

The Relationship between Age and Level of Income with Understanding of Islamic Digital Banking

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Abstract

The rapid growth of information and communication technology development has driven the Islamic banking and finance industry to digitalize all transactions and Islamic banking products to go fully online. However, there is a hindrance in developing Islamic digital banking which is the lack of understanding about Islamic digital banking among Malaysia community from different age and level of income. This study aims to investigate the relationship between age and level of income of Malaysian community with the level of knowledge about Islamic digital banking. This study employed a quantitative survey questionnaire of 100 respondents. The Statistical Product and Service Solutions (SPSS) software version 27 has been used in this study in analysing the data through descriptive analysis. The general finding of this study showed that the young generation and people with lower income have more intention to adopt this new application compared to the older generation and people with higher income. By analyzing these relationships, the research could help Islamic banks tailor their services and products to various demographic groups, enhancing accessibility and understanding. Additionally, the findings might inform policymaking to create a more inclusive financial system, particularly in predominantly Muslim countries. Overall, the study appears to connect the fields of demographics, technology, economics, and cultural studies, potentially providing essential insights for the development and growth of Islamic digital banking.

Keywords: Digital banking; Islamic digital banking; Maqāṣid al-Shariah; Information Communication Technology (ICT); Islamic finance

1.0 INTRODUCTION

The advancement of information communication technology (ICT) has significant impact on various industries. ICT has become a new catalyst with the potential to influence the world's culture, geography, and socioeconomic environment (Nasir & Kalirajan, 2016). The first decade of the twenty-first century saw significant advances in ICT; individuals are now more connected, well-educated, and have better living situations than their forefathers (Mago S, 2015). Apart from that, the evolution of information and communications technology enables an economy to interact with the competitive global network economy in order to attain its socioeconomic and political objectives. The development of ICT has opened the eyes of practitioners in numerous fields, who regard it as a great opportunity since information communication technology may transform their operations from conventional to online, particularly in banking and finance (Cohen et al., 2002).

The impact of ICT has paved the way for the banking and finance industry to be more efficient in serving the customers where banks have been urged to change their operation from over-the-counter services to online banking in order to make their services more convenient, reliable, and accessible to customers (Malali & Gopalakrishnan, 2020). In general, digital banking refers to the digitalization (or shifting online) of all traditional banking operations and services that were previously available to consumers solely within a bank premise. This includes, for example, transfers, withdrawals, and deposits of funds. According to HDFC Bank (2020), digital banking is described as a financial transaction that can be completed entirely online, eliminating the need for traditional documents such as cheques, pay-in slips, and demand drafts. It entails the capacity to do all banking transactions through the internet. Customers may access and do all common banking functions via digital banking seven days a week, without having to physically go to a bank. Digital banking can be done using laptops, tablets, or smartphones as long as the device is connected to the internet. The development of digital banking has become significant due to the urge of increasing number of internet users and smartphone users who demand for reliable, safe, and secure as well as easy to access banking and financial products (S. Ananda, 2020).

Furthermore, the most of Muslims in Malaysia has also demanded for the development of Islamic digital banking as they need to ensure that the services are compliant with Shariah ruling and objectives of Shariah (*Maqāṣid al-Shari'ah*). Shariah compliance in the banking and financial industry aim to provided intended benefits and avoid harmful elements like interest (*Riba'*), uncertainty (*Gharar*) and gambling (*Maysir*) when conducting online dealings (Muhammad Ridhwan Ab. Aziz, 2021). As Allah mentioned in the Quran in Surah al-Baqarah [2] verse 275:

﴿الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ 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: "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."

Islamic digital banking is perceived to be useful to the ummah as it provides Islamic banking and financial products which clearly conform with Shariah laws. It also enables an expanded financial inclusion beyond the traditional geographic reach of physical establishments. As a result, the physical distance between a consumer and a physical banking branch is becoming less important in the era of Islamic digital banking. So, it indicates that Islamic digital banking can facilitate Muslims in rural place and urban place socially and economically in enjoying Islamic banking products (Ridhwan Ab. Aziz et al., 2021). Furthermore, the development of Islamic digital banking enables the promotion of Halal products to non-Muslims in Malaysia, as Halal discourse is recognisable to both Muslims and non-Muslims in Malaysia (Ibrahim & Nordin, 2021).

However, without the understanding and knowledge among the community about any particular new technology would become a hindrance to them to enjoy the new technology. This fact has been endorsed by Van Hove & Dubus (2019) who noted that the digital banking cannot facilitate the community in serving banking products because of certain barrier which is lack of knowledge and awareness in the community about particular aspects of digital banking. Therefore, this study aims to analyse the relationship between age and level of income among Malaysian community with the understanding of Islamic digital banking. This study has employed a quantitative survey questionnaire in order to achieve the objective of the study.

The problem addressed by this study is the lack of comprehensive understanding regarding how age and income levels influence the comprehension of Islamic Digital Banking. Despite the increasing adoption of digital banking services and the significance of adhering to Islamic principles in financial transactions, there is a paucity of research investigating how these demographic factors impact individuals' grasp of this specific banking model. This knowledge gap hinders the development of targeted strategies for enhancing accessibility, education, and outreach within different demographic segments. Thus, this study aims to elucidate the complex interplay between age, income levels, and comprehension of Islamic Digital Banking, with the intention of informing the design of more effective financial products, educational initiatives, and policy frameworks to promote financial inclusion and literacy within the context of Islamic finance.

Critical aspects of this research paper include the use of a quantitative research methodology, which enables the systematic accumulation and statistical analysis of numerical data to reveal correlations between age, income levels, and knowledge of Islamic digital banking services. To ensure the generalizability of findings, it is crucial to employ a stratagem for sampling that incorporates a wide range of demographic groups. Appropriate data analysis techniques, such as regression or correlation analysis, are essential for accurately quantifying the effect of age and income on comprehension while controlling for variables such as education and technology access. The interpretation of quantitative findings goes beyond statistical significance and delves into financial behavior implications. By contextualizing results within cultural and societal contexts, the study aims to establish the relevance of observed relationships to a broader audience. Ethical considerations emphasize participant welfare, and addressing limitations and suggesting future research directions enhance the integrity of the research. Ultimately, deriving actionable policy implications from the quantitative findings enhances the research's applicability by informing strategies for enhancing demographic segment understanding of Islamic digital banking services.

2.0 LITERATURE REVIEW

The thorough study about digital banking has been made by many researchers in recent years. In practise, digital banking is defined as the digitalization (or shifting online) of all traditional

banking operations and transaction services that were previously only available to consumers while they were physically inside a bank branch. Money deposits, withdrawals, and transfers, checking/saving account administration, application for financial products, loan management, bill payment, and account services are among the activities involved. The notion of digital banking is also defined as the process of digitising all banking operations that were previously exclusively available to consumers within a bank branch (Darryl Proctor, 2019). According to Mbama (2018), the introduction of digital banking channels such as telephone banking (t-banking), internet banking (e-banking), and mobile banking (m-banking) has revolutionised the way clients can access the services, putting traditional banking procedures to the test. In the late 1980s, First Direct pioneered the notion of offering services over the phone, which gave birth to digital banking (First Direct, 2014). It has enabled banks to provide multi-channel services, changing how they connect with consumers (Payne, 2017; Cortiñas, 2010).

However, there is limited study in the context of Islamic digital banking. In Islam, Muslims' fundamental financial needs are fulfilled by Islamic banks in conformity with Islamic standards, allowing them to enjoy Shariah-compliant banking services. Shariah rules, or Islamic transaction regulations, strictly adhere to the Islamic commercial law (*fiqh al-mu'amalah*). The rules are based on the Quran and Hadith, as well as secondary sources like Ijma' and Qiyas. According to Shariah law, the funding type should be profit and loss sharing basis, with fixed returns strictly prohibited (Ribā'). Islamic banks commonly refer to conventional banks for industry matters since they provide full-service financial intermediaries, but Islamic banks' operations need to employ Shariah rulings (Riza, 2019).

According to Ridhwan Ab. Aziz & Zakirul Izat (2021), the use of Islamic digital banking is rising in order to meet the needs of Muslims for the digitalization of Islamic financial institutions' goods and services. The goods and services provided by Islamic financial institutions continue to be challenged and to respond to the demands of customers who are accepting of new technological products in order to capture market possibilities while preventing market gaps in the underserved and unserved segments. Then, they further noted that Islamic digital banking development should be in line with the objective of Shariah as the objective of shariah is intended to benefit the community and prevent harm.

In Malaysia, the community has sought and received digital banking services, beginning with Maybank which has introduced the Maybank2u App in September 2014. The app has since had over one million downloads. In February 2015, Maybank introduced another app called Quick Balance, which allows users to easily analyse their account and card balances on mobile devices, appealing to clients who only want to check balances. In 2014, Bank Negara Malaysia reported that there are 5.639 million mobile banking service subscribers in Malaysia, and the Malaysian Communications and Multimedia Commission reported that Malaysia's mobile phone penetration rate is as high as 145 percent in the third quarter of 2014. This shows that the number of mobile banking customers to the rate of mobile phone penetration was still low. Furthermore, when compared to other payment options, mobile banking transaction volume per capita is also quite low (Darmesh Krishanan, 2015). However, Anis Shakirah (2020) stated that PwC has noted a growing demand for digital banks, with 74 percent of Malaysians interested in becoming customers of a virtual bank, revealing that Malaysians are willing to adopt these rather new technology during the Covid-19 outbreak due to the constraint of conducting banking transactions over the counter.

New technology is more commonly accepted by the young generation compared to the older generation. This fact has been supported by Tan (2018) who stated that the millennial generation is an early adopter of new technical goods and services, and they are more likely than prior

generations to use digital banking in the future. EFMA and Oracle Financial Services (2010) urged bank retailers to understand generation Y's requirements and desires if they wish to entice millennial generation consumers to use banking services, because their expectations and perspectives differ from those of prior generations. The use of technological devices dramatically declines at the age of 75 years, when elderly people start to be affected by cognitive and physical impairments (Sperazza, 2012; Klimova, 2017). Education level is another crucial aspect in the acceptance of new technologies. According to the findings of Sperezza's (2012) investigations, older people with higher education are more inclined to embrace and adopt technological equipment than those with lower education. Nonetheless, it is critical to give assistance to the senior citizens in order to increase their acceptance and usage of technology. This may be accomplished by training them and ensuring that the technological equipment meets their specific demands and requirements (Steel, 2009).

According to Righi et al. (2017) technology created for older people should be designed to fulfil the situation and dynamic needs/interests of the communities to which they belong. It has been thought that younger individuals place a higher value on extrinsic incentives of technology use, such as utility. According to Venkatesh (2003), the influence of perceived usefulness on technology usage intention is larger in younger persons than in older ones. On the other hand, elderly citizens may be more procedure-oriented. They are more inclined to examine how much work is required to embrace a new technology and weigh the risks and rewards more thoroughly. Empirical research shows that the relationship between perceived ease of use and technology usage is significantly stronger for older persons, but perceived usefulness has a stronger influence on technology use for younger people (Venkatesh, 2003).

Numerous studies have found that the knowledge and awareness of certain technologies will impact behaviour of people to adopt and accept those technologies (Bhasin & Rajesh, 2021; Choi & Loh, 2023; Riza, 2019; Singh & Rana, 2019; Vats & Maheshwari, 2019). According to the study conducted by Hassan et al. (2018) had emphasized that, the knowledge and awareness of foundation of financial literacy and digital literacy is required for the adoption as Islamic digital banking is a combination of Islamic banking and digital means.

3.0 METHODOLOGY

The quantitative methodology was employed by the researchers in the present study. The questionnaire was utilised since it allows the researchers to obtain information in the most accurate way. A total of 100 respondents had been selected. The respondents were chosen at random by the researchers through a variety of linked parties. Following a thorough survey, data from respondents' responses were statistically evaluated using SPSS version 26. Since each respondent has their own opinion on the subject, the frequency of each variable in the survey questions was examined in this study. The analysis results indicate each respondent's degree of evaluation on numerous parts of this survey. The Cronbach's alpha was used to assess the scale's reliability. A coefficient alpha larger than 0.7 was considered acceptable, more than 0.8 is considered good, and greater than 0.9 is considered exceptional (Nunnally, 1987). Table 1 shows the Cronbach's alpha for all scales to assess the instrument's internal consistency:

Table 1: Exploratory analysis

No	Item
Cronbach's Alpha= 0.73	
1.	Understanding the concept of Islamic digital banking.
2.	Understand that Islamic digital banking is in line with Maqasid Shariah (objective of Shariah).
3.	Understand that Islamic digital banking is carried on wholly or almost wholly through digital or electronic means.

4.0 RESULT

According to the Figure 1 below, most respondents (88 percent) are between the ages of 18 and 28. Meanwhile, respondents between the ages of 40 and 50 are a minority, accounting for only 2% of all respondents. The remaining 10% of 100 responders are between the ages of 29 and 39 years old.

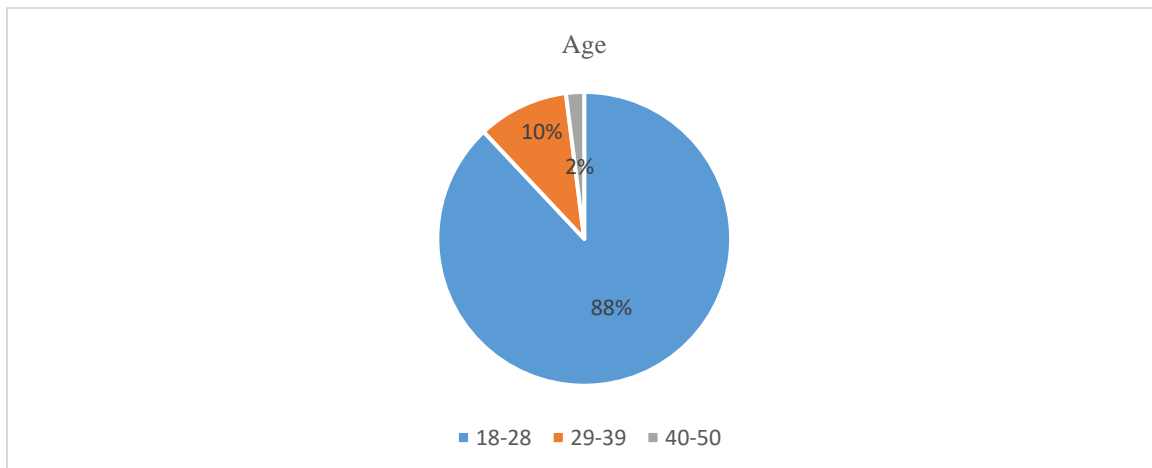


Figure 1: The Age

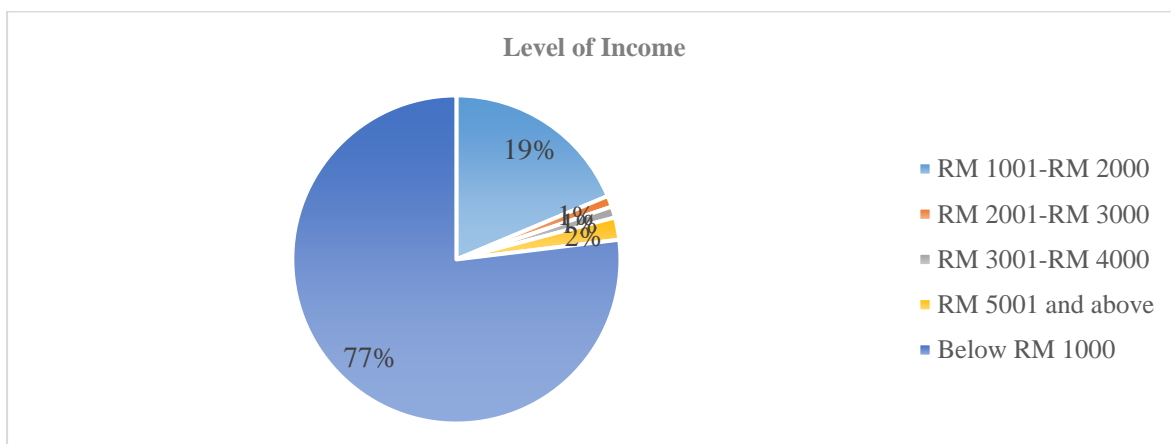


Figure 2: Level of Income

Based on Figure 2 above, most of respondent have less than RM1000 of monthly income which is 77%. Secondly, there are 19% of respondents with RM1001 to RM2000 for their monthly income. However, the respondents with the level of income of RM3001 to RM4000 and RM5001

and above are in the minority where both categories have scored only 1% each. Last but not least, the level of income of respondents between RM2001 and RM3000 is 2%.

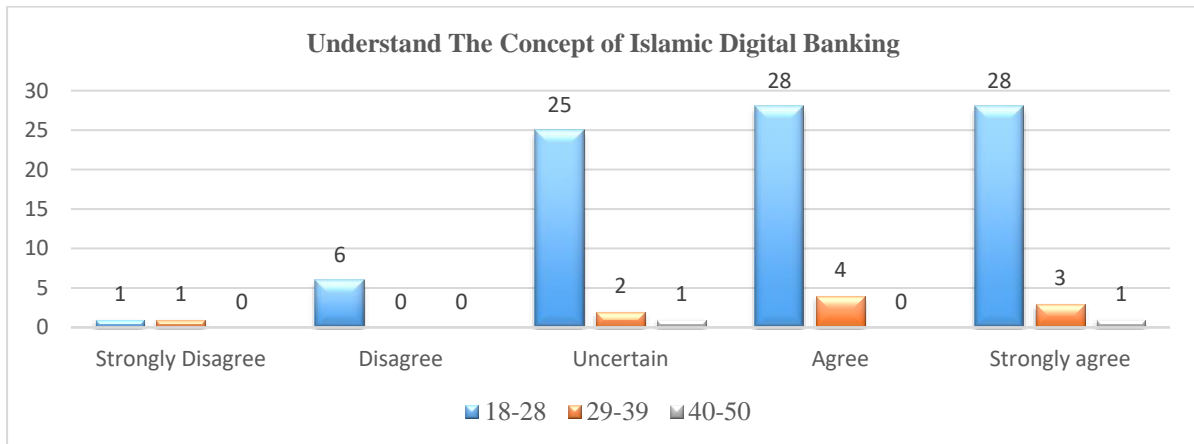


Figure 3: Understanding of the Concept of Islamic Digital Banking Based on the Age

Based on the Figure 3 above, most of the respondents are in the age bracket 18 to 28 years old, and they agree and strongly agree, at 28 respondents each, that they do understand about the concept of Islamic digital banking, which is a process of digitising all transaction and products of Islamic banking and the conduct must conform with Shariah rulings. Meanwhile, 25 respondents from the same age bracket are uncertain about the concept of Islamic digital banking, six respondents disagree, and one respondent strongly disagree.

For the age bracket of 29-39 years old, most of them agree while three respondents strongly agree about the understanding of the concept of Islamic digital banking. Only one respondent strongly disagree and two respondents are uncertain about this concept. Lastly, one of the respondents from the age bracket of 40 to 50 years old strongly agree, while another one is uncertain about the concept of Islamic digital banking.

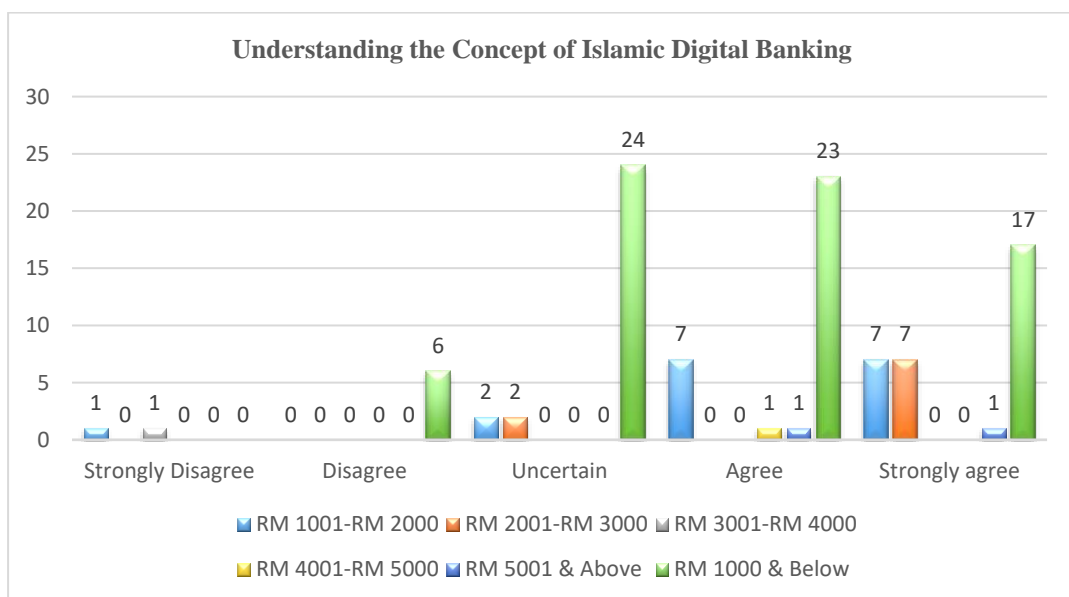


Figure 4: Understanding the Concept of Islamic Digital Banking Based on Level of Income

Based on the Figure 4 above, most of respondents with income level of RM1000 and below are uncertain about the concept of Islamic digital banking, which comprises 24 respondents. Next, there are 23 respondents and 17 respondents in this level of income who agree and strongly agree

that they understand the concept of Islamic digital banking. For the level of income between RM1001 and RM2000, seven respondents agree with the statement while the other seven respondents strongly agree. Meanwhile, there are two respondents who are uncertain about the concept of Islamic digital banking. Most of the respondents in the income level of RM2001 to RM3000 strongly agree with the statement and there are only two respondents who are uncertain about the concept of Islamic digital banking. Apart from that, there is only one respondent from the level of income RM4001-RM5000 who agree that they understand the concept of Islamic digital banking. Lastly, for income level of RM5001 and above, there are two respondents each that agree and strongly agree with the statement.

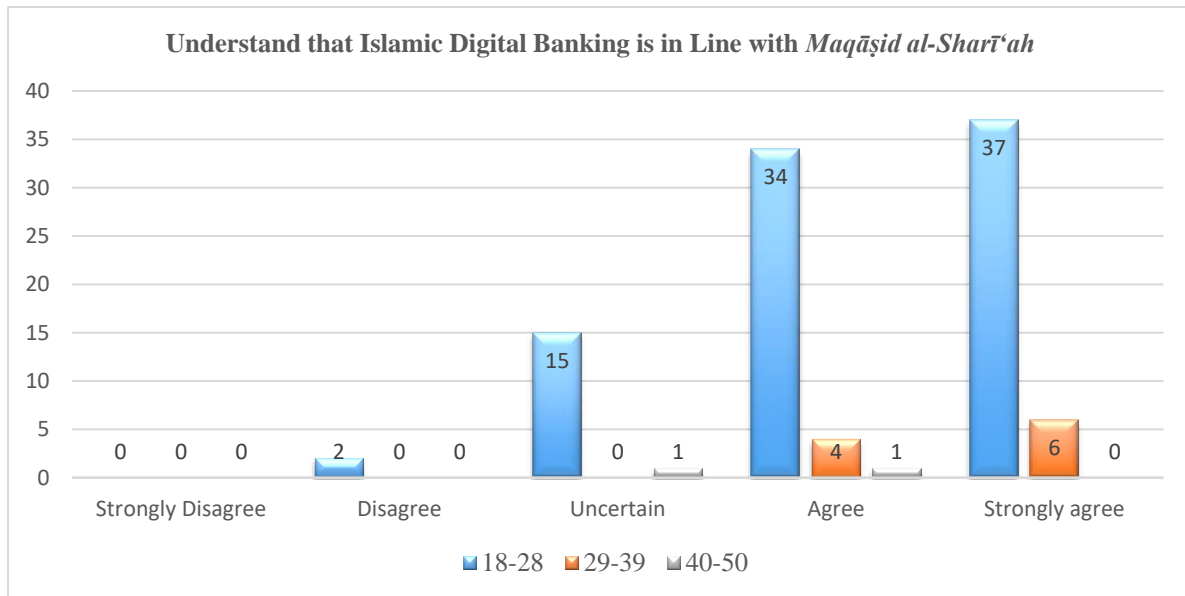


Figure 5: Understand that Islamic Digital Banking is in Line with *Maqāṣid al-Sharī'ah* Based on the Age

According to the Figure 5 above, the most of respondents in category of 18-28 years old strongly agree that Islamic digital banking is in line with *Maqāṣid al-Sharī'ah*. Apart from that, there are 34 respondents in this category who agree while the rest which comprises 15 respondents and two respondents are not uncertain and disagree respectively that Islamic digital banking is based on *Maqāṣid al-Sharī'ah*. Meanwhile, there are six respondents from the 29 to 39 years old age bracket strongly agree that Islamic digital banking is in line with *Maqāṣid al-Sharī'ah* and the rest of respondents from this category agree with that statement. Further, one of the respondents from category 40 to 50 years old agree and another is uncertain about this statement.

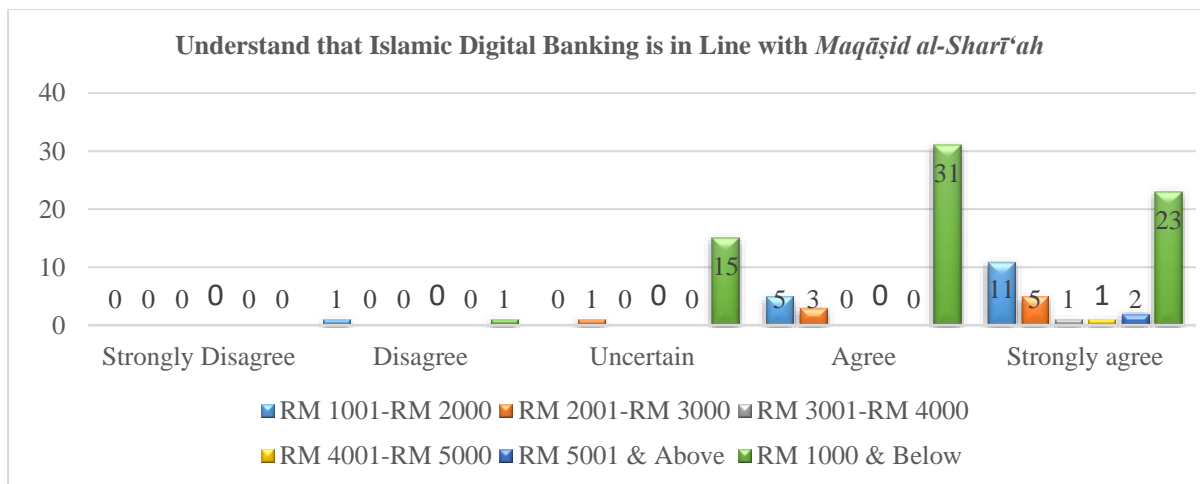


Figure 6: Understand that Islamic Digital Banking is in Line with *Maqāṣid al-Sharī'ah* Based on Level of Income

According to the above Figure 6, most of respondents with income level of RM1000 and below agree that Islamic digital banking is in line with *Maqāṣid al-Sharī'ah*, which comprises 31 respondents. Meanwhile, 23 respondents strongly agree with the statement and 15 respondents from this income level are uncertain if Islamic digital banking is in line with *Maqāṣid al-Sharī'ah*. However, one of the respondents from this level of income disagree with the statement. In addition, most of respondents with income level of RM1001-RM2000 strongly agree that Islamic digital banking is in line with *Maqāṣid al-Sharī'ah*, which comprises 11 respondents. Besides that, there are five respondents in this level of income who agree with the statement while one of them disagree. On the other hand, there are five respondents from income level of RM2001-RM3000 who strongly agree with the statement and three respondents agree that Islamic digital banking is in line with *Maqāṣid al-Sharī'ah*. One respondent from income level RM3001-RM4000 strongly agree with the statement and one respondent from income level RM4001-RM5000 also strongly agree with the statement. Lastly, there are two respondents from income level of RM5001 and above who strongly agree that Islamic digital banking is in line with *Maqāṣid al-Sharī'ah*.

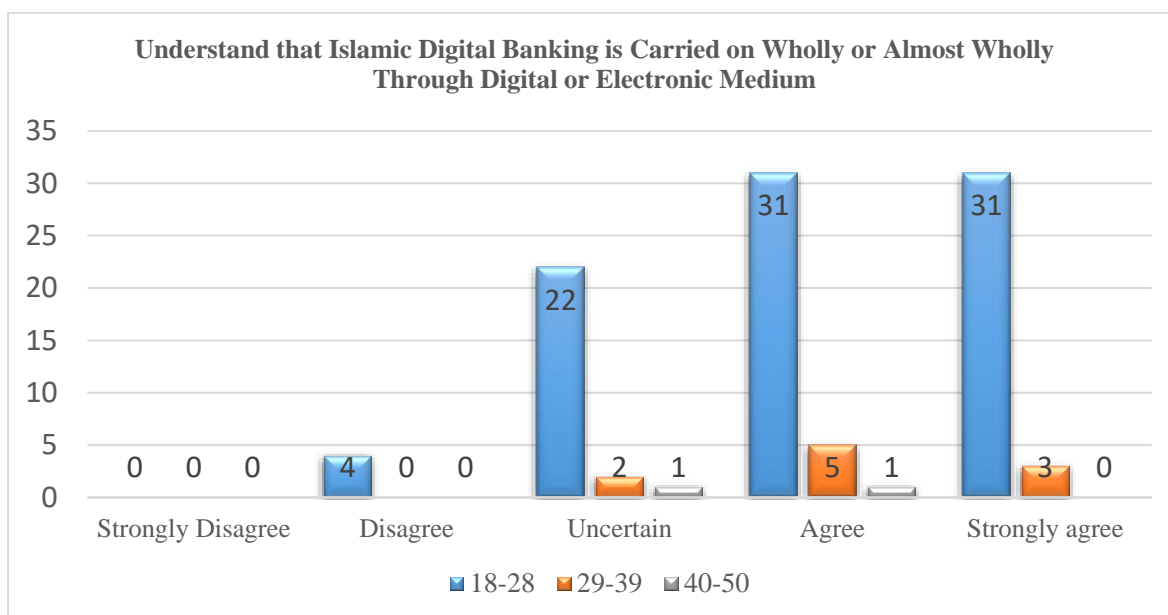


Figure 7: Understand that Islamic Digital Banking is Carried on Wholly or Almost Wholly Through Digital or Electronic Based on the Age

According to Figure 7 above, there are 31 respondents from the age bracket of 18-28 years old who each agree and strongly agree that they do understand Islamic digital banking is carried on wholly or almost wholly through digital or electronic. For this age bracket, there are 22 respondents who are uncertain about the statement and the remaining four respondents from this age bracket disagree. In addition, there are five respondents from the age bracket 29-39 years old who agree with the statement, three respondents who strongly agree while two respondents are uncertain. Lastly, one respondent of the age between 40 and 50 years old agree with the statement, while one respondent is uncertain whether Islamic digital banking is carried on wholly or almost wholly through digital or electronic medium.

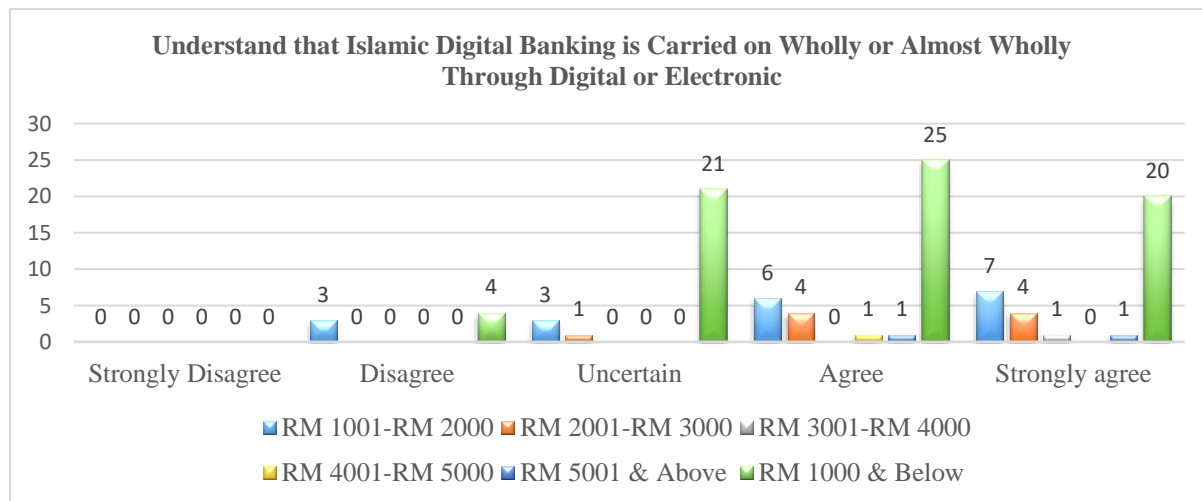


Figure 8: Understand that Islamic Digital Banking is Carried on Wholly or Almost Wholly Through Digital or Electronic Based on the Level of Income

Based on the Figure 8 above, most respondents with the level of income RM1000 and below agree with the statement. There are 20 respondents in this category who strongly agree and 21 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. Apart from that, there are seven respondents and six respondents from income level of RM1001-RM2000 who strongly agree and agree with the statement, respectively. Then, there are equal number of the respondents who are uncertain and who disagree with the statement with three respondents each. Meanwhile, there are four respondents from income level of RM2001-RM3000 who each strongly agree and agree with the statement. One respondent from income level RM3001-RM4000 strongly agree with the statement and one respondent from income level RM4001-RM5000 agree with the statement. Lastly, one respondent from income level RM5001 and above each agree and strongly agree that Islamic digital banking is carried on wholly or almost wholly through digital or electronic medium.

5.0 DISCUSSION

According to the findings above, most of the respondents who agree with and understand about the concept of Islamic digital banking are from the younger generations as opposed to the older generation. This is because younger generations are more likely to have high curiosity, low uncertainty avoidance, and a desire to try new things than older generations, some of whom prefer to make transactions through traditional methods. Furthermore, the younger generation is also more likely to obtain knowledge on Islamic digital banking via websites and social media. Coelho and Duarte (2016) argued that the older generation is isolated because they no longer have access

to social connection. As a result, the elderly people rely heavily on their family members and co-workers for knowledge. However, based on trust, the older generation is becoming more confident in the adoption of technology.

The above findings also showed that the greater number of respondents who agree and comprehend the concept of Islamic digital banking are from lower income households, where the respondents are mainly students. Students appear to understand the notion of Islamic digital banking since they have been exposed to ICT more than the older generation who has a greater degree of income. The student is knowledgeable about modern technology since they live with it. This group's usage of ICT is considered routine and part of their everyday life and culture. Students that are tech-savvy are digital leaders who do more than just absorb information. They synthesise knowledge and apply it in socially appropriate ways. Students perceive technology such as the internet as a medium and instrument for enhancing their studies and information analysis (Fu, 2013).

Apart from that, most respondents who agree and understand that Islamic digital banking is performed wholly or nearly entirely through digital or electronic methods are younger, according to Figure 7. According to Amro Agami and Tiantian Du (2017), this is because young people are more adaptable to new technologies, and young people commonly conduct financial transactions online, such as online transfers, payment for online shopping, bill repayment, and so on compared to the older generation. On the other hand, online transaction is not favoured by older transaction due to trust issue. Older generations' banking experiences differ from those of the younger generation, with the older generation perceiving banks as trustworthy institutions (Saleem Alhabash, 2015).

Finally, as shown in Figure 8, most respondents who agree and understand that Islamic digital banking is handled totally or almost exclusively using digital or electronic medium are from the lowest income category, namely students. This occurred as a result of the students' perception of Islamic digital banking as an online platform that provides a stable and secure environment in which to conduct transactions. Meanwhile, the older generation prefers to perform banking transactions over the counter because they believe it to be the safest method to handle their money. According to Shelia (2016), different generations have differing degrees of confidence in the institution as well as the system in which the technology is integrated. These various types of trust will have a specific impact on new technology.

6.0 CONCLUSION

From the above discussion, the general finding in this study illustrates that a better understanding among the community about Islamic digital banking is significant in order to differentiate it with conventional banking especially among the elderly people in order to achieve financial inclusion goal. The lack of knowledge among Malaysian community about the Islamic digital banking may hinder the development of Islamic digital banking in this country as Malaysia will be adopting Islamic digital banking in the near future. Again, the study regarding Islamic digital banking should be more extensive in order to assist the community and also the practitioners to add to body of knowledge especially since the world is fast moving on to fully online basis operation. Deeper research should be conducted to explore other features and factors that influence the adoption of Islamic digital banking in order to assist the practitioners and the researchers in developing a sustainable Islamic digital banking platform and simultaneously to promote financial inclusion to underserved population either from the young generation or the

older generation. Future research should take into account additional factors including the security and privacy of Islamic digital banking in order to encourage the community to adopt Islamic digital banking in the future. This research has a sample size of less than 200 people. A bigger sample size should be used in future studies to better understand customers' perspectives and attitudes about Islamic digital banking.

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