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DEVELOPMENT OF FINTECH IN *ISLĀMIC* SOCIAL FINANCE IN MALAYSIA

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ABSTRACT

This study aims at investigating adoption of FinTech in *Islāmic* social finance especially for *zakāt* and *wāqf* institutions in Malaysia. A focus group discussion (FGD) with 13 *zakāt* and *wāqf* officers and FinTech experts in Malaysia was conducted. For reporting purposes, this study employed a single-case study approach. The FGD was conducted and completed at the end of December 2021 via an online approach through the Zoom platform. The findings highlight the level of FinTech adoption, issues, challenges, and prospects of FinTech adoption as well as impact of FinTech adoption especially on collecting, managing and distributing the *Islāmic* social finance funds (*zakāt* and *wāqf*) to beneficiaries. The study findings and recommendations are useful especially for *zakāt* and *wāqf* institutions as well as the State *Islāmic* Religious Councils (SIRCs) to utilize FinTech in their operation. This study is among the pioneer studies that explore FinTech adoption in *Islāmic* social finance in Malaysia.

JEL Classification: M40, O31, O33

Keywords: FinTech, *Islāmic* social finance, Challenges, Prospects, Impact

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1. INTRODUCTION

Islāmic finance and *Islāmic* social finance are two broad frameworks within the innovative financing landscape that offer great potential for supporting development finance, given their fundamental

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emphasis on environmental, social and corporate governance criteria to generate positive societal impact. Efficacy of *Islāmic* social finance in attaining social development goals has been empirically shown to be positive across various settings and country profiles.

In general, *Islāmic* social finance is an approach to investing and managing a certain fund aimed at solving societal challenges (Zain and Ali, 2017). It is deemed important in generating positive impacts on society such as alleviating poverty, providing necessary infrastructure such as schools and hospitals and preserving life and dignity. Such investment may not be purely based on charitable and social donations. Rather, it is a form of cooperative investment which offers financial return and social gain. Under the conventional practice, social finance can be traced from investment in the form of equity or debt financing, microfinance and social impact bonds. It is found that Islam already provides an *Islāmic* social-based financing investment that is not only able to benefit individuals but also society at large.

Islāmic social finance is a broad concept and already exists in Islam. For the sake of definition, inclusively, it covers the *Islāmic* traditional instruments based on philanthropy (such as *zakāt*, *wāqf* and *sadaqah*) and cooperation (such as *qard* and *kafala*). Besides traditional instruments, it also covers modern *Islāmic* financial services such as *Islāmic* microfinance, *sukūk* and *takaful* which aim at solving societal challenges.

According to the State of the Islamic Economy Report 2020/2021, the COVID-19 pandemic is forecasted to result in an eight percent decrease in global Muslim spending in 2020 for the *Islāmic* economy sectors globally. All related *Islāmic* economy sectors, except travel, are expected to return to pre-pandemic spending levels by end 2021. In this case, *Islāmic* finance assets were valued at USD2.88 trillion in 2019 and are expected to remain the same in 2020 and grow at a compound annual growth rate (CAGR) of five percent between 2019 to 2024 to reach USD3.69 trillion (Dinar Standard, 2020).

Meanwhile, the Islamic Financial Development Report 2021 highlights *Islāmic* finance asset growth with a significant rise from USD1.975 trillion in 2014 to USD3.374 trillion in 2020 and is projected to accumulate almost USD5 trillion in 2025 (ICD-REFENITIV, 2021). In terms of *Islāmic* finance asset distribution in 2020, about 70 percent (USD 2.349 billion) is under the *Islāmic* banking sector, followed by 19 percent (USD631 billion) under *sukuk*, five percent (USD178 billion) under *Islāmic* funds, four percent (USD154 billion) under other *Islāmic* financial institutions and the remaining 2 percent (USD62 billion) under *takaful* sector.

In 2020 the global *Islāmic* finance ecosystem comprised about 1,595 *Islāmic* financial institutions in total. About 47 countries have already established *Islāmic* finance regulations. Besides, about 1,008 *Islāmic* finance education providers are available with 2,878 research papers related to *Islāmic* finance being produced. Moreover, about 1,235 *Shariah* scholars are representing IFIs with USD1.28 billion being carried out as corporate social responsibility (CSR) by these *Islāmic* financial institutions. There are 844 *Islāmic* finance events with about 11,856 news items on *Islāmic* finance released (ICD-REFENITIV, 2021).

Despite huge achievements by *Islāmic* finance, *Islāmic* social finance is still lagging in exploring its full potential. Improving access to *Islāmic* social finance is an important part of social growth. Embracing technological developments will undoubtedly help *Islāmic* social finance to fulfil its potential and grant the scale, access and outreach it needs to connect with would-be beneficiaries everywhere. *Islāmic* social finance is increasingly considered an alternative source for funding social well-being, particularly as *Islāmic* social finance embraces FinTech.

Digital technology is changing the *Islāmic* social finance landscape. As beneficiaries continue to seek faster and more personalized assistance from *zakāt* and *wāqf* institutions, robotics and automation have emerged as viable tools. Robo-advice, for example, can be both cost and time effective. Aside from FinTech, other *Islāmic* microfinance models have had a larger impact over the last couple of years. Platforms such as micro-*takaful* and social finance such as *qardul-hasan* have gained traction (Summerfield, 2017).

By having an *Islāmic* social finance agenda for almost 2 billion Muslims around the world, *Islāmic* social finance has become a genuine force in the social sector. While it is far from appealing to a mass society outside of traditional Muslim countries, its ethical social fund may gain favor and support from non-Muslims especially on *wāqf* projects. And as FinTech continues to complement the *Islāmic* social finance model, it is able to see accelerated growth.

Therefore, this study aims at investigating FinTech adoption in *Islāmic* social finance especially for *zakāt* and *wāqf* institutions in Malaysia. This includes the level of FinTech adoption, issues, challenges, and prospects of FinTech adoption as well as FinTech adoption impact especially on collecting, managing, and distributing the *Islāmic* social finance funds (*zakāt* and *wāqf*). This study is structured as follows. After the introduction section, discussions are made on the digital ecosystem and *Islāmic* social finance in Malaysia. Then, the relationship between FinTech and *Islāmic* social finance also will be elaborated. Next, the methodology used in this study is explained. This study then presents the research findings and discussion covering the level of FinTech adoption, issues, challenges and prospects of adoption and the impact of FinTech adoption in *Islāmic* social finance in Malaysia. Finally, a summary, implications, recommendations as well as limitations are highlighted at the end of the study.

2. LITERATURE REVIEW

2.1 DIGITAL ECOSYSTEM IN MALAYSIA

The digital economy consists of economic and social activities that involve digital technology production and use by individuals, businesses, and the government. As part of the Malaysian Shared Prosperity Vision 2030 (Wawasan Kemakmuran Bersama, WKB 2030), digitalization was recognized as one of the key features of WKB 2030. Malaysia has embarked on its digitalization journey since 1996 with the introduction of the Multimedia Super Corridor (MSC). Through this initiative, the country has recorded some success stories, such as attracting domestic and foreign information and communications technology (ICT) companies to operate in specific economic zones. Internet usage in Malaysia is widespread. Most of the daily activities across society, businesses and government involve using digital devices. Broad e-commerce activities have also contributed to digital economic growth.

One of the key players in digitalization is the Malaysia Digital Economy Corporation (MDEC) established in 1996 as the lead agency to implement the MSC Malaysia initiative. It focused on accelerating the Malaysian digital economy growth, ensuring it is inclusive and rewarding for all. The focus key drivers of MDEC include: (i) empowering Malaysians with digital skills; (ii) enabling digitally-powered businesses; and (iii) driving digital sector investments (EPU, 2021).

The COVID-19 pandemic has accelerated change in driving the Malaysian people, businesses and the government to adapt to digitalization for their daily needs. The current digitalization industries have shown much promise for the Malaysian future. Malaysia's Information and Communications Technology (ICT) has amassed RM289 billion, accounting for 19.1 percent of GDP in 2019 (EPU, 2021). The COVID-19 pandemic has accelerated digital economy growth and encouraged the people, traditional businesses as well as the government to shift online in meeting daily needs.

Malaysia's government has introduced MyDIGITAL as a national initiative that symbolizes the Government's aspiration to transform Malaysia into a digitally-enabled and technology-driven high-income nation, and a regional leader in the digital economy (EPU, 2021). Examples of the future Malaysia envisioned by MyDIGITAL are to see the Malaysian people enjoy improved digital literacy, more high-paying jobs, improved social well-being and environmental sustainability, and businesses.

Digital business models are becoming more ecosystem-driven, whether through a platform or a network of partnerships. The risk landscape is also being reshaped. Boundaries are blurring, with new and more complex interlinkages within and beyond the financial sector. The key is for Malaysia's financial industry to benefit from the upsides of digitalization while managing the associated risks – especially those that may threaten system-wide stability, consumer outcomes, and financial sector confidence.

As for *Islāmic* FinTech development, in the Global *Islāmic* Fintech Report 2021, Malaysia was ranked at the top of the list based on the GIFT index. The GIFT index includes 32 factors across five different categories (talent; regulation; infrastructure; *Islāmic* FinTech market and ecosystem; capital) for each country of *Islāmic* FinTech development and ecosystem (e.g., active *Islāmic* Fintech community and presence of several *Islāmic* FinTech; regulatory support; a thriving FinTech sector; and a ready talent pool from developed *Islāmic* finance and technology sectors). Malaysia leads the other 64 countries in terms of capital growth and FinTech ecosystem support (Dinar Standard, 2021).

For enhancing the FinTech ecosystem, Bank Negara Malaysia (BNM) stated that it will continue to support the growth potential of Malaysia's broader FinTech ecosystem. BNM will also aim to seamlessly integrate our frameworks – such as the Sandbox – with other initiatives, both at the industry and national levels. This is aimed at establishing an extensive network of key stakeholders that can connect FinTech start-ups to a comprehensive suite of support facilities, ranging from capacity-building resources to market access opportunities. This will build on various existing initiatives available, including those under the Malaysia Digital Economy Corporation (MDEC) and the newly formed Malaysian Research Accelerator for Technology and Innovation (MRANTI) (EPU, 2021).

The BNM also covers the social financing aspects. In 2020, iTEKAD was launched as a social finance pilot program that blends financial and non-financial components. The first phase of the pilot has provided useful insights for participating banks to design more flexible offerings, as well as for diverse implementation partners to support training, business mentorship, and impact monitoring. Since then, more social finance solutions have been launched consistent with iTEKAD components to support pandemic affected micro-SMEs. These offerings combine philanthropic funds (such as grants, donations, and *zakāt*) with low-cost or benevolent microfinance, supplemented with structured finance and business training. Ultimately, Malaysia will see nationwide expansion of iTEKAD and similar social finance offerings by various financial institutions. These programs require close collaboration with a diverse range of implementation partners and stakeholders such as government agencies, State *Islāmic* Religious Councils (SIRCs), FinTech companies, non-governmental organizations (NGOs), social enterprises, and foundations (EPU, 2021).

In *Islāmic* social finance, the BNM recognizes the importance of multi-stakeholder efforts including promoting shared infrastructure and supporting national developmental priorities. BNM in the Financial Sector Blueprint 2022-2026, emphasizes multi-stakeholder coordination and collaboration as a critical factor to lower search and distribution costs, besides promoting greater public confidence in fund disbursement and governance. These efforts include developing shared infrastructure or making better use of existing ones, such as by improving interoperability – to reduce barriers to social finance offerings (BNM, 2022). Examples of such infrastructure include:

- A shared data repository of target groups for social finance programs, which can support better risk-informed profiling of beneficiaries and the channelling of funds to unmet groups.
- A network of credible implementation partners – that are vested in social outcomes and have strong relationships with ‘at-risk’ communities – can act as a support system to build trust and encourage participation in the financial system.
- An integrated dashboard optimizing mobile-based interfaces that facilitate real-time funding updates and impact

disclosures. This can address key information gaps in the social finance landscape, including readily available opportunities for willing stakeholders to contribute funds or volunteer other resources.

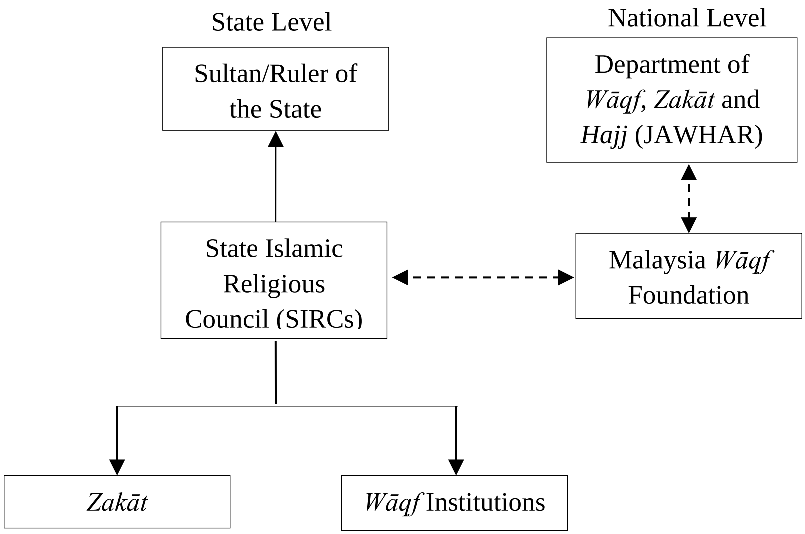
2.2 ISLAMIC SOCIAL FINANCE IN MALAYSIA

In Malaysia, the administration of *Islāmic* religious affairs is under the respective Majlis Agama Islam Negeri or the State *Islāmic* Religious Council (SIRC). The SIRC is responsible for advising the Head of *Islāmic* Religion in all *Islāmic* matters except for *Islāmic* law and administration of justice which is within the power of the *Shariah* courts and muftis. The SIRCs also manage *Islāmic* wealth such as *zakāt*, *wāqf*, *baitulmal* and other *Islāmic* social finance funds. Currently, there are 14 SIRCs in Malaysia. Each of the SIRCs is established based on the Federal Constitution in accordance with Schedule 9 List 2, List of State that stated how states are authorized to have the jurisdiction to govern collection of *zakāt fitrah*, *baitulmal* or other similar *Islāmic* social finance funds.

Basically, each state has the same *zakāt* and *wāqf* organizational structure. In this case, every state is bound to the state ruler or Sultan and *zakāt* and *wāqf* institutions are under SIRC administration, reporting directly to the state ruler. Because of this, each state has its own management practices and legislation for *zakāt* and *wāqf* governance (Aziz and Ali, 2018). Later in 2004, the Malaysian government established the Department of *Wāqf*, *Zakāt* and *Hajj* (JAWHAR) aimed at making *zakāt* and *wāqf* administration systematic and effective throughout the country. For this, JAWHAR plays a vital role as a planning coordinator and manages not only *zakāt* matters but also the *wāqf* administration system and the implementation of regulations of *hajj* administration. The detail on *zakāt* and *wāqf* governance structure in Malaysia is illustrated in the following Figure 1.

Malaysia has a total of 17 *zakāt* institutions from 14 states. It has 14 *wāqf* institutions which is one for each state in Malaysia. These *zakāt* and *wāqf* institutions can be categorized into corporations and non-corporations. Under *zakāt* institutions, several institutions are separated by functions either for collection and/or distribution of funds. Both types, however, still fall under SIRC jurisdiction.

FIGURE 1
Zakāt and *Wāqf* Governance Structure in Malaysia



Source: Kamaruddin and Hanefah (2021a)

Zakāt institutions in Malaysia have shown an increased pattern of *zakāt* collection throughout the years. The following Table 1 shows the *zakāt* collection and distribution by *zakāt* institutions in Malaysia in 2020. In total, more than RM3.6 billion were collected with Selangor attaining the highest *zakāt* collection (RM855.13 million) and Melaka (RM100.72 million) the least. Meanwhile, for *zakāt* distribution, Selangor became the sole state to distribute more than 100 percent of its *zakāt* collection funds which are RM868.26 million (101.54 percent). While other states have an average of 87.73 percent for their *zakāt* distribution as compared to *zakāt* collection funds. The least *zakāt* distribution for 2020 is for Sarawak with RM71.6 million (64.87%).

Malaysia also provides very strong incentives to *muzakkis* (person who pay *zakāt*) to pay *zakāt*. Malaysia is the sole country that provides for reduction in income tax liability of an individual by the full amount of *zakāt* paid (IRTI, 2014). Other countries treat *zakāt* as a tax-deductible expense, which means the amount of *zakāt* paid is adjusted against the taxable income and not against the tax payable. Besides, there is also a provision from the law such as the *Shariah* Criminal Offences (Federal Territories) Act 1997 on the punishment for non-payment of *zakāt*, unauthorised *zakāt* collectors as well as *zakāt* payment to unauthorised collectors. For *wāqf* collection, there is no specific data for both *wāqf* collection and distribution among states in Malaysia.

TABLE 1
Zakāt Collection and Distribution under SIRCs in Malaysia

No	State	*Zakāt* Collection (RM million)			*Zakāt* Distribution (RM million)	Distribution as % of Collection
		Zakāt	*Fitrah*	Total		
1	Selangor	828.50	26.63	855.13*	868.26**	101.54
2	Wilayah Persekutuan	746.91	11.15	758.06	526.47	69.45
3	Johor	300.86	n/a	300.86	299.84	99.66
4	Kedah	207.27	10.64	217.91	195.70	89.81
5	Kelantan	193.34	9.31	202.65	185.58	91.58
6	Perak	181.71	9.92	191.63	165.05	86.13
7	Terengganu	178.52	6.58	185.10	171.12	92.45
8	Perlis	162.33	n/a	162.33*	123.57**	76.12
9	Negeri Sembilan	152.59	4.57	157.16	114.24	72.69
10	Pahang	136.71	n/a	136.71	134.99	98.74
11	Penang	125.32	5.56	130.88	126.58	96.71
12	Sarawak	104.96	5.41	110.37	71.60	64.87
13	Sabah	90.95	10.84	101.79	88.58	87.02
14	Melaka	95.91	4.81	100.72	96.62**	95.93
	Total	3,505.88	105.42	3,611.30	3,168.20	87.73

* For *Zakāt* collection, all data is based on 2020 except Selangor (2019) and Perlis (2014). ** For *Zakāt* distribution, all data is based on 2020 except Melaka (2019), Selangor (2019) and Perlis (2015).
Source: JAWHAR (2021a)

Based on Table 1, in Malaysia *zakāt* collection for 2020 shows an increase as compared to previous years. Several reasons account for this increase. First is enhanced awareness by *Muslims* in Malaysia on obligation to pay *zakāt*. Second, Malaysia has been facing positive economic growth in the last several decades before the COVID-19 pandemic and this eventually impact the prosperity of the citizens including *Muslims*; as such, the amount of *zakātable* income has risen as well. Third, an increase in the *Muslim* population also impacted on the *zakāt* collection. Fourth, *zakāt* administration reform of several *zakāt* institutions under corporatization process has made them more aggressive in *zakāt* collection.

Based on previous data by Perbadanan Wakaf Selangor (PWS) as of 2016, however, the ongoing *wāqf khas* projects handled by PWS until 2016 are worth about RM 760.56 million. These *wāqf khas* projects involved 1,351 acres or 1,328 lots of *wāqf* land worth about RM 500 million (Kamaruddin, 2018). Meanwhile, based on Waqaf An-Nur Corporation Annual Report 2020, *wāqf* assets and its investment assets amount to RM768.45 million. A report for Majlis Agama Islam Pulau Pinang (MAIPP) stated that they currently administer about 1,210 lots of *wāqf* land with 1,260 acres, plus 273 units of home premises and 282 units of commercial premises in 2020. In 2021, MAIPP planned to develop 4 main *wāqf* projects with an economic value of RM170 million (WPP, 2021). Moreover, *wāqf* assets in Malaysia have been estimated to be around RM1.3 trillion (Omar, 2020).

In addition, there is *wāqf irsod*, which is a *wāqf* from the Sultan/government/ruler and usually in the form of land gazetted as the site of a mosque, *musolla*, religious school, *Islāmic* welfare home, orphanage, cemeteries and so on. It can also be in the form of financial allocation by the federal government aimed at developing *wāqf* land owned by SIRCs. A total of 17 large-scale and high-impact projects costing RM290.62 million were funded by the government in collaboration with SIRCs under *wāqf irsod* initiatives (JAWHAR, 2017).

Regardless of the above information, the following Table 2 lists the potential *wāqf* land for development according to states by JAWHAR based on the land size and its estimation value.

TABLE 2
Potential *Wāqf* Land for Development under SIRCs in Malaysia

No	State	*Wāqf* Land Area Size (Hectares)	Estimation *wāqf* Land Values (RM million)	Cash *wāqf* (RM million)
1	Wilayah Persekutuan	1.25	32.33	0.87
2	Selangor	19.15	3.98	57.13
3	Kedah	367.19	22.06	n/a
4	Kelantan	1.66	5.63	1.89

TABLE 2 *(continued)*

No	State	*Wāqf* Land Area Size (Hectares)	Estimation *wāqf* Land Values (RM million)	Cash *wāqf* (RM million)
5	Melaka	133.58	14.47	n/a
6	Negeri Sembilan	2,614.11	67.02	n/a
7	Pahang	1,013.07	2.18	n/a
8	Penang	269.99	140.62	n/a
9	Perak	35,523.88	24.60	5.72
10	Perlis	n/a	0.63	n/a
11	Sabah	n/a	n/a	n/a
12	Sarawak	2.26	0.085	n/a
13	Terengganu	70.99	4.74	0.69*
14	Johor	2,650.36	15.48	16.64
	Total	42,667.50	333,838.58	82.94

** For cash wāqf, all data is based in 2020 except Terengganu (2015).*
Source: JAWHAR (2021b)

Islāmic social finance especially *zakāt* and *wāqf* institutions in Malaysia play significant roles in helping those affected by COVID-19. The pandemic also affected the economy especially when many industries are shut down temporarily as part of quarantine processes. Many become unemployed and lack money to buy necessities. Malaysia already announced a RM250 billion economic stimulus package on 27 March 2020 to overcome the impact. Each state government also announced a separate economic package to help those \directly affected by COVID-19. The *zakāt* institutions in Malaysia also announced their immediate *zakāt* allocation funds specifically for the COVID-19 crisis. The detail on each *zakāt* institution in Malaysia in terms of *zakāt* allocation for COVID-19 recovery is shown in Table 3.

TABLE 3
Zakāt Allocation Funds for COVID-19 by *Zakāt* Institutions in Malaysia

No	State	*Zakāt* Allocation Funds (RM million)	*Asnaf* Beneficiaries (persons)
1	Johor	5.70	20,000
2	Kedah	16.70	520,000

TABLE 3 *(continued)*

No	State	*Wāqf* Land Area Size (Hectares)	Estimation *wāqf* Land Values (RM million)	Cash *wāqf* (RM million)
3	Kelantan		1.00	10,000
4	Melaka		3.54	8,929
5	Negeri Sembilan		4.30	4,594
6	Pahang		2.78	12,694
7	Penang		5.00	n/a
8	Perak		11.95	n/a
9	Perlis		4.43	22,857
10	Sabah		5.93	41,470
11	Sarawak		n/a	n/a
12	Selangor		15.00	n/a
13	Terengganu		17.00	27,000
14	Wilayah Persekutuan		25.11	24,196
	Total		118.44	691,740

Note: n/a = not available. No. of *zakāt* allocation funds and *asnaf* beneficiaries announced by *zakāt* institutions in Malaysia as of 30 March 2020.
Source: Kamaruddin and Hanefah (2021b)

2.3 FINTECH AND ISLAMIC SOCIAL FINANCE

Technology has changed how people interact with each other, for example, in terms of communication. In the past, people use letters, old phones, public phones, pager or meeting directly face-to-face to communicate with each other. The financial industry has also evolved in how consumers conduct their daily financial transactions. Financial institutions have transformed services from desk-counter to web-based and then further advanced to the internet and digital method. People in the industry or people who have knowledge in the financial industry nowadays refer to this as 'FinTech'. However, the services provided by financial institutions such as online banking, mobile banking, apps and so on are only a fraction of FinTech. Currently, there is no consensus or unanimous term of FinTech which is accepted by all. However, based on the literature, FinTech can be known as a new financial industry that applies technology to improve financial activities (Yahaya and Ahmad, 2018).

A lot of opportunities enable FinTech in *Islāmic* finance to grow. Based on the FinTech Malaysia Report 2021, *Islāmic* finance only contributed 4 percent to the FinTech climate in

Malaysia. The percentage was too small with other digital players involved led by payment (contributing 20%), e-wallet (15%) and lending (14%) (FinTech News Malaysia, 2021). The report also found a significant increase in technology use especially for financial activities in 2020. This happened mainly due to the COVID-19 outbreaks and introduction of a Movement Control Order that made FinTech use as a solution for such movement constraints. As result, internet banking in Malaysia has quadrupled in the last decade. Mobile banking is also booming, supported by near universal 4G network coverage and affordable data with a 5G connection in future. The World Economic Forum ranked Malaysia high among 139 countries and first among countries in emerging and developing Asia in 2019. As Malaysians adapt to the 'new normal' during the pandemic, e-wallet usage became a trend (FinTech News Malaysia, 2021).

FinTech adoption among Malaysians will significantly impact the *Islāmic* social finance landscape as well. Based on the *Islāmic* Social Finance Report 2014 by the *Islāmic* Research and Training Institute (IRTI), *zakāt* institutions in Malaysia have developed other instruments for handling *zakāt* funds. Apart from corporatization and collection by *zakāt* staff, other supporting bodies are given the authority to collect funds for transfer to *zakāt* accounts. These include the income tax department (through salary deductions), *baitulmal* subsidiaries, higher learning institutions, collection counters in banks, post offices, and shopping centers, where all play an important role to facilitate collection procedures. The collection process has been simplified, made safer and faster through computerized collection systems, proactive marketing approaches, and payments via commercial banks and e-banking systems (IRTI, 2014).

One study by Esrati et al. (2018) on the FinTech and *zakāt* management in Malaysia found that *zakāt* officers in *zakāt* institutions agreed that they should follow the rapid technology development and apply it in *zakāt* management. They believed that technology use is able to meet current needs and if *zakāt* institutions explore this new technology, it will surely improve *zakāt* management. Besides, *zakāt* institutions also provided a relatively large allocation for technology development including FinTech to ensure efficient and effective *zakāt* collection and distribution. Each *zakāt* institution has a specific department responsible for technology or IT management can be outsourced.

Blockchain technology has received less attention and is little known by *zakāt* institutions. This is attributed to still vague and unclear understanding of its concepts and benefits. In fact, blockchain is also often misunderstood as bitcoin. Undeniably, both have a common founder Satoshi Nakamoto; however, the blockchain and bitcoin functionality differ. For *zakāt* institutions, blockchain technology is an exciting new field to be explored.

Furthermore, a study by Yahaya and Ahmad (2018) was done on the *asnaf* (*zakāt* beneficiaries) intention to use mobile banking for *zakat* distribution in Malaysia. The study identified several factors encouraging *asnaf* to use FinTech including expectation to increase distribution performance, social influence from surrounding to use FinTech, receive adequate facilities to use FinTech as well as behavioral intention to use it. This also means that *asnaf* are aware of FinTech and they do not hesitate to use FinTech including for the *zakāt* distribution process. Focusing on *Islāmic* social finance, this study looks in-depth into the reality of *Islāmic* social finance practice in Malaysia and its adaptation to FinTech in achieving the *Islāmic* social objectives at large. Such analysis is crucial to discover the current practice between *Islāmic* social finance with FinTech while promoting *Islāmic* social finance as a tool to alleviate poverty and reduce inequality in wealth distribution.

3. METHODOLOGY

This research aims at investigating FinTech adoption in *Islāmic* social finance especially for *zakāt* and *wāqf* institutions in Malaysia. This includes the level of FinTech adoption, issues, challenges, and prospects of FinTech adoption as well as FinTech adoption impact especially on collecting, managing, and distributing the *Islāmic* social finance funds (*zakāt* and *wāqf*). Data were collected through a focus group discussion (FGD) approach. The FGD was conducted on 13 *zakāt* and *wāqf* officers as well as FinTech experts in Malaysia. The profile of all respondents is given in Table 4.

TABLE 4
Profile of Respondents

Respondents	Gender	Roles	Positions
1	Male	Zakat Officer	Chief Executive Officer
2	Male	Waqf Officer	Chief Executive Officer
3	Male	Waqf Officer	General Manager
4	Male	Zakat & Waqf Officer	Chief Executive Officer
5	Male	Zakat Officer	Head of IT Department
6	Male	Zakat Officer	Head of Finance Department
7	Male	Waqf Officer	Head of Waqf and *Mal* Department
8	Female	Waqf Officer	Head of Unit
9	Female	FinTech Expert	Deputy General Manager of FinTech (Regulator)
10	Female	FinTech Expert	Senior Manager of FinTech (Regulator)
11	Male	FinTech Expert	Assistant Manager of FinTech (Regulator)
12	Male	FinTech Expert	Executive Chairman of FinTech Company
13	Male	FinTech Expert	Senior Lecturer of Islamic FinTech

Involvement of respondents portrays the diversity of FinTech adoption experience in *Islāmic* social finance in Malaysia. These respondents come from different organizational structures including *zakāt* institutions, *wāqf* institutions, regulator bodies, FinTech companies as well as universities. They also have different designations with different roles and views related to FinTech adoption practices. They also have different attributes especially in terms of gender which could also give more diversified views and opinions regarding FinTech. Therefore, opinions from these respondents are believed to be able to represent the views of *zakāt* and *wāqf* institutions in Malaysia in general adoption in Malaysia. Based on diversified respondent profiles, it is expected that these respondents will be able to give comprehensive views and opinions in order to meet the research objectives of the study.

The FGD focused on the FinTech adoption practices in *Islāmic* social finance based on interview protocols and lasted around two hours. Interview questions focused on three themes, which are:

(i) level of FinTech adoption; (ii) issues, challenges, and prospects of FinTech adoption; and (iii) impact of FinTech adoption. Meanwhile, for reporting purposes, this study employed a single-case study approach (Yin, 2018). In this case, all findings from the FGD were analyzed and combined into a single narrative. To ensure every statement was documented, the interviews were recorded. The FGD was conducted and completed at the end of December 2021 via an online approach through the Zoom platform.

4. RESULTS AND DISCUSSIONS

4.1 LEVEL OF FINTECH ADOPTION

As for the first theme on the level of FinTech adoption in *Islāmic* social finance, it is notable that there is a good response from the public when *zakāt* and *wāqf* institutions are adopting FinTech in the collection processes. Some respondents, however, also informed that FinTech usage by the public is not comprehensive for the following reason:

> "…We see that the usage of FinTech is still not made by all as some group of people [have] yet to believe in the system. They still do the traditional approach in paying the *wāqf* through the counter…" (Respondent 2)

This is believed mainly due to the question of aqad (contract) when performing donation of *zakāt* and *wāqf*. In this situation, Respondent 3 added that they also faced the same situation and make necessary clarification on the acceptance of *aqad* by performing online transactions. This is based on the following comment:

> "…We solve the issue by referring to the State Fatwa Committee. The committee already issued the *fatwa* on the acceptance of *aqad* on the collection of *zakāt* and *wāqf* through online transactions…" (Respondent 3)

Basically, the majority of the respondents agreed that among the public, youth are mostly the ones who prefer to use FinTech in *zakāt* and *wāqf* transaction. This includes online transactions through FPX, mobile apps, QR codes and e-wallets. Meanwhile, the elder still do not use FinTech because of unfamiliarity. In this case, Respondent 2 suggested that:

> "…I think that the public especially the elder group needs to be taught FinTech. Having adequate awareness programs for this group will increase the usage of FinTech in *zakāt* and *wāqf* …" (Respondent 3)

In order to promote FinTech use among the public, respondents recommended that *zakāt* and *wāqf* institutions fully utilize FinTech among its officers at first before promoting awareness among the public. Besides, these institutions also need to be more creative in using FinTech especially in order to find potential beneficiaries of *zakāt* and *wāqf*. This is related to awareness and willingness of using FinTech (Friantoro and Zaki, 2018). For this, some respondents informed:

> "…No matter what channel that we adopt, we still need solid objectives or projects especially for *wāqf* collection…" (Respondent 4)

> "…Cultivating *zakāt* and *wāqf* campaigns must be done in line with the tendency to use technology in society since childhood…" (Respondent 1)

> "…Collaborate with universities in the use of poverty data generated from FinTech to make enhancement in identifying better *zakāt* distribution process…" (Respondent 8)

4.2 ISSUES, CHALLENGES AND PROSPECTS OF FINTECH ADOPTION

For the second theme on the issues, challenges and prospects of FinTech adoption in *Islāmic* social finance, it is found that among the main issues for FinTech adoption is cost. For instance, Respondent 7 mentioned that its *zakāt* institutions invest about RM3.3 million to upgrade and install new technology systems for better operation. Therefore, a question on the cost-benefit analysis of such investment in FinTech is asked.

> "…One of the issues faced by *zakāt* and *wāqf* institutions is cost. For this, *zakāt* and *wāqf* institutions need to do a cost-benefit analysis to identify how much needs to be invested and

how much the return will be made for FinTech adoption…" (Respondent 13)

"…There is a certain cost in providing FinTech facilities such as merchant fees if we are using credit card transactions…" (Respondent 2)

Apart from cost, the acceptance and awareness of FinTech use by the public are also becoming issues faced by *zakāt* and *wāqf* institutions. This is based on the following comment by Respondent 11:

"…Normally FinTech adoption depends on the acceptance of the user and digital literacy…" (Respondent 11)

Moreover, another concern in FinTech adoption is governance issue. As *zakāt* and *wāqf* institutions are bound under their respective SIRC, it is undeniable that every decision including FinTech adoption needs to be approved by their parent organization. In this case, Respondent 2 explained:

"…It depends on the SIRC's acceptance of FinTech as a management ecosystem. *zakāt* and *wāqf* institutions as subsidiaries can go far by adopting FinTech but are still bound by the SIRC's acceptance …" (Respondent 2)

Furthermore, another issue that will arise with FinTech adoption is the *zakāt* and *wāqf* collection boundaries' jurisdiction. In this case, Respondent 3 stated:

"…As *zakāt* and *wāqf* collections are under the jurisdiction of the SIRC in Malaysia, FinTech will make *zakāt* and *wāqf* collection have no such boundaries when the public can pay or donate *zakāt* and *wāqf* funds to any *zakāt* and *wāqf* institutions regardless of which state they are coming from…" (Respondent 3)

Despite the above boundaries issue due to FinTech adoption, the majority of respondents agreed that FinTech actually will be open to future engagement especially in collaboration to develop *wāqf* assets across state boundaries. In this situation, Respondent 6 explained:

> "…For example, the implementation of FinTech at the national level of *wāqf* projects (cross-state) will resolve many issues regarding the development of *wāqf* assets…" (Respondent 6).

Meanwhile, in terms of challenges, there is a concern that FinTech must include *sharīʿah* and spiritual culture elements. For instance, Respondent 13 mentioned:

> "…We must try to inculcate the *sharīʿah* element as well as spiritual culture in FinTech. For example, when we are performing *aqad*, normally we will shake hands between *zakāt* payers and amil. How do we want to capture these elements in digital?" (Respondent 13)

Besides, several other challenges were identified, including risk management such as anticipating the 'red flags' and achieving optimal capital-risk allocation. In addition, some challenges were in the transformational aspects such as in evaluating gaps and opportunities, strengthening financial position as well as improving return on investments. Challenges in productivity covers the ability to highlight areas of inefficiency, analyze and rationalize costs and resource allocation and also the ability to increase value-added output through FinTech.

While, in terms of prospects, there is a suggestion to use an e-voucher as part of the distribution process in the future. For this, Respondent 1 suggested that:

> "…We can use the concept of e-vouchers for *asnaf* who shop at selected stores as part of the distribution mechanism…" (Respondent 1)

Moreover, there is also an initiative to use apps in projects and programs conducted as well as other related FinTech tools. This suggestion aligns with previous recommendations by Haider Syed et al. (2020) and Hassan et al. (2020). This is based on the following suggestions:

> "…The use of apps in foodbank projects will be able to find out the number of items available in foodbank stores. So, we

> can easily monitor from everywhere and make decisions when to refill these items in real-time…" (Respondent 7)

> "…For *wāqf*, the FinTech platform can be used to manage the process of investment, expansion and maintenance of funds and *wāqf* assets. This including in maintaining mosques by using *wāqf* funds…" (Respondent 5)

> "…We can explore especially the development of *wāqf* by using FinTech tools such as bitcoin or sukuk…" (Respondent 9).

Furthermore, FinTech adoption also will be able to make *zakāt* payers and *wāqf* donors have more experience and involvement with managing *zakāt* and *wāqf* funds. This situation might affect the public to know more about *zakāt* and *wāqf* activities and increase their intention to contribute (Niswah et al., 2020). In this case, Respondent 5 elaborated:

> "…When *zakāt* payers and *wāqf* donors are able to monitor the flow of *zakāt* and *wāqf* funds by using real-time data, it definitely will give more experience to them on how *zakāt* and *wāqf* institutions are managing these funds…" (Respondent 5).

Lastly, the benefit of FinTech adoption can be fully utilized if all stakeholders play their roles. For this, Respondent 9 highlighted:

> "…All stakeholders such as *zakāt* payers, *wāqf* donors, the management, the authority, beneficiaries and even the public need to play their parts in order to ensure the success of FinTech adoption by *zakāt* and *wāqf* institutions…" (Respondent 9).

4.3 IMPACTS OF FINTECH ADOPTION

For the third theme on the impact of FinTech adoption in *Islāmic* social finance, it is found that *zakāt* and *wāqf* institutions have made significant improvement especially in transaction processes. This is because paying *zakāt* and *wāqf* digitally will become a future trend because it is felt to be effective and efficient (Ninglasari and Muhammad, 2021). Besides, *zakāt* and *wāqf* collection shows increasing patterns through FinTech adoption. For this, Respondent 1 and Respondent 12 stated that:

> "… FinTech assists in the management of *zakāt* funds. Traditional methods are trivial and time-consuming. Besides, due to COVID-19, manual receipts are unable to be issued and we overcome it by issuing the digital receipt. Moreover, the collection of *zakāt* funds doubled online. *Zakāt* fitrah online also showed an increase…" (Respondent 1)

> "… At present, institution X engages with about 200,000 beneficiaries. It is challenging for the institution to manage such a huge number and FinTech definitely makes it easier to manage especially on distribution of *zakāt* and *wāqf* funds…" (Respondent 12)

Furthermore, FinTech adoption has reduced usage of physical documents and facilitated decision making. This is similar to the recommendation made by Umar and Abubakar (2021) as FinTech is able to avoid error and fraud in manual collection. This is based on the statement by Respondent 2:

> "… we can see the reduction of physical documents used in our daily operation which also can reduce the related cost and error. . . existence of real-time data has improved significantly in the decision-making process as it can be made faster and correctly…" (Respondent 2).

Apart from collection and distribution processes, FinTech can make *zakāt* and *wāqf* institutions monitor the usage of *zakāt* and *wāqf* funds by asnaf/beneficiaries. Moreover, FinTech also can be used in managing *zakāt* and *wāqf* funds and assets as previously suggested (Yahaya and Ahmad, 2018). This had been suggested by the following respondents:

> "… FinTech can be used as a tool to monitor the beneficiaries' spending pattern. This will eventually be important for *zakāt* and *wāqf* institutions in identifying the real needs of beneficiaries in their daily activities…" (Respondent 13).

> "… By using artificial intelligence (AI), *zakāt* and *wāqf* institutions also will be able to manage *wāqf* assets classifications and their returns…" (Respondent 12)

> "… FinTech adoption is able for us to track funding flows from a physical form like *sadaqah* funds collected at mosques…" (Respondent 10)

Apart from *wāqf* asset management, FinTech adoption also can benefit through investment risk management. For this, Respondent 2 viewed:

> "… Investment risk using *wāqf* funds into medium and high-risk investments can be managed properly by using FinTech and can help to maximize returns…" (Respondent 2)

Moreover, FinTech also will be able to capture more necessary data and thus improve performance evaluation. This includes measurement at the individual level in terms of employability, *duniawi* and *ukhrawi* performance as well as effectiveness and efficiency of *zakāt* and *wāqf* management. This is based on the following point by Respondent 5:

> "… When we can monitor both collection and distribution processes by using FinTech, it will make us have come out with proper measurement and impact evaluation…" (Respondent 5)

Besides, Respondent 9 and Respondent 2 also stated that FinTech adoption is also important for *zakāt* and *wāqf* institutions as it is able to promote more transparency and integrity especially toward *zakāt* payers and *wāqf* donors. This is similar to the findings by Ninglasari and Muhammad (2021) where *zakāt* and *wāqf* institutions can maximize their transparency and accountability through FinTech. In this point, both respond as follows:

> "… FinTech can act as real-time information for the public and it can promote the integrity of *zakāt* and *wāqf* institutions…" (Respondent 9)

> "… FinTech can be used as a tool for gaining trust from the public (donors)…" (Respondent 2)

On the other hand, there is a concern about the corporate culture due to FinTech adoption. In this case, Respondent 7 raised his concern:

> "… When the overall work process has changed from traditional to digital, work culture (corporate culture) is also changed from the interaction between humans to interact with machines and technology. This somehow reduces face-to-face services especially between *zakāt* payers or *wāqf* donors with amil or mutawalli…" (Respondent 7)

> However, Respondent 12 informed that FinTech adoption does not mean that every single activity needs to be digitalized. because "humans still needed to be involved in providing the input into the system and making the final decision. Machines cannot extract especially on 'human welfare' or 'human consideration' without human engagement…" (Respondent 12)

Given the challenges revealed before, past studies have made several recommendations These include setting up a national *Islāmic* FinTech task force for financial inclusion. Industry participants and regulators must collaborate to advance the FinTech agenda. Institutions such as SIRCs and *zakāt* and *wāqf* institutions must be open to creating meaningful partnerships and implementing digital strategies. The government needs to introduce *Islāmic* FinTech-specific incentives to attract, retain and grow the community. The government also should focus on enhancing (*Islāmic*) financial literacy and financial health especially within the B40 segment. *Islāmic* financial institutions need to take a more proactive participatory role in the ecosystem by offering infrastructure and expertise. Hybrid models of *Islāmic* digital social finance are needed; funds are required to support early-stage and growth-stage *Islāmic* FinTech companies. Lastly, Malaysia needs to develop an *Islāmic* FinTech talent pool (MDEC, 2020).

Based on the recent *Islāmic* Fintech and Digital Financial Inclusion Report issued by the Malaysian Digital Economy Corporation (MDEC), several challenges face FinTech adoption in the *Islāmic* finance industry. These include a resistance to change and reluctance to fully embrace the digital agenda by senior management especially among *Islāmic* stakeholders (religious authorities, *zakāt* and *wāqf* institutions); absence of national direction on *Islāmic* FinTech hinders digital financial inclusion efforts; lack of engagement between financial incumbents, relevant stakeholders and FinTech start-ups as well as dearth of smart partnerships between larger financial institutions and smaller FinTech companies;, poor financial and digital literacy among B40s and MSMEs; unbalanced growth of *Islāmic* finance sectors now heavily focused on *Islāmic* banking and not on *Islāmic* social finance; lack of credit history and proper credit assessment models prevent MSMEs, start-ups and B40s from accessing micro capital. Finally, inefficient human capital resources is another challenge to FinTech adoption in the *Islāmic* finance industry (MDEC, 2020).

Recently, the Malaysian government through its 12th Malaysia Plan (Rancangan Malaysia Ke-12 or RMK-12), which covers the period 2021 to 2025 has touched on *wāqf* as an economic development instrument. The RMK-12 has identified several potentials for *wāqf* development including for health, low-cost housing development and sustainable higher education as well as support for research and innovation projects. FinTech can play a part in achieving *wāqf* objectives under this RMK-12.

5. CONCLUSION

This paper aimed at investigating adoption of FinTech in *Islāmic* social finance especially for *zakāt* and *wāqf* institutions in Malaysia. Under FinTech adoption, it is found that there is a good public response especially from the youth groups. There is a need to promote awareness for other groups especially the older generation in using FinTech.Also, FinTech can be used in identifying potential *zakāt* and *wāqf* fund beneficiaries. Under issues, challenges and prospects of FinTech adoption, issues identified included cost, public acceptance and awareness to use FinTech, encouragement from the SIRC as the parent of *zakāt* and *wāqf* institutions and state boundary jurisdictions. Several challenges in FinTech adoption cover incorporating Shariah and spiritual culture elements in FinTech tools, risk management, transformational and productivity challenges. On the other hand, several prospects in FinTech adoption were recognized such as use of e-vouchers, apps and other related FinTech tools in *zakāt* and *wāqf* projects and programs besides providing a better experience for *zakāt* payers and *wāqf* donors in managing *zakāt* and *wāqf* funds. Under the impact of FinTech adoption, most *zakāt* and *wāqf* institutions are experiencing significant improvement in transaction processes, increasing patterns in *zakāt* and *wāqf* collection, reducing physical documents used, enabling faster decision making, better monitoring of fund usage by *asnaf*/beneficiaries and better *wāqf* asset management. Comprehensive and real-time data generated from FinTech also assist in performance evaluation and promote more transparency and integrity. Yet one concern is the changing of corporate culture due to FinTech, but this can be controlled by not fully digitalizing and having some human input in the FinTech setting.

Based on the findings of this study, several recommendations are proposed. Awareness of FinTech usage in *Islāmic* social finance needs to be promoted. A strong will and support especially from the government in terms of financial and FinTech expertise toward *zakāt* and *wāqf* institutions in Malaysia is needed. Collaboration between FinTech developers and *zakāt* and *wāqf* institutions is needed to come out with innovative FinTech tools to enhance *zakāt* and *wāqf* institutions. SIRCs must give full support in cultivating digital initiatives in their respective institutions. Although it fills a gap in the literature on *Islāmic* social finance, this study has a number of limitations. Its scope is restricted to *zakāt* and *wāqf* institutions. Hence, future studies may extend to other social finance institutions such as *Islāmic* cooperatives, *Islāmic* non-profits, *Islāmic* social enterprises and *Islāmic* microfinance.

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