



I-FinTech Adoption Mediation on the Financial Literacy Elements and Sustainable Entrepreneurship among Bumiputera MSMEs in Malaysia

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ABSTRACT

The term “i-FinTech” refers to businesses or entrepreneurs that integrate modern, Shariah-compliant technologies with financial services. Nevertheless, MSMEs are typically having lack internal knowledge or poor management, incompetent entrepreneurs, and limited financial resources. The purpose of this research is to analyse if financial literacy elements affect i-FinTech adoption and, in turn, promote sustainable entrepreneurship among Bumiputera SMEs in Selangor, Malaysia. A convenience sample strategy was used to disseminate 1,394 surveys to the Bumiputera entrepreneurs, utilizing a quantitative approach. PLS-SEM and mediation analysis are used to analyse the data. The findings indicate that financial literacy and digital financial literacy have a favorable and significant impact on the adoption of i-Fintech. On the other hand, the adoption of i-Fintech is adversely affected by financial management behavior. Furthermore, this study shows that the relationship between financial literacy and digital financial literacy towards sustainable entrepreneurship is mediated in a complimentary way by the adoption of i-FinTech. This result indicates that Bumiputera business owners that are financially and digitally literate are more likely to use i-FinTech and ultimately make a substantial contribution to sustainable entrepreneurship. The results should improve knowledge of the dynamics between the potential of i-FinTech and sustainable entrepreneurship for researchers, regulators, entrepreneurs, and i-FinTech service providers. It is advised that MSMEs keep using i-FinTech to support their operations in order to minimise the effects of a downturn in the market and maintain seamless operations.

Keywords: Financial Literacy, Financial Management Behavior, Digital Financial Literacy, i-FinTech Adoption, Sustainable Entrepreneurship

JEL Classifications: D22, G53, O33

1. INTRODUCTION

Micro, small, and medium-sized businesses (MSMEs) significantly contribute to the economic development by distributing wealth, generating jobs, advancing technology, reducing poverty, and fostering creativity. A robust MSME sector is necessary to build a strong industrial sector in an economy (Jafari-Sadeghi et al., 2022), and hence, MSMEs that are operating efficiently are critical to steady and ongoing economic growth. Looking for strategies to improve MSMEs’ sustainability has therefore piqued the interest of

academics and stakeholders who directly involved in the MSME sector. Numerous discussions have focused on the importance of MSMEs’ resources and their role in creating sustainable MSMEs in the expanding body of research on MSMEs’ performance. Ying et al. (2019) looked at how managers’ intangible capabilities affected MSMEs’ sustainability, and they came to the conclusion that these skills are crucial for giving managers the ability to handle volatile market situations. However, there haven’t been many thorough analyses of how particular resources, like the adoption of Islamic financial technology (i-FinTech), affect the

sustainable performance of MSMEs. Hence, this study expands the body of literature by offering a thorough analysis of i-FinTech adoption and examines the mechanisms through which i-FinTech adoption can improve resource utilisation and MSMEs' sustainable performance.

Businesses have an ample opportunity to access the i-FinTech ecosystem, particularly for MSME-entrepreneurs. In order to take advantage of what i-FinTech may have to offer, MSMEs must digitise their operations. This is also consistent with the Malaysian government's goal of encouraging MSMEs to integrate more FinTech components into their day-to-day operations. Although there is not many research on the acceptance and adoption of i-FinTech, particularly on the factors that influence adoption itself, it is proposed that the rate of i-FinTech adoption tools is expanding (Rahim et al., 2020). Because of the many possible applications of i-FinTech, this study aims to explore how Malaysian MSMEs entrepreneurs are using these apps to achieve sustainable income.

Prior study found that the main obstacle in utilizing FinTech services is a lack of digital financial literacy (Neumeyer et al., 2020). Entrepreneurs who are use i-FinTech must also be proficient in digital finance. Not only that, entrepreneurs need to be financially and digitally literate in order to effectively utilised i-FinTech solutions especially to avoid being duped and making expensive or risky mistakes. Hence, by examining digital financial literacy-which is frequently disregarded in the literature-in contrast to and in addition to financial literacy, this study adds to the body of existing literature. The goal of the Malaysian government's national strategy for financial literacy 2019-2023 is to improve financial literacy among Malaysians of all ages and stages of life, as well as to encourage responsible financial behaviour and positive attitudes towards money management. It does not, however, particularly address digital financial literacy which offers an important gap that requires attention. Therefore, investigating how digital financial literacy influences the likelihood of becoming a sustainable MSMEs entrepreneur and how the adoption of i-FinTech influences this relationship is a valuable theoretical undertaking in the context of entrepreneurship.

Overall, by using i-FinTech adoption as a mediating factor, this paper sheds light on how financial literacy, financial management practices, and digital financial literacy affect the likelihood of becoming a sustainable entrepreneur. While a lot of research has been done on the topic of what constitutes a sustainable entrepreneur, empirical studies have only looked at the ways in which specific criteria influencing sustainable entrepreneurship. The findings of this study provide support for the hypothesis that the decision to embrace i-FinTech and transition into sustainable

entrepreneurship may be influenced by financial literacy, financial management behaviour, and digital financial literacy taken together. Therefore, it is thought that i-FinTech studies are essential since they support Malaysia's strong Islamic financial sector. Given that technological adoption frequently plays a crucial role in sustainable entrepreneurship. The objective of this study is to investigates the relationship between financial literacy elements (financial literacy, financial management behaviour, and digital financial literacy) and sustainable entrepreneurship using i-FinTech adoption as a mediation variable.

2. LITERATURE REVIEW

2.1. Malaysian Micro, Small and Medium Sized Enterprises

The definition of MSMEs, as released by the National SME Development Council (2019), is predicated on two factors: The total number of full-time employees and the yearly sales turnover. According to Table 1, SMEs in the manufacturing sector are classified as businesses with fewer than 200 full-time employees or a sales turnover of no more than RM50 million. SMEs are classified as businesses with <75 full-time employees or a sales turnover of little more than RM20 million in the services and other industries. Business with <5 workers or a sales turnover of <RM300,000 in the manufacturing sector and other industries, such as quarrying, agriculture, construction, mining, and services, are considered micro firms. All MSMEs must be entities registered with SSM or other comparable agencies in order to meet these definitions. However, it does not include companies that are publicly traded on the main board, state-owned businesses, multinational corporations (MNCs), government-linked companies (GLCs), Syarikat Menteri Kewangan Diperbadankan (MKDs), or subsidiaries of publicly traded companies.

MSMEs are crucial to the Malaysian economy and are seen as the foundation of the nation's industrial growth (Chuah and Thurusamry, 2021; Najib et al., 2021; Respati et al., 2023; Ali et al., 2024; Petpairote, 2023). Table 2 shows that, in comparison to a decade earlier, there were about 78.46% more MSMEs established in 2021. As of 2021, they accounted for 97.4% of all business enterprises (SME Corporation Malaysia, 2022). MSME sector employ over 48% of the workforce (7.25 million) in 2020, and their value-added output amounts to about RM 512.8 billion, or 38.2% of the country's GDP (SME Corporation Malaysia, 2021). Furthermore, the department of statistics Malaysia (2022) reports that a growing proportion of people are starting their own businesses, the majority of which are MSMEs. This group has begun to positively impact the economy's growth and is becoming more and more involved in economic development (Othman et al., 2021).

Table 1: Definitions of micro, small and medium enterprises

Size	Micro		Small		Medium	
	Sales Turnover	Employees	Sales Turnover	Employees	Sales Turnover	Employees
Manufacturing	<RM300,000	< 5 Employees	RM300,000 to < RM15 Mil	5 to < 75 Employees	RM15 Mil to ≤ RM50 Mil	75 to ≤ 200 Employees
Service & Others			RM300,000 to < RM3 Mil	5 to < 30 Employees	RM3 Mil to ≤ RM20 Mil	30 to ≤ 75 Employees

2.2. Sustainable Entrepreneurship

Several definitions of sustainable entrepreneurship have been proposed by scholars over the years, but there is no one that is widely recognised. The ability of anything to be maintained, extended, or continued is the definition of sustainability, a neologism derived from the word “sustainable.” Suitable description of a multi-level domain for entrepreneurship research was given by Venkataraman (1997). He covers early economic theory as well as a wide range of current research. According to Venkataraman (1997), sustainable entrepreneurship is a topic of study that aims to comprehend how possibilities to develop products and services in the future are found, created, and utilised, as well as by whom and with what effects. There are several benefits to using this definition. It directs attention towards opportunities and (a) their origins, (b) the entrepreneurs who act as their agents of exploitation, and (c) the fallout from that exploitation. Additionally, it expands the bounds of the discipline by situating entrepreneurship within a broader social framework and facilitating the creation of an organised but inclusive research agenda. Sustainable entrepreneurship, as defined by Menne et al. (2022), is the ongoing business contribution to economic development while improving the standard of living for the family and community.

Abundant resources and talents are often the foundation of outstanding MSMEs initiatives. It is said that resources and skills may become outdated and meaningless due to environmental changes. MSMEs must thus increase their competitiveness by adapting to new technologies and collaboratively locating new talent sources that may result in an enhancement of MSMEs structure. The suggested framework for the relationship between financial literacy components, i-FinTech adoption, and sustainable entrepreneurship is shown in Figure 1. The development of the suggested framework’s hypotheses is covered in the following sub-sections.

Table 2: Census of establishment and enterprises, 2011 and 2021

Type/census	Census of establishment and enterprises 2011	Census of establishment and enterprises 2021
Micro	496,458	903,174
Small	128,787	229,876
Medium	19,891	18,289
Total	645,136	1,151,339

Source: Department of statistics Malaysia (2021)

2.3. Financial Literacy

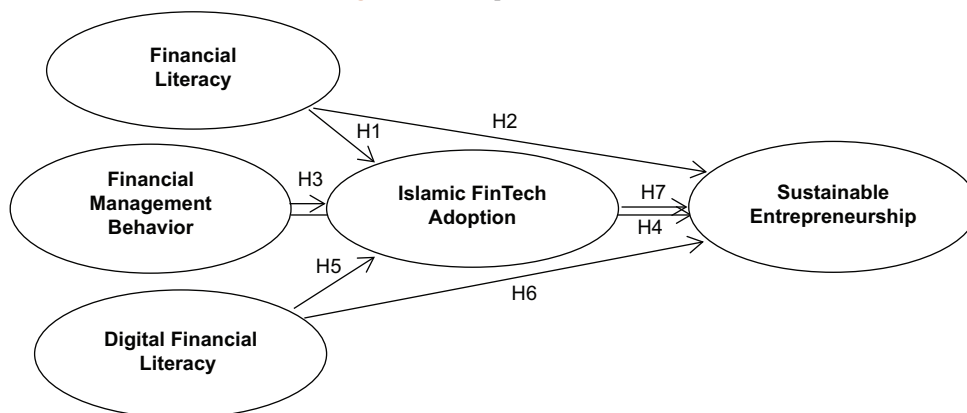
An individual with financial literacy is equipped with the knowledge and abilities to manage all of their financial resources wisely (Akmal and Saputra, 2016). According to Madi and Yusof (2018), financial literacy is the culmination of investors’ and consumers’ knowledge of financial concepts and products, as well as their capacity and assurance to recognise opportunities and risks in the financial world, make wise decisions, know when to seek assistance, and take other practical steps to enhance their financial well-being. Attitudes and behaviors to enhance decision-making and financial management for progressive well-being are influenced by knowledge, skills, and confidence (Andarsari and Ningtyas, 2019; Hanson and Olson, 2018; Murhadi et al., 2024; Rashid et al., 2024; Mtibaa and Boudabbous, 2023; Bayakhmetova et al., 2023). According to many research, the utilisation of FinTech services is impacted by genuine financial literacy. For example, studies by Sardiana (2016), Nguyen (2022), Lajuni et al. (2020), and Batubara et al. (2020) showed that financial literacy has a major impact on consumers’ preferences for using i-FinTech products/services. According to recent research by Nugraha et al. (2022), the sustainability of MSMEs is indirectly impacted by financial literacy, since improving financial literacy would raise the desire to utilise i-FinTech, which may support MSME sustainability. As a result, the following hypotheses are postulated by this research.

- H₁: Financial literacy significantly influence sustainable entrepreneurship among Bumiputera MSMEs.
- H₂: i-FinTech adoption mediates the influence of financial literacy towards sustainable entrepreneurship among Bumiputera MSMEs.

2.4. Financial Management Behavior

For small businesses to survive, grow, and succeed, careful financial management is essential (Fatoki, 2014). The identification, procurement, distribution, and use of financial resources are all considered forms of financial management behaviour (Sabri et al., 2020). Mien and Thao (2015) defined financial management behaviour as financial decision-making that balances the objectives of the organisation with personal motivations. According Tuyisenge et al. (2015), an important indicator of an entrepreneur’s success and ability to develop their business in a competitive market is their ability to handle their finances well. Since MSMEs play a major role in the economies of most nations, bad financial management

Figure 1: Conceptual framework



practices might have a negative influence on the company's future endeavor (Sucuahi, 2013). This conclusion aligns with Naqvi's (2011) research, which suggested that inadequate business planning and financial management skills are among the causes contributing to SMEs' lack of survival. Furthermore, Yoshino et al. (2020) assert that financial management practices are a significant factor in the adoption of FinTech. Hence, financial management behaviour is one of the main variables influencing the adoption of personal financial management technology (Walsh and Lim, 2020). As a result, the research anticipates the following hypothesis.

- H₃: Financial management behavior significantly influence sustainable entrepreneurship among Bumiputera MSMEs.
 H₄: i-FinTech adoption mediates the influence of financial management behavior towards sustainable entrepreneurship among Bumiputera MSMEs.

2.5. Digital Financial Literacy

With the expansion of electronic financial services, digital financial literacy has become a crucial need (Mudasih and Subroto, 2021). However, in contrast to financial literacy, the function of digital financial literacy has received little to no in-depth research. The Alliance for financial inclusion (2021) defined digital financial literacy as the ability to use digitally delivered financial products and services safely, to make informed financial decisions, and to act in one's best financial interest given their particular economic and social circumstances. The ability of people to apply financial functional skills to digital devices in order to find and select information, think critically, be creative, collaborate with others, communicate effectively, and not ignore electronic security and social contexts is known as digital financial literacy, according to Mudasih and Subroto (2021). A research by Prabawati (2019) found that entrepreneurial behaviour is significantly impacted by digital financial literacy. Indrawati (2021) discovered, in a similar vein, that the degree of digital financial literacy significantly influences the selection and utilisation of financial technology solutions. The relevance of digital financial literacy in an increasingly digitalized world was recently highlighted by Kakinuma (2022), who found that FinTech adoption had a moderating influence on the association between digital financial literacy and quality of life. As a result, the following assumptions are made by this research.

- H₅: Digital financial literacy significantly influences sustainable entrepreneurship among Bumiputera MSMEs.
 H₆: i-FinTech adoption mediates the influence of digital financial literacy towards sustainable entrepreneurship among Bumiputera MSMEs.

2.6. I-FinTech Adoption

According to Alam et al. (2019), the finance and technology industry that is expanding the quickest is called FinTech. FinTech is the financial answer to financial problems supported by cutting-edge information technology (Hasnan, 2019). Since FinTech is supported by cutting-edge technology, it may be utilised to provide Shariah-compliant solutions that are pertinent to the current generation, accessible, quicker, and comparatively less costly than the other methods (Todorof, 2018). The concepts of Islamic economics are used in the development of Islamic FinTech, or i-FinTech which may be used to mean that Islamic financial

services by using technology. Shariah rules must be adhered to by i-FinTech. From a Shariah standpoint, technology is generally neutral unless it is used in a way that explicitly violates any Shariah regulations or decisions (Oseni and Ali, 2019).

A specific Islamic finance product's usage of i-FinTech should not cause harm, involve deceit or cheating, have hidden fees, or encourage any riba, gambling, gharar, or other forbidden components that would render the sale void. Peer-to-peer (P2P) loans, trading platforms, crowdfunding, mobile payments, and money transfers are among the primary services provided by i-FinTech. The usage of i-FinTech by SMEs for mobile payments and money transfers are only the subject of this research. Micro-entrepreneurs have been able to build their enterprises in a sustainable way by using i-FinTech. In reality, micro-entrepreneurs might get a macro-level perspective of the data pertaining to their present financial situation by using certain i-Fintech solutions. As a result, their revenue has grown indirectly, they have been able to attract and keep more clients, lower their cost structure, and lower their business risks (Nik Azman et al., 2020). Therefore, the following hypothesis is predicted by this research.

- H₇: i-FinTech adoption significantly influences sustainable entrepreneurship among Bumiputera SMEs.

3. METHODOLOGY

This study uses a quantitative technique with a cross-sectional research design (Bougie and Sekaran, 2019). A self-administered questionnaire has been used to gather information on the fundamental constructs put forth in the theoretical framework. The Bumiputera owners of MSMEs in Malaysia is regarded as the study's sample frame. Convenience sampling is a technique that gathers data by selecting participants depending on their availability (Bougie and Sekaran, 2019). 1394 of the 1400 valid questionnaires that were given were returned, yielding a 99% response rate. Six questionnaires were found to be partly completed after reviewing every survey that was received; as a result, they were removed from the total returned that could be analysed. 1,392 questionnaires were ultimately approved and included in the data analysis.

3.1. Survey Instruments

Pre-validated scales from previous research were used to assess the constructs in this research, ensuring the efficacy of the contents. Appropriate modifications were made to align with the context of i-FinTech adoption among entrepreneurs, as shown in Table 3. There are six parts in the survey questionnaire for this research. In addition to demographic data, the questionnaire measured financial literacy, financial management behaviour, financial digital literacy, adoption

Table 3: Measurement of the construct and its sources

Constructs	Items	Source (s)
Financial literacy	7	Chen and Volpe (1998)
Financial management behavior	7	Ismail et al. (2017)
Financial Digital literacy	7	Lyons and Kass-Hanna (2021)
Islamic FinTech adoption	5	Chuang et al. (2016)
Sustainable entrepreneurship	7	Ploum et al. (2018)

of i-FinTech, and sustainable entrepreneurship. Using a five-point likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), the respondents were asked to indicate how much they agreed or disagreed with their descriptions of the measurement items.

3.2. Data Analysis Method

To evaluate the theoretical model, a partial least squares - structural equation concept (PLS-SEM) was used. The instrument is validated in the first step using the convergent validity, reliability, composite reliability, and discriminant validity. Additionally, the PLS-SEM is conducted in the second phase to assess the relationship between the four latent variables. According to Hair et al. (2019), the best technique to investigate the association between the relevant variables is the PLS-SEM approach. In order to estimate the t-statistics and bootstrap-t values as well as to determine the substantial effect of the variables, Henseler and Chin (2010) proposed utilising 5000 replications of samples (bootstrapping theory).

A method for analysing mediation was created by Zhao et al. (2010), who distinguished between three forms of mediation (competitive, complementary, and indirect-only mediation) and two types of non-mediation (direct-only and no-effect non-mediation). According to their arguments, two requirements must be met in order to support a hypothesised mediation relationship: (a) there must be a significant relationship between the independent and dependent variables via the mediator, and (b) zero cannot be included in the lower or upper levels of the 95% bootstrapped confidence interval (Hair et al., 2017; Hayes and Rockwood, 2016; Zhao et al., 2010; Cheema et al., 2023; Sahabuddin and Hadianto, 2023; Hendrawaty et al., 2024).

4. RESULTS AND DISCUSSION

The demographic profile shows that there are more women than men whereby 61.4% of research participants were women and 38.6% were men. Furthermore, 54.5% of the respondents had between 11 and 20 years of experience as an entrepreneur. Furthermore, 23.9% of the respondents had more than 25 years of experience in running a business. According to the respondents' business income, the majority of them (60.2%) made <RM300,000 each month, and a comparable percentage of them employed <5 people. This suggests that microbusiness owners make up the majority of the research's participants. In contrast, 21.6% of the respondents said their SME employs between 30 and 75 people, suggesting a sizable scale of their business. The majority of respondents (30.7%) said that their present place of business is an urban region, which is where SMEs are located. Lastly, the vast majority of participants (63.6%) use i-FinTech tools.

4.1. Perception of Sustainable Entrepreneurship

This section presents the findings pertaining to the respondents' perceptions about sustainable entrepreneurship. To find out whether the overall mean of perceived sustainable entrepreneurship is significantly different from or equal to a given constant, a sample t-test was used. The mean score of 4.1461 for sustainable entrepreneurship in Table 4 is statistically significant at the 1% level and suggests that the respondents saw themselves as

sustainable entrepreneurs. In general, the majority of respondents said they were adept at seeing chances for sustainable growth. They disclosed that they are aware of how to use societal, environmental, or social difficulties to their business's advantage in terms of sustainability. This supports a claim made by a number of scholars that, in addition to their detrimental effects on society and the environment, entrepreneurs are also crucial in guiding corporate operations towards sustainability (Hockerts and Wüstenhagen, 2010; O'Neill et al., 2011). Furthermore, the participants expressed a solid consensus on their capacity to oversee the sustainability performance of their business and their willingness to take the lead in enhancing their own practices by incorporating sustainability norms, goals, aims, and principles. This outcome is in line with research by Chandna and Salimath (2018), who discovered that sustainable entrepreneurs should take into account elements that foster an inventive atmosphere and, as a consequence, encourage entrepreneurial activity.

4.2. The Degree of i-FinTech Adoption

The results about the degree of i-FinTech adoption among entrepreneurs are reported in this section. To determine if the entire i-FinTech adoption mean is substantially equal to or different from a given constant, a one sample t-test was used. The level of i-FinTech usage among all respondents is shown in Table 5. In particular, the mean score of 3.5318 for i-FinTech adoption suggests that most Bumiputera MMSE owners in Malaysia are only moderately agreed to adopt i-FinTech for their business's operation. The respondents expressed a preference for i-FinTech services and said that utilising them to search up information at any time or any place was highly easy. Unfortunately, since they were unprepared to embrace changes in economic activity, they are hesitant to employ the services offered by i-FinTech. In addition, they claim that there are a number of risks associated with this i-FinTech facility, one of which is the creation of potential for

Table 4: Perception of sustainable entrepreneurship

Constructs	n	Mean	One Sample t-test	
			t-statistic	P-value
Sustainable Entrepreneurship	1394	4.4161	68.395	0.000***

Result is significantly different at *** 1% level and ** 5% level, respectively, using two-tailed tests

Table 5: The extent of i-fintech adoption

Constructs	n	Mean	One sample t-test	
			t-statistic	P-value
i-FinTech Adoption	1394	3.5318	47.826	0.000***

Result is significantly different at *** 1% level and ** 5% level, respectively, using two-tailed tests

Table 6: The extent of i-fintech adoption based on age group

Age group	n	i-FinTech adoption		Independent sample t-test	
		Mean	SD	t-statistic	P-value
< 39 years old	585	3.6865	0.7111	2.807	0.038**
More than 40 years old	809	3.4196	0.6636		

SD: Standard deviation. Results significantly different at the ***1% level and **5% level, respectively, using two-tailed tests

cybercrime. While security has not yet reached the ideal safe threshold, hackers may easily follow money activities in very sophisticated cyber world.

The degree of i-FinTech adoption among respondents was compared by age group using an independent sample t-test. The

Table 7: The extent of i-FinTech adoption based on SME’s revenue

Business revenue	n	i-FinTech adoption		One-way ANOVA	
		Mean	SD	T-statistic	P-value
< RM300,000	839	3.8564	0.5190	15.178	0.000***
RM300,000 to RM3 mil	254	3.4500	0.6079		
RM3 mil to RM20 mil	301	3.4353	0.4808		

Results significantly different at the ***1% level and **5% level, respectively, using two-tailed tests

findings shown in Table 6 demonstrate that, at the 5% significance level, there is a statistically significant variation in the respondents’ score of i-FinTech adoption depending on their age group (t-statistic = 2.807**). According to the results, respondents who were younger than 39 years old had the most desire to use i-FinTech when compared to those who were older than 40. This result is in line with the arguments of Chong et al. (2019), Kolodinsky et al. (2014), and Parusheva (2018), which suggested that younger individuals are more willing to adopt new financial technology in order to make transactions more convenient. Additionally, younger generations deal with technology more often, which results in a higher degree of proficiency and expertise in its use. Furthermore, senior people find it more difficult to employ new technologies, particularly when using a technological platform to execute financial activities.

The degree of i-FinTech adoption among respondents was

Table 8: The measurement model statistics

Indicators and items	Loading	AVE	γ	α	VIF
Financial literacy		0.723	0.948	0.935	2.300
FL1: I have basic accounting knowledge	0.898				
FL2: I have received training on book-keeping	0.889				
FL3: As an entrepreneur, I can prepare basic accounting books	0.824				
FL4: I have the ability to analyse my business’ financial performance on a regular basis	0.924				
FL5: I have the skills required to assess the financial prospects for my business	0.764				
FL6: I understand when I read the bank statement regarding the position of my business	0.913				
FL7: My business prepares monthly income statement	0.716				
Financial management behavior		0.600	0.814	0.784	2.545
FM1: My business has monthly financial planning	0.799				
FM2: I strictly control the financial planning of the business	0.846				
FM3: I have recorded all my business expenses	0.749				
FM4: I always check the financial position of my business	0.716				
FM5: I am very careful in handling business expenses	0.788				
FM6: My business has emergency savings	0.842				
FM7: I am always ready to face any financial problems in business	0.747				
Digital financial literacy		0.628	0.783	0.734	2.354
DFL1: I know about the specific purpose and use of digital financial software available	0.837				
DFL2: I know where to seek digital financial information and advice	0.863				
DFL3: I manage day-to-day finances of the business using digital financial software	0.742				
DFL4: I can choose the right digital financial software for a specific purpose (e.g.,: payments, remittances, borrowing)	0.809				
DFL5: I able to choose a reliable digital financial software service provider	0.838				
DFL6: I can detect fraud related to digital finance (e.g.,: identity theft, malwares, phishing attacks)	0.837				
DFL7: I can avoid the traps of fraud and scammers to protect the data and financial resources of the business	0.783				
i-FinTech adoption		0.621	0.870	0.776	2.712
IFA1: I think it is very easy to find information about the use of i-FinTech services anytime and anywhere	0.920				
IFA2: I like the idea of using i-FinTech services in business	0.939				
IFA3: I think i-FinTech services are fun and I’m not afraid to make mistakes	0.936				
IFA4: I would like to use the services provided by i-FinTech for all business matters	0.803				
IFA5: I want to use i-FinTech services to grow my business in the SME market	0.729				
Sustainable entrepreneurship		0.752	0.929	0.910	2.811
SE1: I am willing to take the initiative to make improvements in my business practices based on norms, values, targets and principles of sustainability	0.850				
SE2: I know about what is seen as “good sustainability practice” in my business	0.870				
SE3: I know how to explain the decisions my business has made regarding sustainability	0.805				
SE4: I do not agree with unsustainable ways of working in my business	0.809				
SE5: I am very good at identifying opportunities for sustainable development	0.848				
SE6: I know how social, environmental or community challenges can be turned into sustainability opportunities for my business	0.811				
SE7: I can monitor the sustainability performance of my business	0.838				

VIF: Variance inflation factors AVE=Average variance explained; γ = Composite reliability; α = Cronbach’s alpha; *P<0.05

compared depending on their business revenue using a one-way ANOVA test. Based on varying business income, Table 7 indicates a statistically significant variation in the respondents' usage of i-FinTech (F-statistic = 15.178***). The findings indicate that, in comparison to other respondents, those whose monthly business income was <RM300,000 had the highest intention of using i-FinTech. Adoption of i-FinTech could improve small firms' sustainability (Arner et al., 2020; Pizzi et al., 2021; Rahadjeng et al., 2023; Gao and Liu, 2023), and using i-FinTech is perhaps more accessible alternative to finance for small enterprises (Lu, 2018). Small firms are able to operate more efficiently and effectively in the market due to i-FinTech.

4.3. Assessment of Measurement Model

The study model was examined using PLS-SEM software through SmartPLS 4.0 (Figure 1). According to Hair et al. (2019), PLS-SEM is a two-step method that involves solving the measurement model to determine the parameters of the PLS model independently and then computing the path coefficients of the structural model. The measurement model's findings are displayed in Table 8. The statistics must adhere to the five acceptable standards in order for the data to be considered reliable and valid. First, according to Ramayah et al. (2018), every factor loading should be more than 0.7. Second, the average variance extracted (AVE) of each latent variable should be >0.5 (Hair et al., 2017); third, composite reliability (CR) should be considerably more than 0.7 (Ramayah et al., 2018). Table 8 shows that the CR and factor loadings for every item were more than 0.7. Financial management behaviour has the lowest AVE value of 0.600, while Cronbach's alpha values are higher than 0.7. The findings of this measurement model show that the items are valid, reliable, and have a sufficient level of internal consistency.

Fourth, the variance inflation factors (VIF) statistics should be examined in order to verify the multicollinearity between each

independent variable. Hair et al. (2017) stated that the model's VIF values ought to be <5. Table 8 shows that none of the VIF values exceeded 5. Lastly, according to Hair et al. (2019), the goal of the discriminant validity evaluation is to attest that a reflective concept has the strongest correlations with its indicators in the PLS path model. The Fornell-Larcker criteria has long been a widely used study to evaluate discriminant validity. Comparing the square root of the AVE of each construct with its connection with other constructs is equivalent to comparing the AVE with the squared correlations of the constructs when evaluating discriminant validity (Hair et al., 2019). The reflecting constructs' square roots of the AVE are all greater than their correlations with the other latent variables in the route model, as seen in Table 9. The results of this study demonstrate that the constructs are attaining discriminant validity.

4.4. Assessment of Structural Model

The results of the structural model evaluation are displayed in Figure 2. According to the predictive power finding, almost 76.9% of the variation explained in the sustainable entrepreneurship could be explained by the four model variables. R² values of 0.75, 0.50, and 0.25, respectively, are typically used to signify considerable, moderate, or weak concerns in business (Hair et al., 2019). As a result, the finding is regarded as having a moderate predictive power for the structural model.

Table 10 displays the effect size (*f*²), which quantifies the influence of a certain predictor construct on an endogenous construct. According to Gefen et al. (2000), the *f*² values of 0.02, 0.15, and 0.35 correspond to small, medium, and large impacts on an endogenous construct, respectively. The values found for the i-FinTech construct was shown to have a significant large impact on sustainable entrepreneurship (*f*² = 0.814). On the other hand, the impact of financial literacy, financial management practices, and digital financial literacy structures on the adoption of i-FinTech and sustainable entrepreneurship is moderate.

The causal link in the structural model is revealed in Table 10. The results show that financial literacy ($\beta = 0.236$, t-stat = 2.094, P < 0.05***), financial management behaviour ($\beta = 0.297$, t-stat = 2.582, P < 0.05***), digital financial literacy ($\beta = 0.124$, t-stat = 2.118, P < 0.05***), and i-FinTech adoption ($\beta = 0.559$, t-stat = 5.911, P < 0.05***) all positively and significantly influence the sustainable entrepreneurship of Bumiputera MSMEs entrepreneurs in Malaysia. Based on these findings, the hypotheses H₁, H₃, H₅, and H₇ are accepted.

Table 9: Fornell-larcker criterion discriminant analysis for measurement model

Constructs	DFL	FL	FM	IFA	SP
DFL	0.873				
FL	0.681	0.850			
FM	0.718	0.710	0.732		
IFA	0.547	0.565	0.589	0.722	
SP	0.650	0.665	0.669	0.825	0.807

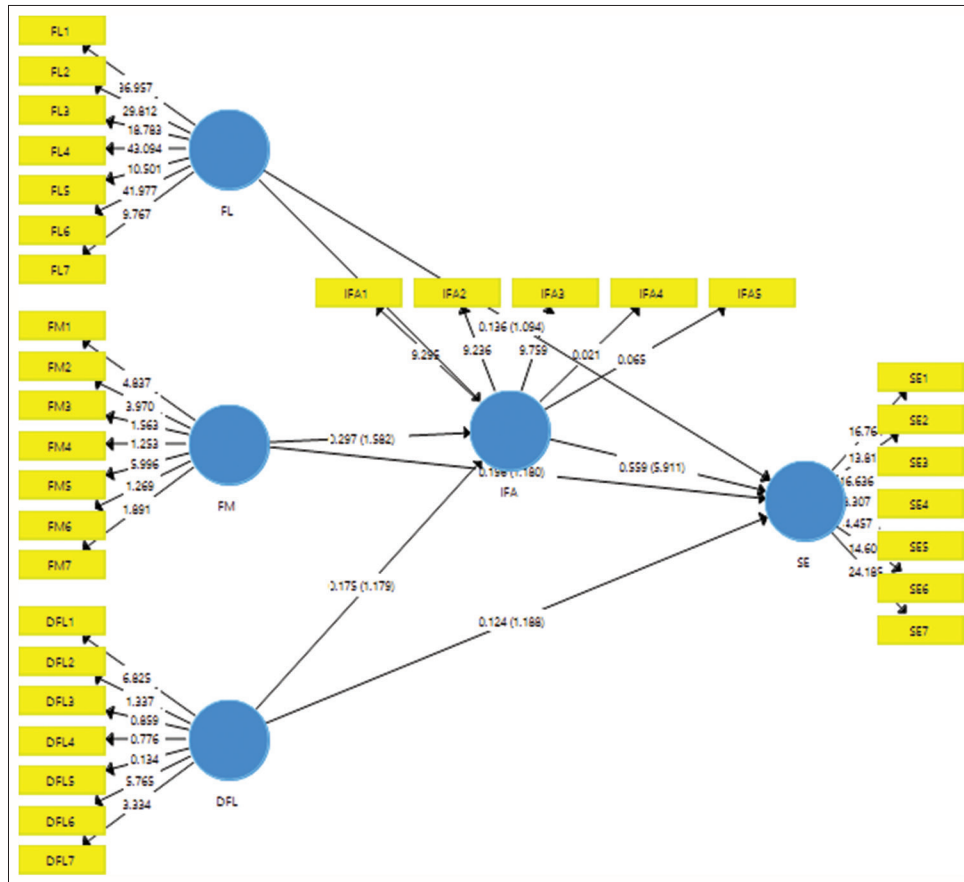
The diagonal (bold) value is a square root of the AVE of each latent variable, and the element off-diagonal value is the inter-correlation value between latent variables. DFL denotes Digital Financial Literacy; FL denotes Financial Literacy; FM denotes Financial Management, IFA denotes Islamic FinTech Adoption, SE denotes Sustainable Entrepreneurship

Table 10: Path coefficients of structural model

H	Path estimate	β	t-statistics	P-value	<i>f</i> ²
H ₁	Financial literacy → SE	0.236	2.094	0.002***	0.033
H ₂	Financial literacy → i-Fintech adoption → SE	0.194	2.506	0.013**	0.038
H ₃	FM behavior → SE	0.297	2.582	0.001***	0.062
H ₄	FM behavior → i-Fintech adoption → SE	0.146	1.828	0.068NS	0.057
H ₅	Digital financial literacy → SE	0.124	2.118	0.002***	0.029
H ₆	Digital financial literacy → i-Fintech adoption → SE	0.242	2.246	0.002***	0.023
H ₇	i-Fintech adoption → SE	0.559	5.911	0.010***	0.814

NS: Not significant; β : Standardized beta coefficient; *f*²: Effect size

Figure 2: Research model specification



The path coefficients findings indicate that i-FinTech adoption plays a partially mediation role in the relationship between financial literacy ($\beta = 0.194$, $t\text{-stat} = 2,506$, $P < 0.05^{**}$) and digital financial literacy ($\beta = 0.242$, $t\text{-stat} = 2,246$, $P < 0.05^{***}$) and sustainable entrepreneurship. Consequently, given that both constructs have a complementary partial mediation effect, hypotheses H_2 and H_6 are supported. On the other hand, i-FinTech adoption has a non-significant indirect influence on the link between sustainable entrepreneurship and financial management behaviour ($\beta = 0.146$, $t\text{-stat} = 1.828$, $P > 0.05^{NS}$). This conclusion is characterised as “direct-only non-mediation” since the direct effect is substantial, but not the indirect effect. As a result, hypothesis H_4 is rejected.

5. CONCLUSION

Sustainable entrepreneurship has emerged as a significant concern for SMEs, particularly those that are just getting started. Regretfully, the biggest issue facing Malaysian MSMEs’ entrepreneurs to date is the delayed acceptance of i-FinTech and limited understanding of its operational value. By empirically testing the impact of financial literacy elements on the adoption of i-FinTech for Bumiputera MSMEs and its implications for sustainable entrepreneurship, this study offers an empirical answer to the problem of MSMEs sustainable entrepreneurship. The study’s key conclusion demonstrated the beneficial effects of digital financial literacy, financial management practices, financial literacy, and i-FinTech adoption on sustainable business. According to this finding, Bumiputera business owners

that are financially and digitally literate are more likely to use i-FinTech and ultimately make a substantial contribution to sustainable entrepreneurship. These findings support the study’s recommendation that all entrepreneurs should engage the digital world in order to get over the challenging times of Covid-19. To do this, business owners need to adopt a new perspective and acknowledge that i-FinTech may be able to support them in maintaining their enterprise. Additionally, enhancing financial literacy and digital financial literacy levels might hasten the adoption of i-FinTech and advance financial inclusion. The findings highlight the necessity of redefining traditional financial literacy to encompass digital financial literacy, with significant ramifications for nations policy makers about enhancing both financial and digital literacy simultaneously.

It is necessary to interpret the results with an awareness of their limits. Firstly, the list of factors influencing the adoption of i-FinTech is not all-inclusive. Further information may be obtained from additional predictors that might influence or be the cause of the adoption of i-FinTech. Therefore, in order to enhance findings from several angles, future study may think about using additional factors like social capital, government supports, or perceived ease of use. Third, response bias may affect the self-reported behaviour that served as the basis for this investigation. The accuracy of the replies is unknown as respondents’ self-reports of their financial expertise and desire to embrace i-FinTech may be less reliable. It is recommended that in-depth methods used to secondary research be used in future studies to lessen response bias.

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