

MSME's sustainability during the Covid 19 pandemic: The roles of Islamic crowdfunding, financial literacy and technology adoption

Norasekin Abd Rashid^{a*}, Norzawani Mamat @ Ibrahim^b, Norhasdalina Hasim^c,
Maziana Zainal Abidin^d

^aFaculty of Business and Management, Universiti Teknologi MARA.

^{c,d}Faculty of Business and Accountancy, Universiti Selangor (UNISEL), Selangor, Malaysia

ARTICLE INFO

Article history:

Received 24 December 2021

Accepted 4 January 2022

Published 31 May 2022

Keywords:

SMEs' sustainability
Islamic crowdfunding
Technology adoption

DOI:

10.24191/jeeir.v10i2.16559

ABSTRACT

Due to the excessively strict procedures enforced by financial institutions and government authorities, the MSMEs in Malaysia are struggling to survive especially during the Covid 19 pandemic. To address this critical issue, with the advancement in technology, entrepreneurs have become more independent and creative in raising capital through a process known as crowdfunding. Hence, this study intends to examine the relationship between Islamic crowdfunding, financial literacy, and technology adoption towards MSME's sustainability during the Covid 19 pandemic. Based on the random sample of 259 MSMEs, we assessed the correlation between all the variables using SmartPLS 3.3. The results show that Islamic crowdfunding, financial literacy, and technology adoption have affected the MSMEs' sustainability positively. The results also indicate that financial literacy was the most influential factor towards MSMEs' sustainability during the Covid 19 pandemic situation.

1. Introduction

Micro, small and medium enterprises (MSMEs) are the backbone of the economy, representing 97.4 percent of overall business establishment in 2021 (Department of Statistic Malaysia, 2022). The MSMEs are divided into numerous categories, including services (83.8%), construction (8.0%), manufacturing (5.78%), agricultural (1.9%), and mining and quarrying (0.4%) (SME Corporation, 2016). The MSMEs also contribute to many factors in generating the economy, such as income and employment generation, and widespread products and services in the city and rural areas.

* Corresponding author. *E-mail address:* norasekinrashid@uitm.edu.my

<https://doi.org/10.24191/jeeir.v10i2.16559>

One of the significant issues among the MSMEs in Malaysia centers on financial assistance. Due to the rigidity of most financing procedures, the MSMEs' source of financing derives merely from their internal sources. According to Hassan et al. (2010), the SMEs in Malaysia are unable to access external funding due to excessive rigid procedures imposed by financial institutions and government agencies. However, with the advancement in technology, entrepreneurs have become more independent and creative in raising capital through a process known as crowdfunding.

Crowdfunding is a new technology-enabled innovative process to raise money for an idea, product, or entire business (Husin, Haron & Aziz, 2019). Besides, according to SME Corporation (2019), the supply of alternative sources of funding, such as equity crowdfunding (ECF), peer-to-peer (P2P) lending, and financial technology (FinTech), are expanding enormously and have become increasingly important in the SME financing landscape. Based on the Organisation for Economic Cooperation and Development (OECD) publication, *Financing SMEs and Entrepreneurs 2019: An OECD Scoreboard*, SMEs have turned to non-bank financing sources at a faster pace than in the past. Online P2P lending and fundraising activities on ECF platforms have increased significantly. In addition, according to Mutegi et al. (2015), financial literacy skills play a crucial part in SMEs because they will affect the loan repayment of SMEs.

However, not many scholarly articles have addressed the influence of Islamic crowdfunding on MSMEs' sustainability. Thus, this study intends to examine the influence of Islamic crowdfunding, financial literacy, and technology adoption on MSMEs' sustainability in Malaysia. The aim of this study is to show that Islamic crowdfunding is one of the variables that can help the MSMEs in Malaysia to grow sustainably.

2. Literature review

There are several dimensions used to measure MSME's sustainability. However, this study measures the SMEs' sustainability based on Islamic crowdfunding, financial literacy, and technology adoption.

2.1 MSMEs' sustainability

MSMEs refers to micro-enterprises (with less than 10 employees), small enterprises (with less than 50 employees) and medium-sized enterprises (with less than 250 employees). The SMEs are concentrated in the labor-intensive enterprises with low entry barriers and low fixed costs of production (Prasanna et al., 2019). Further to this, the importance of SMEs' contributions to the nations' economies in the world is an undebatable fact (Yusof et al., 2018), and the MSMEs now comprise the majority of businesses around the world. In the business world, sustainability refers to a company's ability to survive and thrive in a diverse, competitive, and complex business climate (Jayasundara et al., 2019). Meanwhile, Al Qassabi (2020) defined sustainability as the inclusion of more than just accounting and reporting in corporate reports. It also includes an evaluation of all financial, social, and environmental risks, commitments, and opportunities in business decisions.

According to Imran et al. (2019), sustainability has been a major problem for small and medium businesses in the era of industrial revolution 4.0. Thus, the SMEs must constantly adapt to conditions and take appropriate actions to minimize risks. As highlighted by Auwal et al. (2018), the SMEs in the modern world are not only more complex than larger organizations, but they also face several challenges because they are more susceptible to external economic shocks. Similarly, Jaramillo, Sossa, and Mendoza (2018) revealed that the lack of funding, the high initial capital cost of pursuing sustainability initiatives, and a lack of expertise were the most prominent hurdles to SMEs. Schiopoiu and Mihai (2019) explained that the lack of financial support and time are often identified as barriers to SMEs in pursuing a sustainable plan and in considering sustainability expenditure as a competitive advantage. Therefore, small and medium-sized enterprises (SMEs) must strike a balance between their financial, human, and material capital to be sustainable, as well as between individual values, internal and external relationships, and a social environment that help to determine the sustainability actions of SMEs (Westman et al., 2018).

Moreover, to achieve long-term sustainability in the industry is a big challenge for the SMEs. SMEs frequently struggle with the need to be, and most crucially, remain viable because failure will undoubtedly

come to the forefront otherwise.. Thus, the adoption of technology practices is viewed as the key to successful improvement of their business performance and competitiveness. Therefore, this study was conducted to identify the key factors that determine the MSMEs' sustainability.

2.2 Islamic crowdfunding

Islamic crowdfunding is a Sharia-compliant crowdfunding platform to support halal ventures and goods and the financing must be morally permissible (Hendratmi, Ryandono, & Sukmaningrum, 2019). In addition, Ryandono, Wijayanti, and Kusuma (2020) added that Islamic crowdfunding should be based on Sharia principles and is used to support halal projects and products that are allowed under Islamic law. Sulaeman (2020) has established several benefits of Islamic crowdfunding such as that the online platform offers an alternate source of funding for micro-entrepreneurs, SMEs, and businesses. Thus, Islamic crowdfunding is expected to become a solution for micro, small, and medium enterprises, as well as start-up businesses, instead of the formal financial intermediaries (Roro, 2018). Moreover, when a startup company is unable to provide collateral for financial assistance and is facing problems, an Islamic crowdfunding website platform can be a feasible alternative for obtaining capital funds (Hendratmi et al., 2019). According to Wahjono et al. (2015), Islamic crowdfunding is an ethical form of financing. It is not limited to Muslims only, and it focuses on values and ethics such as community development, honesty, and justice which are universally accepted. Therefore, to drive Islamic crowdfunding, it is important to foster consumer or investor assurance in the platform and create awareness either through social media or community gatherings (Salman, 2015).

Biancone et al. (2019) mentioned that combining the principles of Islamic finance, crowdfunding, the advancements in technology, and Fintech represents an opportunity to significantly contribute to enhancing the entrepreneurial ecosystem in the Islamic world and the promotion of social and economic development. Meanwhile, Hendratmi et al. (2019) revealed that SMEs that obtained funding through crowdfunding platforms have better financial performance than before receiving the grant. The authors also concluded that Islamic crowdfunding's role contributes positively to SMEs' business development including increased sales, increased market share, and more accessible provision of additional capital with profit-sharing principles (according to sharia law). Besides, Rahman (2019) revealed that Muslim entrepreneurs who used Shariah crowdfunding as a financing source would likely achieve financial sustainability. Hence, as similarly posited by Hendratmi et al. (2019), Islamic crowdfunding is recommended as a funding solution for SMEs and is crucial for SME expansion and sustainable business. Thus, we expected a positive relationship between Islamic crowdfunding and MSMEs sustainability.

H1: Islamic crowdfunding is positively associated with MSMEs sustainability.

2.3 Financial literacy

Financial literacy has been identified as an important source of knowledge for financial decision-making (Ye & Kulathunga, 2019). Individuals' quality of life, as well as the integrity and quality of markets, can all benefit from financial literacy. Several previous studies have confirmed the influential role of financial literacy on MSME's business sustainability (Widayanti et al., 2017, Hapsoro & Iswara, 2019; Ye & Kulathunga, 2019). In addition, financial literacy has been shown to have a significant impact on business performance in general, including that of large enterprises and MSMEs (Saifurrahman & Kassim, 2021). To reinforce on these arguments, organizational knowledge, including financial literacy, can improve organizational performance and sustainability if it is strengthened by good organizational characteristics. Aribawa (2016) found that financial literacy has an effect on performance and business sustainability. Therefore, we hypothesized that financial literacy is a significant determinant of sustainability among the MSMEs.

H2: There is a positive relationship between financial literacy and MSMEs sustainability.

2.4 Technology adoption

Technology adoption can be described as the acceptance or adoption of a new product or innovation. Referring to Mustafa & Yaakub (2018), being innovative is essential for the company to sustain its market position and strengthen its performance level. Organizational ability to adopt technology would represent its competitiveness and sustainability in today's dynamic business environment. It is particularly relevant to MSMEs as technology would enable them to compete with their larger counterparts. Furthermore, MSMEs need gradual changes in business models along with changes in consumer preferences and competitors' behaviour.

The MSMEs are also required to improve their survival chance particularly in business models driven by technology adoption, as well as in finding adequate capital, solving issues of inadequate utilities and technical expertise, and providing training and skill development (Prasanna et al., 2019). The success of technology adoption will depend on various factors such as technical characteristics, organizational characteristics, and external factors (Abdullah, Wahab & Shamsudin, 2013). For instance, MSME's active use of the internet demonstrates a productive endeavour.. The Internet provides numerous and inexpensive opportunities for MSMEs to compete with large companies and it is found that numerous MSMEs have adopted the IT (Information Technology) infrastructure for their businesses. Meanwhile, Martias and Hernandez (2019) reported that the IT products such as cloud computing is gradually being adopted by MSMEs in the Philippines to reach and expand market opportunities, and allow speedy and cost-effective deployment of services. Thus, the current study hypothesized that technology adoption has a significant relationship to the MSMEs' sustainability.

H3: Technology adoption has a significant relationship with MSMEs Sustainability.

2.5 Research framework and research hypotheses

A research framework (Figure 1) was developed based on the review of literature on the MSMEs sustainability. The literature shows a lack of study focusing on Islamic crowdfunding as one of the factors that will influence MSMEs' sustainability. Thus, the relationships between these two constructs show considerable unverified potential. Likewise, literature in financial and technology adoption fields have been extensively linked to SMEs' sustainability, but with less of a focus on MSMEs' sustainability. Therefore, the current study intends to fulfil the highlighted gap in the literature. Figure 1 shows the research framework for the current study.

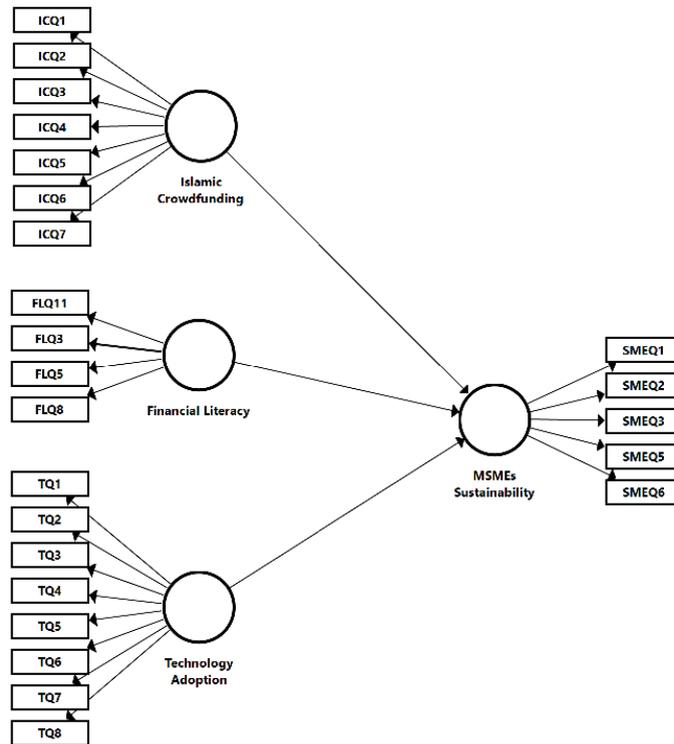


Fig 1. Research framework

3. Methodology

3.1 Research design

This study employed a quantitative approach that focused on the statistical analysis of numerical data collected through questionnaires based on a large-scale survey research. The research design selected for this study was the descriptive design. The descriptive design facilitated the researcher in determining the relationship between variables and it is usually used to describe the current situation. In addition, a cross-sectional study was conducted to interpret all the data including demographic data, independent variable, dependent variable, and the reliability analysis. It also indicated the summary of the data collected which represented the MSMEs in Selangor.

3.2 Data collection procedure

Data for this study were collected from the MSMEs in Peninsular Malaysia in which the organizations had less than 200 employees. The sampling frame was the MSMEs in the food and beverages industry in Selangor. This was due to the cross-state travel restrictions, as well as the limitations imposed on business operations due to the Covid-19 pandemic situations whereby only the food and beverages industry was allowed to operate. The key respondents were business owners or top managers as they were the ones who were actively involved in managing the businesses. The unit of analysis of the study was the organization level. A total of 750 MSMEs were drawn as the samples. This was done due to the possibility of a low response rate as suggested by Sekaran and Bougie (2016). Using the simple random sampling technique, e-mails attached with an online link to Google Forms were sent to 550 companies for them to complete the

survey. Meanwhile, 200 questionnaires were distributed physically which took almost 3 weeks and the response rate was 100%. Based on the data collected, 115 responses were from food stall operators that had a total of less than 5 employees which represented the micro-business category. Meanwhile, 144 responses were from the small and medium business categories that had a total number of more than 5 and less than 200 employees. In addition, for the Google Forms, in the event of bounced e-mails, the companies were contacted via phone calls or their respective company websites in order to check and verify their valid e-mail addresses. To get their prompt responses and full cooperation, follow-up calls and gentle reminders were sent via e-mail after one week. After one month, only 59 companies responded to the survey with a response rate of 10.73%. According to Ho, Ahmad, and Ramayah (2016), a response rate of around 10% is common among MSMEs and is equivalent to other research on MSMEs in Malaysia. This is supported by Sekaran and Bougie (2016), who specified that the ideal response rate range for social science studies is between 5% and 35%. Additionally, the sample size of 259 in this research exceeded the 74 samples required based on statistical power analysis using G*Power. Therefore, the sample size in this study was adequate to represent the population.

4. Data analysis

4.1 Demographic descriptive analysis

Respondents' demographic information was analysed using descriptive statistics based on the total responses received from 259 samples through the distribution of questionnaire in this study.

Table 1: Demographic characteristics of respondent (N=259)

	Frequencies	Percentage
Gender		
Male	135	52.1
Female	124	47.9
Age		
< 30 years	0	0
31-40 years	26	10.0
41-50 years	113	43.6
51-60 years	108	41.7
More than 60 years	12	4.6
Education		
Secondary School	99	38.2
Undergraduate	138	53.3

(Diploma/Degree)		
Postgraduate (Master)	6	2.3
Non-formal Education	16	6.2
Type of Business		
Restaurant	68	26.3
Frozen Food	21	8.1
Food Stall	115	44.4
Food Manufacturer	55	21.2
Position in the Company		
Owner/Founder	187	72.2
Top Management	72	27.8

Table 1 shows the demographic characteristics of the respondents of which 52.1% of the respondents were male and 47.9% were female. Most of the respondents were between 41 and 50 years old (43.6%) and only 4.6% of the respondents were 60-years old and above. From the descriptive analysis, the academic qualification for majority of the respondents was a Diploma or Degree qualification (53.3%). Meanwhile, for the types of businesses operated by the respondents, 115 were food stalls (44.4%), 68 were restaurants (26.3%), while 55 were food manufacturers (21.2%), and the remaining 8.1% were in the frozen food enterprises. A majority of the respondents (72.2%) were the owner/founder of the businesses, while the remaining 27.8% were individuals from the top management, which indicated that the findings in this study could be used with confidence.

4.2 Reliability analysis

Table 2 shows the results of the reliability test. The Cronbach's alpha was used to measure the items' internal consistency and reliability. The reliability coefficient of Cronbach's Alpha is acceptable if the value is greater than 0.7. Therefore, based on the results of the reliability test, the value for Cronbach's Alpha for all variables in the study was above 0.7, which revealed that the reliability analysis among the variables had high internal consistency. Based on Table 2, the value for Cronbach's Alpha for MSMEs Sustainability (DV) was 0.860, while it was 0.925 for Islamic Crowdfunding (IV1), 0.779 for Financial Literacy (IV2), and 0.879 for Technology Adoption (IV2).

Table 2: Reliability test

Variable	Cronbach's Alpha	No. of Items
MSMEs Sustainability	0.860	6
Islamic Crowdfunding	0.925	7
Financial Literacy	0.779	5
Technology Adoption	0.879	8

This study used Partial least squares (PLS) modeling using the SmartPLS 3.2.8 version (Ringle et al., 2015) as the statistical tool to examine the measurement and structural model as it does not require normality assumption, and survey research is normally not normally distributed (Chin et al., 2003). As suggested by Hair et al. (2017), we assessed the multivariate skewness and kurtosis. The results showed that the data collected was not multivariate normal with Mardia's multivariate skewness ($\beta = 30.35$, $p < 0.01$) and Mardia's multivariate kurtosis ($\beta = 79.34$, $p < 0.01$). According to Kline (2011), if the β value for multivariate skewness is greater than ± 3 and the β value for multivariate kurtosis is greater than ± 20 , then the data distribution is not normal.

In addition, since the data was collected using a single source, the current study first tested the issue of Common Method Bias by following the suggestions by Kock and Lynn (2012), and Kock (2015) by testing the full collinearity. In this method, all the variables will be regressed against a common variable and if the $VIF \leq 3.3$, then there is no bias from the single-source data. As shown in Table 3, VIF values were less than 3.3, thus single-source bias was not a serious issue with the data.

Table 3: Full collinearity testing

Construct	IC	FL	TA	MSMEs
VIF	1.989	1.556	1.714	2.032

Note: IC = Islamic Crowdfunding; FL = Financial Literacy; TA = Technology Adoption; MSME = MSMEs Sustainability

The measurement model was used to test the validity and reliability of the instruments used by following the guidelines of Hair et al. (2019) and Ramayah et al. (2018), then the structural model was used to test the hypothesis developed.

4.3 Measurement model

For the measurement model, the loadings, average variance extracted (AVE) and the composite reliability (CR) were assessed. The values of loadings should be ≥ 0.5 , the AVE should be ≥ 0.5 and the CR should be ≥ 0.7 . As shown in Table 4, the AVEs were all higher than 0.5 and the CRs were all higher than 0.7. The loadings were also acceptable with only one or two loadings less than 0.708 (Hair et al., 2019).

Table 4: Measurement model for the constructs

Construct/Source	Questions	Items	Loadings	AVE	CR
Islamic Crowdfunding <i>Source: Saiti et.al (2019)</i>	I am familiar with Islamic crowdfunding terms.	IC1	0.83	0.693	0.940
	I am aware of the online platform for Islamic crowdfunding funds been provided by parties	IC2	0.928		
	If given an option, I would choose Islamic Crowdfunding.	IC3	0.817		
	Islamic Crowdfunding is the best financial medium for SMEs.	IC4	0.689		
	Islamic Crowdfunding offers more benefits to SMEs.	IC5	0.695		
	There is a lot of exposure to Islamic crowdfunding on media platforms (e.g., Online news, Facebook, Blog, Twitter, etc.)	IC6	0.921		
	Islamic crowdfunding is widely accessible throughout the media network.	IC7	0.912		
Financial Literacy <i>Source: OECD (2014)</i>	I will always be responsible for the money that has been spent on the company's improvement.	FL3	0.731	0.596	0.855
	I am aware of the essence of financial concepts and maintain the ability and confidence to handle company funds.	FL5	0.753		
	I am enabled to be more creative in the management of credit and debt.	FL8	0.804		
	I understand the importance of long-term financing for financial management.	FL11	0.796		
Technology Adoption <i>Source: Heinz (2013)</i>	Technology helps the business operation (e.g., technology system for ordering and delivery services).	TA1	0.769	0.504	0.889
	The usage of modern machinery improves business performance.	TA2	0.79		
	The usage of technology enhances employees' productivity.	TA3	0.661		

	The compatibility of an organization largely affects the adoption of technology innovations.	TA4	0.67		
	I find that technologies are very useful for the business (e.g., internet, machinery, equipment, etc.)	TA5	0.575		
	I should become more aggressive by strengthening my technological innovation abilities to survive and grow in this era.	TA6	0.689		
	My company encourages innovative and creative work culture to motivate the use of new technologies.	TA7	0.813		
	The infrastructure of my organization is compatible with the use of the latest technologies.	TA8	0.681		
MSMEs Sustainability	My company has a channel to meet consumer demand.	MSME1	0.868	0.643	0.899
	My company considers customer suggestions in the production of the product.	MSME2	0.842		
	My company prioritizes customer services and cares for the quality of the services.	MSME3	0.674		
	My company includes the reference for sustainability in the statement of vision, mission, and values.	MSME5	0.834		
	My company is profitable and well managed.	MSME6	0.776		

Source: Sarango Lalangui, et al. (2018)

Note: FL1-2,4,6-7,9-10 and MSME4 were deleted due to the low loadings.

Next, the discriminant validity was tested using the HTMT criterion as suggested by Henseler et al. (2015) and updated by Franke and Sarstedt (2019). The HTMT values should be ≤ 0.85 , the stricter criterion and the mode lenient criterion should be ≤ 0.90 . As shown in Table 5, the values of HTMT were all lower than the stricter criterion of ≤ 0.90 , and as such, we can conclude that the respondents understood that the 4 constructs were distinct. Taken together, both these validity tests showed that the measurement items were both valid and reliable.

Table 5: Discriminant validity (HTMT)

	Financial Literacy	Islamic Crowdfunding	SMEs Sustainability	Technology Adoption
Financial Literacy				
Islamic Crowdfunding	0.637			
SMEs Sustainability	0.851	0.62		
Technology Adoption	0.491	0.597	0.542	

4.4 Structural model

The structural model explains the hypothesized relationship between the constructs. Following the suggestions of Hair et al. (2019), to check the significance level, we reported the path coefficients, the standard errors, t-values, and p-values for the structural model using a 5000-sample re-sample bootstrapping procedure (Ramayah et al. 2018). The findings are summarized in Table 5; revealing that Islamic Crowdfunding was positively associated with MSMEs Sustainability ($\beta = 0.145$, $p < 0.05$) which supported H1. Technology Adoption ($\beta = 0.218$, $p < 0.05$) and Financial Literacy ($\beta = 0.522$, $p < 0.05$) were also positively related to MSMEs Sustainability, thus H2 and H3 were supported.

Table 6: Hypothesis testing direct effects

Hypotheses	Direct Effect Relationship	Std Beta	Std Error	t-values	p-values	BCI LL	BCI UL	f ²	Remarks
H1	Islamic Crowdfunding -> MSMEs Sustainability	0.145	0.072	2.016	0.022	0.045	0.284	0.026	Supported
H2	Financial Literacy -> MSMEs Sustainability	0.522	0.128	4.091	0.000	0.256	0.647	0.424	Supported
H3	Technology Adoption -> MSMEs Sustainability	0.218	0.108	2.016	0.022	0.096	0.438	0.061	Supported

Note: 95% confidence interval was used with a bootstrapping of 5,000.

R² was analysed to examine the amount of variance in the endogenous constructs explained by exogenous constructs (Hair, 2017). The range of the effect is from 0 to 1, which assumes that the higher the value, the higher the predictive accuracy level (Ramayah et al., 2018). The effect of Islamic Crowdfunding Financial Literacy and Technology Adoption was tested on MSME's Sustainability, with R² of 0.587 (refer to Figure 2) which indicates that the 3 predictors explained 58.7% of the variance in MSME's Sustainability.

To measure the effect size (f^2), Cohen (1988) proposed that the value of 0.02 is small, 0.15 is medium, and 0.35 is large. As observed in Table 6, Islamic Crowdfunding had a small effect on MSME's Sustainability ($f^2 = 0.026$), Financial Literacy had a large effect on MSME's Sustainability ($f^2 = 0.424$), and Technology Adoption had a small effect on MSME's Sustainability ($f^2 = 0.061$). The findings also verify that the value of 0 did not straddle in between the Confidence Intervals Bias corrected at Upper and Lower Limits. Therefore, all results were significant.

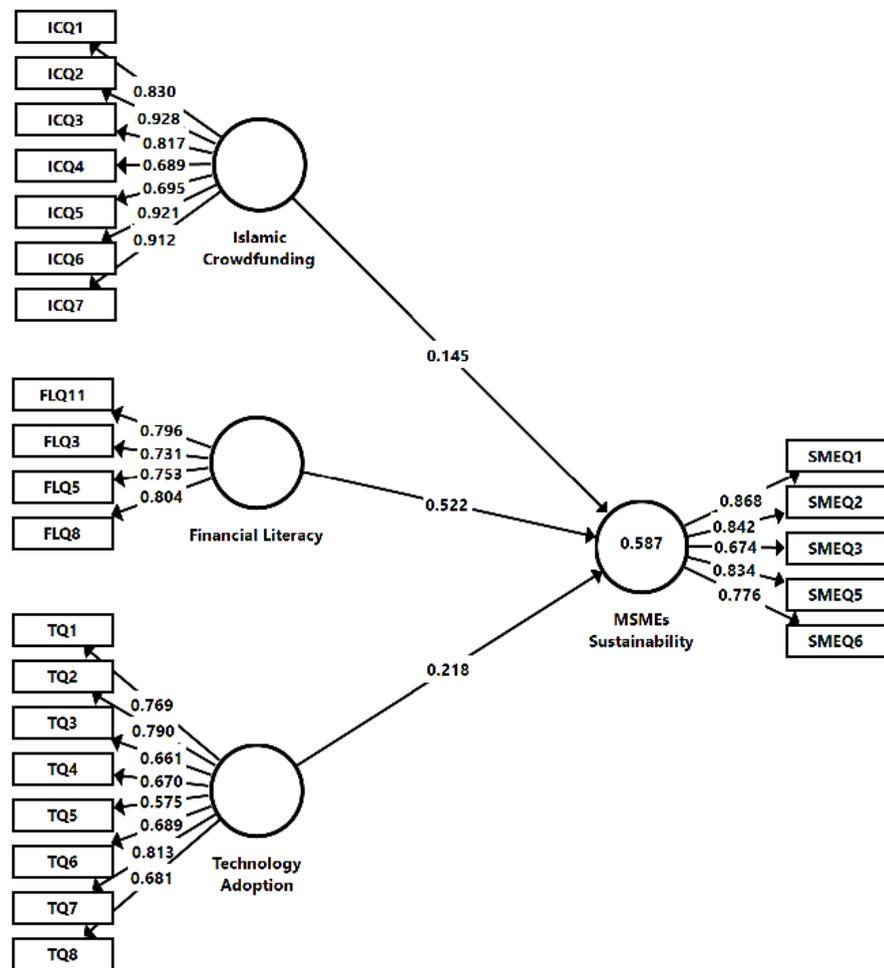


Fig 2. R Square for MSMEs' Sustainability

5. Discussion

This study attempts to identify the factors that affect the MSME's sustainability, and the factors are: i) the relationship between Islamic crowdfunding and MSME's sustainability; ii) the relationship between financial literacy and MSMEs' sustainability; and iii) the relationship between technology adoption and MSME's sustainability.

i) The relationship between Islamic crowdfunding and the MSMEs' sustainability

The result shows that there was a positive relationship between Islamic crowdfunding and MSMEs' sustainability. The work is consistent with prior studies, which concluded that Islamic crowdfunding plays a vital role in MSMEs' financial sustainability (Rahman, Thaker & Duasa, 2019). Similarly, Hendratmi et al. (2019) also indicated that Islamic crowdfunding is recommended as an SME funding solution and crucial for SME expansion and sustainable business. The authors concluded that Islamic crowdfunding's role contributes positively to MSMEs' business development, including increased sales, increased market share, and more accessible provision of additional capital with profit-sharing principles (according to the sharia law).

ii) The relationship between financial literacy and the MSMEs' sustainability

The structural model results reveal that there was a significant relationship between financial literacy and MSMEs' sustainability. This finding is supported by prior studies conducted by Widayanti et al. (2017), Hapsoro and Iswara (2019), and Ye and Kulathunga (2019), which shows that financial literacy has an impact on business sustainability. This is in line with Aribawa's (2016) contention that organizational financial literacy has an impact on performance and business sustainability.

iii) The relationship between technology adoption and the MSMEs' sustainability

Based on the structural model results, there was a positive relationship between technology adoption and SMEs' sustainability. This finding reflects the results in prior studies which concluded that organizational ability to adopt technology would render it competitive and sustainable in today's dynamic business environment (Abdullah, Wahab & Shamsuddin, 2013). This is particularly relevant to micro, small, and medium enterprises (MSMEs) as technology would enable them to compete with their larger counterparts.

6. Conclusion

Based on the results of this study and the discussion above, it can be concluded that Islamic crowdfunding contributes positively to the MSMEs' sustainability, thus assisting their financing needs for business expansion or start-ups in Malaysia. Furthermore, the empirical test results show that financial literacy was the most important factor that influenced the MSMEs' sustainability. The current study also disclosed that technology adoption will increase the capacity to boost MSMEs' sustainability development in Malaysia.

The government must formulate regulations and laws that govern crowdfunding companies to allow them to operate. It is also suggested that Sharia-based crowdfunding companies shall inform the public periodically on the development of SMEs businesses that have received funding through financial statements and annual reports via their company websites or social media platforms. This will enable investors and researchers to analyze and further evaluate the performance of crowdfunding towards MSMEs. Besides, future research should examine the existing regulations and propose new regulations in the area of Islamic crowdfunding in Malaysia.

Acknowledgments

We thank the SMEs for their cooperation in answering the questionnaire and contributing valuable suggestions. The authors would like to thank the grant sponsor for the financial support: SEMESTA-MBI and Grant No: I/SEM-MBI/SS/2020/07.

Conflict of interest statement

The authors agree that this research was conducted in the absence of any self-benefits, commercial or financial conflicts.

References

- Abdullah, N. H., Wahab, E., & Shamsuddin, A. (2013). Exploring the common technology adoption enablers among Malaysian SMEs: Qualitative findings. *Journal of Management & Sustainability*, 3(4), 78-91.
- Ho, T. C., Ahmad, N. H., & Ramayah, T. (2016). Competitive capabilities and business performance among manufacturing SMEs: Evidence from an emerging economy, Malaysia. *Journal of Asia-Pacific Business*, 17(1), 37-58. <https://doi.org/10.1080/10599231.2016.1129263>

- Al Qassabi, M.A. (2020). Insights on Sustainability of Small and Medium Enterprises in Oman: A Conceptual Framework. *International Journal of Economics and Financial Issues*, 10(1), 209-218.
- Aribawa, D. (2016). The effect of financial literacy on the performance and sustainability of MSMEs in Central Java. *Journal of Business Strategy*, 20(1), 1-13.
- Auwal, A. M., Mohamed, Z., Shamsudin, M. N., Sharifuddin, J., & Ali, F. (2020). External pressure influence on entrepreneurship performance of SMEs: a case study of Malaysian herbal industry. *Journal of Small Business & Entrepreneurship*, 32(2), 149-171. <https://doi.org/10.1080/08276331.2018.1509504>
- Biancone, P. P., Secinaro, S., & Kamal, M. (2019). Crowdfunding and Fintech: business model sharia-compliant. *European Journal of Islamic Finance*, 12. <https://doi.org/10.13135/2421-2172/3260>
- Saiti, B., Musito, M. H., & Yucel, E. (2018). Islamic crowdfunding: Fundamentals, developments and challenges. *Islamic Quarterly*, 62(3), 469-484.
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least square latent variable modeling approach for measuring interaction effects: results from a monte carlo simulation study and an electronic-mail emotion adoption study. *Information Systems Research*, 14(2), 189-217.
- Cohen, J. (1988) *Statistically Power Analysis for the Behavioral Sciences* (2nd ed.). Academic Press: Hillsdale, NJ.
- Department of Statistics Malaysia (2022). Interactive Malaysia Statistical Business Register (i-MSBR). Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/cthree&menu_id=WXXvV3RYTmE3RmtwQ2Ri cVZTbVkvZz09
- Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: a comparison of four procedures. *Internet Research*, 29(3), 430-447. <https://doi.org/10.1108/IntR-12-2017-0515>
- Hair, J., Risher, J., Sarstedt, M., & Ringle, C. (2019), When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.
- Hair, J.F.; Hult, G.T.M.; Ringle, C.M.; Sarstedt, M. A. (2017). *Primer on Partial Least Squares Structural Equation Modeling* (2nd ed.). Sage: Los Angeles, CA.
- Hapsoro, D., & Iswara, A. S. (2019). Does financial literation moderate the effect of funding on the sustainability of micro enterprises. *The Indonesian Journal of Accounting Research*, 22(3). <http://doi.org/10.33312/ijar.448>
- Hassan et al. (2010). *Financial Constraints & Opportunities of Micro Enterprise Entrepreneur: A Theoretical Framework*. Paper Presented at International Conference on Business and Economics Research Kuala Lumpur, 2010
- Hendratmi, A., Sukmaningrum, P., Hadi, M. N. and Ratnasari, R. T., *The Role of Islamic Crowdfunding Mechanisms in Business and Business Development* (2019). *Journal of Business and Economics Review*, 4(1), 10–23.
- Henseler, J.; Ringle, C.M.; Sinkovics, R.R. *The use of partial least squares path modeling in international marketing*. In *New Challenges to International Marketing*; Emerald Group Publishing Limited: Bingley, UK, 2009.

- Heinz, M. (2013). Exploring predictors of technology adoption among older adults. [Doctoral dissertation]. Ames, Iowa: Iowa State University. Repository. <https://doi.org/10.31274/etd-180810-3401>
- Ho, T. C., Ahmad, N. H., & Ramayah, T. (2016). Competitive capabilities and business performance among manufacturing SMEs: Evidence from an emerging economy, Malaysia. *Journal of Asia-Pacific Business*, 17(1), 37-58. <https://doi.org/10.1080/10599231.2016.1129263>
- Husin, M. M., Haron, R., & Aziz, S. (2019). The role of perceived benefits in formation of intention to use Islamic crowdfunding platform among small and medium enterprises in Malaysia. *International Journal of Entrepreneurship and Management Practices*, 2(7), 39-47.
- Imran, M., Salisu, I., Aslam, H. D., Iqbal, J., & Hameed, I. (2019). Resource and information access for SME sustainability in the era of IR 4.0: The mediating and moderating roles of innovation capability and management commitment. *Processes*, 7(4), 211. <https://doi.org/10.3390/pr7040211>
- Jaramillo J.A., Sossa J.W.Z., & Mendoza G.L.O. (2018). Barriers to sustainability for small and medium enterprises in the framework of sustainable development –Literature review. *Business Strategy and the Environment*, 28(4), 512-524. <https://doi.org/10.1002/bse.2261>
- Jayasundara, J.M.S.B., Rajapakshe, P.S.K., Prasanna, R.P.I.R., Gamage, S.K.N., EMS Ekanayake E.M.S., G.A.K.N.J., & Abeyrathne, G.A.K.N.J. (2019). The Nature of Sustainability Challenge in Small and Medium Enterprises and its Management. Munich Personal RePEc Archive. Retrieved from https://mpra.ub.uni-muenchen.de/98418/1/MPRA_paper_98418.pdf
- Kline, R.B. (2011). *Principles and Practice of Structural Equation Modeling* (3rd ed.). Guilford Press: New York, NY.
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10.
- Kock, N., & Lynn, G. S. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems*, 13(7), 546-580.
- Matias, J. B., & Hernandez, A. A. (2021). Cloud computing adoption intention by MSMEs in the Philippines. *Global Business Review*, 22(3), 612-633. <https://doi.org/10.1177/0972150918818262>
- Mustafa, H. K., & Yaakub, S. (2018). Innovation and technology adoption challenges: Impact on SMEs' company performance. *International Journal of Accounting, Finance, and Business*, 3(15), 57-65.
- Mutegi, H. K., Njeru, P. W., & Ongesa, N. T. (2015). Financial literacy and its impact on loan repayment by small and medium entrepreneurs. *International Journal of Economics, Commerce and Management*, 3(3), 1-28. Retrieved from <http://ijecm.co.uk/wp-content/uploads/2015/03/3355.pdf>
- OECD. (2014). *PISA 2012 Results: Students and Money (Volume VI): Financial Literacy Skills for the 21st Century*. PISA, OECD Publishing. <https://doi.org/10.1787/9789264208094-en>
- Prasanna, R. P. I. R., Jayasundara, J. M. S. B., Naradda Gamage, S. K., Ekanayake, E. M. S., Rajapakshe, P. S. K., & Abeyrathne, G. A. K. N. J. (2019). Sustainability of SMEs in the competition: A systemic review on technological challenges and SME performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(4), 100. <https://doi.org/10.3390/joitmc5040100>
- Rahman, M.P, Thaker, M.A.M.T, & Duasa, J. (2019). Would Muslim entrepreneurs use shariah-compliant equity-based crowdfunding model for financial sustainability?: A case study on Malaysia. In *Proceedings of the 10th Foundation of Islamic Finance Conference 2019*. Retrieved from <https://doi.org/10.24191/jeeir.v10i2.16559>

International Islamic University of Malaysia Repository.
http://irep.iium.edu.my/76784/9/Dr.%20Maya_Asmey_Jarita_SC.pdf

- Ramayah, T.; Cheah, J.; Chuah, F.; Ting, H.; Memon, M.A. (2018). *Partial Least Squares Structural Equation Modeling Using SmartPLS 3.0* (2nd ed.). Pearson: Kuala Lumpur.
- Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *SmartPLS 3*. Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>
- Roro, F.S.R., (2018). The Risk Mitigation to the Islamic Crowdfunding in Indonesia. In *Proceedings of the International Law Conference (iN-LAC 2018) - Law, Technology and the Imperative of Change in the 21st Century* pages (pp. 237-245). <https://doi.org/10.5220/0010052002370245>
- Ryndono M.N.H., Wijayanti I., & Kusuma K.A. (2020). Determinants of Investment in Islamic Crowdfunding. *Muqtasid*, 2(1), 70-87.
- Saifurrahmana, A., & Kassimb, S. (2021). Islamic Financial Literacy for Indonesian MSMEs during COVID-19 Pandemic: Issues and Importance. *Journal of Islamic Finance*, 10(1), 45-060.
- Salman S., (2015). *Crowdfunding and its Application in Islamic Finance – Mechanism and Challenges*. International Centre for Education in Islamic Finance.
- Sarango-Lalangui, P., Santos, J., & Hormiga, E. (2018). The Development of Sustainable Entrepreneurship Research Field. *Sustainability*, 10(6), 2005. <http://doi.org/10.3390/su10062005>
- Schiopoiu, A.B., & Mihai, L.S. (2019). An Integrated Framework on the Sustainability of SMEs. *Sustainability*, 11(21), 6026. <https://doi.org/10.3390/su11216026>
- Sekaran, U. & Bougie, R. (2016). *Research Methods For Business: A Skill-Building Approach* (7th ed.). John Wiley & Sons.
- SME Corporation (2016). *Annual Report 2016/2017*. SME Corp. Malaysia
- SME Corporation (2019). *Annual Report 2018/2019*. SME Corp. Malaysia
- Sulaeman, S. (2020). Factors determining behavioral intentions to use Islamic crowdfunding platform in times of Covid-19 in Indonesia: Evidence from TAM approach. *Jurnal Ekonomi & Keuangan Islam*, 7(1), 31-44
- Wahjono, S. I., Marina, A., & Widayat. (2015, December 1-2). Islamic crowdfunding: alternative funding solution. In K.S. Mat Teh, M.S. Nasir, M.F. Yahaya & M.F. Abdul Hamid (Eds.), *Proceedings of the 1st World Islamic Social Science Congress* (pp. 30–38). Universiti Sultan Zainal Abidin.
- Widayanti, R., Damayanti, R., & Marwanti, F. (2017). Pengaruh Financial Literacy Terhadap Keberlangsungan Usaha (Business Sustainability) Pada UMKM Desa Jatisari. *Jurnal Ilmiah Manajemen dan Bisnis*, 18(2), 153-163. <http://doi.org/10.30596%2Fjimb.v18i2.1399>
- Ye, J., & Kulathunga, K. M. M. C. B. (2019). How does financial literacy promote sustainability in SMEs? A developing country perspective. *Sustainability*, 11(10), 2990. <https://doi.org/10.3390/su11102990>
- Yusoff, T., & Latiff A.S.A., & Osman S.I.W., & Zawawi N.F.M. (2018). Sustainable Growth in SMEs: A Review from the Malaysian Perspective. *Journal of Management and Sustainability*, 14(8), 43-54.

About the Authors

Norasekin Abd Rashid is a Senior Lecturer at the Department of Technology and Supply Chain Management Studies, Faculty of Business and Management, Universiti Teknologi MARA (UiTM). She obtained her Ph.D. in Management from Universiti Putra Malaysia, Malaysia (2016). Her research interest is in business management, supply chain, and Halal. She can be reached through her email at norasekinrashid@uitm.edu.my.

Norzawani Mamat @ Ibrahim is a Senior Lecturer at the Department of Technology and Supply Chain Management Studies, Faculty of Business and Management, Universiti Teknologi MARA (UiTM). She obtained her Ph.D. in Management from Universiti Malaysia Kelantan, Malaysia (2021). Her research interest is in operation management, supply chain risk, and supply chain management. She can be reached through her email at nzawani@uitm.edu.my

Norhasdalina Hasim is a Lecturer at the Department of Administrative Management and Human Resource, Faculty of Business and Accountancy, Universiti Selangor (UNISEL). She obtained her MBA from Universiti Teknologi MARA (UiTM). Her research interest is in human resources, business management, and logistics. She can be reached through her email at hasdalina@unisel.edu.my.

Maziana Zainal Abidin is a Lecturer at the Department of Business Management and Sports Industry, Faculty of Business and Accountancy, Universiti Selangor (UNISEL). She obtained her MBA from Universiti Teknologi MARA (UiTM). Her research interest is in supply chain and business management. She can be reached through her email at maziana@unisel.edu.my.

Authors' contributions

Norhasdalina Hasim conceptualised the central research idea and provided the theoretical framework. Norasekin Abd Rashid carried out the research and completed the data analysis. Maziana Zainal Abidin participated in the data gathering process. Each author contributed to the composition of the article while Norzawani Mamat@Ibrahim led the review and revision efforts.



© 2022 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).