Breaking Barriers: Investigating Technology Adoption in Micro, Small, and Medium Enterprises (MSMEs) Among Low-Income Women Entrepreneurs in Malaysia

Maryam Sakinah Md Faudzi*, Lily Julienti Abu Bakar, Shuhymee Ahmad
School of Business Management, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia

*Corresponding author email: maryamfaudzi@gmail.com

ABSTRACT
In Malaysia, the B40 segment, particularly low-income women entrepreneurs, faces distinct challenges in adopting technology within their businesses. This qualitative study explores the low uptake of technology adoption among these entrepreneurs to understand the underlying dynamics. By addressing the "what" and "why" of low technology adoption, the research aims to provide insights for fostering inclusivity and empowerment within Malaysia's entrepreneurial landscape. The study involved an in-depth focus group discussion with 25 women entrepreneurs from four states across Malaysia, utilizing thematic analysis with Atlas TI. Key findings reveal issues related to technology adoption based on TAM theory. The findings indicate that most entrepreneurs are integrating technology into their business operations, either through social media marketing, e-commerce platforms, cashless payment methods, online delivery services, and machines, regardless of whether they are located in rural or metropolitan areas. The majority of the respondent are utilizing technology through their social media marketing. These situations have arisen as a result of the impact of COVID-19, which has compelled all entrepreneurs to adopt technology, even at a minimal level. The majority use social media platforms like Facebook and WhatsApp for marketing and adopt online banking and cashless payment methods such as DuitNow QR Code, Touch 'n Go, Boost, Shopee Pay, and Sarawak Pay. Despite using online food delivery services like Food Panda and Grab Food, trust issues such as payment delays, non-payment by drivers, and high commission fees make these platforms less appealing. Additionally, entrepreneurs prefer traditional methods over machinery to maintain quality and struggle to meet e-commerce demand due to their small-scale production, limiting their ability to fully use technology for business growth and sustainability. The findings support the theoretical insights of the TAM model and suggest actionable strategies for fostering technology adoption and empowerment among low-income women entrepreneurs in Malaysia.

KEYWORDS: Low-income women entrepreneurs, Technology adoption, Micro, Small, and Medium Enterprises

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1. INTRODUCTION

In recent years, global has witnessed a burgeoning entrepreneurial landscape, women consistently demonstrate high levels of participation in economies, as evidenced by the GEM 2022/2023 Women Entrepreneurship Reports (2023). In contrast to women in high-income countries, women in low-income countries exhibit the highest percentages of 28.2% entrepreneurial intention and 13.3% start-up rates (Hughes et al., 2023). While there are around 61.3 million women entrepreneurs who own and run firms in the 10 member countries among ASEAN nations, these women make up 9.8 percent of the overall population in ASEAN (Guelich, 2017). This suggests that women in developing countries are trying to improve their quality of life, which is especially motivating for women from lower socioeconomic backgrounds to participate actively in inventive entrepreneurial endeavours.

The term "low-income society group" commonly refers to the B40 group in Malaysia, which represents the bottom 40% of household income earners, earning no more than RM4,850 per month in 2020 and representing almost 16.1% of the population (Hashim et al., 2023). Most individuals belonging to the B40 group are compelled to seek alternative methods of survival. Instead of accepting a single opportunity, they must persist in seeking alternative avenues. Hence, in Malaysia, poverty has motivated women, particularly those from low-income origins, to actively participate in economic labour (Amri et al., 2022). It is important to note that

low-income women entrepreneurs' income-generating activities are critical not only for the improvement of their position in the household but also for the welfare of the family, particularly in the provision of sustenance and education of children, as well as for the broader community (Owusu & Anyesepari, 2013; Kadiyono & Yuliafitri, 2023; Kamall et al., 2023a).

In Malaysia, even though women comprise half of the population, approximately only 20% of entrepreneurs in MSMEs are women (Isa et al., 2021). Despite strides toward gender equality and economic empowerment, low-income women entrepreneurs continue to encounter multifaceted challenges that hinder their business operations in accessing resources and opportunities (Khan et al., 2021). The success of these endeavors is impeded by environmental hazards, insufficient infrastructure, institutional limitations, and unfavorable government policies (Mustapha, 2016; Khan et al., 2021). In addition, women entrepreneurs face significant gender-related obstacles that make them more susceptible to vulnerability compared to their male counterparts (Santos & Neumeyer, 2021; Isa et al., 2022). The lack of support networks, restricted access to cash and markets, and other essential resources exacerbate the challenges they face. These inequalities require targeted initiatives to empower and assist low-income women entrepreneurs in their quest for economic autonomy and achievement (Bardasi et al., 2007). Within this context, technology adoption emerges as a pivotal avenue for overcoming barriers and driving business growth among Micro, Small, and Medium Enterprises (MSMEs) (Ozkazanc-Pan & Clark Muntean, 2018; Crittenden et al., 2019).

Technology adoption refers to the process by which businesses integrate digital tools, platforms, and processes into their operations to enhance efficiency, productivity, and competitiveness (Zaremohzzabieh et al., 2015). In the realm of MSMEs, technology adoption holds immense potential for catalyzing innovation, expanding market reach, and optimizing resource utilization. However, the extent to which low-income women entrepreneurs, who are also the owner-managers of MSME in Malaysia embrace and leverage technology remains an area warranting comprehensive investigation (Abd Hadi et al., 2020). Digital inclusion, a critical component of technology adoption, underscores the importance of ensuring equitable access to and utilization of digital technologies across all segments of society. For low-income women entrepreneurs, achieving digital inclusion entails not only access to affordable and reliable technology infrastructure but also the development of digital skills and capabilities necessary for leveraging technology effectively in their businesses (Ozkazanc-Pan & Clark Muntean, 2018).

Against this backdrop, this study seeks to explore the dynamics of technology adoption among low-income women entrepreneurs in Malaysia's MSME sector. By examining the factors influencing technology adoption, the challenges encountered, and the potential benefits derived, this research aims to shed light on technology uptakes for enhancing digital inclusion and promoting the sustainable growth of B40 MSMEs. Ultimately, by breaking barriers to technology adoption, this study endeavors to empower low-income women entrepreneurs to harness the transformative potential of digital technologies and contribute more effectively to Malaysia's socio-economic development agenda.

To bridge the research gap, this study aims to explore factors influencing technology adoption among low-income women entrepreneurs in Malaysia through these two research questions:

a. What are the technology uptakes in business among low-income women entrepreneurs in Malaysia?
b. Why there are low uptakes of technology in business among low-income women entrepreneurs in Malaysia?

As argued by Abd Hadi et al. (2020), Alam et al. (2021), Azri & Muda (2021) and Khan et al. (2021), the rationale for this study is the extent to which its findings provide advantages to a substantial portion of society. Therefore, in order to address this gap and take into account the suggestions of prior research, (Özsungur, 2019; Isa et al., 2021; Isa et al., 2022; Kaningini et al., 2023) this study makes at least two contributions. Firstly, this study provides significant empirical contributions by addressing existing gaps. It presents cross-state empirical evidence on the adoption of technology in businesses run by low-income women entrepreneurs in Malaysia. As previous literature highlighted only certain states in Malaysia, (Rokis et al., 2018; Abd Hadi et al., 2020; Khan et al., 2021; Kamall et al., 2023a) this qualitative study collected in-depth data from 25 low-income women entrepreneurs from northern, eastern, southern, and western Malaysia to participate in the study. Consequently, the present initiatives provide a fresh perspective on this investigation, in addition to contributing to the existing literature.

Secondly, this study offers practical guidance by outlining strategies for marginalized groups of low-income women entrepreneurs, emphasizing the significance of technology adoption to improved market access, increased efficiency, and enhanced communication with customers, as demonstrated by studies from Abd Hadi et al. (2020). In conclusion, technology adoption holds immense potential for empowering low-income women entrepreneurs and fostering inclusive economic growth. By addressing barriers, enhancing digital skills, and implementing supportive policies, stakeholders can facilitate technology uptake among low-income

women entrepreneurs, thereby unlocking new avenues for economic empowerment and social development.

2. LITERATURE REVIEW

In this section, there are three key themes highlighted from previous literature regarding the technology adoption among low-income women entrepreneurs in Malaysia.

2.1 Overview of Technology Adoption and Uptake Among Low-Income Women Entrepreneurs

In recent years, a significant realization has emerged regarding the transformative potential of technology adoption among low-income women entrepreneurs (Zaremohzzabieh et al., 2015; Rahman et al., 2017a; Alsharida et al., 2021a).

The incorporation of technology by underprivileged groups is a crucial matter in the global effort to alleviate poverty, especially among entrepreneurs (Rahman et al., 2017a). Besides, It is imperative to investigate the role of technology in the context of women entrepreneurs, as it has facilitated the internationalization of numerous businesses in substantially less time than traditional business practices (Isa et al., 2021). Operating within resource-constrained environments, these entrepreneurs have increasingly embraced technology as a means to overcome barriers, enhance productivity, and expand their businesses (Omar et al., 2018; Taleb et al., 2023).

Women entrepreneurs displayed positive attitudes towards embracing technology, and their family members would actively support their decision to do so (Kaningini et al., 2023). They also highlight notable differences before and after incorporated technology in their daily businesses such as increase in customer based due to greater customer awareness (Omar et al., 2018). However, access to affordable and reliable technology infrastructure is foundational for technology adoption among low-income women entrepreneurs. Studies by Kamall et al. (2023) and Rokisa, (2019) underscore the significance of capacity-building initiatives that equip low-income women entrepreneurs with the necessary skills to leverage technology in their businesses. Hence, developing digital skills and literacy is essential for effective technology adoption.

Scholars such as Crittenden et al. (2019) emphasize the critical need to address infrastructure gaps and ensure equitable access to technology, particularly in rural and marginalized communities in South Africa. However, various barriers impede technology adoption among low-income women entrepreneurs, ranging from limited financial resources to inadequate infrastructure and cultural norms. The existing research on technology adoption primarily concentrates on women and young entrepreneurs, leading to a comprehensive discussion. However, it tends to overlook samples of entrepreneurs, particularly those from lower-income groups especially in Malaysia (Rahman et al., 2017a; Islam et al., 2018; Alam et al., 2021).

2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a widely recognized framework used to understand and predict individuals' acceptance and adoption of new technologies. In the context of low-income women entrepreneurs' technology uptake, TAM provides valuable insights into the factors influencing their decision-making processes TAM as highlighted by Davis (1989) posits that an individual's intention to use technology is primarily determined by two key factors:

a. Perceived Usefulness: This refers to the degree to which an individual believes that using a particular technology will enhance their job performance or facilitate the achievement of their goals. For low-income women entrepreneurs, perceived usefulness could involve assessing whether adopting a new technology, such as e-commerce platforms or cashless payment methods, will improve their business efficiency, reach more customers, or increase sales.
b. Perceived Ease of Use: This relates to the extent to which an individual perceives a technology as easy to understand, learn, and use. For low-income women entrepreneurs, perceived ease of use could involve considerations such as the user-friendliness of e-commerce platforms, the simplicity of cashless payment methods, or the ease of integrating technology into their existing business processes.

By understanding these two factors, TAM helps researchers and policymakers identify the barriers and challenges that low-income women entrepreneurs may face in adopting new technologies (Alshammari & Rosli, 2020). For example, if a particular technology is perceived as complex or difficult to use, low-income women entrepreneurs may be less inclined to adopt it, even if they recognize its potential usefulness (Ozkazanc-Pan & Clark Muntean, 2018). Moreover, TAM emphasizes the importance of subjective norms and external influences on technology adoption, suggesting that factors such as social pressure, support from peers and mentors, and access to training and resources can significantly impact individuals' attitudes towards technology (Neneh & Welsh, 2022; Garud & Karnøe, 2003).

However, limited studies apply the TAM model to the context of low-income women entrepreneurs (Ali Tariq et al., 2019; Abd Hadi et al., 2020; Thathsarani & Jianguo, 2022). Besides, researchers and policymakers can gain valuable insights into the factors influencing their technology uptake and design targeted interventions and support mechanisms to promote the adoption of

technology and enhance their MSMEs' business success (Crittenden et al., 2019; Alsharida et al., 2021b).

2.3 Socio-Economic Factors Affecting Technology Uptake

Socio-economic factors affecting technology uptake explore the influence of economic and social conditions on individuals' decisions to adopt and use technology. This encompasses a broad spectrum of considerations, including income levels, education, access to infrastructure, cultural norms, and social networks (Ali Tariq et al., 2019; Crittenden et al., 2019). Research by scholars such Abu Bakar and Ahmad (2010) and Hashim et al. (2023) has demonstrated that income levels significantly impact technology adoption. Higher-income households often possess greater purchasing power, facilitating their ability to invest in the latest technologies and digital devices. Conversely, lower-income households may face financial constraints that impede their adoption of new technologies, leading to disparities in technology access and usage. Moreover, education emerges as a critical determinant of technology uptake. Individuals with higher levels of education typically exhibit greater digital literacy and technological proficiency, making them more inclined to adopt and effectively utilize new technologies. Conversely, individuals with lower levels of education may encounter barriers in understanding and navigating digital platforms, limiting their adoption of technology (Abd Hadi et al., 2020; Kamall et al., 2023a).

Access to infrastructure, such as reliable internet connectivity and electricity, is also pivotal in shaping technology uptake. Studies like Azri and Muda (2021) and Taleb et al. (2023) underscore that rural areas and marginalized communities often confront challenges in accessing basic infrastructure, hampering their engagement with digital technologies. Furthermore, cultural norms and perceptions exert considerable influence on technology uptake. Some communities may exhibit a greater openness and receptiveness to technological innovations than others, thereby influencing individuals' attitudes toward technology adoption.

Additionally, social networks and peer influence play a significant role in shaping technology uptake. Individuals may be more inclined to adopt technology if they perceive it to be socially desirable or if they receive recommendations and support from their peers and social circles (Rahman et al., 2017a; Ali et al., 2018). Hence, understanding these socio-economic factors is crucial for policymakers, businesses, and researchers aiming to develop targeted interventions and policies to promote more equitable and inclusive technology uptake across society.

3. METHODOLOGY

The utilization of appropriate methodology holds considerable importance in addressing challenges encountered during research endeavors. In this study, a qualitative research approach has been adopted due to its alignment with B40 women entrepreneurs' nature as being conducted by Darmalinggam et al. (2021) in previous research particularly emphasizing data collection through semi-structured face-to-face interviews. Nonetheless, as emphasized by Churchill and Bygrave (1989) the philosophical underpinnings of any research method are crucial, as they define the researcher's perspective and encompass the entirety of the research process, from data collection to analysis. Furthermore, Bougie and Sekaran (2020) have highlighted the significance of questions as the foundation of the research inquiry. Hence, this study embraces interpretivism, which focuses on individuals' experiences and interactions within society, as suggested by Creswell (2009). The study included 25 female entrepreneurs from the Amanah Ikhtiar Malaysia agency, representing northern, eastern, southern, and western Malaysia. This was in accordance with Creswell (2009) recommendation that 5-25 respondents are adequate for phenomenological studies. The focus group discussions were conducted in Malay languages and spanned a duration of two months.

The focus group discussion was recorded and subsequently transcribed for analysis purposes. Each session, lasting approximately 60 minutes to two hours, centered on topics related to the level of technology uptakes in business among B40 women entrepreneurs and factors related to low uptakes of technology in business, based on their experiences. Subsequently, the interview questions were broken down into identifiable segments and coded according to two key themes by the participants. Data analysis followed the technique outlined by Allwood (2012) and Al-Shami et al. (2020) ensuring a systematic approach to uncovering insights from the gathered data. Hence, the details of the qualitative research design used for this study are highlighted in **Table 1**.

In this study, semi-structured face-to-face interviews were favored due to the exploratory nature of the research. Interview questions were centered around the level of technology uptakes and factors influencing technology adoption among low-income women entrepreneurs in Malaysia. To validate the adequacy of the question chosen to measure the suggested objective, face, and content validity should be evaluated (Moraes et al., 2022). Accordingly, five academic specialists with more than 10 years of experience in entrepreneurship participated in a pilot test to ensure face and content validity, and the questions were clearly understood by the interviewees. Before starting the research, permission

and declarations of the researchers' commitment were submitted to the Research Ethics Committee of the Research and Innovation Management Centre, Universiti Utara, Malaysia. Following assessment, it was determined that no alterations were necessary to the interview guide. Before the interviews, each participant received a preliminary question guide outlining the topics the researchers intended to explore during the interview. Additionally, at the outset of the interview session, participants were introduced to the researchers and the focus of the study. The interview questions have been developed based on the research questions and based on TAM theory. The interview questions are depicted in **Table 2**. Each interview underwent a thorough manual transcription process, ensuring that every word was accurately captured while safeguarding the anonymity of the interviewees. Subsequently, the data was analyzed using the software, Atlas.TI 24 through coding and thematic analysis.

4. FINDINGS

4.1 Demographic Features of Respondents

The findings of the study depict the demographic features of the women entrepreneurs who joined the semi-structured interview in focus group discussion. As shown in **Table 3**, most women entrepreneurs (80%) were married. Another 12% were single, and 8% were single mothers. A high proportion reported that they worked from home (60%), whereas 40% had shops. The majority of respondents were in their early adulthood (68%). The majority of the respondents (36%) had a secondary school education, 28% held a vocational skilled certificate and 20% had a university, meaning that most women entrepreneurs in developing economies hold at least a secondary school certificate.

4.2 Thematic Analysis

The semi-structured face-to-face interviews aimed to gain a thorough insight into the technology adoption

Table 1 : *Qualitative research design used for the study.*

Criteria	Description
Research paradigm	Interpretative (Inquiry and investigation are prime method)
Method deployed	General Qualitative Inquiry Method
Data collection techniques	Focus Group Discussion through semi structured interviews
Population	Unit of analysis: Individuals/Owners of MSMEs Respondent: Low-income women Entrepreneurs in Malaysia Sampling method: Purposive sampling method
Data analysis	Thematic analysis (involves 5 Stages) • Become familiar with the data, • Generate initial codes. • Search for themes. • Review themes. • Define themes. Word frequency analysis and Word Cloud
Validity and reliability	Credibility- The research findings represent credible insights extracted from the raw data provided by participants, coupled with an impartial interpretation of their authentic perspectives. Transferability- The researchers enhance the potential user's ability to assess transferability through rich and detailed descriptions. Confirmability- The data and interpretations of the findings are not products of the researcher's imagination but are instead derived directly from the data itself.

Table 2 : *Interview questions based on research questions*

Research Questions:	Interview Questions:
1. What is the level of technology uptakes in business among low-income women entrepreneurs including in Malaysia.	Do you use technology applications (social media-Fb, WA, Tik Tok, Telegram, Lazada, Shopee, Website, Food Panda, Grab or manufacturing machines) in running your business and for what purpose? Do you have any social media business accounts? Do you have any business accounts on e-commerce platforms?
2. Why there is low uptakes of technology in business among B40 women entrepreneurs including single mothers in Malaysia?	What are the obstacles to using more advanced technology (Shopee, Lazada, website) in your business? (Time, knowledge, finances etc.)? How can you overcome it? Are you ready to take a course or class to deepen the use of applications for business? Like for example WhatsApp for Business? For your opinion, what are your future plans for the use of technology to help your business?

of women entrepreneurs. The coded data was cross-referenced to highlight the similarities and differences in participants' perspectives. Through continuous comparison, the number of themes relevant to the research questions was reduced, as explained by Crotty (1998). **Table 4** showcases the main themes and sub-themes derived from the transcribed interviews. The study has established two research objectives. The subsequent discussions rely on the data gathered by the researchers. The first research objective (i.e. to study the level of technology uptakes in business among low-income women entrepreneurs in Malaysia) reveals that most low-income women who were involved in this study had used technology in their businesses.

The findings indicate that most entrepreneurs are integrating technology into their business operations, either through social media marketing, e-commerce platforms, cashless payment methods, online delivery services, and machines, regardless of whether they are located in rural or metropolitan areas. The majority of the respondent are utilizing technology through their social media marketing. These situations have arisen as a result of the impact of COVID-19, which has compelled all entrepreneurs to adopt technology, even at a minimal level.

To go in-depth in terms of more sophisticated technology usage such as e-commerce platforms, cashless payment methods, online delivery service platforms, and machine usage portray a variety of outcomes and findings. Following this, 19 of the respondents from low-income women entrepreneurs have progressed by incorporating e-payment solutions into their businesses. The prevalence of online banking and cashless payment methods is increasingly evident, with the utilization of technologies such as DuitNow QR Code, Touch 'n Go, Boost, Shopee Pay, Sarawak Pay, and others gaining prominence.

Additionally, given that only 10 of respondents from low-income women entrepreneurs operate within the service industry, particularly in sectors like food and beverages, online food delivery services such as Food Panda, Grab Food, Bekal, etc., are regarded as integral technological components of their businesses. However, the respondents of low-income women entrepreneurs harbour trust issues regarding the use of online food delivery platforms due to negative encounters such as payment delays, non-payment by drivers, and high commission fees imposed by the platforms. Consequently, this diminishes the attractiveness of utilizing online food delivery services for low-income women entrepreneurs.

Hence, this led to the second research objective (i.e to explore factors contributing to low uptakes of technology in business among low-income women entrepreneurs including single mothers in Malaysia) reveals multiple of challenges that prevent maximum technology adoption among low-income women entrepreneurs. Besides, the less appeal of employing

Table 3: *Demographic features of respondents*

Demographic	Categories	Frequency	Percentage (%)
Marital Status	Single	3	12%
	Married	20	80%
	Single Mother	2	8%
Age	Early adulthood (22-34)	17	68%
	Early middle age (35-44)	5	20%
	Late middle age (45-64)	3	12%
Qualification	Primary School	1	4%
	Secondary School	9	36%
	Vocational College	7	28%
	University	5	20%
	Without	3	12%
Place of business	Shop	9	40%
	Home	15	60%

Table 4: *The main themes and sub-themes derived from the transcribed interviews*

Interview Question	Themes	No of respondent
1. What is the level of technology uptakes in business among B40 women entrepreneurs including single mothers in Malaysia.	Social Media Marketing	24/25
	E-commerce platforms	19/25
	Cashless Payment Method	12/25
	Online delivery services	10/25
	Machine	5/25
2. Why there is low uptakes of technology in business among B40 women entrepreneurs including single mothers in Malaysia?	Knowledge & Skills	19/25
	Cottage Production	15/25
	Trust issue	8/25
	Financial Limitation	23/25
	Physical Limitation	21/25

online food delivery services for low-income women entrepreneurs, a significant portion of these women are hesitant to incorporate machinery into their food preparation processes.

"I don't trust the Grab Food because I have encountered a circumstance when the driver run away with my money after he delivery food." (E3)
"I don't want to use machine as they would change the taste of the food" (E6)
"We don't incorporate any machinery to prepare food, 100% using hand and traditional method" (E9)

They prefer to adhere to traditional methods to preserve the authentic taste, even though this may result in limited quantities and hinder business expansion.

In terms of embracing e-commerce platforms like Shopee and Lazada, certain low-income women express reluctance due to their preference for immediate payments rather than the delayed payment periods typically facilitated by the platforms and prefer autonomy to have full control of their business instead of adhering to the e-commerce rules. Additionally, they highlight concerns about being unable to fulfill demand, given their small-scale production, leading them to opt for maintaining a small and micro-sized operation instead. Besides most low-income women entrepreneurs have limited space, and some of them are using their homes as production sites and cannot afford financially and physically to purchase big machinery to cater for mass production.

"I am afraid if I used Shopee, there is too much order and I cannot meet the demand" (E4)
"As I only operate from home-based, I have limited space and cannot produce higher production, so I prefer to market my product just as usual and not planning to go for e-commerce" (E6)

Furthermore, a majority of the low-income women interviewed revealed that they do not utilize any financial recording systems or applications. Instead, they rely on manual methods for record-keeping. This suggests a preference for traditional, hands-on approaches to managing their finances, possibly due to familiarity or accessibility constraints regarding digital tools.

"I only record everything manually, no apps or any system to for cash or record-keeping" (E8)
"I don't know how to use any application or system to record my cashflow effectively" (E17)

To conclude, **Figure 1** illustrates key terms of technology, Facebook, and WhatsApp, are among the top social media used to do marketing among B40 women entrepreneurs. Among other key term to elucidate the technology uptakes, traditional, machine, manual, financial management, cashflow, cashless, and marketing. Initially, a total of 218 items with synonymous sub themes were identified, which were subsequently streamlined to 111 items following the elimination of non-thematic words.

5. CONCLUSION

In conclusion, this study has shed light on the level of technology adoption among low-income women entrepreneurs in Malaysia, particularly within the realm of business operations. The findings indicate a significant reliance on familiar technologies such as social media for marketing purposes, while more sophisticated tools like e-commerce platforms and cashless payment methods present challenges and barriers. Despite attempts to integrate technology into their businesses, trust issues, preference for traditional methods, limited space, and concerns about financial management hinder widespread adoption.

The acceptance of technology among low-income women entrepreneurs is notably shaped by the examples set by their social circles, including family and friends (Rahman et al., 2017b; Ali et al., 2018). Witnessing peers effectively employ technology often encourages them to embrace and adapt to it themselves, considering their abilities and financial constraints. Additionally, age emerges as a significant factor in technology adoption, with younger entrepreneurs demonstrating greater enthusiasm and aptitude for learning and utilizing new technological tools (Zaremohzzabieh et al., 2015; Strang, 2016).

The findings outlined in the above sections illustrate various challenges and barriers faced by low-income women entrepreneurs in adopting technology in their businesses, particularly within the context of the Technology Acceptance Model (TAM). TAM posits that an individual's intention to use technology is influenced by perceived usefulness and perceived ease of use (Crittenden et al., 2019; Alshammari & Rosli, 2020).

In this context, the integration of e-payment solutions, online food delivery services, and e-commerce platforms among B40 women entrepreneurs reflects attempts to leverage technology for business growth. However, factors such as trust issues, preference for immediate payments, concerns about machinery integration, limited space, and familiarity with traditional methods present significant barriers to technology adoption. Despite the fact that the results of this qualitative study cannot be applied to the entire population of low-income women entrepreneurs, they make a valuable contribution to the Technology Acceptance Model (TAM) theory, particularly in the context of this marginalised group in Malaysia.



Figure 1: *Words Cloud diagram illustrating the technology uptake among low-income women entrepreneurs.*

These challenges highlight the complexity of technology uptake among low-income women entrepreneurs and underscore the need for tailored interventions to address their specific needs and preferences. By understanding and addressing these barriers, policymakers and stakeholders can facilitate the adoption of technology among low-income women entrepreneurs, thereby enabling them to enhance their MSMEs businesses and economic opportunities.

Moving forward, further research is warranted to delve deeper into the underlying factors contributing to the low uptake of technology among low-income women entrepreneurs. Exploring avenues to address these challenges, such as developing tailored interventions and support mechanisms, will be crucial in fostering technology adoption and facilitating business growth within this demographic. Besides future studies also can be done to improve the machine that is available until it can produce the same taste, and same preferences as the traditional way. Policymakers and stakeholders must prioritize understanding the unique needs and preferences of low-income women entrepreneurs to design effective strategies aimed at enhancing their economic opportunities and overall business success (Kaukab, 2022; Rehman et al., 2022). Additionally, future studies could investigate the effectiveness of specific interventions in overcoming barriers to technology adoption, thus contributing to the advancement of MSMEs and economic empowerment among low-income women entrepreneurs in Malaysia.

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