

Do Islamic Fintech Leadership and Technology Adoption Predict Sustainable Entrepreneurship Values among Fintech Organizations?

Raja Suzana Raja Kasim¹, Nurul Afiqah Zulazli² and Wan Fariza Azima Che Azman³

Abstract

The primary objectives of this paper are to examine if Islamic Fintech leadership (IFL) and technology adoption (TA) can predict Sustainable Entrepreneurship Values (SEV) among Malaysian Fintech organizations. A survey was self-administered to 294 organisations involved in payment, e-wallet, prop-tech, digital bank, blockchain, cryptocurrency, remittance, AI/ data, marketplace, crowdfunding, insurtech, wealthtech, Know Your Customer (KYC), and reg-tech services offerings. Partial Least Square Structural Equation Modelling is used to analyze 121 responses. The results show that IFL has a positive and significant relationship with SEV. TA, however, does not moderate the relationship between IFL and SEV. This paper contributed to developing the extended Technology Acceptance Model and Resource-Based Theory. The SEV model explains the leadership concern for socio-economy, environment, and values by creating a game changer for Islamic digital transformation that enables micro and small enterprises to access faster socio-economic well-being and financial health.

Keywords: Islamic Fintech, Leadership, Sustainable Entrepreneurship Values, Fintech, Technology Adoption, Malaysia.

INTRODUCTION

Emerging technological advancements influence the results of sustainable entrepreneurship values (SEV) among fintech organisations. Prodigious volumes of data have been generated and the obstacles and costs connected with the supply of financial services have been mitigated due to developments in computation and networking. In conjunction with network effects and economies of size and scope, these technological elements have radically altered the business models, products, infrastructures, market participants, and market structures of the fintech industry. In contrast with purely exogenous factors, technical innovations are inherently dynamic, as innovators develop the subsequent generation of technologies in response to market conditions.

Interestingly, the concept of meeting social and financial inclusion invites Fintech leaders to reconsider ways to create benefits, particularly the essential requirements that should be provided to the world's impoverished, and this is central to SEV. The primary objectives of this paper are to examine if Islamic Fintech leadership (IFL) and technology adoption (TA) can predict SEV among Malaysian Fintech organizations. This paper is framed around the development of and interactions between three key factors that are relevant for fintech: Islamic Fintech Leadership (IFL); technology adoption (TA) and fintech sustainable entrepreneurship values (SEV) outcomes. This conceptual framework captures the implications of IFL and the TA under way in financial services for (a) SEV outcomes and (b) TA as a mediator between IFL and SEV; and how these two aspects interact. The influence of fintech drivers on SEV outcomes often necessitates TA action to assure congruence with the objectives and offers of fintech, which subsequently moulds SEV outcomes; this creates a feedback loop.

LITERATURE REVIEW

Islamic Fintech Leadership

The Islamic Fintech Leadership (IFL) dynamics are also contingent on the fintech development level of a nation. The extent of fintech penetration, scalability, and variety of services are still constrained at earlier stages of development. At this juncture, the willingness of policymakers to foster shariah as innovation and offer fundamental legal and regulatory certainty is crucial. Risks to financial stability, fair competition, and overall

¹ Universiti Malaysia Kelantan, 16100 Kota Bharu, Kelantan, Email: rajasuzana@umk.edu.my

² Universiti Malaysia Kelantan, 16100 Kota Bharu, Kelantan

³ Universiti Malaysia Kelantan, 16100 Kota Bharu, Kelantan.

investor and consumer protection remain relatively low, which makes it crucial to address data gaps that impede the application of effective IFL skills in risk monitoring, customer protection for the most vulnerable, and financial integrity objective attainment.

Islamic leadership is a set of good and ethical leadership principles based on the Qur'an and Al-Sunnah (biography of the Prophet Muhammad s.a.w) as well as his companions in conducting the organization accurately and effectively. This principle of leadership is also known as Sharia-compliant leadership. Among the values of the principles that need to be applied are justice and "Ihsan" (doing good) (Ahmad & Fontaine, 2011). Islam is a comprehensive religion that unites all aspects of life and does not distinguish between aspects of temporal, secular and religious life (Ahmad & Oguniola, 2011). The Islamic leadership universality in Fintech organizations meets the needs of all, irrespective of religion, race, and status by emphasizing the well-being of all human beings, including wealth and financial matters (Salim et al., 2020). The implementation of Sharia is not solely for Muslims except in beliefs and rituals matters (Dawood et al., 2022). Thus, researchers have agreed that the Islamic beliefs and organizational management should be under the same Sharia compliance.

Although Islamic leadership is the earliest principle used in the world civilization, the indicators for Islamic leadership are scattered, diverse and there is no clear consensus among academics (Ahmad & Oguniola, 2011; Husti & Mahyarni, 2019; Hariyono & Tjahjadi, 2021; Febriani & Sa'diyah, 2021). In fact, there are very limited studies on Islamic Fintech leadership (Salim et al., 2020). Fintech leaders play a critical role in the development of a technology culture and cultivate relationships with a wide range of stakeholders outside the company while keeping pressing ethical issues in mind (Berraies & Bchini, 2019; Cortellazzo et al., 2019). To sustain during Covid-19 crisis, an organization must ensure that values, skills and solutions are in line with external sources such as the latest technology (Obrenovic et al., 2020).

Islamic Fintech leaders must invest in developing employees' skills to support and motivate them to deal and adapt with the use of technology (Cortellazzo et al., 2019). In this study, Islamic Fintech leadership (referred hereinafter simply as IFL) is defined as "individual who are well-versed and competence in Sharia leadership values and able to exploit the use of technology to deliver Sharia-compliant financial solutions, products, services and investments to clients regardless of their religion, race and status" (Dawood et al., 2022; Salim et al., 2020).

Sustainable Entrepreneurship Values

In this paper, Sustainable Entrepreneurship Values (SEV) is defined as new approach to how Fintech organizations act towards the access of the values created from the environmental, socio-economic, and inclusively beneficial outcomes. SEV concerns issues that reduce environmental impacts. Most researchers recognise environmental sustainability as an approach to consolidate production manners towards meeting consumer awareness and orientation to perform in certain ethical practices (Cohen, Inagami, & Finch, 2008; Gallardo-Vázquez & Sanchez-Hernandez, 2014). Tarnanidis et al. (2016) states that sustainable entrepreneurs lead organizations in creating a corporate value system that tackles traditional sustainability practices with ways to solve environmental and social problems. Subsequently, Parrish and Tilley (2016) argue that ecological and environmental goals represent different practices and issues that are not necessarily related to profit generation alone, therefore, they claim that the solution to this problem lies in the practice of sustainability in the long-term stage.

Next, the second sub-construct is on social and economic values. social values is divided into two sub-domains (internal and external). This approach is supported by numerous past studies (Richomme-Huet & De Freyman, 2014). The reason behind these differences is to help entrepreneurs better organize their SEV processes and plans as well as create values that promote social change in the business environment (Majid et al., 2017). After all, for organizations to be able to promote social change, they first need to build a mechanism that promotes goals in this direction (Tarnanidis et al., 2016; Olayiwola, 2023; Samad, Ahmad and Ismail, 2024).

Therefore, this construction item focuses on providing employees with equal opportunities that will help them meet their individual needs as well as impact their quality of life (Quazi & O'Brien, 2000). Organizations should also commit to providing a sustainable and responsible innovation society (Belz & Binder, 2017) as well as

working forward to improve the quality of life of the workforce, their families, the local community, the community and the world in general as well as the next-generation (Crals & Vereeck, 2005).

Apart from that, economic values should be focus while keeping in mind the previous two dimensions (Soto-Acosta, Cismaru, Vătmănescu, & Ciochină, 2016). Organizations should also identify the factors that foster entrepreneurial opportunities correspondingly with the various production regulations (Turker, 2009; Cohen, Bitan and Mikulincer, 2023; Nasamu, 2023). In conjunction with, they also must aim to maximise profits while also raising social expectations among their stakeholders (Tarnanidis et al., 2016). For instance, Fintech promotes zakat and sadaqa activities to financially support underprivileged populations by generating money flow and offers Mudaraba and Murabaha concepts to enable start-ups and SMEs to either restore employment or initiate business (Rabbani, Ali et al., 2021).

Finally, the bottom 40 (B40) values which is represented by an emerging low-income consumer base home to 4 billion people in the world (Prahalad & Hart, 2000). In Malaysia, the concept is known as “Bottom 40” market value. An understanding of the income distribution structure is critical to grasp the B40 market’s value opportunity. The B40, M40, and T20 tiers represent the country's population (32.7 million), consisting of the Bottom 40%, Middle 40%, and Top 20% households respectively, with income thresholds potentially changing over time (DOSM, 2022).

At the top tier, the T20 group represents wealthy or affluent customers with the highest income in the country. Most of them are business owners, top executives, and professionals that have a higher standard of living and access to luxury products and services. M40 at the middle refers to the middle-income consumers typically consists of semi-professionals, managers, and executives. They serve as a test-tube for next-generation technologies and products that enable more sustainable ways of life with higher standard of living compared to the B40 group (Prahalad & Hart, 2002).

Technology Adoption

Particular attention has been paid to the technology acceptance model (TAM) (Jaziri & Miralam, 2019) in the field of technology adoption (TA) research, which was established by Davis (1989). The term 'adoption' is employed synonymously with 'usage' and 'acceptance' in this research. Voluntariness to embrace or accept new technology is the definition of TA; thus, willingness is a crucial success factor in technology adoption (Kamal, Shafiq, & Kakria, 2020).

TA may also be described as societal acceptance, intent to use, integration, and disposition toward the implementation of new technologies (Jaziri & Miralam, 2019; Fernando, Surjandy, Meyliana, & Touriano, 2018). Diverse scholars have put out the TAM (Jaziri & Miralam, 2019) in an effort to forecast the adoption of particular new technologies through the evaluation of its usability and practicality. Nevertheless, the first TAM is not without its constraints, as it could overlook the fundamental assumptions that shape individuals' perspectives on contemporary technologies (Jaziri & Miralam, 2019).

Perceived usefulness (PU) and perceived ease of use (PEOU) are deemed inadequate predictors of technology adoption, as stated in reference Zhong, Oh, and Moon (2021). Additionally, there are two substantial aspects that warrant consideration: perceived danger and perceived trust. SEV might be estimated by a Fintech platform utilising an extended TAM of perceived risk and trust. This factor significantly impacts the adoption of technology Fernando et al. (2018). Indeed, prior international research has investigated the significance of perceived trust and risk as crucial determinants in the adoption of Fintech (Jaziri & Miralam, 2019). Conversely, a wider TAM may also influence the decision of leadership to use Fintech (Amoako-Gyampah, 2007; Racherla & Friske, 2012). From this standpoint, extended TAM might be deemed suitable for investigating the moderating influence of TA among Fintech businesses in Malaysia.

TA is defined as the organization's deliberately made decision to implement financial technology (Jaziri & Miralam, 2019; Kamal et al., 2020; Fernando et al., 2018). As a result, the objective of this study is to investigate the function of TA as a mediator between IFL and SEV within the Fintech sector of Malaysia.

Conceptual Framework

Figure 1 illustrates the conceptual framework utilised to transform the previously mentioned relationship into the hypotheses of this research endeavour. The conceptual framework of this study comprises three constructs: IFL, TA, and SEV. These structures concurrently function as the theoretical foundation of the research. The TA serves as the moderating variable in this research, whereas the IFL represents the predictor variable. SEV is the outcome variable.

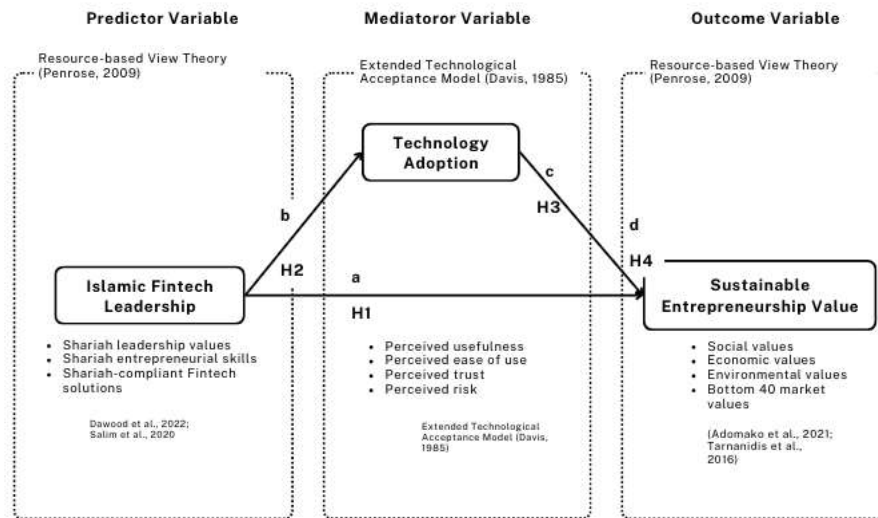


Fig. 1. The Conceptual Framework

Arrow (a) indicates the relationship between the IFL and SEV which tested H₁. In illustrating the extent to which both IFL and SEV have good linkages between them, the relationship is indicated by the direction of the arrow (b) which tested H₂. Arrow (c) indicates the TA act as mediator in the relationship between IFL and SEV (which tested H₃). Thus, the following highlights the hypothesis of this study:

- H₁: there is a significant relationship between IFL and SEV pursued.
- H₂: there is a significant relationship between TA and SEV.
- H₃: there is a positive relationship between IFL and SEV moderated by TA.

RESEARCH METHODOLOGY

The descriptive correlational research design is utilised in this article. In order to collect input regarding the correlation between variables, a survey paper is employed. A clarification of the phenomenon is achieved by analysing descriptive data collected via surveys. The primary objective of a correlational analysis is to examine the mediating role that the dependent and independent variables may play (Tan, 2014). The examination of possible associations between variables allows for the classification of relationships into distinct groups using the methodology and data (Hair, Hollingsworth, Randolph, & Chong, 2017).

To research the relationship between TA, Fintech sustainability, and IFL, the population of Fintech enterprises in Malaysia is analysed in this article. Thus, the organisational level serves as the unit of analysis. Fintech offerings and organisations that participated in this study included payment, e-wallet, prop-tech, digital bank, blockchain, cryptocurrency, remittance, AI/data, marketplace, crowdfunding, insurtech, wealthtec, Know Your Customer (KYC), and reg-tech.

This study involved the participation of 260 Malaysian Fintech organisations out of a total population of 294 Fintech organisations. Out of the 260 questionnaires that were issued, 126 (48.5 percent) were returned. However, 121 (46.5 percent) were considered usable and were analysed thereafter.

FINDINGS

The Measurement Model

Reliability Analysis. A value greater than 0.7 was determined by the examination of Cronbach's Alpha for the IFL, TA, and SEV of Fintech organisations. All items utilised in the creation of the model were deemed reliable, according to the findings of this study (Hair, Ringle, & Sarstedt, 2013). The loadings of the indicators were distinct in the context of composite reliability, and it was ascertained that all values over 0.7 held true for each item in the final model (see Table 1). When the numbers above 0.7, it is possible to consider the dependability of the indicators as satisfactory (Hair et al., 2013).

Table 1. IFLVQ Measurement Model.

Construct	Items	Outer loading	α	CR	AVE				
SEV	SEV1	0.857	0.954	0.963	0.787				
	SEV10	0.954							
	SEV2	0.853							
	SEV3	0.911							
	SEV4	0.809							
	SEV5	0.863							
	SEV9	0.952							
	IFL	IFL1				0.907	0.977	0.980	0.841
		IFL10				0.865			
IFL11		0.847							
IFL2		0.902							
IFL3		0.810							
IFL4		0.901							
IFL5		0.855							
IFL6		0.951							
IFL7		0.951							
IFL8		0.969							
TA	TA2	0.916	0.979	0.983	0.904				
	TA3	0.971							
	TA4	0.950							
	TA5	0.964							
	TA6	0.940							
	TA9	0.962							

Following this, the AVE values for all constructions, as shown in Table 1, surpass 0.5, which signifies that the convergent validity is adequate (Hair et al., 2013). The findings indicated that a specific construct accounted for almost 50% of the variability observed in its indicators (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014; Ab Hamid, Sami, & Sidek, 2017; Basbeth & Ibrahim, 2018). In addition, the AVE report and outer loadings attest that the construct measures have achieved a sufficient level of convergent validity and have satisfied the convergent validity criteria utilised in evaluating the measurement model presented in this research.

The most recent method for assessing the discriminant validity of constructs and ascertaining the true correlation between reliable latent variables is the Heterotrait-Monotrait Ratio (HTMT) (Ab Hamid et al., 2017). Assessing the possibility of indiscriminate validity among concepts is seen as a challenging endeavour (Henseler, Ringle, & Sarstedt, 2015; Hair, Risher, Sarstedt, & Ringle, 2019). In addition, the HTMT criterion preserved the discriminant validity of the constructs and advocated for the requirement that none of the confidence intervals for the constructs contain one (1) or unity (Henseler, Ringle, & Sarstedt, 2015; Hair, Risher, Sarstedt, & Ringle, 2019). Table 2 provides confirmation that there is no evidence to suggest the absence of discriminant validity, as all constructs in this study satisfy the measuring criteria that are consistent with prior research, using a significance level of 0.90.

Table 2. FSEVQ Heterotrait-Monotrait Ratio (HTMT).

Construct	IFL	SEV	TA	TA*IFL
IFL				
SEV	0.646			
TA	0.863	0.330		
TA*IFL	0.390	0.172	0.464	

The Structural Model

Path Coefficients. As the path relationship between the model's constructs, path coefficients are anticipated in the structural model (see Table 3). A regression coefficient (β) was also utilised to analyse each path association. Islamic Fintech Leadership (IFL) produced a substantial link, as indicated by the result (SEV, t-value = 6.105, p-value = 0.000). A further significant link was revealed by IFL (TA; t-value = 26.296; p-value = 0.000). However, there exists a weak association between technology adoption and SEV (TA \rightarrow SEV; t-value = 3.502, p-value = 0.000) (Hair Jr et al., 2014; Basbeth & Ibrahim, 2018). The structural and bootstrapping models of this paper are illustrated in Figures 2 and 3, respectively.

Table 3. Mean, STDEV, T-Values, and P-Values.

Hypotheses	Path	β	T Statistics	P Values	Result
H ₁	IFL \rightarrow SEV	1.269	5.757	0.000	Supported
H ₂	TA \rightarrow SEV	-0.768	3.135	0.002	Supported

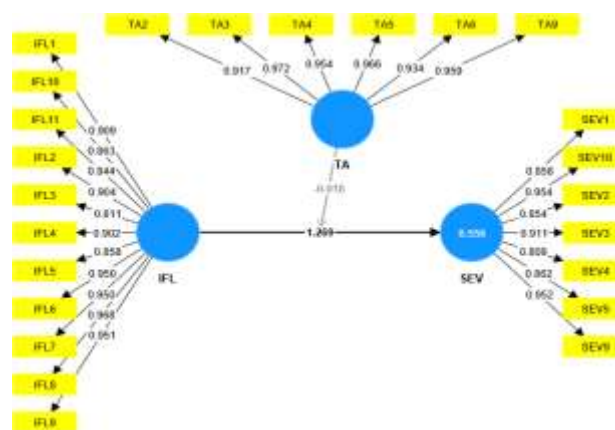


Fig. 2. The Structural Model

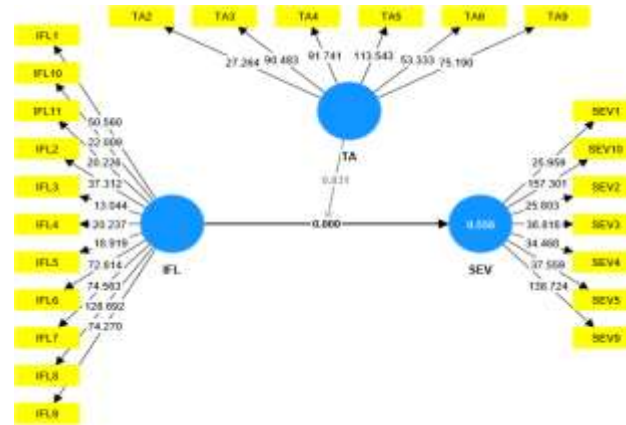


Fig. 3. The Bootstrapping Model.

Moderating Impact. The methodology incorporates the magnitude of the moderating impact (β -value), the t-value, and the significance of the p-value (Ramayah, Cheah, Chuah, Ting, & Memon, 2018; Henseler & Chin, 2010; Memon, Cheah, Ramayah, Ting, Chuah, & Cham, 2019). The bootstrapping technique indicates that TA and SEV are negatively correlated ($TA \rightarrow SEV$), t-value = 3.135, $p = 0.002$). The result further extends that TA does not have as significant moderation path between the relationship of IFL and SEV ($TA*IFL \rightarrow SEV$, t-value = 1.293, p-value = 0.196) as demonstrated in Table 4.

Table 4. Mean, STDEV, T-Values, and P-Values.

Hypotheses	Path	β	T Statistics	P Values	Result
H ₃	TA*IFL→SEV	-0.018	0.213	0.831	Not Supported

The simple slope analysis in Figure 4 figures out that TA does not significantly moderate the relationship between IFL and SEV. Nevertheless, there is a medium f^2 impact size with 0.209 value and significant p-value with 0.000 respectively. The graph of moderation indicated that the red line is 1 standard deviation below the mean, the blue line is the mean, and the green line is 1 standard deviation above the mean. The graph of moderation shows that it is sloping bottom to top (upwards) from left to right. Thus, it can be interpreted that the positive relationship between IFL and SEV is dampened by TA. This is because the mean blue line is sloping upward that positive relationship is strengthened by TA and it is almost getting towards the moderated with the distance of all the lines are getting smaller toward one end point. However, the one standard deviation below (the red line) is kind of steeply positive, which means that there is no real moderating, even there is statistically significant moderated impact when the green line is less steep with kind of flat slope. Thus, it is confirmed that TA does not moderate the relationship between IFL and SE.

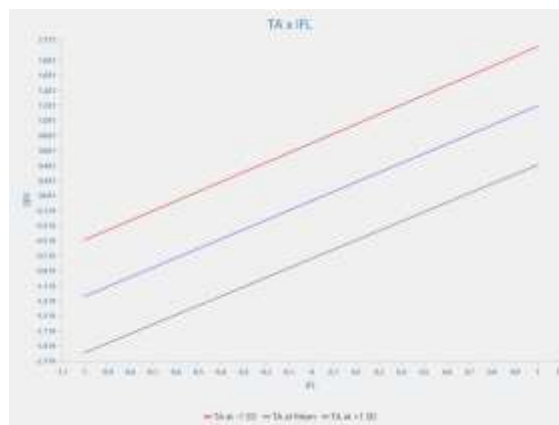


Fig. 4. The Bootstrapping Model.

TA does not moderate the relationship between IFL and SEV in Malaysian Fintech organizations. This paper has expanded the current flow of knowledge by utilising SmartPLS-SEM 4.0.9.9 path modelling as an analysis tool to examine the relationship between IFL and SEV with moderation role of TA in Malaysian Fintech organisations.

From the model of this paper, Fintech organizations should scrutinise the aisle of Islamic leadership to be able to developed an imperative SEV business model. They also need to strive to exchange the ability in an effective manner to collaborate based on technology relationship.

CONCLUSION

With the expansion in scale, intricacy, interdependence, and potential consolidation of Fintech operations, policymakers must intensify their efforts to ensure financial stability, protect data, and promote equitable competition between conventional and Islamic fintech solutions. Legal, regulatory, and supervisory frameworks—along with technological and financial infrastructures—must be reevaluated and fortified in order to foster the growth of a thriving fintech sector that adheres to the aims of shariah policy. A survey was self-administered to 294 organisations involved in payment, e-wallet, prop-tech, digital bank, blockchain, cryptocurrency, remittance, AI/data, marketplace, crowdfunding, insurtech, wealthtech, Know Your Customer (KYC), and reg-tech services offerings. About 121 responses have been analyzed into statistical analysis. The result indicated that designing an effective SEV model has ramifications from the viewpoints of the economy, society, and the environment. The results show that IFL has a positive and significant relationship with SEV. TA, however, does not moderate the relationship between IFL and SEV. This paper contributed to developing the extended Technology Acceptance Model and Resource-Based Theory. The implications highlight how the SEV model shapes the functions of IFL and TA, where these organizations are lauded for their services to solve financial inclusion issues and offer sustainable solutions to micro-enterprises and fringe borrowers from the informal sector. The SEV model explains the leadership concern for socio-economy, environment, and values by creating a game changer for Islamic digital transformation that enables micro and small enterprises to access faster socio-economic well-being and financial health.

Acknowledgement

The Fundamental Research Grant Scheme from the Ministry of Higher Education Malaysia supported this research. The grant code is FRGS/1/2023/SS04/UMK/02/1.

REFERENCES

- Ab Hamid, M., Sami, W., & Sidek, M. M. (2017). Discriminant validity assessment: Use of Fornell & Larcker criterion versus HTMT criterion. *Journal of Physics: Conference Series*, 890(1), 012163. <https://doi.org/10.1088/1742-6596/890/1/012163>
- Ahmad, K., & Fontaine, R. (2011). Islamic leadership at the International Islamic University Malaysia. *International Journal of Economics Management and Accounting*, 19(2), 121-135. <Go to ISI>://WOS:000408988200001
- Ahmad, K., & Ogunsola, O. K. (2011). An empirical assessment of islamic leadership principles. *International Journal of Commerce and Management*, 21(3), 291-318. <https://doi.org/10.1108/10569211111165325>
- Amoako-Gyampah, K. (2007). Perceived usefulness, user involvement and behavioral intention: an empirical study of ERP implementation. *Computers in Human Behavior*, 23(3), 1232-1248. <https://doi.org/10.1016/j.chb.2004.12.002>
- Basbeth, F., & Ibrahim, M. A. H. (2018). *Four Hours Basic PLS-SEM*. First edition, iPRO Publication Ltd, Malaysia.
- Belz, F. M., & Binder, J. K. (2017). Sustainable entrepreneurship: a convergent process model. *Business Strategy and the Environment*, 26(1), 1-17. <https://doi.org/10.1002/bse.1887>
- Berraies, S., & Bchini, B. (2019). Effect of leadership styles on financial performance: mediating roles of exploitative and exploratory innovations case of knowledge-intensive firms. *International Journal of Innovation Management*, 23(3), Article 1950020. <https://doi.org/10.1142/S1363919619500208>
- Cohen, D. A., Inagami, S., & Finch, B. (2008). The built environment and collective efficacy. *Health and Place*, 14(2), 198-208. <https://doi.org/10.1016/j.healthplace.2007.06.001>
- Cohen, A., Bitan, D., & Mikulincer, A. (2023). The Influence of Managers' Personality on Innovation Deployment: Evidence from Small Business. *Journal of Management World*, 2023(4), 76–86. <https://doi.org/10.53935/jomw.v2023i4.262>
- Cortellazzo, L., Bruni, E., & Zampieri, R. (2019). The role of leadership in a digitalized world: a review. *Frontiers in Psychology*, 10(AUG), Article 1938. <https://doi.org/10.3389/fpsyg.2019.01938>
- Crals, E., & Vereeck, L. (2005). The affordability of sustainable entrepreneurship certification for SMEs. *International Journal of Sustainable Development and World Ecology*, 12(2), 173-183. <https://doi.org/10.1080/13504500509469628>

Do Islamic Fintech Leadership and Technology Adoption predict Sustainable Entrepreneurship Values among Fintech Organizations?

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 13(3), 319-340. <https://doi.org/10.2307/249008>
- Dawood, H., Al Zadjali, D. F., Al Rawahi, M., Karim, D. S., & Hazik, D. M. (2022). Business trends & challenges in Islamic FinTech: A systematic literature review. *F1000Research*, 11, Article 329. <https://doi.org/10.12688/f1000research.109400.1>
- Department of Statistics Malaysia, DOSM. (2022). Department of statistics Malaysia press release report of household income and basic amenities survey 2022. Retrieved from <https://www.dosm.gov.my/v1/index.php?r=column/pdfPrev&id=RUZ5REwveU1ra1hGL21JWVIPRmU2Zz09>
- Febriani, R., & Sa'diyah, C. (2021). Exploring Islamic leadership on sme performance: mediated by innovative work behavior and financial technology. *JAM: Jurnal Aplikasi Manajemen*, 19(3), 495-506. <https://doi.org/10.21776/ub.jam.2021.019.03.04>
- Fernando, E., Surjandy, Meyliana, & Touriano, D. (2018). Development and Validation of Instruments Adoption Fintech services in Indonesia (Perspective of Trust and Risk). 3rd International Conference on Sustainable Information Engineering and Technology, SIET 2018 – Proceedings, 283-287. <https://doi.org/10.1109/SIET.2018.8693192>
- Gallardo-Vázquez, D., & Isabel Sánchez-Hernández, M. (2014). Structural analysis of the strategic orientation to environmental protection in SMEs. *BRQ Business Research Quarterly*, 17(2), 115-128. <https://doi.org/10.1016/j.brq.2013.12.001>
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106-121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long range planning*, 46(1-2), 1-12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management and Data Systems*, 117(3), 442-458. <https://doi.org/10.1108/IMDS-04-2016-0130>
- Hariyono, A., & Tjahjadi, B. (2021). The Role of Intellectual Capital in the Development of Financial Technology in the New Normal Period in Indonesia. *Journal of Asian Finance, Economics and Business*, 8(1), 217-224. <https://doi.org/10.13106/jafeb.2021.vol8.no1.217>
- Henseler, J., & Chin, W. W. (2010). A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling. *Structural Equation Modeling*, 17(1), 82-109. <https://doi.org/10.1080/10705510903439003>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Husti, I., & Mahyarni, M. (2019). Islamic leadership, innovation, competitive advantages, and performance of SMEs in Indonesia. *East Asia*, 36(4), 369-383. <https://doi.org/10.1007/s12140-019-09325-7>
- Jaziri, R., & Miralam, M. (2019). Modelling the crowdfunding technology adoption among novice entrepreneurs: an extended TAM model. *Entrepreneurship and Sustainability Issues*, 6(4), 2159-2179. [https://doi.org/10.9770/jesi.2019.6.4\(42\)](https://doi.org/10.9770/jesi.2019.6.4(42))
- Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). *Technology in Society*, 60, 101212. <https://doi.org/10.1016/j.techsoc.2019.101212>
- Khan, T. I., Nisar, H. G., Bashir, T., & Ahmed, B. (2018). Impact of aversive leadership on job outcomes: Moderation and mediation model. *NICE Research Journal*, 56-73.
- Majid, I. A., Latif, A., & Koe, W.-L. (2017). SMEs' intention towards SE. *European Journal of Multidisciplinary Studies*, 2(3), 24-32. <https://doi.org/10.26417/ejms.v4i3.p24-32>
- Memon, M. A., Cheah, J. H., Ramayah, T., Ting, H., Chuah, F., & Cham, T. H. (2019). Moderation analysis: issues and guidelines. *Journal of Applied Structural Equation Modeling*, 3(1), 1-11.
- Nasamu, I. . (2023). Strategies for employees to effect change to improve performance of public organizations. *Journal of Accounting, Business and Finance Research*, 17(1), 1–9. <https://doi.org/10.55217/102.v17i1.675>
- Obrenovic, B., Du, J., Godinic, D., Tsoy, D., Khan, M. A. S., & Jakhongirov, I. (2020). Sustaining enterprise operations and productivity during the COVID-19 pandemic: "Enterprise Effectiveness and Sustainability Model". *Sustainability*, 12(15), 5981. <https://doi.org/10.3390/su12155981>
- Olayiwola, A. S. . (2023). Does financial sector development have a sustainable level of effects on inclusive growth in Sub-Saharan African countries? Evidence from dynamic panel threshold analysis. *Asian Journal of Economics and Empirical Research*, 10(2), 39–47. <https://doi.org/10.20448/ajeer.v10i2.5196>
- Parrish, B. D., & Tilley, F. (2016). Sustainability entrepreneurship: charting a field in emergence. In *Making Ecopreneurs* (pp. 21-41). Routledge.
- Prahalad, C., & Hart, S. (2002). Strategy+ business. *The Fortune at the Bottom of the Pyramid*, 26, 2-14. <https://doi.org/10.19177/reen.v1e220081-23>
- Prahalad, C., & Hart, S. L. (2000). Raising the bottom of the pyramid: Strategies for sustainable growth. <http://www.ima.kth.se/utb/mj1501/pdf/prahalad.pdf>, checked on, 15(05), 2012.

- Quazi, A. M., & O'Brien, D. (2000). An empirical test of a cross-national model of corporate social responsibility. *Journal of Business Ethics*, 25(1), 33-51. <https://doi.org/10.1023/A:1006305111122>
- Rabbani, M. R., Ali, M. A. M., Rahiman, H. U., Atif, M., Zulfikar, Z., & Naseem, Y. (2021). The response of Islamic financial service to the Covid-19 pandemic: The open social innovation of the financial system. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), Article 85. <https://doi.org/10.3390/JOITMC7010085>
- Racherla, P., & Friske, W. (2012). Perceived 'usefulness' of online consumer reviews: An exploratory investigation across three services categories. *Electronic Commerce Research and Applications*, 11(6), 548-559. <https://doi.org/10.1016/j.elerap.2012.06.003>
- Ramayah, T., Cheah, J., Chuah, F., Ting, H., & Memon, M. A. (2018). Partial least squares structural equation modeling (PLS-SEM) using smartPLS 3.0. An updated guide and practical guide to statistical analysis.
- Richomme-Huet, K., & De Freyman, J. (2014). What sustainable entrepreneurship looks like: An exploratory study from a student perspective. In *Social Entrepreneurship* (pp. 155-177). Springer. https://doi.org/10.1007/978-3-319-01396-1_7
- Salim, K., Abojeib, M. & Baharom, AH. (2020). *Islamic Fintech in Malaysia: Reality & Outlook*. Kuala Lumpur: The International Centre for Education in Islamic Finance (INCEIF).
- Samad, N. H. A. ., Ahmad, N. H. ., & Ismail, R. F. . (2024). Social entrepreneurial orientation and social value of nonprofit organisation during crises. *Edelweiss Applied Science and Technology*, 8(1), 45–58. <https://doi.org/10.55214/25768484.v8i1.415>
- Soto-Acosta, P., Cismaru, D.-M., Vătămănescu, E.-M., & Ciochină, R. S. (2016). Sustainable entrepreneurship in SMEs: A business performance perspective. *Sustainability*, 8(4), 342. <https://doi.org/10.3390/su8040342>
- Tan, L. Y. C. (2014). Correlational study. In W. F. Thompson (Ed.), *Music in the social and behavioral sciences: An encyclopedia* (pp. 269-271). Thousand Oaks: SAGE Publications. <http://hdl.handle.net/10497/18115>
- Tarnanidis, T., Papathanasiou, J., & Subeniotis, D. (2016). Critical success factors in the TBL concept of sustainable entrepreneurship. *International Journal of Decision Support Systems*, 2(1-3), 38-53. <https://doi.org/10.1504/IJDSS.2016.081734>
- Turker, D. (2009). Measuring corporate social responsibility: A scale development study. *Journal of Business Ethics*, 85(4), 411-427. <https://doi.org/10.1007/s10551-008-9780-6>
- Zhong, Y. P., Oh, S., & Moon, H. C. (2021). Service transformation under industry 4.0: Investigating acceptance of facial recognition payment through an extended technology acceptance model. *Technology in Society*, 64, Article 101515. <https://doi.org/10.1016/j.techsoc.2020.101515>