H. M. (1995). *A way of being*. Harcourt: Houghton Mifflin.
- 42) Sidik, I. G. (2012). Conceptual framework of factors affecting SME development: mediating Factors on the relationship of entrepreneur traits and SME performance. *Procedia Economics and Finance*. 4, 373–383.
- 43) Susantia, E., Firdalius.F., &R. P. (2020). The Role of Digital Communication for Women Entrepreneurs (MSMEs) in Padang City. *Journal of REKOMEN (Management Economic Research)* 3, (2) 148–155
- 44) Tarute, A. & Gatautis, R. (2014). ICT impact on SMEs performance. *Procedia - Social and Behavioral Sciences*. 110, 1218–1225.
- 45) Turban, E., King, D., McKay, J., Marshall, Managerial PerspectiveP., Lee, J. & Viehland, D. (2008). *Electronic Commerce* 2008. Managerial Perspective.
- 46) Usman, B., Buang, N.I. B. &Usman, Y. (2015). Entrepreneurship and SMEs in Malaysia: need to nurture women entrepreneurship. *Journal of Women's Entrepreneurship and Education*. 3(4), 77–96.
- 47) Vodanovich, S. & Urquhart, C. (2017). ICTs and the computerized hijab: women's experiences of ICT in the UAE. *Electronic Journal of Information Systems in Developing Countries*. 82(1), 1–17.
- 48) Wahyono, E.W., Kolopaking, L., M., Suarti, M. C. & Hubeis, A. V. S. (2019). Digital Network and Social Entrepreneurship Development of Women Migrant Workers. *Journal of Communication Science*. 16(1), 57–7.
- 49) World Bank. (2018). *Digital Dividends*, World Development Report. World Bank. Washington DC
- 50) Yadav, V. & Unni, J. (2016). Women entrepreneurship: research review and future directions. *Journal of Global Entrepreneurship Research*. 6(1), 12–18.
- 51) Yong Yee., Habidin. N.F, Saleh, M. I & Moh. Fuzi. N. (2015). The relationship of WEP to words ICT Adoption. *International Journal of Innovative Research and Creative Technology*. 1(1), 88–91.
- 52) Yunis, M., El-Kassar, A. & Tarhini, A. (2017). Impact of ICT-based innovations on organizational performance: the role of corporate entrepreneurship. *Journal of Enterprise Information Management*. 30 (1), 122–141.



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.

Fivi Anggraini

ORIGINALITY REPORT

18%

SIMILARITY INDEX

18%

INTERNET SOURCES

2%

PUBLICATIONS

2%

STUDENT PAPERS

PRIMARY SOURCES

1

ijefm.co.in

Internet Source

17%

2

[Submitted to Sriwijaya University](#)

Student Paper

1%

3

[Submitted to Laureate Education Inc.](#)

Student Paper

<1%

Exclude quotes Off

Exclude matches Off

Exclude bibliography Off

Fivi Anggraini

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10
