

Exploring Digital Competency among Mah Meri *Orang Asli* Women Entrepreneurs in Malaysia's Tourism Sector

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DOI: <https://doi.org/10.47772/IJRISS.2026.100801138>

Received: 09 September 2026; Accepted: 14 September 2026; Published: 25 September 2026

ABSTRACT

This study explores the digital competencies of Mah Meri *Orang Asli* women entrepreneurs engaged in Malaysia's tourism sector. Utilizing a case study approach, data were collected through interviews and observations with three women entrepreneurs and two supporting officers. The findings reveal that these women have adapted digital technologies, such as social media platforms, to market their products and services, reflecting an evolving digital literacy crucial for enhancing their entrepreneurial success. This study contributes to the understanding of how indigenous communities can leverage digital tools to boost economic development and offers insights into policy directions for digital inclusion.

Keywords: Digital Competency, Orang Asli, Entrepreneurship, Tourism

INTRODUCTION

In today's rapidly evolving digital age, digital literacy has become a critical factor in determining the success of individuals and communities within the global economy. Malaysia, with its ambitious digital transformation agenda, has recognized the importance of empowering all citizens to participate in the digital economy. Central to this effort is the MyDIGITAL initiative, a comprehensive framework aimed at positioning Malaysia as a regional leader in the digital economy by 2030. The initiative outlines key policies and strategies to accelerate the adoption of digital technologies, particularly among underserved and rural communities, including the Orang Asli. The fifth core of the MyDIGITAL initiative specifically focuses on creating an inclusive digital society by bridging the digital divide and empowering marginalized groups through entrepreneurial activities (Unit Perancang Ekonomi, 2021).

The Mah Meri tribe, one of the indigenous communities in Peninsular Malaysia, provides a compelling case study on the intersection of digital competency and entrepreneurship. Historically, Mah Meri women have played a vital role in their community's economic activities, particularly in the tourism sector. Their craftsmanship, especially in weaving and cultural performances, has attracted national and international attention. However, with the advent of digital platforms and tools, these women now face the challenge of adapting to new technologies to expand their business ventures. While digital technologies offer unprecedented opportunities for economic growth and outreach, indigenous communities such as the Mah Meri often lack access to the resources, training, and infrastructure necessary to fully participate in this digital transformation.

This study seeks to address the gaps in understanding how indigenous women, particularly the Mah Meri, engage with digital platforms to enhance their entrepreneurial endeavors. Despite growing interest in the digital inclusion of indigenous populations, there remains a lack of detailed research on the specific competencies required for these communities to thrive in the digital economy. By exploring the digital competency of Mah Meri *Orang Asli* women entrepreneurs, this study aims to contribute valuable insights into how digital literacy can be fostered and sustained within marginalized communities. It also highlights the role of government

policies, such as MyDIGITAL, in supporting the development of digital skills among indigenous populations, ensuring that they are not left behind in the country's digital transition.

The findings of this research are significant not only for understanding the current state of digital competency among Mah Meri women but also for informing future policies and interventions that can further bridge the digital divide. By equipping indigenous women with the necessary digital skills, Malaysia can ensure that communities like the Mah Meri are active participants in the nation's digital economy, ultimately contributing to broader socio-economic development.

LITERATURE REVIEW

Who is Orang Asli?

The Orang Asli are known by various names. In foreign countries, they are known as indigenous people. While in Malaysia, indigenous people refer to the original population consisting of Malays, Orang Asli in the peninsula, and ethnic groups in Sabah and Sarawak. The term indigenous is divided into two, namely Bumiputera and Orang Asli (Roddin et al., 2022). Act 134 is a special act for Orang Asli that is only accepted in Peninsular Malaysia (JAKOA, 2022). Based on Section 3 of the Orang Asli Act 1954 (Act 134), Orang Asli is defined as follows:

- (i) Any whose father is a member of the Orang Asli ethnic group, who speaks the Orang Asli language and generally follows the Orang Asli way of life and the customs of the Orang Asli beliefs, and includes a descendant through the male;
- (ii) Any person of any race who is involved through patrilineal descent, intermarriage, community or social adoption by an Orang Asli and who has been brought up as an Orang Asli, habitually speaks the language of the Orang Asli, follows the way of life of the Orang Asli and the customs of the Orang Asli beliefs, and becomes members of an Orang Asli community; or
- (iii) A child from any union between an Orang Asli woman and a man from another race, provided the child habitually speaks the Orang Asli language and Orang Asli beliefs and is still a member of an Orang Asli community.

From the definition above, the term Orang Asli means the original population (indigenous) in Peninsular Malaysia while other races such as the Malays, the original population in Sabah and Sarawak are termed Bumiputera. This is because the provision in the act has clearly stated that the term Orang Asli is only used to explain the status of the original population in Peninsular Malaysia. However, the use of the term aboriginal in foreign countries is the same as the use of the term Orang Asli in Malaysia.

Digital Competency among Orang Asli

Spencer and Spencer's Theory was introduced in Spencer and Spencer's (1993) study involves five (5) dimensions of digital skills competence:

- (i) Skills; related to the ability or capability to do something.
- (ii) Knowledge; that is related to knowledge or information in a certain field.
- (iii) Motivation; related to the factors that stimulate a person to do a task.
- (iv) Nature; is related to the personal characteristics or behaviour of person in responding to something that happens.
- (v) Self-Concept; is related to the image or quality value that a person has.

There are three (3) important elements in competence that are influenced by the characteristics possessed by individuals, namely, knowledge, skills and behaviour as found in Spencer and Spencer's Theory.

According to Gordon in Sutrisno (2016), there are six (6) aspects contained in the concept of competence, namely knowledge, understanding, value, skill, attitude, and interest. The sixth aspect of competence is knowledge, which is an awareness of the cognitive field. For example, an entrepreneur tries to identify a good digital marketing method to meet every customer's needs. Next is understanding, which is the cognitive and affective depth possessed by an individual. For example, an entrepreneur implements learning and has a good understanding of the characteristics of digital marketing and the state of things effectively and efficiently. The next aspect is value, which is a standard of behaviour that is believed and united in a person such as honesty, openness, and et cetera. Skill is something that an individual possesses in carrying out a given task. For example, entrepreneurs have good digital skills in using applications for digital product marketing. The attitude aspect is a feeling or reaction to external stimuli and the last one is interest, which is a tendency to do something. Every entrepreneur needs to have a deep interest in the field of entrepreneurship and be able to keep up with current digital trends.

Digital competence involves confident, critical, and responsible use, followed by engagement with digital technology for the purpose of learning at work and participation in society. The skill is defined as a combination of knowledge, skills, and attitudes. Based on the DigComp framework from Riina et al. (2022), the key components that can be linked to the digital competence of Orang Asli are through:

- (i) Information and data literacy: To express information needs, to find and retrieve digital data, information and content. To evaluate the relevance of the resource and its content. To store, manage and organise digital data, information and content.
- (ii) Communication and collaboration: To interact, communicate and collaborate through digital technologies while being aware of cultural and generational diversity. To participate in society through public and private digital services and participatory citizenship. To manage one's digital presence, identity and reputation.
- (iii) Digital content creation: To create and edit digital content to improve and integrate information and content into existing bodies of knowledge while understanding how copyright and licenses apply. To learn how to give understandable instructions to a computer system.
- (iv) Problem-solving: To identify needs and problems, and to solve conceptual problems and problem situations in a digital environment. To use digital tools to innovate processes and products. To keep up with digital developments.

During the eight weeks of 2020 the world jumped five years in the implementation of digital consumer and business solutions. It goes without saying that the whole of 2020 has been marked by an unprecedented acceleration of digital transformation. Digital upheaval has suddenly broken into everyone's life. Among the most discussed topics is a shift towards distance learning and remote work. A study carried out in Ukraine shows that the key to digital competence includes the basics of computer literacy; information literacy and the ability to work with data; creation of digital content; communication and interaction in a digital society, security in a digital environment; and problem-solving in a digital environment and lifelong learning. Digital competence includes the necessary knowledge, abilities, and practical skills (Lonan, 2021).

The digital business environment facilitates the marketing and delivery of products from producers to customers. For the Orang Asli community, they are known for their skills in producing good and marketable handicraft items. The challenge that is often faced is how this community market their work and make it reachable to the outside communities, not only domestically but also internationally. The development of digital business needs to be taken advantage of by the Orang Asli community to improve their socio-economic well-being. Nevertheless, this cannot happen without proper training and skills. The Orang Asli may not be able to ride on the technology offered in the 4th industrial revolution immediately, but consistent training and handholding can help facilitate this faster. This also has to be embedded in the school curriculum especially for the Orang Asli

children to have a long-term sustainable impact. Several agencies have begun to take the lead in educating the Orang Asli on e-commerce. The study has evidenced that the Orang Asli are readily using the mobile phone for communication. They are also active in social media to be well-informed about social and political issues (Selvaratnam, Embong & Keliwo, 2019).

The Malaysian Digital Economy Corporation (MDEC) implemented the #SayaDigital programme in the Orang Asli village in Bukit Lanjan, Selangor to improve literacy and digital adaptation to various levels of society. Since its inception in August 2020, three programmes and nine online initiatives have already been implemented through the pilot project. The #SayaDigital movement targets B40 families, low-income groups, the elderly, and youth in order to raise awareness in the community that digital use can make life easier and further empower future careers (Yusof, 2021).

Entrepreneurship-based Tourism among Orang Asli

Poverty and "rigid mindset" or resistance to change are the main challenges for the government in overcoming problems among Orang Asli. These two are the obstacles for this community to move forward due to their rigid way of thinking, because most of them do not want change, have a low income, only depend on subsistence income, are unemployed, have a low level of education, and lack interpersonal and intrapersonal skills (Roddin et al., 2020).

The role of women in eradicating poverty in the Orang Asli community is an aspect that needs to be focused on. The negative view of women as being incapable of developing themselves and their own communities needs to be dismissed. It should be known that the rapid development of the country's economy now employs more women to actively engage in the world of entrepreneurship. Along with men, the involvement of women in the field of entrepreneurship is seen as something positive to eradicate poverty and lead the development of their own communities. Therefore, one of the options for Orang Asli communities that have a majority of women is through their involvement in tourism activities in which it can be a major contributor to their social economic development (Roddin et al., 2021).

Tourism, as one of Malaysia's fastest growing economic sectors, has created many business opportunities, the majority of which are family-controlled businesses (Mohd Puzi & Ismail, 2017). According to Ibrahim et al. (2023), cultural ecological tourism is one example that is seen as having the potential to generate job opportunities and income for indigenous communities. Tourism has an advantage over other sectors in its ability to reduce poverty. This can clearly be proven that tourism is a diverse industry and has a wide scope in participation, especially from the informal sector. The tourism sector is more labour intensive, where it uses higher female energy resources than other sectors such as manufacturing. Through tourism, customers or tourists come to the product and this will indirectly offer opportunities for individuals or companies in the sector to make additional sales and create networks. Tourism products can be developed through natural and cultural resources that are often assets to the poor (Roddin, 2016).

The Orang Asli Mah Meri in Pulau Carey is an ethnic community that come from the Senoi group, and they are one of the successful communities in tourism-based entrepreneurship. Pulau Carey, which situated in Kuala Langat, Selangor has five villages of the Mah Meri tribe, namely Sungai Bumbun, Sungai Judah, Sungai Kurau, Sungai Rambai and Kerpau Laut with a population of 1,149 people. The Mah Meri community is one of the indigenous tribes that contribute a lot in producing handicrafts and has managed to attract many tourists to their settlements to see their handicrafts and culture. This can be seen through products that have been highlighted abroad through exhibitions, demonstrations, and visits such as One Village One Product (OVOP) Indonesia, One Tambon One Product (OTOP) Thailand, and several other countries. This SDSI programme involves three categories, namely weaving, carving, and cultural groups. A Craft Centre was built in Kampung Sungai Bumbun, Pulau Carey in 2007 and 2008 under the funding of the Ministry of Rural and Regional Development (KKLW)'s Rural Economy Division on 0.85 acres of land. There are fifteen (15) women who are registered under the women's and cultural group in the village of Sungai Bumbun, Pulau Carey, Selangor, signifying this community as one of the successful communities with good example in entrepreneurship-based tourism among the Orang Asli (Roddin, 2016).

RESEARCH METHODOLOGY

This study uses a case study design with a qualitative approach by purposeful sampling. Interview and observation methods are used in this study involving three (3) research participants, consisting of women entrepreneurs of the Mah Meri Orang Asli and two (2) supporting participants who are officials at the ministry level and the Malaysian Indigenous Development Department (JAKOA). The selection of three (3) participants is sufficient to fulfil the purpose of the study. Yin (2003), stated that in order to fulfil the purpose of predicting the same result (literal replication) or predicting different results with predictable reasons (theoretical replication) in the selection of study participants in a case study, three to five respondents in one group are sufficient. While according to Patton (2002) and Merriam (2009), the number of research participants selected depends on the research question and data collection until the data becomes saturated and based on the purpose of the study, which covering the study of the phenomenon being studied. In qualitative studies, the size and number of study participants are not the main measure, but the selection of the right participants is the element that determines the quality of the study data obtained Patton, (2002). The small number of participants gives researchers the opportunity to deepen the experience of each participant, which can give meaning to the process of change that has gone through. Therefore, the determination of the sample size depends on the context of the study being carried out, including time limitations.

The observation was also carried out on the study participants and their environment. Each participant has a background and skills that have been inherited from their ancestors. Methodological transparency was strengthened through the collection of primary data using semi-structured, in-depth interviews and structured field observations. The interviews were conducted in Bahasa Malaysia, with each session lasting approximately 60 to 90 minutes. With participants' consent, all interviews were audio-recorded and transcribed verbatim. The background of the selected participants are women, who have been involved in the early stages of the development of the tourism sector in Pulau Carey, specifically in Kampung Sungai Bumbun, included those who are still active until now. The Table 1 is the background of the participants who involved in this study.

Table 1: Background of the Study Participants

No	Research Participants Coding	Level of Education	Skills
1	PK1	Grade 6	Weaving and dancing (culture), singers and play instrument
2	PK2	Grade 6	Weaving and dancing (culture), Singer
3	PK3	Form 2	Weaving and dancing (culture)

PK1 is the leader of the weaving and culture group. She acts as the head of the household. Likewise, PK3 plays the role as the head of the family in supporting the household. While PK2 plays a role in contributing to improve her family income by culture performance. All the selected participants are seen to be living well in Kampung Sungai Bumbun because of the development, provision of facilities and centralisation of many activities that are carried out in the settlement. The selection of Kampung Sungai Bumbun is a symbol of Orang Asli community involvement in tourism activity in Pulau Carey. As a central showcase settlement equipped with a dedicated Craft Centre built under Ministry funding, Kampung Sungai Bumbun benefits from superior infrastructure compared to remote inland settlements. Consequently, findings cannot be generalized as representative of all Mah Meri or Orang Asli settlements. Instead, this study serves as an exploratory case study illustrating digital adoption dynamics within an enabled indigenous showcase village.

The support participant that coded with PS1 is an assistant secretary who has served in the Economic Empowerment Division, the Ministry of Rural and Regional Development. Meanwhile, PS2 is an officer who has served in the Socio-Economic Development Division, JAKOA Malaysia. They have a lot of experience with the Mah Meri and Orang Asli communities.

ANALYSIS AND DISCUSSION

The research data obtained was analysed using the thematic method. Through this method, the main theme has been released in which the digital competence of Mah Meri Orang Asli women is divided into three, namely knowledge, skills, and attitudes. This finding is supported by the theory of Spencer and Spencer's (1993), where the attributes obtained coincide with the theory in relation to competence elements.

Through the results of the study obtained among the Mah Meri Orang Asli women, it shows that the digital competence practiced in promoting tourism-based entrepreneurship in their settlements is through digital knowledge, digital skills, and attitudes in facing digitalisation (Refer Figure 1). Although this finding only represents Mah Meri Orang Asli women, it can be adapted based on the same characteristics found in Orang Asli women entrepreneurs from other tribes. These three components are important when the country is hit by the COVID-19 pandemic, causing digital skills to become the main aspect as their business management platform.

Thus, to improve digital competence among Orang Asli women, the elements of knowledge, skills, and attitudes need to be emphasised in helping other Orang Asli women to become entrepreneurs in the era of digitalisation.

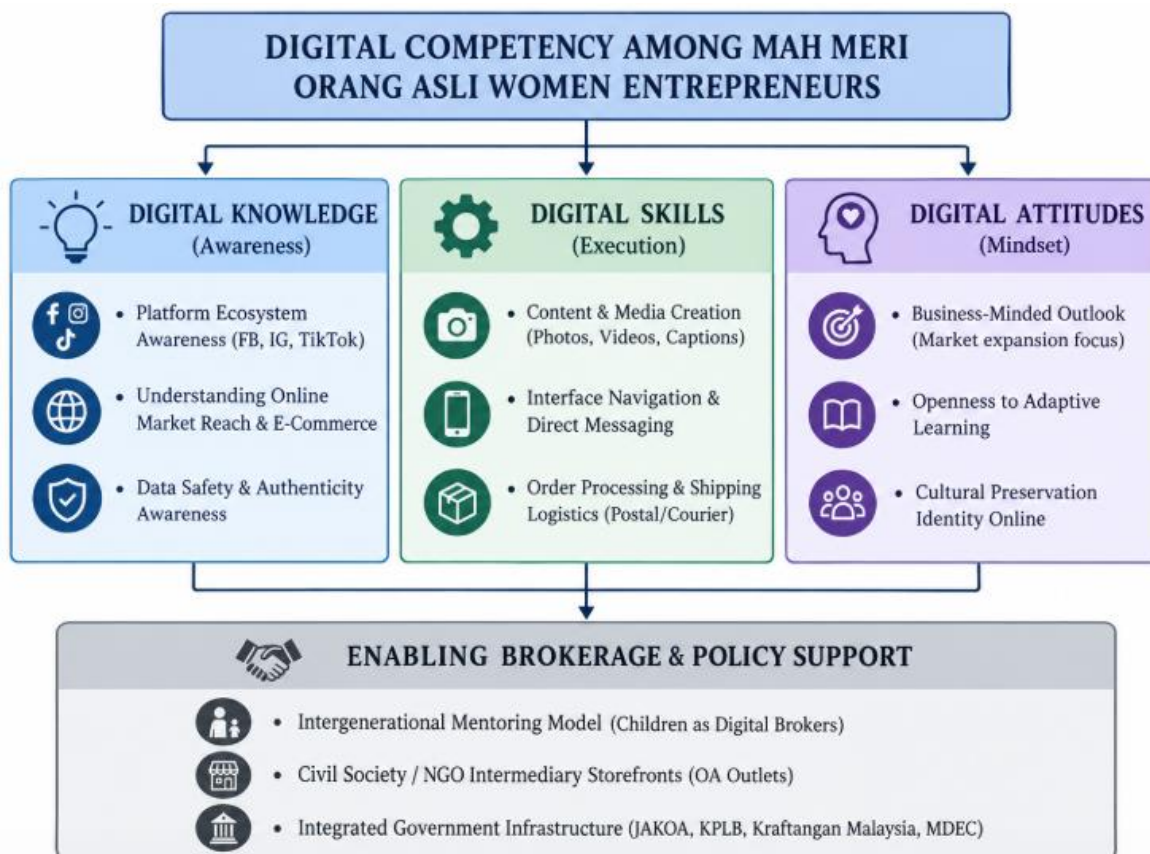


Figure 1: Digital Competency Among Mah Meri Orang Asli Women Entrepreneurs

Digital Knowledge Competency

The results of interviews and observations show that PK1, PK2, and PK3 have exposed themselves to various digital applications such as WhatsApp, Facebook, Website, Instagram, and Tik Tok to promote tourism attractions in their settlements. For the digital knowledge competency, as PK1 stated that when the COVID-19 pandemic hit the country, she started receiving orders from customers through online platforms such as WhatsApp. Rather than acquiring digital skills through formal coursework alone, participants rely on an informal Intergenerational Mentoring Model. When navigating complex application updates or troubleshooting interface errors, older entrepreneurs utilize their formally educated children as digital brokers. As PK1 explained:

"During COVID, I still open for orders online. It's no problem. If I don't know I learn with my children." PK1

Digital knowledge is very necessary especially after the post pandemic. It can be seen through the findings from PK1, PK2, and PK3, where they work together in learning digital technology. Throughout the process, their children become a reference for them to learn how to use the latest applications. NGOs also play a role in increasing the knowledge of the use of digital applications in expanding the market for Orang Asli women's products, especially in relation to woven products.

Digital Skill Competency

NGOs play an important role in helping the Orang Asli community. This NGO group is active in helping the Mah Meri community in terms of new product production ideas, promotion, and sales. Woven products are promoted online known as OA (Orang Asal) Outlets. Indirectly, the efforts made by NGOs have helped introduce their communities and products to the world.

"...it's actually the NGO that helps. I know what they do. Before this I didn't know how to use a computer (internet) but now I know how to surf the internet. I know what the NGO is promoting regarding my product". (PK1)

"...NGOs do promotions on the internet voluntarily. In matters of buying and selling, we also deal online. Through promotions on the website, we get orders including from abroad. There are also customers who come here if they know about our products which are promoted on the internet." (PK2)

Orang Asli women are also assisted by the government through training and participation in various events that allow them to improve their skills including collaboration with other communities in Malaysia in the same field.

"...we will indeed send them to a course, whether we work with JAKOA, the Department of Indigenous People, or under the ministry, and Handicrafts". (PS1)

"...and one more thing, with the help given by the government, it doesn't matter which agency. You can see their improvement in terms of communication and their views are also moving forward." (PS2)

The exposure given has created the exploration of various skills including digital skills to connect with other communities that produce the same product. Thus, it creates a wider network of marketing networks. Mobile communication tools enable Mah Meri entrepreneurs to establish inter-tribe supply networks across Peninsular Malaysia, bypassing traditional geographic isolation. PK1 highlighted collaborative trade links with Semai artisans in Tapah, Perak, and Temiar craft makers in Gombak, Selangor:

"...Semai people in Tapah, Perak took my stuff. He has a shop nearby. We have a cooperation network. Sometimes there are no items here, I go to Gombak to buy items from Orang Temiar. This year the cooperation is very good. We used to not know the Semai, Temiar tribes and now we know them since we got involved in this handicraft. The relationship has become closer". (PK1)

"...we have mailed this item to interested traders as well. This product is for the foreign market. For example the state of Johor. We also market in Melaka, Penang and Perak." (PK2)

There are various opportunities and provisions provided by the government to help the Orang Asli community. It becomes an advantage to this community in improving their digital skills. For example, internet facilities in Orang Asli villages are able to improve their skills in using digital networks with free broadband facilities.

Attitude through Digital Competency

Attitude is a psychological symptom and implicit in the individual. For the researchers, speech, character, and information given can be related to the real attitude of this community. It closely coincides with the cognitive,

affective, and psychomotor characteristics that are triggered by environmental stimuli. Thus, they have a positive attitude towards the use of digital, which is considered today's important technology that needs to be learned in sustaining their business.

The attitude can be seen when the Orang Asli women are able to change their mindset in using digital facilities positively. For example, PK1, PK2, and PK3 promote their handicraft and cultural activities through their Facebook channels. They also shared information related to the promotion of their activities carried out by the government. Indirectly, it shows that they have awareness from the aspect of safety and authenticity of shared data for the purpose of attracting people to get to know them better.

Meanwhile, through the Ministry of Rural and Regional Development, Orang Asli Development Malaysia (JAKOA), and the *Malaysian Handicraft Development Corporation*, the initiatives of these bodies also provide exposure and opportunities to this community to be involved in various programmes and activities such as exhibitions, tours, performances, competitions, etc. to expand their experience.

"...we sometimes send them to seminars, like business matching. Even if they can't communicate in English. But, business-minded can be applied." (PS1)

Through business-minded is important in creating a more extensive digital network according to the needs of the world today towards industry revolution 4.0.

CONCLUSION

Overall, it can be concluded that digital knowledge, skills in using digital technology, as well as attitude in accepting change and practicing it are the important elements of every community to achieve digital competency effectively. The implementation of digitisation in the Orang Asli community still requires support and assistance from external parties such as the Ministry of Communications and Digital, the Ministry of Rural and Regional Development, JAKOA, and NGOs. Although the Orang Asli Mah Meri community is an example of Orang Asli women entrepreneurs who successfully use digital platforms in business management, they still need guidance from more skilled people. While supporting officers noted that artisans develop strong commercial instincts even without formal English fluency, expanding international tourism matching requires contextualized language training. The curriculum should incorporate Vocational English for Business Matching, equipping entrepreneurs with functional vocabulary for product cataloging, pricing negotiation, international trade exhibitions, and digital customer support. They still expect their children with a higher level of education to help them understand the latest applications in product marketing management. Providing internet connectivity alone is insufficient if entrepreneurs lack appropriate hardware. Government policy must extend beyond free broadband provision to implement targeted Digital Hardware Subsidies.

ACKNOWLEDGEMENTS

The researcher takes the opportunity to express his gratitude to the Malaysian Ministry of Higher Education (MoHE) who funded the cost of this research through the Fundamental Research Grant Scheme (FRGS) Vote K539, grant reference number FRGS/1/2024/SS06/UTHM/02/2 and the University Tun Hussein Onn Malaysia (UTHM) for giving permission and approval for the publication of this paper.

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