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HALAL CHOCOLATE PURCHASE INTENTION AND COMPLIANCE: EXAMINING THE MODERATING ROLE OF RELIGIOSITY AMONG MALAYSIAN MUSLIMS

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ABSTRACT

In Malaysia, the halal chocolate market is relatively less popular than other halal products such as meat and pharmaceuticals. The ingredients in commercial chocolate such as emulsifiers, flavorings, and dairy additives can raise halal compliance issues, an important but underexplored area of research. To date, there is little research attention on halal chocolate within consumer behavior studies. This study fills the gap by investigating religiosity as a moderating factor in halal chocolate consumption, an aspect not previously examined in this context. Using an online survey and convenience sampling method, a total of 252 valid responses were gathered from Malaysian Muslims aged 18 and above. Partial Least Squares-Structural Equation Modeling (PLS-SEM) was used to analyze the data of which findings suggest the significant effect of attitude and religiosity in driving purchase intention, as opposed to halal knowledge. Religiosity strengthens the relationship between attitude and intention, highlighting its crucial role in halal consumer decision-making. This insight shows that religiosity not only shapes halal-related attitudes, but also conditions their impact on behavior, especially in a product category that is often overlooked such as halal chocolate. Theoretically, this study contributes by positioning religiosity as a boundary condition in halal consumer research on top of providing practical guidelines for chocolate manufacturers, marketers, and halal certification authorities in catering to the religious sensitivities of Malaysian Muslim consumers.

Keywords: Halal chocolate, halal knowledge, religiosity, intention, Malaysia, Muslim

INTRODUCTION

Islam sets clear guidelines for its followers on what is permissible, permitted, lawful, and otherwise. In Islam, the classification of what is halal (permitted) or haram (prohibited) is based on the teachings of the Qur'an and Hadith. The concepts of halal and haram underpin the text of the law, divine revelation, and the Muslim's relationship with his Lord, himself, his family, and the entire universe. They function as normative guidelines that influence a Muslim's consumption behavior, where compliance is associated with spiritual well-being, ethical living, and consumer trust, while neglect may result in moral and social repercussions (Hussain et al., 2024; Nandala & Azrak, 2024).

While some rules are open to discussion and personal interpretation, certain Islamic rules are rather clear such as those related to the consumption of food. There is ample evidence from the Qur'an and Hadith commanding a Muslim to only consume halal food. This is decreed by Allah, the Exalted in Surah Al-Baqarah (2:168):

“O mankind, eat from whatever is on earth [that is] lawful and good.”

The hadith of the Holy Prophet SAW (by Tabrani), which is also rendered as S'ad (RA), states:

“O S'ad purify your food (and as a result) you will become one who's supplications are accepted. I swear by He in whose hands the soul of Muhammad (pbuh) lies, verily a servant (of Allah) tosses a Haram morsel in his stomach (due to which) no deed is accepted from him for 40 days.”

Therefore, it is clear that Muslims must only consume halal foods as an expression of Allah's vicegerency. As prescribed by Allah in the Qur'an and Hadith, halal foods are those devoid of prohibited ingredients to Muslims including pork, alcohol, toxins, and unhygienic elements. Halal food must also be processed, produced, or stored in vessels that are clean according to Islamic law. As such, halal foods are safer and healthier to eat, more ethical, and less prone to contamination. It is in fact a reflection of comprehensive goodness (tayyib) in all areas including health, cleanliness, hygiene, and morality (Jailani & Adinugraha, 2022). The halal concept hence goes beyond religious values, making it relevant not only to Muslims but also non-Muslims alike.

Alongside finance, pharmaceuticals, cosmetics, travel, and modest fashion, the halal food industry makes up a significant sector in the global Islamic economy. Globally, the halal food market was valued at USD 2.22 trillion in 2022 and is projected to reach USD 4.1 trillion by 2028 (Herminingsih, 2023). As a globally renowned halal hub, Malaysia's Halal Industry Master Plan 2030 (HIMP 2030) is set to launch the country's halal industry to reach RM 521.6 billion by 2030 (Ignatius, 2023). Halal exports alone stood at RM 59.46 billion in 2022, with food and beverages contributing the largest share (RM 23.35 billion). These figures highlight both the importance and economic potential of the halal food sector for Malaysia. At the same time, with the expanding Muslim population set to reach 2.76 billion by 2050, global demands for halal products are expected to further increase (Sardar et al., 2019). Unfortunately, research has indicated that the global halal food supply is not at par with the expanding population (Haddad et al., 2019). And while academic literature on halal food is growing, further investigation is still needed (Al-Shami & Abdullah, 2023; Haleem et al., 2020; Henderson, 2016), particularly in the Malaysian context (Abdul Khalek, 2014; Ismail & Ismail, 2021).

As the halal food industry is vast, the focus of this study is specifically on halal chocolate, an area that has received very limited scholarly attention. Chocolate is among the most widely consumed confectionery products globally (Tama & Karaş, 2025). Malaysia provides a strategic context as it is Asia's second largest and the world's sixth major cocoa producer (Trade Hub, 2022), accounting for 6.8% of total cocoa grinding

despite limited domestic cultivation. The Malaysian Cocoa Board (2023) reports steady growth in chocolate exports, from 67,955 tons in 2021 to 77,215 tons in 2022. Meanwhile, domestic consumption exceeds that of neighboring countries such as the Philippines and Indonesia (Durai, 2022), underscoring the relevance of studying halal chocolate in this market. This is because its ingredients, including emulsifiers, flavorings, or dairy additives, may contain doubtful or non-halal components, raising concerns for Muslim consumers (Ramlan et al., 2022). Additionally, halal chocolate is widely available in everyday contexts, such as roadside food stalls, desserts, and other confectionery products. Although many sellers are Muslim, allowing consumers to purchase chocolate confidently, a critical question remains: to what extent does the halalness of chocolate influence purchase intention? This study investigates this question by examining attitude, halal knowledge, and religiosity as key drivers of Malaysian Muslims' intention to purchase halal chocolate. Given these factors, examining halal chocolate is both relevant and justified.

Malaysia's substantial Muslim population makes this consumer group particularly important for research. The Department of Statistics Malaysia (DOSM, 2022) reports that Muslims comprise 63.5% or 21.5 million of the overall Malaysian population. Their large number and considerable purchasing power make them a key market segment. Although religion is central in the daily lives of Malaysian Muslims, guiding their personal and consumption decisions, previous studies on halal food indicate a growing but limited understanding of the role of religiosity in consumer behavior (Abdullah et al., 2022). While some research finds that religiosity positively influences halal purchase intention (Karimah & Darwanto, 2021; Suleman et al., 2021), others report mixed or contradictory results (Destiana & Tairas, 2021; Khan et al., 2019; Mukhtar & Butt, 2012). In light of such findings, this study delves deeper into how religiosity, along with attitude and halal knowledge, influences Malaysian Muslims' halal chocolate purchase intention, with religiosity also examined as a potential moderating factor.

Against this background, this study examines the drivers of Malaysian Muslim customers' halal chocolate purchase intention. Guided by the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB), this research extends these models by incorporating halal knowledge and religiosity as additional variables. More importantly, religiosity is examined not only as a direct determinant of purchase intention, but also as a moderating variable in the relationship between attitude and intention. This study hence theoretically broadens the scope of the TRA and TPB to include religious-based values in consumer decision-making, an area rarely addressed in prior halal food studies. This offers new insights into how religiosity interacts with attitudinal factors in shaping halal consumption behavior, particularly in the context of halal chocolate. From a practical standpoint, the findings provide guidance for halal chocolate producers, sellers, and policymakers to better understand the drivers of Muslim consumer behavior, thereby indirectly driving the halal food industry's growth in Malaysia. The next section presents the literature review and how it relates to the formulation of the hypotheses.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Underpinned by the TRA and TPB, this study highlights the significance of attitudes, knowledge, and religiosity in shaping consumer intentions. However, given the scarcity of empirical studies specifically addressing halal chocolate, the literature review draws upon broader research conducted on halal food products. This broader discussion establishes the theoretical and empirical foundation for examining halal chocolate purchase intention as a distinct yet underexplored category within the halal food sector.

Underpinning Theories

This study explores consumer intention using prominent theories namely the TRA and TPB. TRA was developed by Fishbein and Ajzen (1975), and later expanded by Ajzen to become the TPB (Ajzen, 1985;

1991). Although intention has been included as a component of the TRA and TPB with attitudes, subjective norms, and perceived behavioral control proposed as its drivers, Ajzen does not confine himself to these three factors. He asserted that other background factors may also influence intention (Khan et al., 2019). In response to this, some researchers have extended the models by including additional variables related to the study context, while others suggested external variables to test intention. A number of studies have successfully confirmed that intention is in fact driven by determinants beyond the original three variables (Azizan et al., 2022; Vizano et al., 2021; Zulkifli et al., 2023).

In this study, in addition to the original variable of attitude, the factors of halal knowledge and religiosity are also included to test their influence of hala chocolate purchase intention.

Intention

As the key driver of human behavior, intention continues to be the subject of extensive research across a range of areas and disciplines (Nawang & Moses, 2023). Intention is primarily characterized by an individual's subjective possibility of committing a particular action, influenced by one's attitude that leads to conscious behavior (Ajzen & Fishbein, 1985). It is the degree of effort that an individual is prepared to expend to achieve a goal (Ajzen, 1991). Thus, intention is the unwavering desire to achieve one's goals that is unassailable. The stronger the intention, the more effective the behavior (Miller, 2011).

Intention has been extensively studied within the context of halal food (see Amalia et al., 2020; Azizan et al., 2022; Billah et al., 2020; Baharuddin et al., 2015; Hanafiah & Hamdan, 2021; Khalek, 2014; Maichum et al., 2017; Syed et al., 2022; Vongurai, 2022). Findings demonstrate that intention is the result of the interaction between several factors. In the context of this current study, a person's willingness to purchase halal chocolate is assessed by intention, which is influenced by attitude, halal knowledge, and religiosity. Religiosity is proposed as a moderator between attitude and intention.

Attitude

Ajzen and Fishbein (2000) provide a comprehensive definition of attitude, namely, the subjective evaluation and appraisal of a behavior, concept, or object, measured as like or dislike, good or bad, or favor or disfavor. As the definition implies, people can develop both positive and negative attitudes toward certain things, which in turn reflect their beliefs, opinions, preferences, and intents. A more positive attitude results in a stronger intention to perform the expected behavior, and contrarywise.

The predictive power of attitude on intention has been extensively studied (Amalia et al., 2020; Azizan et al., 2022; Billah et al., 2020; Pratama et al., 2023; Setiawati et al., 2019; Shah Alam & Sayuti, 2011; Syed et al., 2022; Vizano et al., 2021; Vongurai, 2022; Wardana & Widowati, 2021). In the context of halal food, Azizan et al. (2022) confirmed that attitude predicts Malaysian Muslims' halal purchase intention. In the context of Indonesia, Setiawati et al. (2019) drew the same conclusion that attitude predicts intention. This finding was also supported by Syed et al. (2022) in the context of Pakistanis and Vongurai (2022) among Thai Muslims. However, Harun et al. (2023), Marmaya et al. (2019), and Zulkifli et al. (2023) found that attitude has no bearing on intention.

Owing to the contradictory results, knowledge of whether or not attitude influences the purchase of halal chocolate continues to be limited. This study hypothesizes that:

H1: Attitude has a positive influence on halal chocolate purchase intention among Malaysian Muslims.

Halal Knowledge

Abd Rahman et al. (2015) define knowledge as facts, feelings, or experiences that are true to an individual or group. It may also be an awareness, consciousness, or familiarity based on experience (Abd Rahman et al., 2015). Knowledgeable people can act intelligently and decide on their subsequent behaviors. The pursuit of knowledge is highly pronounced in Islam as evidenced by the first revelation by Allah Almighty to the Prophet SAW in which He commanded the Holy Prophet to read (Surah Al-Alaq 96). Islam values the pursuit of knowledge and those who possess it.

In the context of this study, halal knowledge refers to one's capacity to discern between halal and haram based on the Shariah law (Salehudin, 2010). Through knowledge, Muslims can reduce doubt (syubhat) by clarifying and distinguishing between these two concepts. As consumers' halal knowledge grows, so does their desire to confirm the 'halalness' of products and services (Nurhayati & Hendar, 2020). Therefore, the impact of knowledge on intention should not be overlooked.

Past studies on halal knowledge have shown that knowledge impacts intention to consume halal food. Baharuddin et al. (2015) avow that knowledge about halal food is significant in influencing consumers' halal product purchase intention. Billah et al. (2020) and Maichum et al. (2017) revealed that knowledge about halal food is highly significant in influencing halal food purchase intention, supporting Baharuddin et al. (2015). Nonetheless, Riptiono (2020) and Wibowo et al. (2020) discovered that halal knowledge has no influence on purchase intent. As the previous findings were inconclusive, this current study sets out to examine the relationship between halal knowledge and purchase intention among Malaysian Muslims in greater depth. Consequently, the second hypothesis is postulated:

H2: Halal knowledge has a positive influence on halal chocolate purchase intention among Malaysian Muslims.

Religiosity

Religion, regardless of religious orientation, influences people's behavior in all areas of life so that they live according to the codes, morals, and rules it promulgates, thus contributing to the formation of attitudes and values. Religion has been confirmed as a key predictor of human behavior (see Delener, 1994; Essoo & Dibb, 2004). As religion is so important in people's lives, it shapes not only their beliefs but also consumption intention and attitude (Jamal, 2003; Said et al., 2014) including food choices (Eid, 2020).

Religion and religiosity are often used interchangeably, but they refer to two different concepts. Religion has divine origins, whilst religiosity is human-oriented and represents a behavioral model (Awada, 2018). Religiosity is defined by Ibrahim and Ismail (2015) as a complex and broad concept encompassing a broad range of religious or faith-related behaviors, attitudes, beliefs, feelings, and experiences. Johnson et al. (2001) defines religiosity as an individual's level of commitment to his religion, as reflected in his behavior and attitude.

According to Elseidi (2018), religious people tend to incorporate their religious beliefs into every aspect of their behavior and actions. Religious Muslims tend to stay away from doubtful activities and only consume halal foods (Suleman et al., 2021). Therefore, people who are intrinsically religiously motivated tend to have a strong foundation of beliefs that is reflected in their attitude (Eid, 2020) and are more likely to follow religious norms (Bonne et al., 2007).

Previous research has indicated that religiosity drives halal food purchase intention (Ahmadova & Aliyev, 2021; Amalia et al., 2020; Mukhtar & Butt, 2012; Rahim et al., 2021; Wardana & Widowati, 2021). However, Hanafiah and Hamdan (2021) came to a different conclusion. With such contradictory results,

the relationship between these variables should be further explored, leading to the third and fourth hypotheses:

H3: Religiosity has a positive influence on the attitude to purchase halal chocolate among Malaysian Muslims.

H4: Religiosity has a positive influence on the intention to purchase halal chocolate among Malaysian Muslims.

Religion is always present in people’s attitudes, behavior, intentions, and other aspects of life. As a result, religiosity has been proposed as a moderating variable as per Awan et al. (2015) and Haque et al. (2017). Following their recommendations, researchers (see Elseidi, 2018; Juliana et al., 2021; Patwary et al., 2018; Usman et al., 2022) have attempted to test the moderating effect of religiosity in the relationship between purchase intention and decision in different research contexts. Elseidi (2018) and Juliana et al. (2021) reported that religiosity successfully moderates the relationship between attitude and intention to purchase halal food. However, Memon et al. (2020) drew a contradictory conclusion. Hence, there is a need to further examine the moderating role of religiosity in this context, leading to the fifth hypothesis:

H5: Religiosity has a moderating effect on the relationship between attitude and intention to purchase halal chocolate among Malaysian Muslims.

Conceptual Framework

To achieve the study’s objectives, a research model and several hypotheses were developed based on the literature review, as shown in Figure 1.

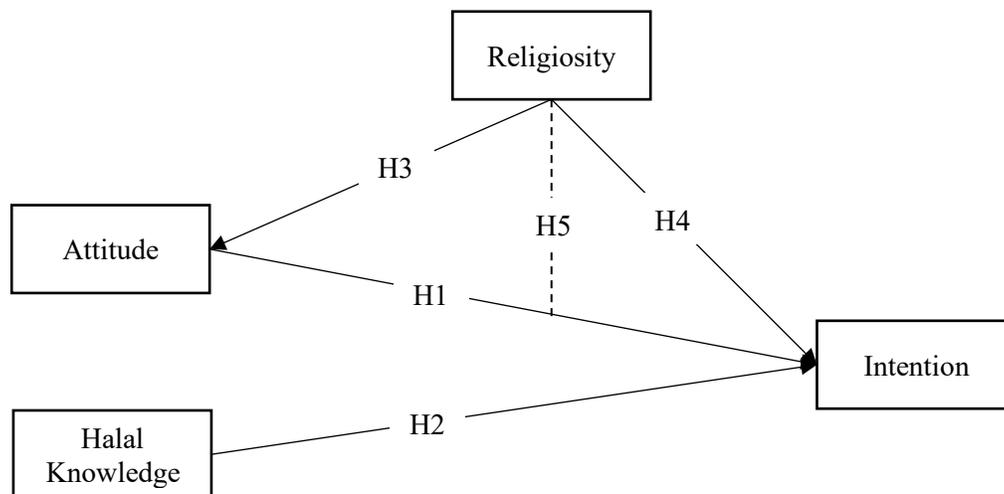


Figure 1. Conceptual framework and hypotheses

METHODOLOGY

A quantitative approach was adopted in investigating the effects of attitude, halal knowledge, and religiosity on purchase intention. An online survey using Google Forms was employed to gather the needed data, disseminated across various social media platforms such as WhatsApp, Twitter, and Facebook. The use of an online questionnaire allowed the researchers to gather data quickly, conveniently, and cost-effectively from a large pool of respondents. Additionally, Google Forms provide built-in validation features to ensure that all the questions were answered completely before submission.

Sample and Sample Size

Respondents were recruited using a non-probability convenience sampling technique, which enabled the researchers to reach the participant easily. While this approach facilitated efficient data collection, it also comes with limitations. Online surveys may introduce sampling bias, as individuals with limited internet access or low social media activity may be underrepresented (González-Bailón et al., 2014). Furthermore, reliance on convenience sampling restricts the generalizability of the findings, as the data may not fully represent the wider Malaysian Muslim population (Peterson & Merunka, 2014). These methodological constraints are acknowledged, rendering caution when interpreting the results.

Malaysian Muslims aged 18 years and above make up the study population, reflecting the largest and most dominant demographic group in the country at 63.5% or approximately 21.5 million people (DOSM, 2022). Chocolate, being a universally enjoyed product across age groups, makes this segment particularly relevant as they represent active consumers and key household decision-makers. To ensure the inclusion of only the intended population, the survey included filter questions that allowed only Malaysian Muslims to proceed. This criterion was essential because the study not only investigates halal chocolate consumption, but also the moderating role of religiosity, a factor closely tied to Islamic faith and practice.

The Partial Least Squares-Structural Equation Modelling (PLS-SEM) is the most commonly used method for sample size determination. It follows Hair et al.'s (2011) "10 times rule" method whereby the sample size is assumed to be 10 times greater than the highest number of inner or outer model links related to any of the model's latent variable. Since the path analysis in this study consists of five parameters, the recommended sample size based on the 10 times rule is 50 samples. Thus, 252 samples are required.

Measurement

The measurement items for all the variables had been used and validated in previous studies, and were modified in this study to measure halal chocolate purchase intention. The variable of intention, which consisted of three items adapted from Ajzen (1991), aimed to measure the intention of respondents to buy halal chocolate. The four-item attitude measure was also adapted from Ajzen (1991) to determine the respondents' attitude towards halal chocolate. The variable of halal knowledge, measured using six items adapted from Salehudin (2010), aimed to determine if the respondents have sufficient information on halal issues. The four items measuring religiosity were adapted from Ji and Ibrahim (2007) with the aim to determine the respondents' commitment to their religion. A five-point Likert scale was used for all the items, with 1 denoting "strongly disagree", 2 denoting "disagree", 3 denoting "neutral", 4 denoting "agree", and 5 denoting "strongly agree". Table 1 details the measurement items and their corresponding item codes.

Table 1
Measurement Items and Codes

Construct	Statement	Code
Attitude	Eating halal chocolate is important to me.	Att1
	Halal chocolate is healthy.	Att2
	Halal chocolate is safe to eat.	Att3
	Halal chocolate is clean.	Att4
Halal Knowledge	I understand Islamic laws of halal and haram for chocolates.	Halal1
	I feel capable to differentiate which chocolates are permissible (halal) and which are forbidden (haram).	Halal2
	I know much about whether certain chocolates are permissible (halal) or forbidden (haram).	Halal3
	I feel that I don't need the help of someone else more knowledgeable to differentiate which chocolates are permissible (halal) and which are forbidden (haram).	Halal4
	I feel that I know enough which chocolates are forbidden by Islam.	Halal5
	I have enough knowledge to differentiate between permissible (halal) and forbidden (haram) stuffs.	Halal6
Religiosity	I am a consumer of halal chocolate.	Rel1
	Eating halal chocolate is an important part of my identity.	Rel2
	I would feel at loss if I could not eat halal chocolate.	Rel3
	I follow strict Islamic rules to eat halal chocolate.	Rel4
Purchase Intention	I will buy halal chocolate.	Int1
	I am likely to buy halal chocolate in the future.	Int2
	I plan to buy halal chocolate in the forthcoming days.	Int3

Data Analysis

The analysis was conducted using the Statistical Package for Social Sciences (SPSS) and PLS-SEM. The former was used for data entry and basic analysis of the respondents' profile, while the latter was used to test the hypotheses. According to Hair et al. (2021), PLS-SEM is deemed suitable for this research as it is exploratory in nature and because the proposed relationships between the variables have not been previously assessed.

RESULTS

Respondents' Profiles

The survey involved 252 Muslim respondents. Most of the participants were female, accounting for 75% of the total respondents. In terms of age, 61.5% were between 18 and 24, 19.8% were between 25 and 34, whilst 12.7% were between 45 and 54. In terms of marital status, most of the respondents were single (73.8%). The rest were either married (25.4%) or divorced/widowed (0.8%). Ethnicity wise, the majority of the respondents were Malays (94.8%), with the remaining 5.2% being either Indians or Chinese. In terms of income distribution, 61.9% earned RM1,000 and below whilst the remaining 38% reported incomes above RM1,001. Education wise, 61.1% of the respondents were Bachelor's degree holders.

Partial Least Squares (PLS) Path Modelling

Model evaluation and hypotheses testing were performed using PLS path modeling based on SmartPLS 4.0. As per Anderson and Gerbing's (1988) two-step approach, the analysis began with the measurement model assessment. Once its validity was confirmed, the structural model assessment was performed.

Measurement Model Assessment

The measurement model assessment involves measuring the loadings, average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha (α). The acceptable criteria are as follows: loading ≥ 0.7 , AVE ≥ 0.5 , CR ≥ 0.7 , and Cronbach's alpha ≥ 0.7 (Hair et al., 2009, Hair et al., 2011). As shown in Table 2, all the AVE values are above 0.5, all the CR values are above 0.80, and all the Cronbach's alpha values are above 0.7, meeting the acceptable thresholds. However, in terms of factor loadings, an exception was observed for Halal4, which had a low loading of 0.667 and therefore removed from the analysis.

Table 2
Measurement Model

Construct	Item Code	Loading	Cronbach's Alpha	AVE	CR
Attitude	Att1	0.860	0.886	0.747	0.921
	Att2	0.743			
	Att3	0.920			
	Att4	0.921			
Halal Knowledge	Halal1	0.847	0.908	0.727	0.930
	Halal2	0.906			
	Halal3	0.890			
	Halal5	0.772			
	Halal6	0.843			
Religiosity	Rel1	0.886	0.882	0.740	0.919
	Rel2	0.880			
	Rel3	0.771			
	Rel4	0.898			
Purchase Intention	Int1	0.951	0.932	0.881	0.957
	Int2	0.956			
	Int3	0.908			

The Heterotrait-Monotrait ratio of correlations (HTMT) was then used to assess the discriminant validity. Table 3 shows that all the HTMT values are within the acceptable thresholds of 0.80 to 0.90, consistent with the guidelines proposed by Henseler et al. (2015) and reaffirmed by Hair et al. (2017), thereby providing evidence of satisfactory discriminant validity across the constructs.

Table 3
Assessment of Discriminant Validity

Construct	Attitude	Halal Knowledge	Purchase Intention	Religiosity
Attitude	0.864			
Halal Knowledge	0.602	0.853		
Purchase Intention	0.689	0.693	0.938	

Religiosity	0.677	0.732	0.829	0.860
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Structural Model Assessment

Following confirmation of the construct measurements' reliability and validity, the structural model assessment was then performed. The first assessment involved the determination of the path coefficient estimates denoting the constructs' hypothesized relationships. To achieve this, a bootstrapping procedure ($n = 252$, sample = 5000) was applied, following the suggestion of Hair et al. (2017). Figure 2 presents the complete estimates of the structural model, while Table 4 presents the structural model assessment results entailing the path coefficient standard errors and t-statistics.

As shown in Figure 2 and Table 4, attitude and intention have a statistically significant and positive correlation ($\beta = 0.127$, $t = 2.933$, $p = 0.003$), supporting H1. Additionally, the findings demonstrate positive relationships between religiosity and attitude ($\beta = 0.677$, $t = 9.457$, $p = 0.000$) and between religiosity and intention ($\beta = 0.488$, $t = 7.172$, $p = 0.000$), thereby supporting H3 and H4. In contrast, H2 was rejected. Based on the result, halal knowledge has no significant effect on intention, with a relatively low path coefficient.

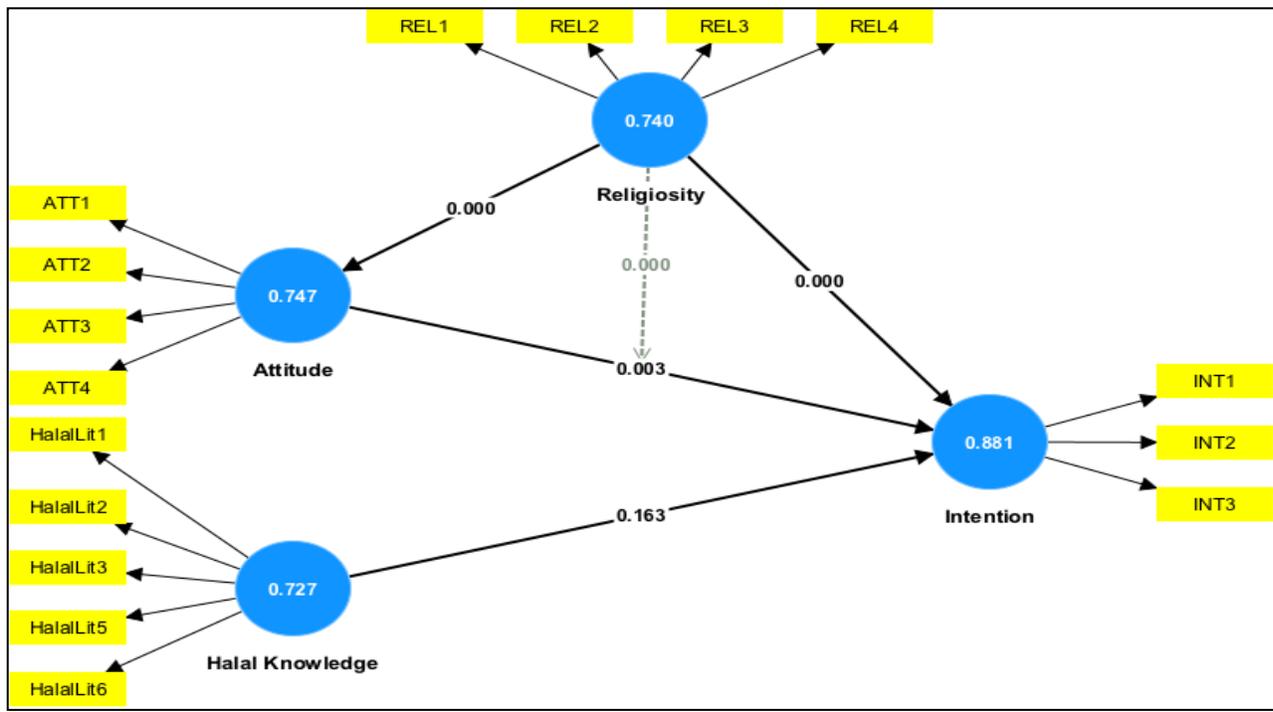


Figure 2. Structural model assessment results

Table 4
Hypothesis Testing Results

Hypothesis	Std Beta	Std Error	t-values	p-values	5% LLCI	95% UCLI	Decision
<i>Direct Relationship</i>							
H1: Attitude → Intention	0.127	0.131	2.933	0.003	0.061	0.201	Supported
H2: Halal Knowledge → Intention	0.073	0.073	1.396	0.163	-0.014	0.159	Not Supported
H3: Religiosity → Attitude	0.677	0.676	9.457	0.000	0.676	0.548	Supported
H4: Religiosity → Intention	0.488	0.488	7.172	0.000	0.378	0.604	Supported
<i>Indirect Relationship</i>							
H5: Religiosity*Attitude → Intention	-0.119	-0.118	5.868	0.000	-0.152	-0.868	Supported

The coefficient of determination (R^2) serves as a key evaluative criterion within the PLS-SEM framework (Hair et al., 2011, 2018; Henseler et al., 2015). It reflects the proportion of variance in the dependent variable that is accounted for by its predictor(s) (Hair et al., 2018), with values ranging from 0 to 1, where a value closer to 1 signifies stronger predictive accuracy (Hair et al., 2017). R^2 values of approximately 0.75, 0.50, and 0.25 are typically interpreted as substantial, moderate, and weak, respectively (Hair et al., 2017). As shown in Figure 2, the R^2 value for intention in this study is 0.881, indicating that 88.1% of its variance is explained by attitude, halal knowledge, and religiosity. Given that R^2 values exceeding 0.10 are considered meaningful, this result demonstrates a substantial level of explanatory power.

Cohen's f^2 was utilized to assess the predictor constructs' effect size. The effect size f^2 quantifies how much a change in the dependent latent variable's R^2 is influenced by a shift in the independent latent variable, revealing the power contributed by the endogenous construct in justifying an exogenous construct (Ramayah et al., 2018). An effect size of 0.35 is deemed large, 0.15 is medium, and 0.02 is small (Cohen, 1988). In Table 5, all the constructs are shown to exhibit small, medium, and large impacts in determining the R^2 . Thus, it can be concluded that all the relationships have a small, medium, and large effect in elucidating intention and attitude.

Table 5
Effect Size

Path	f^2	Effect Size Rating
Attitude -> Intention	0.032	Medium
Halal Knowledge -> Intention	0.010	Small
Religiosity -> Attitude	0.845	Large
Religiosity -> Intention	0.345	Medium
Attitude*Religiosity -> Intention	0.159	Medium

Moderating Effect of Religiosity

For testing the moderation hypothesis, PLS-SEM's product indicator approach was used to determine the moderating effect of religiosity on the correlation between attitude and intention. The product indicator method was chosen as the moderating variables (i.e., religiosity) were continuous in nature (Rigdon et al., 2017). As indicated in Table 3, religiosity moderates the correlation between attitude and intention ($\beta = -0.119$, $t = 5.868$, $p = 0.000$), thus supporting H5.

The significant interaction was subsequently analyzed through an interaction plot, following the suggestion by Dawson (2014). Figure 3 shows three lines representing the correlation between attitude (x-axis) and intention (y-axis). The correlation for average religiosity level is represented by the middle line. The correlation between attitude and intention for higher (religiosity's mean value plus one standard deviation unit) and lower (religiosity's mean value minus one standard deviation unit) levels of religiosity are represented by the other two lines. Therefore, the results demonstrate that with greater levels of religiosity, there would be less emphasis on attitude to influence intention. In this case, religiosity contributes further to increase intention rather than attitude. In contrast, low religiosity means further contribution of attitude in influencing intention.

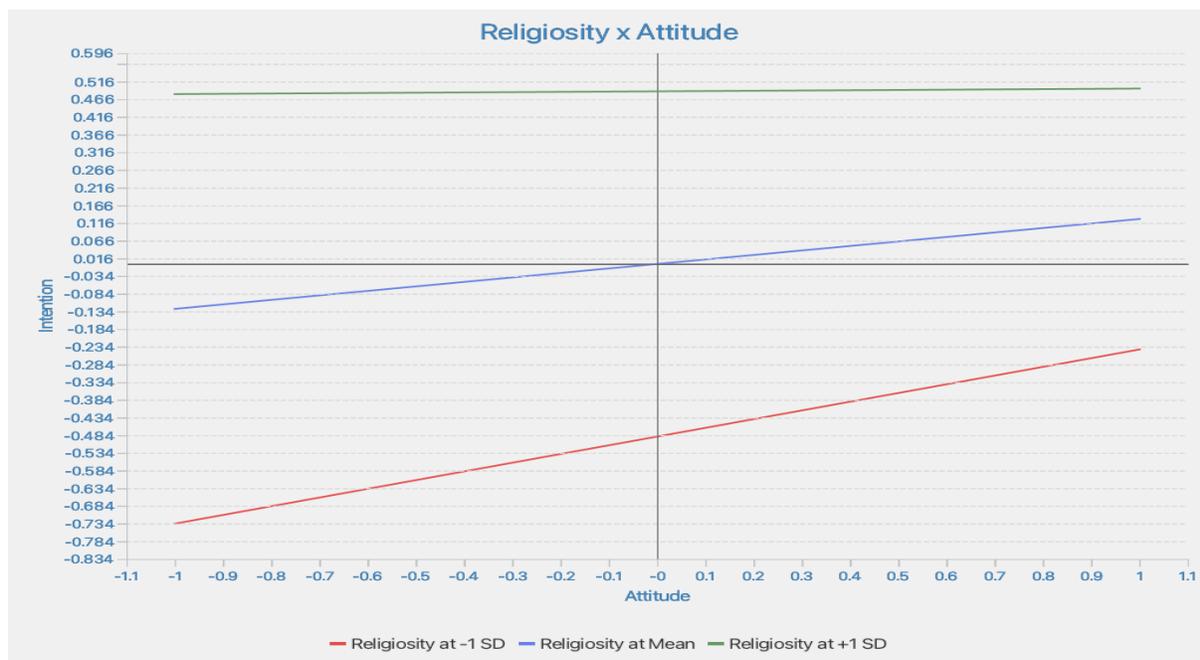


Figure 3. Religiosity moderates the relationship between attitude and intention

DISCUSSION

This study examined how halal chocolate purchase intention among Malaysian Muslims is influenced by attitude, halal knowledge, and religiosity. The hypothesized relationships were tested using Partial Least Squares-Structural Equation Modelling (PLS-SEM). The results showed that 76% of the variance in purchase intention was explained by the model, indicating statistical significance. The hypothesis testing confirmed four hypotheses and rejected one. Specifically, attitude and religiosity were found to have a significant effect on halal chocolate purchase intention, whereas halal knowledge did not. Among these factors, religiosity had the strongest impact on intention.

The identified positive effect of attitude on purchase intention aligns with previous findings on halal food consumption (Amalia et al., 2020; Azizan et al., 2022; Billah et al., 2020; Pratama et al., 2023; Shah Alam & Sayuti, 2011; Syed et al., 2022). This indicates that Muslims in Malaysia recognize the importance of consuming halal chocolate, perceive it as safe, clean, and healthy, and therefore have a higher likelihood of

purchasing it. In contrast, halal knowledge was found to have no significant role in predicting intention, diverging from some prior findings (Baharuddin et al., 2015; Billah et al., 2020; Maichum et al., 2017). This may be explained by the fact that Malaysian Muslim consumers rely primarily on halal certification, placing less emphasis on the underlying halal knowledge when purchasing chocolates.

Religiosity has a significant role in shaping both attitude and purchase intention. Highly religious individuals integrate their faith into everyday behaviors, including consumption decisions (El-Bassiouny, 2014; Bonne et al., 2007; Eid, 2020; Elseidi, 2018; Suleman et al., 2021). The stronger the religiosity, the more likely consumers are to purchase halal chocolate, as this reflects adherence to Islamic dietary laws and religious obligations (Ahmadova & Aliyev, 2021; Amalia et al., 2020; Mukhtar & Butt, 2012; Rahim et al., 2021; Wardana & Widowati, 2021).

More importantly, this study demonstrates that the relationship between attitude and purchase attention is moderated by religiosity. Attitude has a less critical effect on purchase intention among individuals with high religiosity levels. They are guided primarily by their commitment to halal principles rather than by attitudinal evaluations alone (Shah Alam & Sayuti, 2011). In the context of halal chocolate, this moderation effect highlights the unique challenge of ensuring compliance with halal–haram principles in a product category where the ingredients (e.g., emulsifiers, flavorings, or dairy additives) may be doubtful or non-halal. For these consumers, purchasing halal chocolate is both a preference and a religious duty, emphasizing the importance of halal certification and transparent ingredient sourcing.

This focus on halal chocolate serves as a novel contribution to halal consumer research, as this product category has received limited scholarly attention compared to staple halal foods. The study underscores that even for universally popular products like chocolate, religiosity and certification information strongly influence purchase intention, offering practical insights for manufacturers and policymakers. For chocolate producers, highlighting halal status and ensuring certification can directly appeal to religious consumers' values and increase market acceptance among highly observant Muslim segments.

In summary, the TRA and TPB are extended in this study with the incorporation of religiosity as both a direct determinant and a moderating factor in halal chocolate consumption. Based on the findings, although attitude and religiosity pose a significant effect on purchase intention, halal knowledge may be less relevant when certification is present. By focusing on a less-explored halal product category, this study offers in-depth insight regarding the role of religiosity in shaping consumer behavior, offering implications for marketing, product development, and policy within Malaysia's growing halal chocolate industry.

CONCLUSION

In Malaysia, a wide range of local and imported chocolate products are widely and commercially available, with chocolate consumption showing an increasing trend in recent years. This study sets out to determine the roles of attitude, halal knowledge, and religiosity in influencing halal chocolate purchase intention among Muslims in Malaysia. It also aims to examine the moderating role of religiosity in the relationship between attitude and intention. According to the findings, attitude and religiosity significantly affect halal chocolate purchase intention, whilst halal knowledge does not. Additionally, religiosity moderates the relationship between attitude and purchase intention.

This study offers both theoretical and practical contributions. Theoretically, this study enriches the existing literature on halal food, the role of religion, and consumer behavior. It provides empirical evidence that attitude significantly drives halal chocolate purchase intention among Muslims. The findings also clearly

demonstrate that religiosity is of utmost importance to Muslims, forming a solid structure in their belief system which in turn shapes their attitudes and intentions.

In practical terms, this study can help producers, manufacturers, importers, exporters, policymakers, and marketing managers in understanding the purchasing behavior of consumers, especially among Malaysian Muslims. Attitude and religiosity are key determinants of halal chocolate purchase intention in this study's context. Therefore, businesses should continuously explain and communicate the existence of halal chocolate by displaying the halal certificate and logo on the packaging. In addition, advertising and promotional strategies should highlight the halal certification and logo on the chocolate. These strategies would improve consumers' knowledge and awareness of halal chocolate consumption, on top of boosting their long-term intention to purchase halal chocolate.

This study, like others, has its limitations. Firstly, this study only focuses on halal chocolate consumers. Future studies are urged to examine the perspectives of other stakeholders like chocolate producers, manufacturers, retailers, marketers, importers, and exporters to gain richer insights regarding the drivers of chocolate production and purchase. Future studies should also explore the perspectives of entrepreneurs of different nationalities. Secondly, the samples in this study are mainly Muslims, which is not representative of Malaysians as a whole. Future studies are hence urged to conduct cross-cultural and cross-national examinations of Malaysians from various religious, social, and cultural backgrounds. Alternatively, future studies could also investigate the cultural differences between Muslim and non-Muslim consumers and the effects on their consumption behavior as well as purchase decisions. Another suggestion is to investigate the relationships between gender, race, education, and income level with purchase intention. Finally, this study only used one data collection method namely a survey questionnaire. To gain better insights regarding halal chocolate purchase intention, future studies could combine qualitative and quantitative methods for gathering data.

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