

**THE ADOPTION OF HALAL APP AMONG YOUNG MUSLIM CONSUMER:  
A STUDY ON ACIS STUDENT, UiTM SHAH ALAM**

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<b>Abstract</b>	<p><i>Smartphones today are one of the best ways to disseminate information. In addition to social media platforms, mobile applications are also gaining popularity, as 230 billion apps were downloaded by users worldwide in 2021. In the last 10 years, many mobile app developers have started to launch their own halal apps with different objectives to serve the halal industry in Malaysia. Unfortunately, the apps are mostly found to be unused or not fully functional, which requires adjustments by app developers. In addition, academic studies on halal applications in Malaysia are still lacking, even though digitization is on the rise, especially in the wake of the pandemic. This research is expected to explore the level of halal app adoption among young Muslim consumers and factors that influence their halal application adoption. This study will be limited to students of ACIS at UiTM Shah Alam, using a quantitative approach with SPSS software for the data analysis. At last, this study will find out how perceived usefulness, perceived ease of use, social influence, trust, religiosity, and design aesthetics will positively influence halal app adoption. In the future, it is recommended for other researchers to continue empirical studies on the halal app using different quantitative methods.</i></p> <p><b>Keywords:</b> <i>Halal, App, Digitalisation, Student Behaviour, Muslim Consumer.</i></p>
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**INTRODUCTION**

Due to the implementation of social distancing during the pandemic COVID-19 across the world, digital connectivity has played an important role in everyone's life. As a result of customers' massive shift to online platforms, businesses and industries have been doing digital transformation to stay competitive in the new environment. According to McKinsey Global Survey of Executives, the pandemic has accelerated the digitization of internal operations and customer interactions by 58% or equivalent to 3 years ahead (LaBerge et al., 2021).

In the Global Halal Industry, digitalization is expected to be one of the key drivers of Islamic economy in the upcoming years as technology investments are rising across the sectors. Among the sector that investors find appealing are food delivery apps, e-commerce apps and Islamic fintech (Alshater et al., 2022). The same trends also happen in Malaysia's halal industry. According to Datuk Ts Hasnul Fadhly Hasan during the Malaysia International Halal Showcase (MIHAS) 2021, "Through digitalisation halal certification evolves to be more efficient and transparent, and this resonates strongly with halal consumers". Since the halal industry has always been a major driver of Malaysia's economy, he emphasizes the need of varying halal ecosystem, innovations and technology pertinent to halal market in order to stay relevant in the industry (Hanum, 2021).

They are also known as Gen Z which is a cohort that getting more exposure to digital and technology compared to other generations during their time as the result of growing in the COVID-19 pandemic. Thus, there is a need for the industry players to understand and cater the demand of this group which mainly revolves around technology and social media. Therefore, this research is set to find out the awareness and the adoption level of halal apps among young Muslim consumers and the factors that influenced them to adopt it based on conceptual frameworks from past studies. This study will focus on ACIS, UiTM Shah Alam students with the usage of quantitative approach through survey questionnaires and library research. The findings reveal how Perceived Ease of Use, Perceived Usefulness, Perceived Innovativeness, Trust, Social Influence, Religiosity and Design Aesthetics will positively influence halal app adoption among young Muslim consumers.

## **LITERATURE REVIEW**

The research regarding to adoption of Halal App is sound rarely especially in Malaysia. Suresh and Sharma (2017) in the Journal of Procedia Computer Science entitled "Factors Influencing Consumers' Attitude Towards Adoption and Continuous Use of Mobile Applications: A Conceptual Model" has tackle the issue of consumer's fickleness and their disinterest in mobile apps that becoming a major concern for app marketers. According to Google, 26% of mobile apps were uninstalled after a single use, and 25% of installed apps never utilised by users. In addition, another industry data reported that, 37% of app engagement lasts under a minute (Malik et al., 2017).

App market is getting huge every year. In 2021, it is reported that 230 billion apps were downloaded by users globally (Ceci, 2022). This increase the need to investigate mobile app usage trend and consumer's behaviour in order to know what can be done to make users continuously use an app. In another study by Mustun (2021) in the International Journal of Islamic Business, the author has come out with one of the first conceptual framework for halal-based apps. In the paper "Factors Influencing the Adoption of Halal App in A Small Island Developing State (SIDS): The Case of Mauritius", the author discussed about the lack of scholarly research on halal-based app despite the big advantages that can be achieved from it such as encourage halal consumerism and increase halal product purchases.

According to Amir Heidi et al. (2016), although a lot of major halal issues have been addressed and taken into action but there are still a few issues that have yet to be settled. One of the common occurrences is the issue of halal logo counterfeiting. This issue is quite tough to handle because it usually happened at the end of halal chain which means it is very easy for the falsified products to reach the consumer. Another issue is consumers nowadays tend to rely more on social media rather than news sources or government websites to get updates and information. In the halal business context, this trend is quite damaging because it catalyst the spread of misinformation and fake news that can cause big loss to the certain companies.

Sanakulov and Karjaluo (2015) mentioned in a paper entitled 'Consumer adoption of mobile technologies: A Literature Review', that Perceived Usefulness, Perceived Ease of Use, Social Norms and Facilitating Conditions are the main determinants

of mobile learning adoption. Quality, prior experience, and system accessibility were also statistically demonstrated to be important factors of adoption, but that is not all. According to Tan et al. (2012), subjective norms are the most important component in adoption, while Chong et al. (2011) prefer cultural characteristics and service quality. However, Cheon et al. (2012) asserted that perceived behavioural control override attitude and social norms the main element in intention to use mobile learning.

## METHODOLOGY

This research has been conducted using quantitative approach where quantitative research can be defined as a process of gathering and interpreting numerical data to identify trends and averages, formulate hypotheses, examine causality, and generalize findings to larger populations (Bhandari, 2020). The method used to collect the data is survey using questionnaire because it is suitable to measure unobservable data such as people's preferences, attitudes, beliefs and behaviours. The survey purpose is to determine the level of awareness and adoption of halal apps among young Muslim consumers which is represented by Halal Industry Management students in UITM Shah Alam.

The set of questions used in the survey is mostly taken from Mustun's previous work with a few additional points. Combined questions are used to guarantee that all necessary information is addressed. This type of questionnaire includes both structured (open-ended) and unstructured (closed-ended) questions. A seven-point Likert scale is used for closed-ended questions to allow respondents to express in detail how strongly they agree or disagree with a specific question. In addition, to ensure respondent's privacy and reduce social pressure, the survey has been conducted anonymously. This method also reduces social desirability bias as respondent feel more comfortable to give their honest answer (McLeod, 2019). The questionnaire has been created using Google Forms because it is convenience as it allows researcher to create and analyse surveys from mobile or web browser without the need to install any software.

The scholarly literature is collected by entering relevant keywords such as "Halal", "Mobile apps", "Halal industry" and "Young consumer". The source is ensured to be only the trustable one such as journal article and academic paper published by public universities or Google Scholar, online newspaper released by recognized news company. Since the data collected is ordinal data so the method of analysis that being used is descriptive analysis. Cronbach's alpha is also measure to ensure the internal consistency of the variables. The software that will be used to analyse the data is SPSS Statistics version 29 and the result is presented in the form of table.

## RESULTS

### Profile of respondents

From 104 responses collected, 78 responses were gathered through Google Forms while the rest 26 responses were collected physically using survey paper. The respondent is divided according to their gender and age is not recorded because the sample was drawn from a location where students of the same age range are present. However, it can be summarized that the respondents are between 22-26 years old. There is an inevitable biased towards females in the sample because the ratio between male students and female students at the faculty is inclining towards females. As a result, 79% of the respondents are female and 21% are male.

Gender	Frequency	Percent
Male	22	21
Female	82	79
Total	104	100

Table 1: Respondent's gender

### Reliability And Validity Assessment

To ensure the internal consistency of variables used in the research, Cronbach's Alpha test has been run on them using Reliability Analysis in SPSS. According to George and Mallery (2003), an output above 0.9 is considered excellent, above 0.8 is good, above 0.7 is acceptable, above 0.6 is questionable, above 0.5 is poor and below 0.5 is unacceptable. Based on the result in the table below, it can be concluded that all the items in each section of the study are stable and consistent because the Cronbach's Alpha values of all variables exceed the bare minimum of 0.7.

Variables	Cronbach's Alpha	Result	Number of items
Perceived Usefulness (PU)	0.942	Excellent	4
Perceived Ease of Use (PEOU)	0.917	Excellent	3
Social Influence (SI)	0.932	Excellent	3
Trust	0.848	Good	3
Religiosity	0.907	Excellent	3
Design Aesthetics	0.923	Excellent	3
App Adoption	0.952	Excellent	3

Table 2: Result of Cronbach's Alpha Test

## DISCUSSION

### Issues That Lead To The Development Of Halal

Media has played a big role in spreading and hastening the process of cultural exchange in the modern era. For instance, the popularity of Korean drama and music has made many people around the world wanted to try Korean food and culture. Similarly, as the food supply chain has become more globalized, Muslims now have access to a wider range of products that are frequently made in non-Muslim countries. As these products were transported with a long distance, there is a bigger chance for dishonest people to falsify the document for their own profit such as by falsely claim a product to be halal. This is one of the reasons that make halal app crucial because not only it can help consumer to verify the halal status but it also can assist the process of product recall in case contamination happens.

Besides that, determining what is halal or not in the modern era has becoming more challenging due to the complexity of the ingredients used. For example, the halal status of food additives such as emulsifier, shortening and colouring are almost impossible to be determined with just a simple glance unless the manufacturers declared it by themselves. Even raw substance can be critical when the sources is unidentified such as oil which can be extracted from animal-based or plant-based.

Moreover, the increase in halal awareness has made Muslims become more conscious about their consumption. As halal promote not only religious benefit but also emphasize the element of safety and quality of the product, a lot of non-Muslims also started to be interested in halal goods. For instance, in Malaysia, a lot of non-Muslim sellers and vendors will use halal ingredients to attract and cater to the demand of Muslim customers whose very sensitive about halal status. In addition, the numerous case of halal logo abuse has put the consumer in dire need of a transparent market where detailed information about halal products will be accessible to everyone.

### The Level Of Awareness And Level Of Adoption Of Halal App

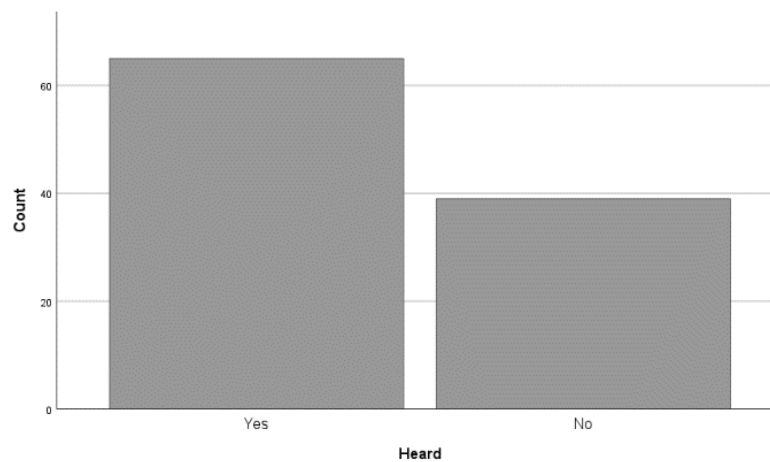


Figure 1: The Level of Halal App Awareness

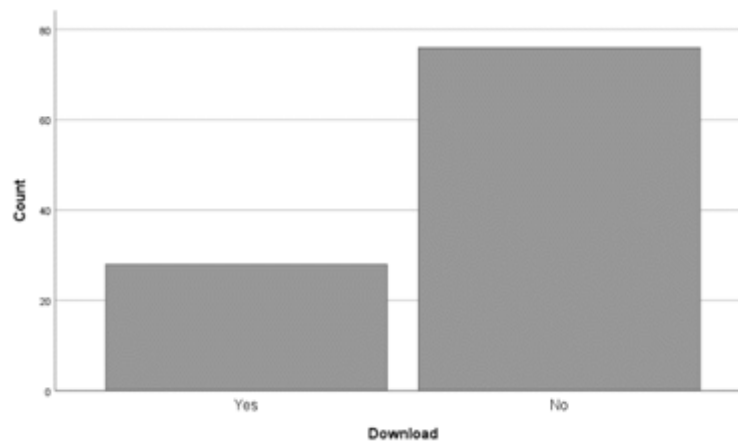


Figure 2: The Level of Halal App Adoption

The first bar chart shows the level of halal app awareness and the second bar chart shows the level of halal app adoption. In response to the first question of whether the respondent is aware of halal app, 63% of respondents claimed that they have heard about halal app while 38% said no. Extending the first question, respondents were also asked whether they have ever downloaded halal app and only 27% of respondents said yes as shown in the upper bar chart, while 73% choose no as shown in the below bar chart. This result shows a huge contrast between the awareness level and adoption level of halal app among young consumers because although a lot of respondents are aware of the existence of halal apps, only a few of them were interested to download it. Moreover, since the question was phrased in the past tense so it is also possible that the respondents have uninstalled the app by the time they fill out the survey.

The third and fourth question is additional question given to respondents who have downloaded any halal app. They were asked to specify the name of halal apps that they used and based on the answer, 11% used Verify Halal, 9% used Smart Halal, 2% used Scan Halal and the rest 5% mentioned various type of apps which is Halal Gig, Quik Halal, Halal Scanner and Halal MUI. This result shows that Verify Halal, Smart Halal are the most well-known halal app among young consumer in Malaysia.

In the fourth question, respondents were asked to tell how they discover the halal app and from 27 respondent who downloaded it, only 13 respondents give the answer. According to the result, 3% discover the app from social media, 3% get recommendation

from their friends, 2% found out from halal seminar and the rest 5% discover it from lecturer, halal community, browsing in Google Play Store, self-searching and self-reading.

## DISCUSSION ON FACTORS INFLUENCING HALAL APP ADOPTION

### Perceived Usefulness (PU)

According to Sanakulov and Karjaluto (2015) who reviewed past studies about the relationship between PU and positive attitude towards technology, they found out that 100% of previous study reported the relationship to be significant and this is once again proved in this study. Based on the result, 85% of respondents agree that buying halal products using halal app will be easier, 81% of agree that buying halal products using halal app will be faster, 87% agree that buying halal products using halal app will be more efficient and 86% agree that halal app is useful. The detailed result is shown in Table 3.

Variables	I think buying halal products will be easier if I use halal app	I think buying halal products will be faster if I use halal app	I think halal app will help me to buy halal products more efficient	I think halal app is useful				
Scales	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	52	50.0	38	36.5	51	49.0	49	47.1
2	28	26.9	32	30.8	32	30.8	29	27.9
3	8	7.7	15	14.4	7	6.7	11	10.6
4	10	9.6	11	10.6	7	6.7	6	5.8
5	4	3.8	2	1.9	3	2.9	5	4.8
6	0	0	4	3.8	0	0	0	0
7	2	1.9	2	1.9	4	3.8	4	3.8

Table 3: Frequency and Percentage of Perceived Usefulness

### Perceived Ease of Use (PEOU)

Perceived Ease of Use is a degree to which a person believes that using a technology is free of effort (Davis, 1989). Based on the result, 82% of respondents agree that it is easy to learn how to use halal app, 81% of respondents agree using halal app will not require much effort and the instructions of halal app is easy to be followed. It is to be noted that some of the respondents have been using halal app before and some did not. However overall, the result shows the respondent's positive attitude towards Perceived Ease of Use of halal app. The detailed result is shown in Table 4.

Variables	I think it is easy to learn how to use halal app	I think using halal app will not require much effort	I think it is easy to follow the instructions of halal app			
Scales	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	33	31.7	26	25.0	23	22.1
2	33	31.7	36	34.6	37	35.6
3	19	18.3	22	21.2	24	23.1
4	14	13.5	14	13.5	14	13.5
5	0	0.0	1	1.0	1	1.0
6	3	2.9	3	2.9	1	1.0
7	2	1.9	2	1.9	4	3.8

Table 4: Frequency and Percentage of Perceived Ease of Use

### Social Influence (SI)

Based on the result, 89% of respondents agree that those who are important to them will support the use of halal apps, 87% agree that those who have the power to affect their behaviour will also do the same and 86% of respondents also believe that those whose opinions matter to them will support using halal apps to buy halal products. Given that the percentage of each result is high although not many of the respondent have used the halal app, researcher arrives to the conclusion that because the Muslim user is believed that the halal app will protect his strictly adhered-to diet. The detailed result is shown in Table 5.

Variables	People who are important to me will appreciate if I use halal app to buy halal products		People who influence my behaviour will appreciate if I use halal app to buy halal products		People whose opinions I value will appreciate if I use halal app to buy halal products	
	Scales	Frequency	Percent	Frequency	Percent	Frequency
1	38	36.5	34	32.7	36	34.6
2	33	31.7	34	32.7	28	26.9
3	22	21.2	22	21.2	25	24.0
4	6	5.8	9	8.7	8	7.7
5	1	1.0	2	1.9	3	2.9
6	1	1.0	1	1.0	1	1.0
7	3	2.9	2	1.9	3	2.9

Table 5: Frequency and Percentage of Social Influence

### Trust

App safety is one of the biggest concerns among mobile phone users. Downloading an app can impose the user to the risk of malware, risk of hacking and risk of data stolen. Therefore, the user's motivation to download and use an app will only improve if the app developer can persuade or at least create the perception that their app is secure. Based on the result, 90% of respondents agree that halal app is trustworthy, 92% agree that the information provided in the halal app is accurate and trustworthy and 82% agree that giving personal information to the halal app is safe. The detailed result is shown in Table 6.

Variables	I think I can trust halal app		I think I can trust the information about halal products given by halal app		I think the security of my personal information in halal app is trustworthy	
	Scales	Frequency	Percent	Frequency	Percent	Frequency
1	39	37.5	41	39.4	26	25.0
2	41	39.4	40	38.5	34	32.7
3	14	13.5	15	14.4	25	24.0
4	5	4.8	3	2.9	13	12.5
5	2	1.9	2	1.9	2	1.9
6	1	1.0	1	1.0	2	1.9
7	2	1.9	2	1.9	2	1.9

Table 6: Frequency and Percentage of Trust

### Religiosity

Dindyal and Dindyal (2003) stated that religion is a significant factor that determines the consumption pattern of people in different societies. Based on the result, 90% of respondents agree that religious beliefs positively influenced the usage of halal app, 93% of respondents agree that the Muslim's obligation to search for halal products can be fulfilled by using halal app and 94% of respondents agree that buying prohibited and doubtful products can be avoided by using halal app. This proves that Muslims will show good attitudes toward any technology or system that they believe can help to safeguard their faith and beliefs. The detailed result is shown in Table 7:

Scales	I think I will use halal app because of my religious beliefs		I think I will use halal app to follow religious command that searching for halal products is an obligation for every Muslim		I think I will use halal app to avoid haram (prohibited) and <i>syubhah</i> (doubtful) products	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	47	45.2	46	44.2	60	57.7
2	33	31.7	39	37.5	31	29.8
3	14	13.5	12	11.5	7	6.7
4	6	5.8	3	2.9	2	1.9
5	0	0.0	1	1.0	1	1.0
6	2	1.9	1	1.0	2	1.9
7	2	1.9	2	1.9	1	1.0

Table 7: Frequency and Percentage of Religiosity

### Design Aesthetics

In this section, a screenshot of Verify Halal and Smart Halal features have been provided as the supporting illustration of the question. Based on the result, 88% of respondents agree that the screen design looks attractive, 86% of respondents agree that design of the apps look professional and 85% of respondents agree that the graphics look helpful. The detailed result is shown in Table 8.

Scales	The screen design looks attractive		The apps look professionally designed		The graphics displayed are helpful	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	34	32.7	30	28.8	33	31.7
2	30	28.8	35	33.7	32	30.8
3	27	26.0	27	26.0	23	22.1
4	7	6.7	6	5.8	11	10.6
5	2	1.9	3	2.9	1	1.0
6	3	2.9	3	2.9	4	3.8
7	1	1.0	0	0.0	0	0.0

Table 8: Frequency and Percentage of Design Aesthetics

### App Adoption

App adoption is a form of technology acceptance which reflect individual's intention and behaviour in utilizing halal app after considering all the intrinsic and extrinsic factor. Based on the result, 89% of respondents admit that they have intention to download halal app in the future, 91% agree that they will frequently use halal app to buy halal products in the future and 86% wanted to recommend halal app to other people. Interestingly, none of the respondent choose "Extremely disagree" for all question. This demonstrate that none of the respondent totally oppose the idea of adopting halal app. The detailed result is shown in Table 9.

Scales	I intend to download halal app in the future		I think I will frequently use halal app to buy halal products in the future		I will recommend others to use halal app	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	44	42.3	39	37.5	48	46.2
2	38	36.5	33	31.7	30	28.8
3	11	10.6	23	22.1	14	13.5
4	8	7.7	5	4.8	9	8.7
5	1	1.0	2	1.9	1	1.0
6	2	1.9	2	1.9	2	1.9
7	0	0.0	0	0.0	0	0.0

Table 9: Frequency and Percentage of App Adoption

## **FINDINGS**

### **The Awareness and Adoption of Halal App**

This research used quantitative method to measure the level of awareness and the level of adoption of halal app among young Muslim consumer represented by Halal Industry Management students in UITM Shah Alam. The result suggests that relevant parties, such as halal app developers and halal agencies, should engage in more promotion and advertising because although the awareness level is good but the adoption level is still low. Users will not aware of the benefits of halal applications if the information about the app is not widely spread.

In addition, the fact that many respondents cited social media and friends as the channels via which they learned about the halal app, it shows that young consumers are highly influenced by trends and peers. Halal organizations can seize this opportunity to promote halal apps using methods that appeal to young people, such as tapping into popular social media platforms, collaborating with young social media influencers, or organizing halal exhibitions at local universities.

### **Factors Influencing Halal App Adoption**

To understand the answer of the respondent in more detail, the mode and median of each variable were analysed. The full results of the mode and median are shown in Table 8. Based on the result, all variables in Perceived Usefulness record 1 (extremely agree) as the mode with a median between 1.5-2.0. From this, it can be concluded that the majority of respondents agree that halal app is useful and it can make the process of buying halal products to be easier, faster and more efficient.

Perceived Ease of Use, in contrast to Perceived Usefulness, indicated a slightly different pattern. Only the variable 'Halal app is easy to learn' record 1 (extremely agree) while the rest of the variables record 2 (quite agree) as the mode that also reflect in the median as it records 2.0. This shows that although the majority of respondents agree that Perceived Ease of Use has an impact on halal app usage but their level of agreement is not as strong as Perceived Usefulness. Also, choosing "Quite agree" shows that respondents have a perception that using halal app is not totally free from effort and following the instructions of halal app is not totally easy.

Interestingly, for Social Influence only variable 'People who influence the behaviour will appreciate the use of halal app' records 1 (extremely agree) and the rest of the variables show a correlation with the frequency result as they record 1 (extremely agree) as the mode. This proves that majority of young people are more influence by their friends compare to their family and other people. Therefore, it can be concluded that social influence had a positive influence on young consumer's intention to use the halal app.

Just like Perceived Ease of Use, trust also indicates a slight decline with two variables record 2 (quite agree) as the mode and only the item "Information in halal app is trustful" record 1 (extremely agree) as the mode. This could be because some of the users already know that halal apps such as Verify Halal and Smart Halal are being monitored by the Department of Islamic Development Malaysia (JAKIM) which explains the high percentage of the result. But overall, the majority of respondents show confidence in using halal apps which indicates that trust has a positive impact on young consumers' intentions to use and adopt the halal app.

According to Yusoff and Kamdari (2014), religion is undoubtedly a vital consideration when choosing Islamic products. This statement was proved in this research as all variables of religiosity record 1 (extremely agree) as the mode. The variable about "Using halal app to avoid prohibited and doubtful things" records the highest number of frequency and percentage among all variable in the research with 57.7% respondents show their agreement with the statement.

Design aesthetics also received a positive result as two out of three variables record 1 (extremely agree) as the mode. Since the sample of the illustration is taken from

the actual Malaysia's halal app, it depicts that app designer is doing a great job with the design. The most important variable is the last variable which is about the intention to adopt halal apps. Positively, all three variables record 1 (extremely agree) as the mode showing that although respondents disagree with some variables but the majority of them were interested to use and adopt halal apps in the future. This indicates that all seven hypotheses are acceptable and significant. The full result of mode and median is shown in table 10.

Variables	Question	Mode	Median
Perceived Usefulness	• Easier	1	1.5
	• Faster	1	2.0
	• More efficient	1	2.0
	• Useful	1	2.0
Perceived Ease of Use	• Easy to learn	1 <sup>a</sup>	2.0
	• Not require much effort	2	2.0
	• Easy to follow the instructions	2	2.0
Social Influence	• People who are important	1	2.0
	• People who influence behaviour	1 <sup>a</sup>	2.0
	• People whose opinions are valued	1	2.0
Trust	• App is trustworthy	2	2.0
	• Information about halal products is accurate	1	2.0
	• Security of personal information is safe	2	2.0
Religiosity	• Use for religious beliefs	1	2.0
	• Following religious command	1	2.0
	• Avoiding prohibited and doubtful products	1	1.0
Design Aesthetics	• Attractive screen design	1	2.0
	• Professional look	2	2.0
	• Helpful graphics	1	2.0
App Adoption	• Intend to download	1	2.0
	• Frequent use	1	2.0
	• Recommend to others	1	2.0

Table 10: Mode and median

### Halal Purchasing Intention

To complete the test on the conceptual framework of factors that influences halal app adoption by Mustun (2021), researcher also asked the respondent about their opinion on purchasing halal products that are found on halal app and 41% of respondents show an extremely high desire to buy products that are found in halal app 36% quite likely to buy and 8% show a slight interest in purchasing and only 5% disagree. As the mode is 1 (extremely agree), it shows that halal app adoption positively affects halal purchasing intention.

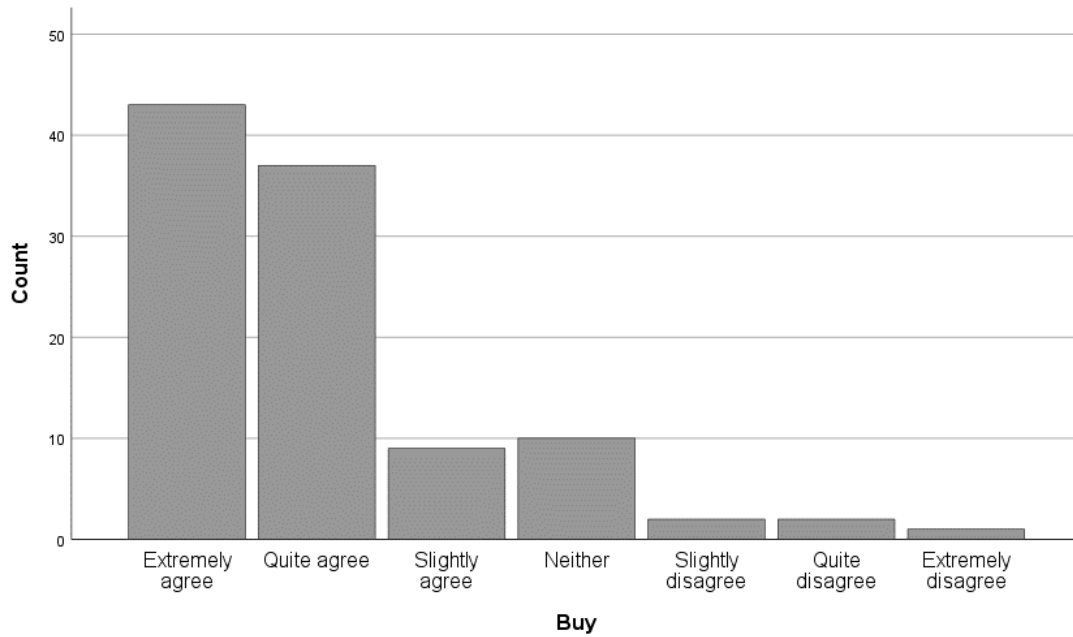


Figure 3: Halal Purchasing Intention

In addition, respondents were asked about the main factor that, in their opinion, affects app adoption among smartphone users. They were asked to choose one from a set of four options. The first option is internal factor that shows how well an app performs. The second is external factor, which includes ratings, comments, and reviews from other users. The third is technical factor that deals with internet accessibility or device storage and the fourth option is personal factor that depicts user awareness and their IT skills. Based on the result, 47% of respondents selected internal factors, 22% external factors, 20% personal factors, and 11% selected technical factors. This result proves that Perceived Usefulness or App Performance Expectancy is the most influential factor that can encourage or hinder a user from using and adopting halal applications.

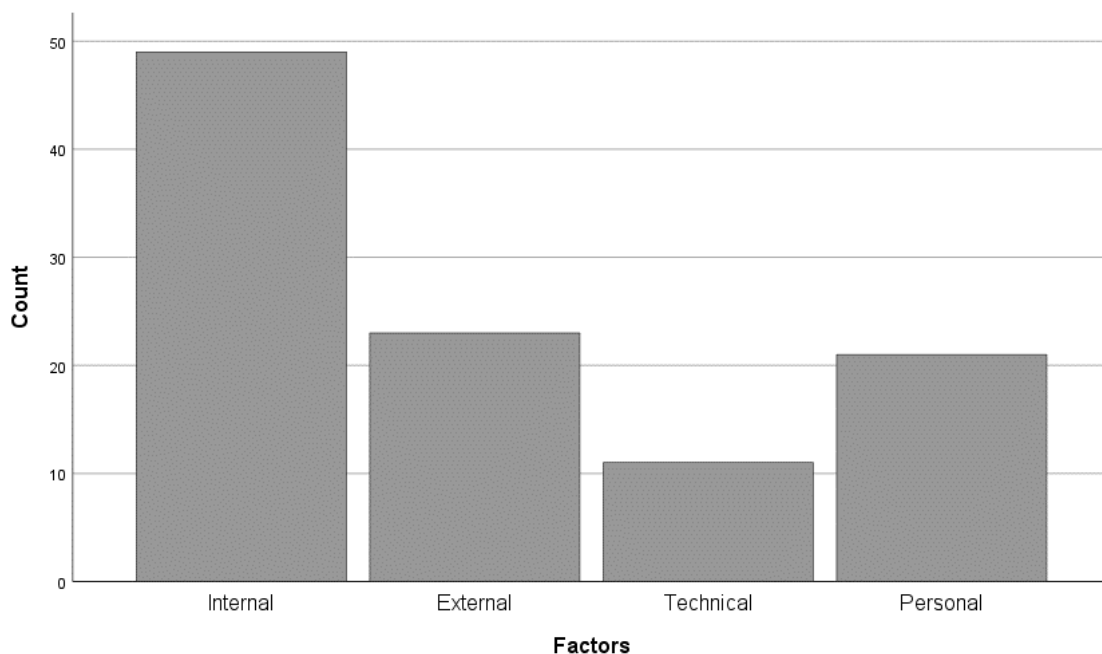


Figure 4: The Biggest Factors Influences App Adoption

## CONCLUSION

In the conclusion, developing halal applications requires a lot of cooperation and support not only from the government but also private sector and society as a whole. Increasing expertise, awareness, and promotion is believed to be the most effective way to improve halal app adoption and the young consumer can be a good target since they already show interest in adopting new technology. Although this paper is still lacking in some aspects, but it is hoped that this research can fill in the literature gap in the study of halal application and at the same time inspire other researchers to explore this topic.

The increase in halal app research and development demonstrates how seriously Muslims regard their faith and how they will go extra lengths to ensure their consumption complies with Islamic law. Simply put, it means that developing halal apps is also a sort of indirect da'wah because it demonstrates how devoted Muslims are to their religion.

## REFERENCES

### Book

George, D., & Mallery, P. (2003). *Using SPSS for Windows Step by Step: A Simple Guide and Reference*. (4th ed.). London: Pearson Education.

### Conference

Amir Heidi, A., Yusop, F. D., & Kamarulzaman, Y. (2016). *Combating Halal misconceptions among Muslims and Non-Muslims: The potential use of mobile learning application*. In 3rd International Halal Conference (INHAC 2016).

### Journal

Alshater, M. M., Saba, I., Supriani, I., Rabbani, M. R. (2022). Fintech in Islamic Finance Literature: A review. *HELIYON*, 8(9), e10385, 1-24.

Cheon, J., Lee, S., Crooks, S.M. and Song, J. (2012). An investigation of mobile learning readiness in higher education based on the theory of planned behaviour. *Computers & Education*, 59(3), 1054-1064.

Chong, J., Chong, A.Y., Ooi, K. and Lin, B. (2011). An empirical analysis of the adoption of m-learning in Malaysia. *International Journal of Mobile Communications*, 9(1), 1-18.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Dindyal, S., & Dindyal, S. (2003). How personal factors, including culture and ethnicity, affect the choices and selection of food we make. *Internet Journal of Third World Medicine*, 1(2), 27-33.

Malik, A., Suresh, S., & Sharma, S. (2017). Factors influencing consumers' attitude towards adoption and continuous use of mobile applications: a conceptual model. *Procedia computer science*, 122, 106-113.

Mustun, I. Z. K. (2021). Factors Influencing Adoption of Halal App in A Small Island Developing State (SIDS): The Case of Mauritius. A Conceptual Framework. *International Journal of Islamic Business*, 6(2), 58-77.

Remali, Y., Nor' Azurah, M. K., (2014). Selection Factors of the Acceptance Al-Ijarah Thumma Al Bay (Aitab) in Kota Bharu, Kelantan. *Malaysian Journal of Business and Economics*, 1(2), 23 – 50.

Sanakulov, N., & Karjaluo, H. (2015). Consumer adoption of mobile technologies: a literature review. *International Journal of Mobile Communications*, 13(3), 244-275.

Tan, G.W., Ooi, K., Sim, J. & Phusavat, K. (2012). Determinants of Mobile Learning Adoption: An Empirical Analysis. *The Journal of Computer Information Systems*, 52(3), 82-91.

### **Website**

Annual number of global mobile app downloads 2016-2021.  
<https://www.statista.com/statistics/271644/worldwide-free-and-paid-mobile-appstore-downloads/> (accessed on 10th November 2023).

COVID-19 digital transformation & technology.  
<https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever> (accessed on 10th November 2023).

McLeod, S. A. (2019). Likert scale. *Simply Psychology*.  
<https://www.simplypsychology.org/likert-scale.html> (accessed on 11th November 2023).

MYNIC joins MIHAS to establish digital halal economy.  
<https://www.nst.com.my/lifestyle/bots/2021/09/726804/tech-mynic-joins-mihas-establish-digital-halal-economy> (accessed on 11th November 2023).

Pritha Bhandari. (2020). What Is Quantitative Research? | Definition, Uses & Methods.  
<https://www.scribbr.com/methodology/quantitative-research/> (accessed on 10th November 2023).

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