

# Demystifying Muslim Consumer Religiosity: Does Sustainability Matter in Halal Food Industry?

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## ABSTRACT

*The recent outbreak of COVID-19 has negatively impacted the global Islamic economy, including the Halal food industry. Despite the pandemic, the Halal food industry continues to survive due to the growing and diverse Muslim population. Thus, researchers focus has shifted to the global Muslim consumers, especially their religiosity. Over the past few years, substantial research has focused on the effect of religiosity in predicting behaviour. Nevertheless, current conceptualisation and operationalisation have limited understanding of the multidimensional nature of religiosity. As such, this scarcity may not reflect the entire phenomenon. This paper aims to identify the Muslim consumer religiosity factors concerning Halal food products. The findings from this study suggest five factors that contribute to Muslim consumer religiosity, including the socio-environmental aspects that are essential pillars of sustainability. This new finding suggests that future research explore the social and environmental responsiveness concerning Muslim consumers in order for Halal practitioners to develop sustainable strategies that cater to Muslim consumer preferences.*

**Keywords:** Muslim Consumers; Religiosity; COVID-19 Pandemic; Sustainability

## INTRODUCTION

The Halal industry is one of the anchors in global Islamic economies. Malaysia has been at the forefront of the Halal industry development, establishing the Halal ecosystem to cater to domestic and foreign markets. Halal Industry Master Plan (HIMP) 2030 projected the global Halal industry market size to be worth USD 5 Trillion in 2030. Halal Development Corporation Berhad (HDC) (2020) reported that the Halal food and beverages industry alone is worth USD 2.1 Trillion. Nevertheless, the recent outbreak of COVID-19 had contracted the world’s economy by 3.3%, and the Muslim spending worldwide decreased by 8% in various sectors of Islamic economies in 2020.

The State of Global Islamic Economy Report 2020/21 projected that the Compound Annual Growth Rate (CAGR) for Pre COVID-19 was 6.2% and for post-COVID-19 is only 3.2% (Dinar Standard, 2021). The worst-hit sector by the pandemic is travel related industry with -70%, while the Halal food industry is the second least badly hit sector with -2.5%. The CAGR forecast for the Halal food industry was recorded at USD1.17 trillion in 2019 to reach USD1.38 trillion in 2024.

**Table 1**  
Global Islamic Economy Indicator, GIEI 2015-2020 (Top Three Countries)

Rank	2015/2016	2016/17	2017/18	2018/19	2019/20	2020/21
1	Malaysia (116)	Malaysia (121)	Malaysia (146)	Malaysia (127)	Malaysia (111)	Malaysia (290.2)
2	UAE (63)	UAE (86)	UAE (86)	UAE (89)	UAE (79)	S. Arabia (155.1)
3	Bahrain (58)	Bahrain (66)	S. Arabia (67)	Bahrain (65)	Bahrain (60)	UAE (133.0)

Note. Extracted from SGIE Report 2015-2021

Malaysia has been leading in the global Islamic economies and for several consecutive years ranked as number one among 83 Muslim-majority countries based on the Global Islamic Economy (GIE) Indicator. As illustrated in Table 1, the GIE indicator serves as the benchmark for the leading national ecosystems and is regarded as the best to support the development of the Islamic economy.

Malaysia has been consistently in the top three in the Halal food sectors for the last six years, as shown in Table 2. It can be a role model for Islamic economic development, especially in the Halal food sector.

**Table 2**  
*GIEI on Halal Food Sector 2015-2020 (Top Three Countries)*

Rank	2015/2016	2016/17	2017/18	2018/19	2019/20	2020/21
1	Malaysia (76)	UAE (75)	Malaysia (97)	UAE (91)	UAE (91.5)	Malaysia (209.8)
2	Pakistan (56)	Pakistan (56)	UAE (67)	Malaysia (81)	Malaysia (74.3)	Singapore (125.2)
3	UAE (53)	Malaysia (55)	Pakistan (60)	Oman (62)	Sudan (66)	UAE (104.4)

Note. Extracted from SGIE Report 2015-2021

The emergence of this industry is also driven by the growing Muslim population globally. The world's Muslim population is expected to reach 2.2 billion by 2030 (Pew Research Center, 2011). Based on the projection by Pew Research Center (Pew Research Center, 2017), the number will continue to increase to 3.0 billion by 2060. According to Vohra et al. (2009), researchers segment Muslims into conservatives, new age Muslims, societal traditionalists, practical strivers and liberals. Researchers suggest this segmentation based on the in-depth religious acceptance within the community (Rishi & Halder, 2015). Each segment responds differently to the markets and trends concerning consumption. Nonetheless, global Muslim consumers are increasingly pushing for Halal products and services (Pew Research Center, 2011). There is evidence of high sentiments on such importance, especially in Muslim-majority countries such as Malaysia.

However, it is vital to recognise that there are variations in the adherences and practices of Islam among Muslims (Pew Research Center, 2011). Thus, religiosity is an important variable when studying Muslim consumers and their behaviour. Religion is a sensitive aspect for Muslims, but this depends on devotedness or religiosity (Said et al., 2014). Muslim consumers may vary in their behaviour due to differences in their religiosity level (Abou Youssef et al., 2011). Religious individuals tend to translate their internal religious beliefs into external consumer behavioural activities (Mokhlis, 2006). Others posited that religiosity represents inherent human values that are observable and more practical to marketers (Newaz, 2014).

Furthermore, many studies have emphasised the role of religiosity in determining the intention to purchase Halal food products. It includes several factors that employed a single dimension of religiosity scale in the Muslim majority population and Muslim minority population (Muslichah, et al., 2019; Khalek, 2015; Yakin and Rahmani, 2018; Elseidi, 2018; Acas & Loanzon, 2020). Despite the differences in contextual setting (i.e. multiple countries, Muslim compositions and cultural diversity), these studies consistently found that religiosity affects awareness and intention to purchase Halal food products. However, according to Jafari (2012), religiosity is not static since it is shaped and altered by incoming knowledge or changing landscape of religion.

Therefore, the existing research might fall short in capturing the multidimensional nature of religiosity in shaping the behaviour of diverse segments of Muslim consumers. Since the conceptualisation and operationalisation are based only on limited dimensions, this scarcity may not capture the concept entirely (Abou-Youssef et al., 2011; El-Bassiouny, 2016; Khraim, 2010; Shukor & Jamal, 2013). Thus, the outcome may not adequately reflect nor explain the Muslim consumer religiosity.

Besides, Malaysian Muslim consumers might provide unique dimensions based on their multicultural diversity and ideal ecosystem for the Islamic economy. Malaysian Muslims hold on to their faith and belief, especially concerning food consumption (Asa & Azmi, 2018). Therefore, this paper aimed to identify the multidimensional religiosity of Muslim consumers as such dimensions might provide new insights on religiosity affecting Muslim consumers in their intention to purchase Halal food products.

## **LITERATURE REVIEW**

A systematic literature review revealed limited but growing research on religiosity and consumers especially concerning Halal food products. A total of 109 research employed either Islamic or Muslim religiosity. However, only 18 articles which is less than 4% emphasised Halal food products which fit the context of this study. These studies were conducted within the 2015-2020 timeline and had almost a similar objective which was to find

out the role of religiosity in determining the purchase intention of Muslim consumers on Halal food products.

Many past studies conceptualised and found that religiosity is either moderating or the antecedent to attitude or intention to purchase Halal food products. There are findings on religiosity that moderate the relationship of purchase intention and its determinants (Elseidi, 2018; Muslichah et al., 2019; Souiden & Jabeur., 2015). Others found that religiosity is the background factor that affects attitude and behaviour (Souiden & Rani, 2015; Briliiana & Mursito, 2017; Yakin and Rahmani, 2018). These works had utilised a more generic religiosity measurement for Muslims (Alam et al., 2012; Rehman & Shabbir, 2010; Abd Rahman et al., 2015).

Moreover, researchers conducted their study on the topic in several Muslim-dominated countries, such as Brunei and Malaysia. Some focused on minority Muslims in the Philippines, Scotland, and Belgium. Muslichah et al. (2019) found that the religiosity of Muslims in Brunei affects the relationship of Halal awareness and intention to purchase Halal food products. These authors asserted that the greater the degree of individual religiosity, the more likely it will be that they will strive to conform to their religious obligation. Thus, religiosity plays an essential role in governing beliefs and behaviour. Research also suggests further investigation is required on religiosity survey instrument and conceptualisation to ensure its robustness.

According to Khalek (2015), religiosity affects Halal food consumption among Malaysian Muslim consumers. The findings show that religiosity is a strong determinant. Yakin and Rahmani (2018) carried out their research focusing on the minority of Indonesian Muslims in Belgium. The findings of their study suggest that Muslims are affected by their religiosity in Halal food consumption and that Indonesian Muslims are prone to consume Halal food as part of their religiosity.

In addition, another research by Elseidi (2018) focused on 400 Arab Muslim communities in Scotland. This study found that Islamic religiosity moderates the effects of the Theory of Planned Behaviour (TPB) or TPB's three determinants of purchase intention of Halal-labelled food products. Acas and Loanzon (2020) employed their research on 444 Filipino Muslims. Their findings suggest religiosity affects the purchase intention of Halal

products. Thus, religiosity plays an essential role in such behaviour apart from TPB's determinants.

These studies have explored consumer behaviour within the consumer decision-making frameworks such as Theory of Planned Behaviour (TPB) and Theory of Reasoned Action (TRA). Religiosity was incorporated into these frameworks and consistently produced a similar result. However, it does not reflect the multidimensional effects of religiosity on purchase intention of Halal food products. Studies not designed to measure or detect multidimensional religiosity are unlikely to find unique variance contributed by these factors. Thus, they can be poor sources of continuing evidence to build research (Berry, 2005; Miller & Thoresen, 2003).

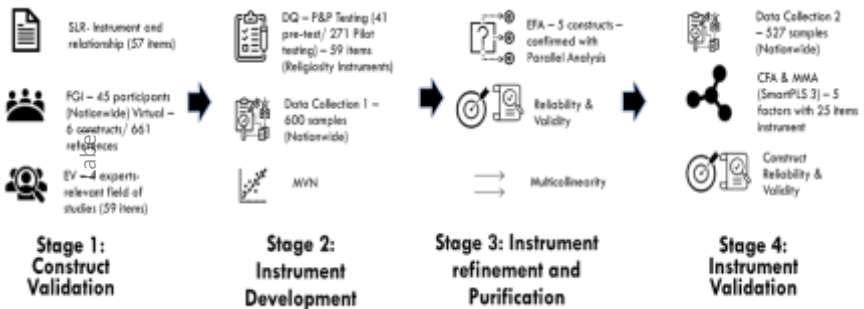
Perhaps, the conceptualisation of religiosity based on gross measures may not capture the concept of religiosity entirely (Manap et al., 2013; Shukor & Jamal, 2013). Although alternatives for multidimensional measurements are available, researchers scarcely adopt them in consumer research, for instance, instruments in the field of psychology (Albelaikhi, 1997; Jana-Masri and Priester, 2007; Abu Raiya et al., 2008; Tiliouine & Belgoumidi, 2009; Krauss et al., 2005; Ji & Ibrahim, 2007). Single dimensional generic measures were widely preferred instead. The outcome may not adequately reflect nor explain the religiosity concerning Muslim consumers. Thus, it is essential to identify the multidimensional religiosity that warrants more in-depth studies.

## **METHODOLOGY**

This study applied exploratory and confirmatory research design in developing the religiosity factors. It was carried out in stages on a diverse Malaysian Muslim population using systematic instrumentation and data collection procedures. This study adopted a sequence of valid and reliable steps for generating and measuring multi-item constructs based on Churchill (1979) and Boateng et al. (2018) as well as assessments on psychometric properties suggested by Hair et al. (2014). This study employed Structural Equation Modelling (SEM) to analyse the data derived from two separate data collections.

Most of the current research in the area is limited to a single dimension instrument measuring religiosity. The process in this study involved four stages, as illustrated in Figure 1. Stage 1 focused on construct development. It started with an extensive literature review on Muslim and Islamic religiosity scales available in the literature. Based on 30 selected instruments and measurements, the content analysis found 998 items mainly on beliefs and practices

**Figure 1**  
*Four Stages of Identifying the Muslim Consumer Religiosity Factors*



Based on Churchill (1979) and Boateng et al. (2018).

The synthesis of contents generated 57 items. This procedure also considered research concerning Halal consumer, ethics and consumer and environment for the item generations. It proceeded with focus group interviews to illicit content not captured in the literature. This research adopted the standard protocol of focus group interview suggested by Bryman and Bell (2007), Breen (2006) and Krueger and Casey (2002). Eight sessions that consisted of five to seven participants were carried out nationwide by focusing only on Malaysian Muslim consumers. As shown in Figure 2, the steps of the virtual focus group were adopted using steps recommended by Marques et al. (2021).

A total of 45 participants were involved in this process. This study adopted a standard coding procedure and thematic analysis (Crabtree and Miller, 1992; Fereday and Muir-Cochrane, 2006). It involved recording the interview sessions, then transcripts were subjected to a coding process and analysed for thematic analysis using NVivo. The results yielded 661 frequencies. It suggested six constructs as shown in Table 3.

**Figure 2**  
Steps for Conducting the Virtual Focus Group Interview



Adopted from Marque et al. (2012).

**Table 3**  
Religiosity Constructs

No.	Religiosity constructs	
	Main Themes	Frequency
1	Religious Belief	143
2	Norms	185
3	Values	74
4	Knowledge	90
5	Social Responsiveness	119
6	Environmental Responsiveness	50
	Total	661

The result from Nvivo Software (Thematic Analysis)

The next step involved expert validation of the constructs. This procedure is adopted based on Grant and Davis (1997) and Lynn (1986). Four selected experts checked and validated the 59 items on religiosity as exogenous variables and 11 items as endogenous variables for the draft questionnaire. The representativeness, clarity and appropriateness of these items were the concern during this process. The criteria for selecting these experts varied based on their background and field of expertise related to the research (i.e. marketing and branding, consumer behaviour and cultural values, Muslim consumer and Halal industry, Shariah and Islamic studies). The experts suggested retaining 59 items that measure religiosity. The experts also suggested keeping the six items measuring brand preferences and five items measuring purchase intention.



Stage 2 focused on developing the draft questionnaire, pre-testing and a pilot test. Items retained from the expert validation were drafted for the initial questionnaire. Due to the suitability of e-form during the pandemic, Google Form was chosen for its user-friendliness, popularity and compatibility with multiple devices. Next, pre-testing focused on 41 respondents. This number was reflective of the actual sample of Malaysian consumers. According to Memon et al. (2017), it requires no statistical analysis at this stage. This study performed adjustments on the grammatical error and additional information.

Subsequently, the pilot testing involving 300 respondents yielded 271 questionnaires which were then subjected to analysis for the pilot testing procedure. Exploratory Factor Analysis (EFA) was carried out. This study used the Kaiser Mayer Olkin and Bartlett test of Sphericity. Several different extraction and rotation methods were employed to derive meaningful factors. After close examination, no items were dropped at this stage. Thus, the actual survey used the 59 items from the pilot test.

The first data collection was a full-scale survey with a target of 600 completed questionnaires. The sample size complies with the subject to item ratio for EFA sample size and general rules of thumb as suggested by Hair et al. (2014), Osborne (2014) and Comrey and Lee (1992). A subject to item ratio of 5:1 to 10:1 were used. Hence the 600 samples for the 59 items on religiosity items would qualify (10:1) or considering the total of 70 items (including endogenous variables) would meet at least an 8:1 ratio. This sample was derived nationwide, based on Malaysian population 2019 statistics provided by the Department of Statistics Malaysia, DOSM.

The multivariate normality analysis was carried out on the 600 samples as recommended by Johnston and Wichern (1992) and Rencher (2002).  $R^2$  for both approaches were 0.951 and 0.940 value of close to 1, almost linear regression suggesting no extreme non-normality. Next, EFA was carried out based on Worthington and Whittaker (2006) and Costello and Osborne (2005). The EFA utilised Maximum Likelihood extraction with Promax Rotation. Then, parallel analysis was employed to retain the appropriate number of factors, as suggested by Buja and Eyuboglu (1992) and Green et al. (2016). It resulted in five Muslim religiosity factors and reliability checked using Cronbach Alpha, as shown in Table 4.

**Table 4**  
*Religiosity Factors*

<b>Items</b>	<b>RB</b>	<b>N</b>	<b>SR</b>	<b>ER</b>	<b>K</b>
B16. Purchasing Halal food products can avoid 'Syubhah' product	0.694				
B29. It is every Muslim duty to purchase and consume Halal products	0.660				
B7. I believe Islamic dietary principles promote individual health	0.654				
B3. Consumption of Halal products is obligatory for Muslims	0.569				
B1. Consumption of Halal products is a form of submission to Allah	0.563				
B46. I check for safety certifications for food products (MESTI and HACCP)		0.715			
B12. I gather information about food products before purchase		0.692			
B33. I prioritize local Halal products even if the quality is relatively low		0.646			
B13. I check the certification of the Halal products for authentication		0.512			
B57. I do not buy from producers/stores that Mix Halal and Non-Halal products		0.505			
B52. I buy Halal products to improve the Muslim socio-economy			0.780		
B53. I support Halal products producer that donates to charity activities			0.734		
B51. I buy Halal food products to support my community			0.671		
B56. I encourage the consumption of Halal products among my family and friends			0.663		
B55. I contribute Halal products in communal activities			0.569		
B24. Halal production minimized resource wastage				0.803	
B28. Halal principles support organic food consumption				0.734	
B27. Halal principles safeguard animals' wellbeing				0.725	

B23. Halal principles promote environmental preservation						0.697
B26. Halal food production avoid harmful ingredient						0.547
B43. I possess good knowledge of Halal products						0.683
B39. I understand the scientific benefits of Halal production and consumption						0.644
B38. I know how to differentiate Halal and non-Halal products						0.643
B37. I understand the concept of Halal						0.568
B19. Consuming Halal products is part of my community practices						0.530
Eigenvalues	8.051	1.978	1.571	1.410	1.235	
% of variance	32.21	7.913	6.285	5.640	4.939	
Cumulative %	32.21	40.12	46.40	52.04	56.04	
Cronbach Alpha	0.774	0.761	0.818	0.778	0.798	

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

Note. RB: Religious Belief, N: Norms, SR: Social Responsiveness, ER: Environmental Responsiveness, K: Knowledge.

Results from EFA using SPSS 27.

Validity assessment includes the assessment of convergent validity. According to Narver and Slater (1990), strong correlations among the factors should portray convergent validity. Moderate to high correlation shows evidence of convergent validity (Gregory, 2007). Results indicate these factors meet such threshold. In addition, factor loading can also confirm convergent validity with cut-off points of 0.5 (Hair et al., 2014). Heterotrait-Monotrait (HTMT) ratio analysis confirmed the discriminant validity with all values below the < 0.85 cut-off threshold. Lastly, according to Hair et al. (2014), VIF of <0.5 indicates no harmful multicollinearity. It is derived based on the regression analysis.

Stage 3 involved the validation of the factors using confirmatory factor analysis (CFA) in line with best practices as suggested in the relevant literature such as Memon et al. (2017), Green et al. (2016) and Hair et al. (2014). A new data set is required to confirm findings in the previous stage (Hair et al., 2014; Memon et al., 2017). Next, the second data collection involved 599 samples. Multivariate Normality (MVN) analysis suggested the non-normality of data. This was followed by the checking and screening of outliers which resulted in 527 usable questionnaires. The nationwide data

collection used quota sampling like the first data collection to ensure it reflected the different backgrounds of Malaysian Muslim consumers.

The Structural Equation Modelling (SEM) was used to develop the measurement model using SmartPLS 3. The research performed model specifications. These changes involved deleting the items. One item from norms and two from knowledge were deleted. The 12% changes in the model to improve the construct reliability and convergent validity is considered minor and allowed without further validation from a new data set (Hair et al., 2014). It is to ensure that the model possesses sufficient reliability and validity. This reduction of items resulted in a 22-item instrument.

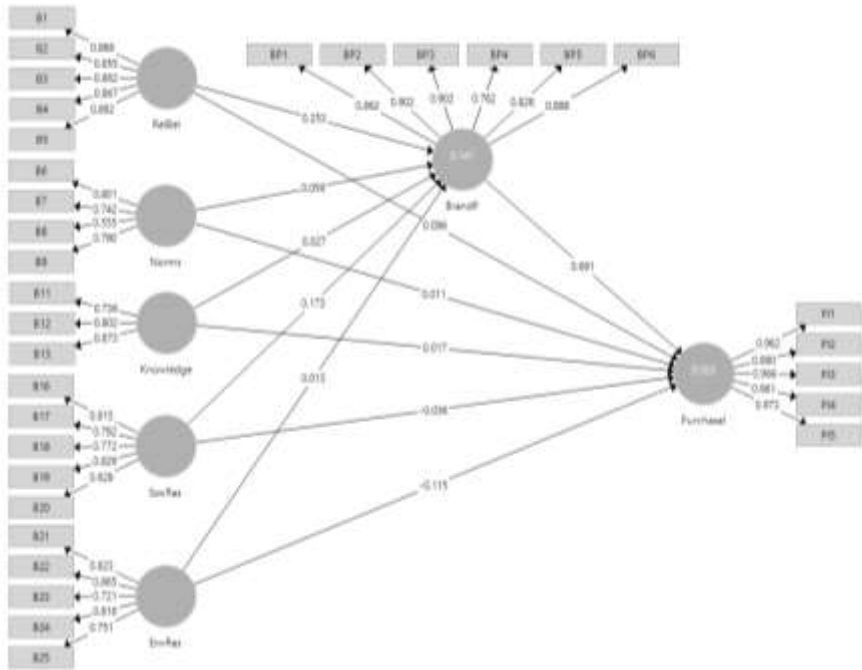
## **FINDINGS AND ANALYSIS**

The discussion in this section focuses on the SEM output using SmartPLS 3 in assessing the measurement model validity. It depends on: (1) establishing an acceptable level of goodness-of-fit for the measurement model and (2) finding specific evidence of construct validity (Hair et al., 2014). The measurement model consists of Muslim consumer religiosity factors, brand preferences and purchase intention, as shown in Figure 3.

The goodness-of-fit featured only Standardised Root Mean Square Residual (SRMR) based on the output available in SmartPLS 3 and resulted in a good fit model with an SRMR value of 0.053. Nunnally (1978) suggested that the internal consistencies can be measured using Cronbach Alpha with the cut-off point of 0.7. The Cronbach Alpha for all the factors were more than 0.7 which met such criteria.

While constructing reliability using Composite Reliability (CR), this measure of internal consistency in scale items suggested sufficient construct reliability of 0.7, as shown in Table 5. In addition, Average Variance Extracted (AVE) also indicated good results meeting the cut-off threshold suggested by Hair et al. (2014) based on the testing system proposed by Fornel and Larcker (1981). Discriminant validity using HTMT ratio analysis reported no issue since all the values met the cut-off value of  $< 0.85$ , as suggested by Kline (2011). Thus, it also established the discriminant validity.

**Figure 3**  
 Measurement Model



The result from SmartPLS 3.

**Table 5**  
 Religiosity Factors

No	Factors	CA	CR	AVE	RB	N	K	SR	ER
1	Religious Belief (RB)	0.92	0.94	0.76					
2	Norms (N)	0.71	0.82	0.53	0.173				
3	Knowledge (K)	0.75	0.85	0.65	0.200	0.620			
4	Social Responsiveness (SR)	0.83	0.88	0.59	0.284	0.667	0.619		
5	Environmental Responsiveness (ER)	0.86	0.86	0.64	0.163	0.728	0.508	0.619	

Based on the CFA and measurement model assessment, the Muslim consumer religiosity is multidimensional. It consists of the following five factors:

**Factor 1: Religious Belief** → This factor refers to Muslim consumers' religious beliefs on food products' purchase and consumption. It highlights the religious belief that the obligation of consuming Halal food products is a duty and responsibility. Besides, this factor also highlights that Islamic dietary principles promote individual health. Lastly, consuming Halal food products can avoid *Syubhah* products (doubtful Halal status).

**Factor 2: Norm** → This factor describes the aspects of religiosity on Muslim consumers' practices that directly or indirectly influence the purchase and consumption of food products. It includes the need to gather information before purchasing, checking for authentic Halal products certification (logo) and safety certification issued by the Ministry of Health such as MESTI or also known as "*Makanan Selamat Tanggungjawab Industri*" and HACCP which is also known as Hazard Analysis and Critical Control Point and prioritising local products despite the relatively low quality.

**Factor 3: Knowledge** → This factor refers to the degree of knowledge of Muslim consumers on Halal food products. It emphasises the understanding of Halal concepts and the scientific benefits of Halal products and consumption. It also includes possessing good knowledge of Halal products and the ability to differentiate between Halal and non-Halal products as well as knowing that consumption of such products is part of community practices.

**Factor 4: Social responsiveness** → This factor describes the religiosity aspects on the degree of Muslim consumer responsiveness to conform to social expectations concerning the purchase and consumption of food products. It highlights the social responsiveness to support the community by purchasing products produced by the Muslim community to improve their socio-economy. It also highlights the support of Halal product producers that donate to charity and focuses on the contribution of Halal products in communal activities. Besides, it encourages the consumption of Halal products among family and friends.

**Factor 5: Environmental Responsiveness** → This factor highlights the aspects of religiosity on the degree of Muslim concern about Halal principles in relation to environment-related production of food products. It focuses on environmental responsiveness towards Halal principles on Halal products. It includes the care on resource wastage, preservation and safeguarding of animal wellbeing. It also involves avoiding harmful ingredients and supporting the consumption of organic products.

## CONCLUSION AND RECOMMENDATIONS

These newly identified factors offer new insights into religiosity and Muslim consumers. Social and environmental responsiveness are additional to previous factors (i.e. religious belief, knowledge and norms or practices). Social and environmental factors are among the essential pillars of sustainability (Hansmann et al., 2012; Purvis et al., 2019; Ranjbari et al., 2021). Thus, this rediscovery emphasises the relationship not only between Mankind and God (*Hablumminallah*) and among mankind (*Habluminannas*) but other creations (*Hablumminal 'Alam*). It enriches our understanding within the Muslim community on the nature of religiosity. This finding on the new additional factors towards religiosity and Muslim consumerism would provide a deeper insight into Muslim consumer motivation and behaviour. Thus, it would help practitioners to develop better strategies and tactics.

The recent World Halal Business Conference in 2021 highlighted the commitment of the Malaysian government's post-COVID-19 recovery Plan (MITI, 2021). The Keynote Address by the Prime Minister highlighted the role of the Halal industry as an essential feature in the National Recovery Plan, with the economic recovery being paramount to the resilience of the overall Muslim majority national economy. It is reflected in the recent Malaysian Budget of 2022 which strengthened the commitment to revitalise the Halal industry. The allocation of RM24 million was aimed to produce more Halal industry players that focus on micro and small enterprises. It would increase the capability and capacity of local Halal producers in catering to domestic and foreign demand on Halal products, especially on food products. Consequently, this effort will further help the national post-COVID-19 recovery plan.

This economic recovery plan takes into consideration the socio-economically disadvantaged, including the Micro, Small and Medium Enterprises in the Halal food Industry. Data from Halal Knowledge Centre revealed that there are 6427 Halal certified companies of which 12% are multinational companies while 1.1% are unspecified. SMEs and Micro make up over 80 % of the Halal-certified companies in Malaysia (HKC, 2021). Therefore, for such strategies to work, SMEs and Micro Enterprises would need to re-strategise their plans. In addition, consumers also need to support local producers. The reciprocal relationship between businesses and consumers is vital. Muslim consumers need to embed their social responsiveness in their commitment to purchase Halal food products. In return, SMEs should deliberate on the welfare of society.

In addition, HDC spearhead of Halal development in Malaysia encourages the Halal sustainable ecosystem. This move is complementary to the COVID-19 recovery plan. As the United Nations (UN) had conveyed messages for an inclusive, resilient and green recovery through regional cooperation in response to the pandemic (UN, 2020), it calls for multilateral actions, regional cooperation and coordination as part of a greater agenda of Sustainable Development Goals (SDGs) by 2030. It signals a more sustainable Halal industry based on values for a greener earth, fundamentally religious values that emphasise global ethics, social welfare, environmental friendliness, quality and sustainability.

Studies found that Muslim consumers emphasised religiosity in purchasing environment-related products. These studies investigated Pro-Environmental Consumer Behaviour (PECB) and environmental orientation and practices (Bhuiyan et al., 2018; Hari Adi & Adawaiyah, 2018). According to Omar et al. (2015), religiosity is significant in determining ecologically-conscious behaviour apart from environmental concerns and perceived consumer effectiveness. These factors of environmentally conscious behaviour suggest that environmental responsiveness is an essential aspect of Muslim consumer religiosity. Hence, emphasising the elements of the environment in the offering of companies' products and services is a crucial and viable strategy.

Lastly, the pandemic reminds the Muslim community that balancing the economic, social, and environmental goals lies in our actions. Al Quran reminds in Surah Ar-Rum, Chapter 30, Verse 41.



ظَهَرَ الْفَسَادُ فِي الْبَرِّ وَالْبَحْرِ بِمَا كَسَبَتْ أَيْدِي النَّاسِ  
لِيُذِيقَهُمْ بَعْضَ الَّذِي عَمِلُوا لَعَلَّهُمْ يَرْجِعُونَ

*Corruption has spread on land and sea as a result of what people's hands have done, so that Allah may cause them to taste 'the consequences of' some of their deeds and perhaps they might return 'to the right path' to righteousness.*

In the case of economic recovery for the Halal industry, the Halal sustainable ecosystem is not merely a slogan but a commitment to drive industry development sustainably. Halal sustainable values are essential as they provide the foundation for a sustainable long-term strategy to cater to Muslim consumer behaviour. Muslim consumers generally observe these values in their religiosity and their intention and preference on consumption, especially on food products and services. Thus, the Halal industry players can go beyond quality standards by enhancing their competitiveness in meeting customers' needs and preferences for greener and socially responsible products in line with the global agenda of sustainable development goals.

In conclusion, Muslim consumer religiosity factors offer new ideas and approaches, beyond beliefs and practices, to cater to Muslim consumers. Muslim consumers manifest their commitment through their social and environmental responsiveness. These factors broaden the concept of religiosity that affects Halal food consumption by considering the relationship between man and others and their environment. Therefore, Halal producers and practitioners need to acknowledge the role of religiosity in shaping Muslim consumer behaviour and developing strategies for greener and sustainable products offered to their customers.

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The authors confirm equal contribution in each part of this work. All authors reviewed and approved the final version of this work.

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## **CONFLICT OF INTERESTS**

All authors declare that they have no conflicts of interest.

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## **REFERENCES**

- Abd Rahman, A., Asrarhaghi, E., & Ab Rahman, S. (2015). Consumers and Halal cosmetic products: knowledge, religiosity, attitude and intention. *Journal of Islamic Marketing*, 6(1), 148-163. <https://doi.org/10.1108/JIMA-09-2013-0068>
- Abou-Youssef, M., Kortam, W., Abou-Aish, E., & El-Bassiouny, N. (2011). Measuring Islamic-driven buyer behavioural implications: A proposed market-minded religiosity scale. *Journal of American Science*, 7(8), 728-741.
- Abu Raiya, H., Pargament, K. I., Mahoney, A., & Stein, C. (2008). A psychological measure of Islamic religiousness: Development and evidence for reliability and validity. *The International Journal for the Psychology of Religion*, 18(4), 291-315. <https://doi.org/10.1080/10508610802229270>

- Acas, S. S., & Loanzon, J. I. V. (2020). Determinants of halal food purchase intention among Filipino muslims in Metro Manila. *Arabian Journal of Business and Management Review*, 10(3), 1- 7.
- Alam, S. S., Janor, H., Zanariah, C. A. C. W., & Ahsan, M. N. (2012). Is religiosity an important factor in influencing the intention to undertake Islamic home financing in Klang Valley? *World Applied Sciences Journal*, 19(7), 1030-1041. <https://doi.org/10.1108/JIMA-09-2013-0068>
- Albelaikhi, A. A. (1997). *Development of a muslim religiosity scale* [Unpublished doctoral dissertation]. University of Rhode Island.
- Asa, R. S., & Azmi, I. M. A. G. (2018). The concept of halal and halal food certification process in Malaysia: Issues and concerns. *Malaysian Journal of Consumer and Family Economics*, 20, 38-50. <https://www.majcafe.com/wp-content/uploads/2018/07/5.-the-concept-of-halal.pdf>
- Berry, D. (2005). Methodological pitfalls in the study of religiosity and spirituality. *Western journal of nursing research*, 27(5), 628-647. <https://doi.org/10.1177/0193945905275519>
- Bhuian, S. N., Sharma, S. K., Butt, I., & Ahmed, Z. U. (2018). Antecedents and pro-environmental consumer behaviour (PECB): The moderating role of religiosity. *Journal of Consumer Marketing*. 25(3), 287-299. <https://doi.org/10.1108/JCM-02-2017-2076>
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioural research: A primer. *Frontiers in public health*, 6, 149. <https://doi.org/10.3389/fpubh.2018.00149>
- Breen, R. L. (2006). A practical guide to focus-group research. *Journal of Geography in Higher Education*, 30(3), 463-475. <https://doi.org/10.1080/03098260600927575>
- Briliana, V., & Mursito, N. (2017). Exploring antecedents and consequences of Indonesian Muslim youths' attitude towards halal cosmetic products: A case study in Jakarta. *Asia Pacific Management Review*, 22(4), 176-184. <https://doi.org/10.1016/j.apmr.2017.07.012>
- Bryman, A., & Bell, E. (2007). *Business research methods* (3<sup>rd</sup> ed.). Oxford University Press.
- Buja, A., & Eyuboglu, N. (1992). Remarks on parallel analysis. *Multivariate Behavioral Research*, 27(4), 509-540. [https://doi.org/10.1207/s15327906mbr2704\\_2](https://doi.org/10.1207/s15327906mbr2704_2)

- Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64-73. <https://doi.org/10.1177%2F002224377901600110>
- Comrey, A. L., & Lee, H. B. (1992). *The first course in factor analysis* (2<sup>nd</sup> ed.). Lawrence Erlbaum Associates, Inc.
- Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation*, 10(1), 1-9. <https://doi.org/10.7275/jyj1-4868>
- Crabtree, B. F., & Miller, W. F. (1992). A template approach to text analysis: Developing and using codebooks. In B. F. Crabtree & W. L. Miller (Eds.), *Doing qualitative research*, 93–109. Sage Publications.
- Dinar Standard. (2021). *State of Global Islamic Economic report: Thriving in uncertainty*. <https://cdn.salaamgateway.com/reports/pdf/862e1c9a9d925c5cd6aacae31b0ea102e21778a9.pdf>
- El-Bassiouny, N. (2016). Where is “Islamic marketing” heading? A commentary on Jafari and Sandikci's (2015) “Islamic” consumers, markets, and marketing. *Journal of Business Research*, 69(2), 569- 578. <https://doi.org/10.1016/j.jbusres.2015.05.012>
- Elseidi, R. I. (2018). Determinants of Halal purchasing intentions: evidence from the UK. *Journal of Islamic Marketing*. 9(1), 167-190. <https://doi.org/10.1108/JIMA-02-2016-0013>
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigour using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80-92. <https://doi.org/10.1177%2F160940690600500107>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Grant, J. S., & Davis, L. L. (1997). Selection and use of content experts for instrument development. *Research in Nursing & Health*, 20(3), 269-274. [https://doi.org/10.1002/\(SICI\)1098-240X\(199706\)20:3%3C269::AID-NUR9%3E3.0.CO;2-G](https://doi.org/10.1002/(SICI)1098-240X(199706)20:3%3C269::AID-NUR9%3E3.0.CO;2-G)
- Green, J. P., Tonidandel, S., & Cortina, J. M. (2016). Getting through the gate: Statistical and methodological issues raised in the reviewing process. *Organizational Research Methods*, 19(3), 402-432. <https://doi.org/10.1177%2F1094428116631417>

- Gregory, R. J. (2007). *Psychology testing: History, principles, and applications* (5<sup>th</sup> ed.). Allyn & Bacon.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. (2014). *Multivariate Data Analysis* (7<sup>th</sup> ed.). Pearson Education.
- Hansmann, R., Mieg, H. A., & Frischknecht, P. (2012). Principal sustainability components: An empirical analysis of synergies between the three pillars of sustainability. *International Journal of Sustainable Development & World Ecology*, 19(5), 451-459.
- Hari Adi, P., & Adawiyah, W. R. (2018). The impact of religiosity, environmental marketing orientation and practices on performance. *Journal of Islamic Marketing*. 9(4), 841-862. <https://doi.org/10.1108/JIMA-09-2016-0067>
- HDC. (2020). *Halal industry master plan, HIMP 2030: Executive Summary*. Halal Development Corporation, HDC. <https://www.hdcglobal.com/wp-content/uploads/2020/02/Halal-Industri-Master-Plan-2030.pdf>
- HKC. (2021) Interactive Dashboard. Malaysia Halal Certified Company by Industry. <https://hkc.hdcglobal.com/member/interactiv>
- Jafari, A. (2012). Islamic marketing: insights from a critical perspective. *Journal of Islamic Marketing*, 3(1), 22-34. <https://doi.org/10.1177/1470593111424184>
- Jana-Masri, A., & Priester, P. E. (2007). The development and validation of a Qur'an-based instrument to assess Islamic religiosity: The religiosity of Islam scale. *Journal of Muslim Mental Health*, 2(2), 177-188. <https://doi.org/10.1080/15564900701624436>
- Ji, C. H. C., & Ibrahim, Y. (2007). Islamic doctrinal orthodoxy and religious orientations: Scale development and validation. *The International Journal for the Psychology of Religion*, 17(3), 189-208. <https://doi.org/10.1080/10508610701402192>
- Johnston, R.A. & Wichern, O.W. (1992). *Applied multivariate statistical analysis*. (3<sup>rd</sup> ed.). Prentice-Hall.
- Khalek, A. A. (2015), *Determinants influencing Halal food consumption among generation Y Muslims in Malaysian private universities*. [Unpublished doctoral dissertation]. The University of Malaya.
- Khraim, H. (2010). Measuring religiosity in consumer research from an Islamic perspective. *International Journal of Marketing Studies*, 2(2), 166-179. <https://doi.org/10.5539/ijms.v2n2p166>
- Kline, R. B. (2011). Convergence of structural equation modelling and multilevel modelling. In M., Williams, & W. P. Vogt, (Eds.). *The SAGE*

- handbook of innovation in social research methods*. Sage Publications.  
<https://dx.doi.org/10.4135/9781446268261.n31>
- Krauss, S. E., Hamzah, A., Juhari, R., & Hamid, J. A. (2005). The Muslim Religiosity-Personality Inventory (MRPI): Towards understanding differences in the Islamic religiosity among the Malaysian youth. *Pertanika Journal of Social Sciences & Humanities*, 13(2), 173-186.
- Krueger, R. A., & Casey, M. A. (2002). Designing and conducting focus group interviews. In R. A. Krueger, M. A. Casey, J. Donner, S. Kirsch, & J. N. Maack (Eds.). *Social analysis: selected tools and techniques*. (pp. 4-23). World Bank.
- Lynn, M. R. (1986). Determination and quantification of content validity. *Nursing Research*, 35(6), 382-385.  
<https://doi.org/10.1097/00006199-198611000-00017>
- Manap, J. H., Hamzah, A., Noah, S. M., Kasan, H., Krauss, S. E., Mastor, K. A., ... & Idris, F. (2013). Prinsip Pengukuran Religiositi Dan Personaliti Muslim. *Jurnal Psikologi dan Pembangunan Manusia*, 1(1), 36-43.
- Marques, I. C. D. S., Theiss, L. M., Johnson, C. Y., McLin, E., Ruf, B. A., Vickers, S. M., ... & Chu, D. I. (2021). Implementation of virtual focus groups for qualitative data collection in a global pandemic. *American Journal of Surgery*. 221(2021), 918-922.  
<https://doi.org/10.1016/j.amjsurg.2020.10.00s>
- Memon, M. A., Ting, H., Ramayah, T., Chuah, F., & Cheah, J. H. (2017). A review of the methodological misconceptions and guidelines related to the application of structural equation modelling: A Malaysian scenario. *Journal of Applied Structural Equation Modeling*, 1(1), 1-13.  
[https://doi.org/10.47263/JASEM.1\(1\)01](https://doi.org/10.47263/JASEM.1(1)01)
- Miller, W. R., & Thoresen, C. E. (2003). Spirituality, religion, and health: An emerging research field. *American psychologist*, 58(1), 24.  
<https://doi.org/10.1037/0003-066X.58.1.2>
- MITI. (2021, September 9). Speech of Prime Minister at WHBC 2021(read by Senior Minister & MITI Minister. [Video].  
<https://www.youtube.com/watch?v=7HyB7FZt5ko>
- Mokhlis, S. (2006). *The influence of religion on retail patronage behaviour in Malaysia* [Unpublished doctoral dissertation]. The University of Sterling.
- Muslichah, M., Abdullah, R., & Razak, L. A. (2019). The effect of halal foods awareness on purchase decision with religiosity as a moderating

- variable: A study among university students in Brunei Darussalam. *Journal of Islamic Marketing*, 11(5), 1091-1104. <https://doi.org/10.1108/JIMA-09-2017-0102>
- Narver, J.C. & Slater, S.F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20-35. <https://doi.org/10.1177/002224299005400403>
- Newaz, F. T. (2014). *Religiosity, generational cohort and buying behaviour of islamic financial products in Bangladesh* [Unpublished doctoral dissertation]. Victoria University of Wellington.
- Nunnally, J. C. (1978). *Psychometric Theory* (2<sup>nd</sup> ed.). McGraw Hill.
- Omar, N. A., Osman, L. H., Alam, S. S., & Sanusi, A. (2015). Ecological conscious behaviour in Malaysia: The case of environmentally friendly products. *Malaysian Journal of Consumer and Family Economics*, 18, 17-34.
- Osborne, J. W. (2014). *Best practices in exploratory factor analysis*. CreateSpace Independence Publishing.
- Pew Research Center (2017). The Changing Global Religious Landscape. <https://assets.pewresearch.org/wp-content/uploads/sites/11/2017/04/07092755/FULL-REPORT-WITH-APPENDIXES-A-AND-B-APRIL-3.pdf>
- Pew Research Centre (2011). The Future of the Global Muslim Population: Projection for 2010-2030. <https://assets.pewresearch.org/wp-content/uploads/sites/11/2011/01/FutureGlobalMuslimPopulation-WebPDF-Feb10.pdf>
- Purvis, B., Mao, Y., & Robinson, D. (2019). Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, 14(3), 681-695. <https://doi.org/10.1007/s11625-018-0627-5>
- Ranjbari, M., Esfandabadi, Z. S., Zanetti, M. C., Scagnelli, S. D., Siebers, P. O., Aghbashlo, M., ..., & Tabatabaei, M. (2021). Three pillars of sustainability in the wake of COVID-19: A systematic review and future research agenda for sustainable development. *Journal of Cleaner Production*, 126660. <https://doi.org/10.1016/j.jclepro.2021.126660>
- Rehman A., & Shabbir, M. S. (2010). The relationship between religiosity and new product adoption. *Journal of Islamic Marketing*, 1(1) 63-69. <https://doi.org/10.1108/17590831011026231>
- Rencher. A.C. (2002). *Methods of multivariate analysis*, (2<sup>nd</sup> ed.). John Wiley & Sons, Inc.
- Rishi, B., & Halder, S. (2015). Demystifying the Islamic Consumer Segments. In *Islamic Perspectives on Marketing and Consumer*

*Behavior: Planning, Implementation, and Control*, 214-230. IGI Global.

- Said, M., Hassan, F., Musa, R., & Rahman, N. A. (2014). Assessing consumers' perception, knowledge and religiosity on Malaysia's halal food products. *Procedia-Social and Behavioral Sciences*, 130, 120-128. <https://doi.org/10.1016/j.sbspro.2014.04.015>
- Shukor, S. A., & Jamal, A. (2013). Developing scales for measuring religiosity in the context of consumer research. *Middle-East Journal of Scientific Research*, 13(1), 69-74. [https://www.idosi.org/mejsr/mejsr13\(cifwm\)13/12.pdf](https://www.idosi.org/mejsr/mejsr13(cifwm)13/12.pdf)
- Souiden, N. & Rani, M. (2015), "Consumer attitudes and purchase intentions toward Islamic banks: the influence of religiosity", *International Journal of Bank Marketing*, 33(2) 143-161. <https://doi.org/10.1108/IJBM-10-2013-0115>
- Souiden, N., & Jabeur, Y. (2015). The impact of Islamic beliefs on consumers' attitudes and purchase intentions of life insurance. *International Journal of Bank Marketing*, 33(4), 423-441. <https://doi.org/10.1108/IJBM-01-2014-0016>
- Tiliouine, H., & Belgoumidi, A. (2009). An exploratory study of religiosity, meaning in life and subjective wellbeing in Muslim students from Algeria. *Applied Research in Quality of Life*, 4(1), 109-127. <https://doi.org/10.1007/s11482-009-9076-8>
- UN. (2020). *COVID-19: Towards an inclusive, resilient and green recovery-building back better through regional cooperation*. <http://www.regionalcommissions.org/COVID19BuildingBackBetterThrougRegionalCooperationFINAL.pdf>
- Vohra, M., Bhalla, G., & Chowdhury, A. (2009). Understanding the Islamic consumer. *Research World*, (February), 40-43.
- Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The counselling psychologist*, 34(6), 806-838. <https://doi.org/10.1037/0022-0167.50.1.84>
- Yakin, A. U., & Rahmani, I. S. (2018, March). *Halal food consumption among the Indonesian Muslim minority in Belgium*. In Kojima, H. Proceedings of the International Workshop on "Halal Food Consumption in East and West", Institute for Asian Muslim Studies, Waseda University, Tokyo. <http://hdl.handle.net/2078.1/196661>



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