

EXPLORING THE FACILITATORS OF E-COMMERCE ADOPTION AMONG RURAL ENTREPRENEURS IN SABAH

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Abstract

The economic paradigm is currently shifting from traditional approaches to a digital-based economy. This transformation required all businesses to fully utilize e-commerce platforms as part of their business operation. However, in contrast with urban entrepreneurs, rural entrepreneurs face greater challenges to embrace the transition. Hence, this study aimed to explore the facilitators of e-commerce adoption among rural entrepreneurs in Sabah. This study adopted the Unified Theory of Acceptance and Use of Technology (UTAUT) as the underpinning theory to conceptualize the facilitators of adoption. Qualitative face-to-face semi-structured interviews with the rural entrepreneurs were conducted to gain an in-depth understanding of the phenomenon. The data were then analyzed using thematic analysis. The result of this study suggested that the rural entrepreneurs were facilitated by observational learning in addition to all UTAUT dimensions. The outcome of this study is hoped to provide beneficial inputs to the relevant stakeholders to encourage more participation among rural entrepreneurs in adopting e-commerce platforms.

Keywords: e-commerce; rural entrepreneurs; facilitators; Sabah; technology adoption

1. Introduction

Technology adoption in business, especially e-commerce platforms, is considered a must-have for businesses nowadays. This not only helps big corporations but also small and medium-sized enterprises (SMEs). By utilizing e-commerce platforms, the market size and target market will increase, leading to business expansion, which is particularly helpful for SMEs. Malaysia has set the goal to innovate digital economic growth through Shared Prosperity Vision 2030. Thus, transition efforts toward digitalization need to be facilitated. However, despite Malaysia ranking 31st among 63 countries in the Institute for Management Development (IMD) World Digital Competitiveness Ranking 2022, digitalization among micro and small enterprises is still low, which could hinder Malaysian industries from going global. As the 12th Malaysia Plan (2021-2025) is announced, the government aims to maximize the Industrial Revolution (IR) 4.0 era by attracting ASEAN countries to invest in Malaysia. To achieve this, the government established the Pelan Hala Tuju e-Dagang Kebangsaan 2.0, 2021-2025,

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which aims to assist and facilitate micro and small entrepreneurship in utilizing e-commerce platforms and enhance partnerships with other countries since micro and small entrepreneurship establishment reflect a significant percentage in our country (Rancangan Malaysia Kedua Belas, 2021-2025, n.d.).

However, despite the motivation to achieve this objective, rural areas are still facing significant challenges in adopting e-commerce compared to urban areas due to lack of competent leaders, challenging geography, lack of infrastructure and basic utilities, and low population density. This leads to a lack of logistics and mobility, thus reducing investor attraction to invest in the rural economy. Moreover, the service and agriculture sectors dominate the rural economies and demand a workforce with limited skills, since the majority of rural laborers have received education only up to primary and secondary school. As a result, more younger people migrate from rural to urban areas to find job opportunities that fit their needs and qualifications. Sabah is among the states focused on by the government in their effort to facilitate rural digital economies in the 12th Malaysia Plan (RMK 12) due to its lower adoption of the digital economy and are not ready to extend its market globally (Rancangan Malaysia Kedua Belas, 2021-2025, n.d.).

Despite the lack of e-commerce adoption among rural entrepreneurs in Sabah, there is a lack of literature exploring the e-commerce facilitators among rural entrepreneurs in Sabah. Most of the previous studies related to e-commerce adoption among rural entrepreneurs are studied from the context overseas (Abiso & Ajagbe, 2018; Garg & Choeu, 2015; Mapeshoane & Pather, 2016). Consequently, the perception of their adoption as well as how they can be facilitated remains unclear. This will provide an ambiguous situation if any of the stakeholders would like to provide any assistance in the effort to encourage more rural people to utilize e-commerce platforms. Therefore, this study aims to explore the facilitators of e-commerce adoption from the perspective of rural entrepreneurs in Sabah, considering the seriousness of digitalization issues among rural entrepreneurs.

2. Literature Review

Business transactions can be facilitated by adopting technology such as e-commerce as a platform for buying and selling, either in terms of business-to-business (B2B), business-to-consumer (B2C), or consumer-to-consumer (C2C). Utilizing e-commerce can improve the productivity of organizations as it enhances the action and technique of running the business (Cheong et al., 2020). While the adoption of e-commerce is crucial, the factors that lead to the usage of e-commerce as part of a business strategy may vary. Entrepreneurs might adopt e-commerce if they are ready to adopt the technology. As suggested by the findings of Abiso and Ajagbe (2018) and Al-Bakri and Katsiolouides (2015), readiness and managers' perceptions are among the important factors that affect e-commerce adoption among SMEs, apart from strategy and pressure from their partners. In an organization, top management is one of the crucial influences on the culture of the organization, especially in terms of technology adoption. This can be seen through the study by Abdullah et al. (2013), which found that the characteristics of the managers and owners, organizational culture, and teamwork influenced technology adoption among Malaysian SMEs. This is consistent with the findings of Ismail et al. (2017), which were similar, apart from the factors of technology, environment, security, relative advantage, and compatibility. Meanwhile, a study conducted by Kurnia et al. (2015) found that SMEs in the grocery retail sector agreed that pressure from the environment and the readiness to adopt e-commerce technology were the important factors that had influenced them to adopt the technology. Similar to Yeng et al. (2016), who found that SMEs in northern states of Malaysia were being influenced to adopt e-commerce due to pressure from their competitors and the relative advantage offered by the utilization of e-commerce platforms. Therefore, businesses are motivated to adopt technology if they are being pushed by their competitors and do not want to be left behind in their industry. Demographic factors such as age, gender, and geographical location also play significant roles in the usage of e-commerce (Awa et al., 2015). Compared to urban areas, accessibility to electricity is one of the important factors influencing the level of ICT usage for rural micro-businesses (Perez-Estebanez & Rautiainen, 2018). This is due to the lack of electricity and internet accessibility, which are always synonymous with rural conditions. However, even though

rural areas are always linked with insufficient facilities and infrastructure, if compared to the urban area, Macharia (2009) found that the existing infrastructure did not influence the decisions of SMEs in Nairobi, Kenya, to adopt e-commerce. Instead, implementation costs, IT skills, and knowledge influence their decisions significantly.

On the other hand, security issues were also found to be one of the reasons that influence the adoption (Alam et al., 2011). However, users tend to adopt technology if the protection of intellectual property rights is in place, apart from loyalty and implementation reasons (Ajmal, 2017). Entrepreneurs might adopt e-commerce if they are ready to adopt the technology, as suggested by the findings of Abiso and Ajagbe (2018) and Al-Bakri and Katsioloudes (2015). Readiness and managers' perceptions are among the important factors that affect e-commerce adoption among SMEs, apart from strategy and pressure from their partners. In an organization, the top management is one of the crucial influences on the culture of the organization, especially in terms of technology adoption. This can be seen through the study by Abdullah et al. (2013), which found that the characteristics of the managers and owners, the organizational culture, and teamwork influenced technology adoption among Malaysian SMEs. This is consistent with the findings of Ismail et al. (2017) and Alam et al. (2011), which were similar, apart from the factors of technology, the environment, security, relative advantage, and compatibility. Meanwhile, Chee et al. (2016) further found that manufacturing SMEs in West Malaysia were being facilitated not only by competitors and top management support but also by government support. Therefore, the government also has a crucial role to play in ensuring that technology adoption, especially e-commerce, can be implemented successfully among SMEs. One way to do this is by improving and enhancing the facilities and infrastructure, as the study conducted by Ramayah et al. (2005) showed. This is because, apart from top management support, the infrastructure must also be readily available to enable SMEs to adopt e-commerce effectively. In addition to government support, training also plays a vital role in influencing e-commerce adoption. By giving training to the entrepreneurs, they can be equipped with all the necessary information and knowledge which then influence them to adopt e-commerce easily. It can be seen that training through the Inita Project influenced the usage of online platforms in their businesses. Based on the findings of one study, after being exposed to knowledge about how to use ICT and applying what has been taught to their business operations, the sales of the participants increased drastically (Hashim et al., 2011). Thus, it is clear that entrepreneurs in rural areas need more exposure to digitalization and training, which is one of the most effective ways to encourage them to embrace the digital economy.

More studies have been conducted to identify the level of e-commerce adoption and the reasons that motivate businesses to utilize this beneficial platform. However, despite the results of previous studies providing an overview of e-commerce adoption around the world, including in Malaysia, studies about e-commerce adoption in Sabah remain limited. This limitation raises curiosity about the current perception of entrepreneurs in rural areas of Sabah regarding the utilization of e-commerce, especially given the significant connectivity challenges faced by this state in Malaysia. Thus, this limitation creates the need to explore the facilitators of e-commerce adoption from the perspective of rural entrepreneurs in Sabah, which this study attempts to discover.

2.1 Unified Theory of Acceptance and Usage Technology

This study utilizes the Unified Theory of Acceptance and Use of Technology (UTAUT) as the underpinning theory. Developed by Venkatesh et al. (2003), this theory comprises four main constructs that affect behavioral intention and, in turn, user behavior. According to the theory, the four main constructs are performance expectancy, effort expectancy, social influence, and facilitating conditions, which all influence behavioral intention. Age, gender, experience, and voluntariness of use are significant moderators that affect behavior. Performance expectancy is the belief that using the system will enhance job performance Goswami and Dutta (2017). Effort expectancy refers to the user's perceived ease of use, which can lead to adoption behavior (Shaharudin et al., 2012). Social influence is a significant construct that motivates users to adopt the system due to peer influence (Almaimouni et al. (2014) and Cho et al. (cited in Abu-Shanab & Ghaleb (2012)). Facilitating

conditions directly affect user behavior by providing the belief that the organization and infrastructure are available to support system usage. This is supported by Dutta and Shivani (2020) as well as Singh and Behl (2016) who found that facilitating conditions are crucial in assisting users in adopting technology.

3. Methodology

This study employs a qualitative approach in which data was collected through semi-structured in-depth interviews. Although the qualitative approach does not guarantee the generalization of respondents, it provides rich data and understanding of the phenomenon (Bryman, 2016) that suits the aim of this study. Purposive sampling was chosen as the most appropriate technique to select participants due to their suitability in answering the research question to ensure that the collected data are relevant. Information on potential participants was obtained from the Ministry of Rural Development Sabah to obtain their contact information to seek their permission to be interviewed. Appointments were then set up with those who were willing to be interviewed. Interview sessions took place at the agreed date, time, and place. The interviews were conducted in the Malay language as all entrepreneurs were comfortable speaking in Malay, and the average interview session took place between one hour and thirty minutes to two hours. Rural entrepreneurs were asked to share their backgrounds, and then they were asked how they became determined to use e-commerce, what facilitated their adoption of e-commerce, what encouraged them to adopt an e-commerce platform, and who assisted them in adopting e-commerce, including what facilitated their use of e-commerce. Probing questions were also asked based on the responses given by rural entrepreneurs. The data collection process continued until the saturation point was reached, whereby no new information was gathered from the interview session. As a result, 25 rural entrepreneurs were interviewed, and their facilitators were explored. The data were then analyzed using thematic analysis.

4. Findings

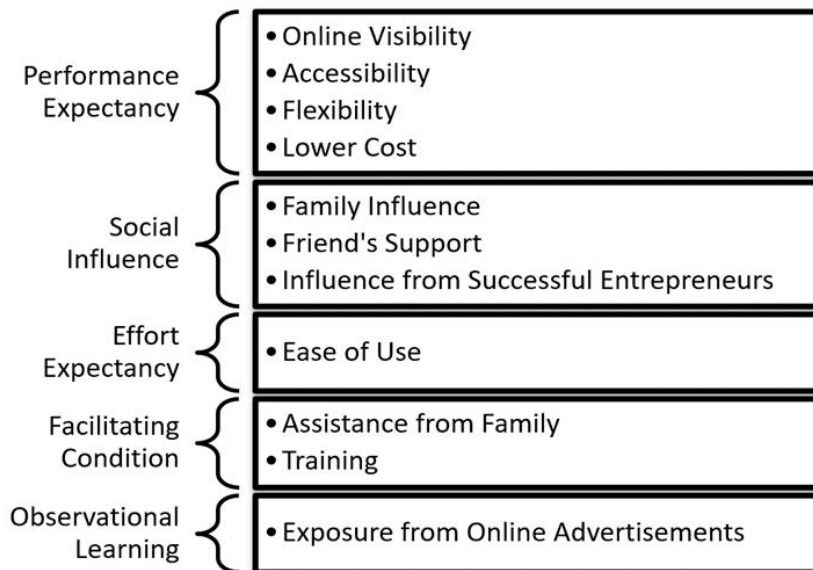
This section discusses the facilitators of e-commerce adoption among rural entrepreneurs. In this section, the underlying factors of how they are facilitated to use e-commerce in operating their business are discussed in detail. All 25 rural entrepreneurs interviewed (E1- E25) were adopting e-commerce platforms in operating their businesses such as through their own social media as well as using websites in selling and marketing their products. The demographic profile of the rural entrepreneurs can be shown as below:

Table 1: Demographic Profile of Rural Entrepreneurs

DEMOGRAPHY	NUMBER OF PARTICIPANTS
GENDER	
Male	6
Female	19
AGE	
30-40	6
41-50	14
51-60	5
LEVEL OF EDUCATION	
Primary	5

Secondary	17
Tertiary	3
YEARS OF EXPERIENCE	
1-3	3
4-6	18
7-9	4
NATURE OF BUSINESS	
Homestay	2
Foods	14
Handicraft	8
Textile	1

After conducting the analysis, five central themes (four dimensions from UTAUT and one newly emerged theme) were found to be the facilitators of e-commerce adoption among rural entrepreneurs. The central themes and subthemes are summed up in the figure below:



Performance Expectancy

Performance expectancy explains that someone adopts the technology because of the benefits or performance expected by the user. Most people are likely to adopt behavior if it benefits them. Findings suggested that performance expectancy is the most highlighted dimension that influences the adoption of rural entrepreneurs towards e-commerce adoption. There are four themes generated that can be classified under this dimension which are online visibility, accessibility, flexibility as well as lower cost. Rural entrepreneurs are facilitated to use e-commerce platforms as they can bring positive impact to their businesses. The most dominant facilitator is online visibility where 15 of the rural entrepreneurs responded that online visibility especially through social media is very crucial in operating their business. Using online platforms such as their social media to promote their products extends the visibility of the products to a wider audience rather than limiting it to their close network

and nearby customers. This enhances their product visibility and thus will attract more potential customers who are interested in their products. This is because, without visibility, it is hard for people to know about the business. Therefore, with online visibility, it is easier for potential customers to reach them. The entrepreneurs could also be benefitted from easy access to products by customers through an e-commerce platform. If they offer their products online, it is easy for customers to buy or order them just by using their phones. This can be considered a win-win situation for both seller and buyer as it can enhance business transactions if compared to the traditional ways of doing business. Five rural entrepreneurs stated that they are encouraged to adopt e-commerce because they want to ensure that their customers have easy access to information about their businesses. As a result, the customers may know about the availability of the products only through online platforms. Apart from being a win-win situation for both buyers and sellers, the entrepreneurs are also benefitted by using e-commerce as it is flexible in terms of promoting products. Six interviewees mentioned that they are being facilitated by the reason of flexibility. As mentioned by E14:

We could use it online everywhere. So, if I am free, I could just post on our online page. It is easy for me as I always attend booths, and join expos, so, if I use technology, I could promote my business frequently. I could also upload when I am attending the expo to make people aware that I was there. So, they might come to the expo (E14).

Therefore, it shows that they could still manage their business without having to worry about time, place, and condition. An online platform is ubiquitous and thus can be used anywhere and at any time. Therefore, entrepreneurs can post about their products without being limited by space or time. This ensures that their products are visible to others as they can be continuously promoted. In addition, the usage of e-commerce also incurs lower costs, especially in terms of marketing expenses. As they just have to post about their products on their online platform, the entrepreneurs can reduce their promotion costs, such as flyers, on which they would need to spend more if they were acting traditionally. Six rural entrepreneurs agreed that using online marketing has a lower cost in terms of time, energy, and money compared to traditional marketing. This is because if they are using the traditional method, apart from having to meet the customers face to face, they have to print out the flyers. This method is time-consuming and expensive as they have to spend more money on printing the flyers. As the benefits of using e-commerce are greater than depending on the traditional ways of promoting their products. This is consistent with the study conducted by Goswami and Dutta (2017), which showed that women entrepreneurs are influenced by performance expectancy in their intention to use e-commerce.

Social Influence

Secondly, social influence is another reason for adoption that explains how the users adopt the technology because of the influence from the people around them who think they suppose to use the technology. Therefore, three themes can be classified under social influence which are family influence, friend's support, and influence from successful entrepreneurs. Influence from successful entrepreneurs was also found to be the facilitator of e-commerce adoption. According to the rural entrepreneurs, successful entrepreneurs keep mentioned about social media and websites and this encourages them to use the same approach in promoting their products as well. As stated by E20:

Most successful entrepreneurs also use their social media. I follow their updates on their social media and they always mentioned the importance of using social media and websites. I didn't use the website yet, but I have a plan to use it in the future. I need to learn about it first (E20).

Therefore, it can be seen that recommendations from successful entrepreneurs to use an online platform to promote their products give a significant impact on influencing the rural entrepreneur's behavior to adopt e-commerce. This indicates that entrepreneurs trust someone that they look up to, especially those who can be considered successful in the industry. As a result, there is a possibility for the entrepreneurs to follow the fruitful suggestion given by them. Besides, the facilitator of e-commerce adoption is family influence whereby three of the interviewees mentioned that their family members encourage them to use their social media due to the potential of using it in running their business. This shows that the people around us especially our family members may motivate someone to do something. Apart from family, support from friends is also the facilitator of e-commerce adoption among four interviewees. Some of the entrepreneurs also mentioned that they receive support from friends and family, who encourage them to use online platforms as they believed that this will help the entrepreneurs' businesses. They mentioned that their friends encouraged them to use their own Facebook to promote their products by looking at the potential of the online platform. This also shows that the influence of people in our surroundings is significant in guiding our decision. Therefore, it shows that social influence plays a significant role in influencing entrepreneurs to use e-commerce. This is because the relationships among rural people are stronger, so their trust in their community and those they trust can easily influence their decisions. This can be reflected in their decision to use e-commerce after being encouraged by family members, friends, and other entrepreneurs whom they respect. This is consistent with (Almaimouni et al., 2014), who showed that social influence, in terms of both personal and business, had an impact on the usage of e-commerce among entrepreneurs in Saudi Arabia. This is also supported by Cho et al. (cited in Abu-Shanab & Ghaleb (2012) who argued that people who are considered close to the individual, such as their family and friends, have some impact on individual decisions when it comes to the usage of new technology. By having recommendations from someone who is considered as important people in their life, the adoption of e-commerce can be facilitated easily.

Effort Expectancy

Effort expectancy explains about the easier the usage, it is much easier for people to use it. Thus, people can adopt it successfully. The ease of use theme that emerged from the finding can be classified under effort expectancy as the rural entrepreneurs mention that it is easy for them to adopt it because they are used to using their social media. Three rural entrepreneurs mentioned ease of use as their facilitator because it is easy for them as they are already familiar to use their social media. They just use the same method to promote their business online. As stated by E2:

In addition, it was so easy. Because it is like you are playing your Facebook. You just have to click and post and wait if people are commenting on your products, you could just reply to their comments without having to see them face to face (E2).

This factor influences the tendency for people to use technology due to the ease of using it. In line with Shaharudin et al. (2012) who found that perceived ease of use influences the adoption, there is a tendency for the adoption behavior to occur. If a system is hard to use, it may reduce people's tendency to adopt the technology. As some entrepreneurs know how to use social media for their social connection purpose, it is easy for them to market their products by using their own social media platforms due to their familiarity with using the same platforms. Therefore, they have fewer issues promoting their products online as they already know the features of social media. This shows that familiarity makes someone comfortable in adopting something thus making it easier for them to keep up with the changes.

Facilitating Condition

Facilitating condition is also one of the constructs that indicate the reason for using the technology. Consistent with Dutta and Shivani (2020) who found that there is a positive relationship between facilitating condition towards e-commerce usage. This construct explains the availability of facilities, infrastructures, or supportive environments that enable them to adopt the technology successfully. Based on the findings, training, and assistance from family can be classified under this construct as the rural entrepreneurs adopting e-commerce if they get assistance from someone and learn how to use e-commerce platforms through courses learned during the training. Training does play a significant role in enabling entrepreneurs to adopt e-commerce as 10 interviewees mentioned this factor. They stated the knowledge and awareness to adopt e-commerce obtained from the training organized by the Ministry of Rural Development (MRD) and Ministry of International Trade and Industry (MITI). Therefore, from this exposure, they know the importance of being visible especially online. E12 stated that:

Sometimes, when the Ministry of Rural Development conducts courses for rural entrepreneurs like us, they did mention the online marketing strategy. Ministry of Trade also talk about the e-commerce platform whenever they do event, seminar, or any training where their target are entrepreneurs like us (E12).

The majority of the entrepreneurs who mentioned this factor mentioned that they knew about using online platforms to market their products as part of their marketing strategies through attending the courses organized by various agencies. This shows that the training played important role in increasing the entrepreneurs' awareness and knowledge of using e-commerce to market their products. Having the awareness and knowledge through the training attended will guide them to apply the knowledge to their business. Hence, more training organized by the relevant agencies are needed to encourage the participation of rural entrepreneurs in the digital economy. In addition, some rural entrepreneurs were also being facilitated by assistance from family. As they are unfamiliar with the technology, some of the entrepreneurs mentioned that their family members would assist in marketing their products online. This is because some of them are not used to technology, therefore assistance from their younger family members is needed. Their daughters and sons are the ones that will assist them either by teaching them how to use the online or even helping them in handling their online business. Singh and Behl (2016) also found a similar result which shows the importance of supporting conditions in technology adoption, especially among older women. Rural entrepreneurs, especially those of the older generation, are not used to using technology as they are used to conducting business traditionally. Therefore, the older generation said they faced difficulties using it. This explains why they needed to be assisted by someone, in this case, their children. Both these factors share one similarity, in that they need a supportive environment that can assist them in adopting e-commerce.

Observational Learning

Upon analysis of data and generating themes, the researcher found the newly emerged construct that can be added to UTAUT's original constructs which is the observational learning construct. This construct explains that someone might be influenced to use the technology after observing others who are using the same technology as well. Observational learning is the method whereby someone adopts a behavior after observing the environment independently. Findings suggested that rural entrepreneurs are also being facilitated because they saw advertisements from other businesses that are using social media as their marketing tools. Seeing their advertisement gives the idea to the entrepreneurs to use the same technique as well in marketing their products. By frequently seeing online advertisements while scrolling through their social media, rural entrepreneurs are being influenced to use the same technique in promoting their products due to the potential of such approach. Six rural entrepreneurs mentioned their facilitator of e-commerce adoption is the exposure from online advertisement. As stated by E4:

I always see advertisements about the products when I open my Facebook. I could see a lot of people view and comment under the product advertisement and from there I started to follow the same method as well by promoting my products on my Facebook (E4)

This shows that apart from being exposed to something that we are alert to, we also tend to learn something from our observation. As we observe our surroundings, we receive the input that we process into the output. This also happened to some of the rural entrepreneurs as they observed the usage of online advertisement techniques, which motivated them to employ the same ways, especially when they operated in the same industry. According to Glanz et al. (2008) (cited in Laranjo (2016)), an individual tends to imitate the behavior of someone if they perceive them as similar to them, a concept known as peer modeling. This facilitator is considered a newly emerged facilitator as this factor had not been mentioned by previous studies. This demonstrates that rural entrepreneurs in Sabah also learn from observation and use the same strategy for their businesses.

Therefore, in responding to the needs of rural entrepreneurs to adopt e-commerce, it is not sufficient to rely solely on giving awareness to them about the benefits that can be offered through the utilization of this online platform. Having the ability to observe and learn, supportive conditions, as well as influence from the people as well as the easiness of using the platform, are vital facilitators that may encourage more rural entrepreneurs to become both offline and online business owners.

5. Conclusions

In conclusion, this study reveals that rural entrepreneurs in Sabah utilize online platforms, especially for marketing purposes. However, the majority of businesses still rely on social media as their main e-commerce adoption platform, and each entrepreneur has their own perception towards e-commerce. The findings confirm the four original UTAUT constructs, namely performance expectancy, social influence, effort expectancy, and facilitating condition, and highlight the observational learning factor as an additional dimension. These insights can guide stakeholders in assisting rural entrepreneurs to embrace the digital economy, including those in areas with connectivity challenges.

Despite its contribution, this study has some limitations. It focuses on entrepreneurs in the rural area of Sabah who participate in programs organized by the Ministry of Rural Development, which limits the scope of the findings. Also, the study is cross-sectional in nature and was conducted before the pandemic, which means that the entrepreneurs' perception of e-commerce adoption might have changed over time. Longitudinal studies can address this limitation.

Future studies may investigate e-commerce adoption in specific industries, such as agriculture, retail, and handicraft, to explore how effective e-commerce platforms are in helping businesses reach their potential customers compared to traditional methods. Furthermore, it may be beneficial to study the government or non-governmental organizations' role in facilitating digitalization in rural areas, where internet connectivity may pose a challenge. Understanding their perspective and plans can help ensure the inclusivity of rural people in adopting technology. Lastly, given that most entrepreneurs in this study rely only on social media, future studies may also investigate their readiness and intention to use other e-commerce platforms.

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