



Digital Transformation Through Islamic Digital Banking For Financial Inclusion

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Abstract

Digitalization trends, to a certain extent, shape organizations and individuals in a similar way. The application of digitalization becoming widespread and is a necessity in a business today. Digitalization plays in improving the business landscape by creating the opportunity to enhance development, increase employment opportunities, and accelerate innovation. The introduction of information and communication technology has transformed the banking and financial services industry. The Islamic banks urge to react to these radical changes in order to meet the need of the society especially among Muslim community. The development and adoption of Shariah compliant digital banking in line with Maqasid al-Shariah in achieving financial inclusion is become significance as the alternative for conventional one. However, without a better understanding and exposure to the community would become a hinder for the development and the adoption of this digital platform. This study is aimed to explore the understanding and application of Islamic digital banking for financial inclusion. This study employed a quantitative survey questionnaire of 250 respondents. The Statistical Product and Service Solutions (SPSS) software version 26 has been used in analysing the data through descriptive analysis. The general findings shows that a better understanding towards the Islamic digital banking is important to alleviate poverty and for financial inclusion.

Keywords: Digital transformation; Digital banking; Islamic digital banking; Maqāṣid al-Shariah; Information Communication Technology (ICT); Financial Inclusion.

1. Introduction

Digital transformation is changing the way business gets done and, in some cases, creating entirely new classes of businesses. With digital transformation, companies are taking a step back and revisiting everything they do, from internal systems to customer interactions both online and in person. Digital transformation is the process by which companies embed technologies across their businesses to drive fundamental change. The benefits? Increased efficiency, greater business agility and, ultimately, the unlocking of new value for employees, customers and shareholders. The global digital transformation market is projected to grow from \$469.8 billion in 2020 to \$1,009.8 billion by 2025, at a compound annual growth rate (CAGR) of 16.5% during this period (Research & Markets, 2020). Digitally transformed organizations are projected to contribute to more than half of the global gross domestic product (GDP) by 2023, accounting for \$53.3 trillion (IDC, 2020).

Information and communication technology (ICT) has undergone enormous growth in recent years, and this growth has been especially noticeable in the banking and financial services industry. The

ICT has brought the technological changes to the transaction of banking and financial services from offline (over the counter) banking transaction to online banking transaction. Apart from that, the performance of banks and the way customer service is provided in the banking business have both been profoundly impacted by the introduction of information and communication technology (ICT). Banks have made significant investments in information and communications technology (ICT) and have broadly adopted ICT networks for the purpose of delivering a wide variety of products and services that have added value in an effort to keep up with the rate of global growth, improve the quality of customer service delivery, and reduce the costs of conducting transactions. The development of information and communications technology has had a significant influence on the emergence of banking services that are both more adaptable and simpler to use. P.Revathi (2019) argues that technological change in this area will have far-reaching consequences for economic development.

At the present time, a greater number of people now have access to mobile phones, and the availability of smartphones and the internet has accelerated the digitalization of banking and financial activities and

transactions. Thus, the development and widespread use of digital banking have resulted from the convergence of mobile phone technology and widespread internet access. according to the survey by the Statista Research Department (2022), there 29.3 million internet users in Malaysia and the internet user in Malaysia is expected to significantly grow year by year due to the advancement of the technology that cannot be blocked. The growth of internet users in Malaysia has become the catalyst to the development of digital banking in which offers the safer and reliable banking and financial services. General terms, digital banking refers to the process of digitising, or moving online, all of the traditional banking operations, products, and services that traditionally have been made available to consumers only when they were physically present inside of a bank branch. This includes activities such as depositing money in an account, withdrawing it out of an account, and transferring funds elsewhere. Internet banking and mobile banking are the two most important aspects of the what people refer to as "digital banking" (Boon-Itt, 2015; Garzaro, 2020).

However, the majority of community in Malaysia is Muslim. Thus, the development of Shariah compliant digital banking that is in line with Maqasid al-Shariah is compulsory to them. Maqasid al-Shariah is defined as Islamic legal doctrine for Muslim in which it is aimed to acquire the benefit to the mankind (*Jalb Masalih*) and avoid the harms from something (*Daf' Mafasid*). Moreover, Shariah compliant digital banking is considered as the transaction that excluded from *Riba* (interest), *Gharar* (uncertainty), *Maysir* (gambling) and other prohibition. As Allah S.W.T mentioned in holy al-Quran, surah al-Baqarah verse 275:

﴿الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَتُومُونَ إِلَّا كَمَا يُتُومُ الَّذِي يَتَخَبَّطُهُ الشَّيْطَانُ مِنَ الْمَسِّ ذَلِكَ بِأَنَّهُمْ قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا فَمَنْ جَاءَهُ مَوْعِظَةٌ مِنْ رَبِّهِ فَانْتَهَى فَلَهُ مَا سَلَفَ وَأَمْرُهُ إِلَى اللَّهِ وَمَنْ عَادَ فَأُولَئِكَ أَصْحَابُ النَّارِ هُمْ فِيهَا خَالِدُونَ ﴿٢٧٥﴾

Translation from Tafsir Ibn Khathir:

“Those who accept usury, on the other hand, will spring up on the Day of Resurrection as though afflicted by Satan’s touch. That is because they claim that ‘commerce and usury are the same thing,’ but God has permitted trade while forbidding usury. Anyone ceases taking usury after

receiving God’s warning may preserve his previous gains—God will be his judge—but whoever returns to usury will be a permanent resident of the Fire.”

From this evidence of al-Quran, it indicates that, *Riba* is completely prohibited by Islam as it is led to injustice and unfairness dealings to the community. According to Shazni Ong (2020), although numerous Islamic digital banks have been established in recent years, they are neither as large nor as well-known as their conventional counterparts. The Islamic financial industry has been slower to react to new digital opportunities than the conventional financial industry. So, the Islamic banking need to keep in track with digital advancement in order to promote Muslim community with products and services that comply with Shariah.

In addition, the development of digital banking that is compliant with Shariah needs to take into consideration the factor of financial inclusion. This is because the inclusion of financial services is crucial to the alleviation of poverty in a community. According to Roxana (2020), digital banking helps underserved communities gain access to banking goods and services, which has a positive effect on the quality of community members' economic and social lives. So, it would appear that digital banking has prepared the way for financial inclusion, which is intended to boost and sustain economic growth throughout the Malaysian population, whether they live in a rural area or an urban area. As it can be perceived, there are around 1.7 billion individuals in the globe who do not have access to traditional banking services, according to a 2021 report on financial inclusion and development issued by the World Bank. This reflects a fraction of the world's population that is extremely near to one-twentieth (Luca Ventura, 2022). Those without access to standard banking services such as checking and savings accounts, along with other financial instruments such as insurance, loans, and mortgages. So, the development of Shariah compliant digital banking is significance to serve unbanked population.

The objective of this study is to investigate the understanding of Shariah compliant digital banking that based on *Maqasid al-Shariah* in achieving financial inclusion. Apart from that, this study aimed to provide an exposure to the underserved population related to the notion of Shariah

compliant digital banking in order to encourage them to enjoy the products and services that offered by Islamic banks. Additionally, this study also provides the reference to the future researchers for their further study related to the Shariah compliant digital banking that in line with *Maqasid al-Shariah* for financial inclusion. As it can be perceived, there is limited sources related to the field.

2. Research Methods

In this study, quantitative method was used by the researchers. The questionnaire was utilised since it provides the most accurate means of data collection. This questionnaire has been distributed through google form to the respondent. A total of 250 respondents were chosen. Researchers selected respondents at random using a network of interconnected parties. Following a comprehensive survey, replies from respondents were analysed statistically using SPSS version 26. This study examined the frequency of each variable in the survey questions, given that each responder has a unique perspective on the issue. The analytical findings reveal how each respondent evaluated several aspects of this poll. The Cronbach's alpha was used to evaluate the reliability of the scale. A coefficient alpha more than 0.7 was deemed acceptable, greater than 0.8 was deemed excellent, and greater than 0.9 was deemed remarkable (Nunnaly, 1987). According to Sekaran (2003), the value of Cronbach's alpha represents the degree to which the components of a set have a positive association with one another. Table 1 displays Cronbach's alpha for all scales in order to evaluate the instrument's internal consistency:

Table 1. Exploratory analysis

No	Item
Cronbach's Alpha= 0.801	
1.	Understanding the concept of Islamic digital banking.
2.	Understand that Islamic digital banking is carried on wholly or almost wholly through digital or electronic means.
3.	Islamic digital banking transaction is different from online banking transaction.
4.	Understand that Islamic digital banking is in line with <i>Maqasid al-Shariah</i> (objective of Shariah).
5.	Islamic digital banking is the key financial solution for improving financial inclusion.

3. Results and Discussions

Findings

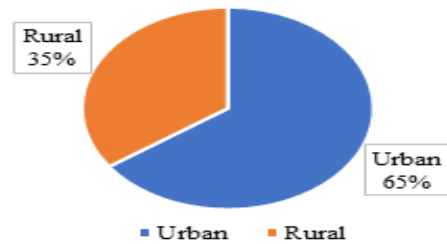


Figure 1. Geographic Location of Respondents

According to the information that has been gathered through a Google form that has been distributed to the community all over Malaysia, it has been determined that the majority of the respondents live in urban areas, which accounts for 65% of the total, while the remaining 35% of the respondents live in rural areas.

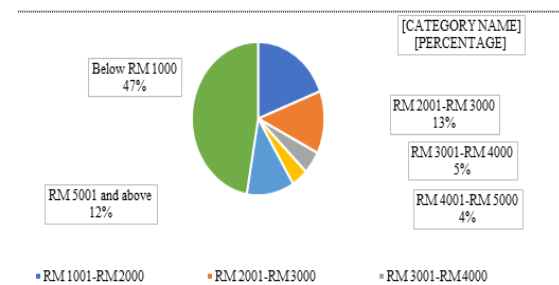


Figure 2. Monthly Income

In the course of the survey data that was gathered, the vast majority of respondents have earned a monthly income that is less than RM 1,000, which accounts for about 47% of the total. In the meantime, the respondent whose monthly income was between RM 1,001 and RM 2,000 accounts for 19% of the total. Aside from that, the percentages of respondents in the categories with a monthly income of between RM 2,001 and RM 3,000 and those with a monthly income of RM 5,001 and above are, respectively, 13% and 12%. Last but not least, the groups of people with a monthly income of between RM 3,001 and RM 4,000 and people with a monthly income of between RM 4,001 and RM 5,000 have the lowest response rates to the survey questionnaire, coming in at 5% and 4%, respectively. These groups make up the lowest groups of respondents overall.

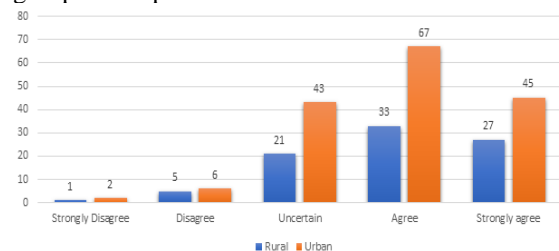


Figure 3. I understand the concept of Islamic digital banking based on geographic

Location

According to the bar chart that can be found above, the majority of the group of respondents who live in urban areas are in agree about the concept of Islamic digital banking. This group includes 67 respondents. In addition, the results of the poll showed that a greater proportion of those respondents who live in rural areas agreed with the assertion in which 33 of the total respondents.

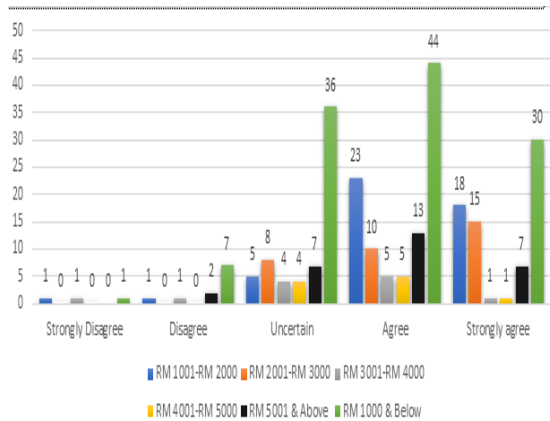


Figure 4. I understand the concept of Islamic digital banking based on income level

According to the data in the preceding figure, the larger number of respondents with income level of RM1000 and below are agreed about the concept of Islamic digital banking, which comprises 44 respondents. In addition, there are 36 respondents and 30 respondents in this level of income who uncertain and strongly agree that they understand the concept of Islamic digital banking. For the level of income between RM1001 and RM2000, 23 respondents agree with the statement while the other 18 respondents strongly agree. Meanwhile, there are five respondents who are uncertain about the concept of Islamic digital banking and the remaining two respondents from this group disagree and strongly disagree with the assertion. Most of the respondents in the income level of RM2001 to RM3000 strongly agree with the statement and there are 10 respondents who are agreed about the concept of Islamic digital banking while 8 of them are uncertain with this statement. Apart from that, there are 5 respondents from the level of income RM4001-RM5000 who agree that they understand the concept of Islamic digital banking while four of them are uncertain about the statement. There is only one respondent from this group strongly agree about this assertion. Lastly, for income level of RM5001 and above, there are 13 respondents agree with the statement. There are equal number of the respondents uncertain and strongly agree about the concept of Islamic digital banking in which both equally 7 respondents. There are only two respondents disagree with the statement.

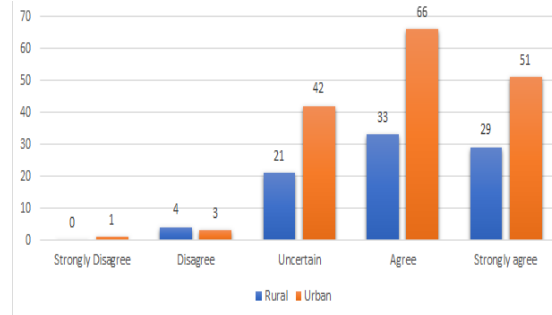


Figure 5. I understand Islamic digital banking is carried on wholly or almost wholly through digital or electronic means based on geographic location

According to figure 5, the majority of respondents who live in urban areas are in agreement with the assertion that Islamic digital banking is conducted fully or almost wholly through digital or electronic means. However, there are four respondents from this group who disagree with the statement. Aside from that, the highest number of respondents from people who live in rural areas also agreed and understood that Islamic digital banking is carried on wholly or almost wholly through digital or electronic means, which totaled 33 respondents. On the other hand, one of the respondents from this category is strongly disagree with the statement.

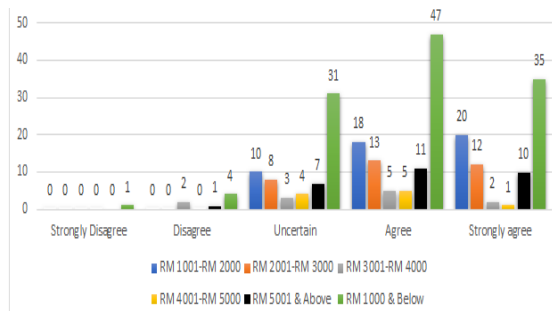


Figure 6. I understand Islamic digital banking is carried on wholly or almost wholly through digital or electronic means based on income level

Based on the Figure above, most respondents with the level of income RM1000 and below agree with the statement. There are 35 respondents in this category who strongly agree and 31 respondents who are uncertain whether Islamic digital banking is carried wholly or almost wholly through digital or electronic medium. However, there are four respondents in this income level who disagree with the statement and there is only one respondent strongly disagrees. Apart from that, there are 20 respondents and 18 respondents from income level of RM1001-RM2000 who strongly agree and agree with the statement, respectively. Then, there are 10 of the respondents who are uncertain with the statement. Meanwhile, there are 13 respondents from income level of RM2001-RM3000 who agree with the statement while 12 of them strongly agree with it. There are only 8 respondents from this

income level are uncertain about this assertion. Five of respondents from income level RM3001-RM4000 agree with the statement while three of them uncertain about this statement. Besides that, there are equal number of respondents in this level income that strongly agree and disagree with this statement in which both have 2 respondents respectively. The majority of respondent from income level RM4001-RM5000 agree with the statement while 4 respondents and one respondent uncertain and strongly agree about the statement. Lastly, 11 respondents from income level RM5001 and above each agree and 10 of them strongly agree that Islamic digital banking is carried on wholly or almost wholly through digital or electronic medium. There are 7 respondents, and one respondent are uncertain and disagree about the statement above.

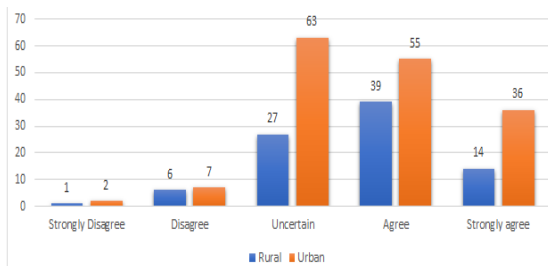


Figure 7. Islamic digital banking transaction is different from online banking transaction based on geographic location

Based on the bar chart in the figure 7, the largest number of respondents from the group of people who are living in urban area across Malaysia are neutral about the statement that Islamic digital banking transaction is different from online banking transaction. Apart from that, there are 55 respondents and 36 respondents from this group are agreed and strongly agreed with the assertion. Apart from that, there are 39 respondents in which largest number of respondents from the group in rural area agreed with the statement. Meanwhile, one of them are strongly disagreed that Islamic digital banking transaction is different from online banking transaction.

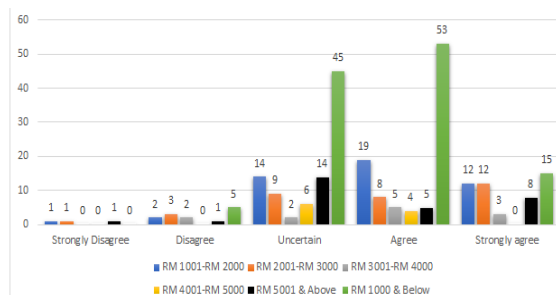


Figure 8. Islamic digital banking transaction is different from online banking transaction based on income level

Based on bar chart above, the largest number of respondents in the level income below RM1000 agree that Islamic digital banking transaction is

different from online banking transaction in which 53 respondents respectively and there 5 respondents in this group of income disagree with the statement. Apart from that, most of respondents from the income level RM 1001-RM2000 agree with the statement while there is only one respondent strongly disagree with the statement. Based on the bar chart above, there five respondents agree with the assertion while the remaining respondents strongly agree, uncertain and strongly disagree that Islamic digital banking transaction is different from online banking transaction. There are six respondents from income level RM4001-RM5000 uncertain with this statement while the remaining 4 respondents are agreed. In addition, the largest number of respondents with income level RM5001 and above are uncertain about Islamic digital banking transaction is different from online banking transaction while the smallest number of the respondents strongly disagree and disagree about the statement.

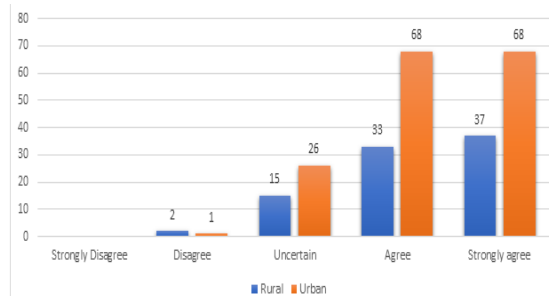


Figure 9. Islamic digital banking is in line with Maqasid al-Shariah on geographic location

According to the bar chart above, the majority of the respondents from urban area are strongly agree and agree that Islamic digital banking is in line with Maqasid al-Shariah in which equally 68 respondents. Apart from that, there are 26 respondents uncertain with the statement while one of them are disagree with the statement. Meanwhile, the respondents who are living in rural places majorly strongly agree that Islamic digital banking is in line with Maqasid al-Shariah while 33 of them agreed with this statement. There are 15 respondents from this group uncertain with this statement while there are two respondents disagree that Islamic digital banking is in line with Maqasid al-Shariah.

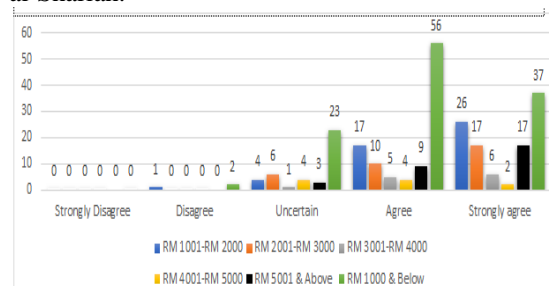


Figure 10. Islamic digital banking is in line with Maqasid al-Shariah income level

According to the above Figure, the larger number of respondents with income level of RM1000 and below agree that Islamic digital banking is in line with Maqasid al-Shariah, which comprises 56 respondents. Meanwhile, 37 respondents strongly agree with the statement and 23 respondents from this income level are uncertain if Islamic digital banking is in line with Maqasid al-Shariah. However, two of the respondents from this level of income disagree with the statement. In addition, the majority of respondents with income level of RM1001-RM2000 strongly agree that Islamic digital banking is in line with Maqasid al-Shariah, which comprises 26 respondents. Besides that, there are 17 respondents in this level of income who agree with the statement while one of them disagree. There are only four respondents and one respondent that uncertain and disagree with this statement. On the other hand, there are 17 respondents from income level of RM2001-RM3000 who strongly agree with the statement and 10 respondents agree that Islamic digital banking is in line with Maqasid al-Shariah. 6 respondents from income level RM3001-RM4000 strongly agree with the statement while 5 respondents and one respondent from this level income agree and uncertain with this assertion. There equal number of respondents from income level RM4001-RM5000 agree and uncertain with the statement in which equal 4 respondent. Lastly, there are 17 respondents from income level of RM5001 and above who strongly agree that Islamic digital banking is in line with Maqasid al-Shariah while 9 of them is agree. There are only 3 respondents that uncertain about the statement.

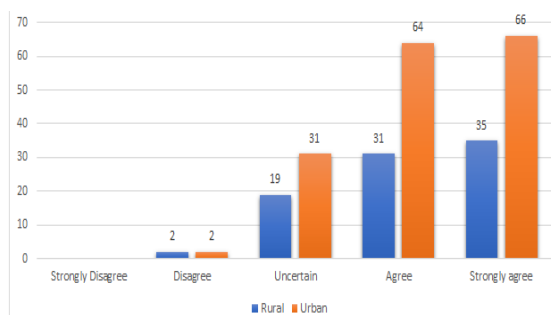


Figure 11. Islamic digital banking is the key financial solution for improving financial inclusion on geographic location

The bar chart above showed that the largest number of respondents from the urban areas are strongly agreed that Islamic digital banking is the key financial solution for improving financial inclusion in which approximately 66 respondents while 64 respondents from this group agreed with the assertion. There are 33 respondents from urban areas are uncertain about the statement and there are only 2 respondents disagree with this statement. Additionally, the largest number of respondents from rural areas are strongly agreed that Islamic

digital banking is the key financial solution for improving financial inclusion while 31 respondents and 19 respondents from this group are agreed and uncertain about this statement. Lastly, there are only two respondents are disagreed that Islamic digital banking is the key financial solution for improving financial inclusion.

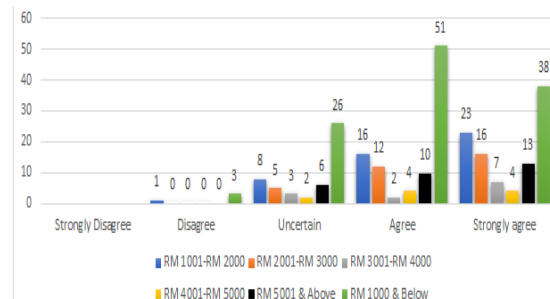


Figure 12. Islamic digital banking is the key financial solution for improving financial inclusion income level

Bar chart above showed that the highest number of respondents with income level below than RM1000 is agreed that Islamic digital banking is the key financial solution for improving financial inclusion while the lowest number of respondents from this group are disagreed with the statement. Meanwhile, there are 23 respondents from the income level group RM1001-RM2000 are strongly agreed that Islamic digital banking is the key financial solution for improving financial inclusion and there is only one respondent disagree with the statement. Moreover, the majority of respondents with income level RM2001-RM3000 agree with this statement while they are only 5 respondents uncertain about it. There are 7 respondents with income level strongly agree with the statement and remaining three and two respondents from this group are uncertain and agreed that Islamic digital banking is the key financial solution for improving financial inclusion. In the other hand, there are equal number of respondents strongly agree and agree with the assertion in which 4 respondents respectively. Last but not least, there 13 respondents strongly agree with the statement while 10 of them are agreed. There are only six respondents uncertain that Islamic digital banking is the key financial solution for improving financial inclusion.

Discussion

Throughout the analysis, the majority of the respondents are living in urban areas compared to rural areas. This is occurred due to the lack of internet coverage in the rural areas. The internet coverage is significant for the development of digital platforms. The digital platform like online banking need to extensive internet coverage in order to penetrate the market of the unbanked population in rural areas. However, it would be a biggest hinder to the Islamic banks to offer the products and services to the underserved population

in Malaysia. In the prior study, it was also mentioned that a high rate of mobile phone and internet penetration in a country has helped to increase the reach of financial services and help unbanked population. This is because these technologies have helped to increase the number of people who have access to the internet. It is now possible to provide traditional banking services even in areas where there are no physically located bank offices because to the proliferation of mobile banking technology. As a result of this branchless banking service, customers can now receive banking services whenever, wherever, and at whatever cost they choose all at a time and place that is both fair and convenient. In addition to this, the people of a country that is struggling economically has reaped significant benefits as a result of the introduction of this internet banking system (Rajesh Barik & Pritee Sharma, 2019).

The findings presented above also demonstrated that the majority of respondents who are in agreement with and understand the concept of Islamic digital banking, the notion of Shariah-compliant digital banking is based on Maqasid al-Shariah and the understanding of digital banking is a key of financial inclusion come from households with lower incomes. The majority of the respondents in these households are students. Students tend to have an understanding of the concept of Islamic digital banking since they have been exposed to information and communication technology (ICT) more than elder generations, which have traditionally had a higher level of affluence. The student is well-versed in contemporary technology because they are constantly exposed to it in their daily lives. The use of information and communication technologies is believed to be routine among this population and is an integral component of their culture and day-to-day existence. Students that are proficient in the use of digital technologies are digital leaders who do more than simply take in knowledge. They are able to synthesize information and apply it in ways that are socially suitable. Students view many forms of technology, including the internet, as a tool and a medium that can help them improve their academic performance and analysis of information (Fu, 2013).

Throughout the findings, the respondents aware that the adoption of Islamic digital banking will offer a better way to enjoy the services and products without having to transact over the counter (bank branch) and cost effective. According to George Okella (2019), the adoption and use of digital banking services through the utilisation of new technology such as mobile phones can significantly increase the delivery of essential financial services to unbanked and underbanked people, particularly

in rural areas of developing nations. This is as a result of the fact that customers and banks alike may see cost savings when using digital banking. Kikulwe et.al (2014) urged that people living in poverty in developing nations may have more access to a wider range of affordable, easily accessible, and trustworthy financial services if their banks adopt digital banking. Indeed, the adoption and use of digital banking can provide additional benefits to financial inclusion by offering access to other financial services such as interest-bearing savings accounts, loans, insurance, and investment products. These additional benefits can be realized because of digital banking ability to offer these services.

Finally, it is clear from the data that respondents consider Islamic digital banking a viable solution for alleviating poverty. More than a quarter of women-headed families in Kenya increased their savings after gaining access to digital banking services, according to research by Suri and Jack (2016). Because of this, they were able to expand their businesses, which ultimately led to a 22% reduction in extreme poverty.

4. Conclusion

Digitalization engagement is one of the challenges that Islamic banking and financial institutions are facing today. Islamic Financial Institutions need to remain competitive and prepare for digitalization and able to respond to the current social challenges, regulatory, technological and economic, optimize the scope of digitalization, and take advantage of new growth opportunities. The primary conclusion from this research is that the community as a whole needs a better understanding of Islamic digital banking that is in accordance with Maqasid al-Shariah in order to realise the goal of financial inclusion. This understanding is necessary in order to ensure the continued development and application of this technology in Malaysia. Aside from that, the service provider needs to discover a solution on how to seize the market gaps of the unbanked population in order to achieve financial inclusion in establishing digital banking. This is a prerequisite for achieving financial inclusion. According to the findings of this study, a broad internet coverage across Malaysia is highly crucial, particularly in rural regions, in order for an Islamic bank to offer the products and services that conform with Shariah to the unbanked population as well as people who live in metropolitan areas. The future researcher needs to find a solution in order to establish a better way to sustain the development of Islamic digital banking in the future. The community will be able to sustain their economy while simultaneously increasing both the standard of their living and the quality of their life as a result of their adoption of Islamic digital banking.

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