Muslims’ willingness to pay for certified halal food: an extension of the theory of planned behaviour

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Abstract

Purpose – The purpose of this paper is to extent the theory of planned behaviour (TPB), when extended by self-identity and religious commitment (RC), and is able to predict Muslim consumers’ willingness to pay (WP) for certified halal food.

Design/methodology/approach – A survey of 277 Muslim consumers in Malaysia was conducted and the cross-sectional data were analysed using the partial least squares technique.

Findings – Attitude (ATT) and religious self-identity (RSI) were found to have a positive impact on WP for certified halal food. Additionally, RC has a positive effect on ATT and RSI and has a positive moderating effect on the relationship between perceived behavioural control and WP.

Practical implications – The findings can benefit halal food companies by offering an insight into the willingness of Muslim consumers to pay for certified halal food.

Originality/value – The findings contribute to the research on halal foods by illustrating the factors that determine Muslim consumers’ WP for certified halal food. This study also extends the understanding of the TPB to the halal food context.

Keywords Islamic marketing, Willingness to pay, Halal food, Religious commitment

Paper type Research paper

Introduction

According to Thomson Reuters’ (2014), state of the global Islamic economy report 2014-2015, the Muslim population is expected to increase at a rate of 1.5 per cent annually and to 2.2 billion by 2030. The rate of population increase among Muslims is almost 10 times faster than that of the non-Muslim population (Wilson, 2014). The Quran commands Muslims to consume halal food and prohibits that which is haram; it also enjoins Muslims to avoid any doubtful items (Zailani et al., 2018). As such, Muslim consumers are sensitive to products

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and services offered in the market and want to be assured that whatever food they eat will be in accordance with Islamic principles (Wilson and Liu, 2011; Zailani et al., 2015). Despite the above, it is difficult for Muslims to assess whether a product is halal or not at the time of purchase. The halal certification process examines the procedures for slaughtering an animal, the ingredients used, the cleaning, handling and processing and the transportation and distribution of products to ensure that they meet halal standards (Latif et al., 2014). Therefore, products that have halal certification provide assurance to Muslim consumers that the ingredients used and the production processes undergone are in accordance with Islamic sharia laws (Lokman, 2008; Hamdan et al., 2013), and consequently, such certification may afford them greater confidence and willingness to purchase such items (Fathi et al., 2016). However, the obstacle created by the introduction of a formal halal certification strategy into the halal food chain is that there could well be price increases for consumers (Angulo and Gil, 2007; Zailani et al., 2017). Some halal companies believe that the present Malaysian standard is not cost-effective and imposes an extra cost on halal production, which leads to higher prices for halal products (Zailani et al., 2017) and this could have a negative effect on consumers’ willingness to purchase halal certified products. Therefore, it is deemed relevant to investigate the factors that determine the willingness of Muslim consumers to pay higher prices for halal products if they can be assured, by quality assurance labelling, that there will be a lower risk of eating non-halal food.

Few studies have been done on Muslims’ willingness to pay (WP) for halal products (Verbeke et al., 2013; Ibrahim, 2011). Verbeke et al. (2013) studied the drivers of consumers’ WP for certified halal labelled meat. They found that more acculturated and female consumers were more in favour of purchasing certified halal food. Ibrahim (2011) found that income, current consumption, household size and marital status were drivers of WP for halal goat meat. To encourage and motivate Muslims to pay for halal certified foods, emphasis is needed on the key psychological mechanisms that underpin motivation. As such, the main aim of this study is to identify and evaluate the psychological determinants of Muslims’ WP for halal foods, as the investigation of this issue is lacking in the literature.

The theory of planned behaviour (TPB) (Ajzen, 1991) is a theoretical framework to explain the psychological mechanism of behavioural intention. According to the TPB, intention is the driver of behaviour. Intention is based on ATTs towards the behaviour, subjective norms (SN) and perceived behavioural control (PBC) (Ajzen, 1991). The TPB has been widely used to determine psychological predictors of individuals’ WP (Hansla et al., 2008; Bernath and Roschewitz, 2008; López-Mosquera et al., 2014). Although ATTs, SN and PBC have shown significant effects on behavioural intention, several studies have recommended adding other variables to enhance the predictive power of the TPB (Mondéjar-Jiménez et al., 2016; Russell et al., 2017). In the context of halal products, researchers generally agree that the behaviour of Muslim consumers can be explained by religious self-identity (RSI) and religious commitment (RC) (Wu et al., 2014; Bonne et al., 2007; Awan et al., 2015; Said et al., 2014). Therefore, we adopt and extend Ajzen’s (1991) TPB by integrating RSI and RC into the original TPB to better predict the willingness of Muslim consumers to pay extra for halal certified food.

Another approach to improving the predictive power of the TPB has been to examine moderator variables. Said et al. (2014) found that consumers’ behaviours are strongly influenced by their RC. In other words, it was found that when consumers are faced with a new product, before purchasing, they will first contemplate whether or not it may violate or in any way contradict their religious norms and beliefs (Zucker, 1986). RC refers to the extent to which an individual adheres to the values, beliefs and practices of his or her religion and practises them in daily life (Worthington et al., 2003). It is expected that Muslim consumers whose religious beliefs underpin their approach to daily life will be more willing...
to pay for halal certified products if they find that halal food consumption is a norm among people who are important to them and also if they find it easy to procure halal food. As such, the present research examined the role of RC as a potential moderator on the impacts of SN and PBC on WP for halal certified foods. The major contribution of this study to the literature in this area is that it provides an understanding of the factors that determine Muslim consumers' WP for halal food. The findings also have a direct implication for the TPB. Finally, the findings may help managers of food companies and policymakers to promote halal food products in a more effective manner.

Literature review
The term “halal” signifies what is permitted, allowed, lawful or legal, according to the holy Quran (Wilson and Liu, 2011; Wilson, 2014). Its opposite is “haram” (Muhammad et al., 2009; Rosly, 2010). Halal applies not only to foods but also to other consumer products such as pharmaceutical products and cosmetics (Ngah et al., 2014). Halal is a product attribute that cannot be verified by an individual consumer at the time of purchase or even after consuming the goods. The certification process for establishing whether a product is halal covers a careful examination of the procedures for slaughtering, the ingredients used, the cleaning, handling and processing of products and their transportation and distribution to ensure that the certified product meets halal standards (Latif et al., 2014). As such, halal certification can provide assurance to Muslim consumers that the ingredients used, production and logistical processes are in accordance with the Islamic sharia laws.

The Department of Islamic Development Malaysia (JAKIM) is the government agency, which has full jurisdiction and authority over all halal matters in Malaysia. The department is not only responsible for regulating all halal requirements locally through various acts and laws but also, through measures such as MS 1500:2009, it plays an important role in maintaining halal standards internationally (Tieman and Van Nistelrooy, 2014). In fact, there are more than 400 halal certifying bodies worldwide (Zailani et al., 2017). Although, consumers have more confidence with the halal logo provided by JAKIM than in others issued by counterparts in non-Muslim countries (Rezai et al., 2012), halal companies believe that the present Malaysian standard is not cost-effective and imposes extra cost on halal products’ production and logistics, which leads to higher prices for halal products (Zailani et al., 2017). Although, some studies report that Muslim consumers are willing to pay extra to purchase halal certified products (Verbeke et al., 2013; Yunos et al., 2014), other studies claim that in addition to religious concerns, consumers are price and quality conscious (Mokhlis, 2006; Yousaf and Malik, 2013). Considering the extra cost of halal certified products and consumers’ price concerns, Zailani et al. (2017) suggested that from the business point of view, JAKIM, HDC and other halal companies should collaborate with each other to set standards that secure the halal integrity of products throughout the entire supply chain while maintaining cost effectiveness. Although, such collaboration may reduce the cost of halal certification, it is time-consuming. Nevertheless, it is crucial for halal companies to understand the factors that motivate Muslim consumers to pay extra for halal certified products and this is the justification for the present study.

Theory of planned behaviour
“The Theory of Planned Behaviour has been successful in predicting important behaviours in a wide variety of domains” (Harrison et al., 1997, p. 172). According to the TPB, the best predictor of future behaviour is the intention of an individual (Ajzen and Fishbein, 1985). As an antecedent of a particular behaviour, intention accurately indicates a person’s readiness and willingness to engage in that behaviour (Ajzen, 1985), and has a threefold function:
it indicates a person’s positive or negative evaluation of a particular behaviour;
(2) it shapes a person’s perceptions of what others expect of him or her; and
(3) it affects a person’s perception of how easy or difficult it is to carry out the behaviour.

Precisely because the TPB is useful in predicting human behaviours, it has been widely applied in a range of fields, including public transportation (Zailani et al., 2016), the green hotel industry (Han and Kim, 2010) and philanthropies (Masser et al., 2012). Studies that have used the TPB in the context of Islamic-related behaviours have found that it has high power in explaining these types of behaviours (Ali et al., 2017a, 2017b; Haro, 2016). Thus, considering its power in explaining a broad range of behavioural intentions with three variables (Conner, 2015) and its usefulness in an Islamic context, the TPB was selected for the theoretical base of the current study.

Fishbein and Ajzen (2010) suggested that future studies should extend the original TPB developed by Ajzen (1991). Such modifications to expand this theory have improved our ability to predict human behaviour in various contexts. Conner (2015) suggested adding new factors and also moderators as two potential ways to extend the TPB. Adding more related factors to the context of halal certified foods to the TPB may be useful in enabling halal food companies to understand the drivers of WP for certified halal food, which are more related to the context, in addition to the three general drivers in the original TBP. Furthermore, testing the impacts of potential moderators can also provide useful insight for practitioners regarding the reasons why customers’ behaviours are different and consequently help them to understand the drivers of their target market’s behaviour.

Based on the literature, behaviour towards halal products is strongly affected by self-identity (Alam and Sayuti, 2011) and the impact of self-identity on consumer behaviour was shown in the TPB research. As such, to extend the predictive power of the TPB, RSI was also considered as a potential driver of consumer WP for certified halal food. Halal food consumption is an Islamic dietary prescription and depends on the RC of followers (Bonne et al., 2008). In other words, the extent to which a Muslim is committed to Islam can influence his or her RSI and ATT towards consuming halal food. RC can also increase the importance of social pressure to consume halal food, and hence, influence behavioural control over the WP for halal certified food. Hence, RC was considered as a determinant of ATT and RSI and a moderator of relationships between SN, PBC and WP (Figure 1).

**Figure 1.**
Proposed extended TPB model for WP for halal certified foods

![Proposed extended TPB model for WP for halal certified foods](image_url)
**Attitude**

According to Ajzen and Fishbein (1985), a person’s ATT towards behaviour refers to his or her positive or negative evaluation/appraisal of the behavioural performance. ATT has been found to be a predictor of consumers’ intention to purchase, especially in the food category. For instance, Alam and Sayuti (2011) and Garg and Joshi (2018) found that ATT has a strong impact on consumer purchase intention and consumers having a stronger positive ATT also reflect a stronger intent to purchase halal food. The positive relationship between ATT and intention to purchase halal food products was found by Lada et al. (2009) and Mukhtar and Butt (2012). Research by Tarkiainen and Sundqvist (2005) on food purchasing behaviours of individuals likewise established a strong positive correlation between individual ATT and purchase intention. In view of these studies, therefore, the present study hypothesises that those Muslim consumers having a positive ATT towards halal food would be ready to pay for halal certified foods.

**H1.** Consumers’ WP for halal certified food is positively influenced by ATT.

**Subjective norm**

The second predictor of intention is the subjective norm, which is believed to be a social factor in nature (Ajzen and Driver, 1992). A subjective norm refers to the social pressure exerted to engage in a particular behaviour (Ajzen and Fishbein, 1985). It was found by Mukhtar and Butt (2012) to be a significant determinant in choosing halal products. In this study, a subjective norm is the degree to which a person perceives that those who are important to him or her consume halal food as a norm. Based on the previous studies mentioned, the present study hypothesises that the higher the level of subjective norm, the higher the WP for halal certified foods on the part of the consumer. The following hypothesis is developed in the present study:

**H2.** Consumers’ WP for halal certified food is positively influenced by SN.

**Perceived behavioural control**

PBC has been found to be positively related to the intention to purchase halal food products (Alam and Sayuti, 2011). Hence, the third determinant of intention indicates a person’s perception of how easy or difficult it is to perform a given behaviour (Ajzen and Fishbein, 1985) and is called PBC. Therefore, the present study hypothesised that the individual who perceives that consuming halal food is an easy task will be more willing to pay for halal certified products than the individual who perceives consuming halal food is a difficult task. Therefore, we develop the following hypothesis:

**H3.** Consumers’ WP for halal certified food is positively influenced by PBC.

**Religious self-identity**

The concept of self-identity was developed by (Stryker and Burke, 2000) and is based on the identity theory that the self-derives meaning from the various socially constructed roles it performs (Pelling and White, 2009). It has also been defined as a label one uses to describe oneself (Cook et al., 2002; Bonne et al., 2008) and it relates to a specific behaviour (Conner and Armitage, 1998). Thus, for example, one’s self-identity would include the extent to which a consumer see himself or herself as fulfilling the requirements of a religion. Hence, RSI would
be the extent to which a person sees her- or himself as fulfilling religious laws. Someone with a strong RSI, therefore, would be more likely to perceive himself or herself as following religious laws and would be more likely to consume halal food as a result. In the case of halal food, RSI refers to self-identification as halal food consumers (Ali et al., 2018).

Much of the TPB research has pointed to the importance of including self-identity to improve prediction of consumer behaviour (Fielding et al., 2008; Mannetti et al., 2004; Yazdanpanah and Forouzani, 2015). In the case of halal food-related behaviour, Bonne et al. (2008), Ali et al. (2017a) and Ahmed et al. (2014) found that self-identity was an additional predictor variable to the original TBP variables. Accordingly, if a Muslim consumer has a high sense of RC, he will have a high tendency to consume halal food and consequently a higher likelihood to be willing to pay for halal certified food to ensure that its ingredients, production process and logistics meet Islamic laws. Therefore, this study hypothesises that WP for halal certified products will be higher for an individual who perceives himself or herself as a person who follows religious laws in their behaviour. Therefore, the following hypothesis is developed:

\[ H4. \text{ Consumers’ WP for halal certified food is positively influenced by RSI.} \]

**Religious commitment**

Religion occupies an important role in Muslims’ food consumption. Religiosity is composed of two dimensions, namely, the intra- and the inter-personal, which play a vital role in individuals' lives (Mokhlis and Spartks, 2007). The internal dimension of religiosity comprises the individual’s religious identity, values, ATTs and beliefs (King and Williamson, 2005), whereas the external dimension refers to religious affiliations, devotions and memberships in a religious community. In this study, the internal dimension of religiosity was considered in the form of RC. Individuals who are committed to their religion will adhere to its values, beliefs and practices by integrating them into their daily life (Worthington et al., 2011). Religiously committed persons tend to evaluate their world in terms of religious dimensions and values. Religion is more important to religiously committed individuals and they tend to evaluate most actions based upon their religion. Within the Muslim culture, ATTs towards consuming halal food and RSI are likely to depend on the individual’s degree of religiosity; hence, strict Muslims will reject foods that may contain forbidden ingredients. Many past studies have shown a significant effect of RC on consumers’ ATTs and behaviour (Mukhtar and Butt, 2012; Asnawi et al., 2018; Garg and Joshi, 2018;Charsetad, 2016). Garg and Joshi (2018) found that RC was a driver of ATTs towards halal brands. Asnawi et al. (2018) also showed that Muslim consumers’ RC has a positive effect on their intention to select halal products.

Furthermore, Khan et al. (2017) stated that religion holds the central position in the culture that affects the day-to-day routines of any cultural group. It also shapes an individual’s moral system. Previous studies have shown that the culture or moral system moderates the impacts of SN and individuals’ PBC and behavioural intention (Chen et al., 2009; Bang et al., 2014). RC is considered as the expectation that one will behave in a certain way, which is based on religious principles (Khan et al., 2017). Thus, individuals who are highly committed to Islam are expected to have a higher WP for halal certified foods if they find it easy to consume halal food and if they find halal food consumption to be a norm among people who are important to them. Thus, it is expected that the existence of stronger RC enhances the positive effects of SN and PBC on consumers’ WP for halal certified food. Hence, the following hypotheses are developed:
H5. RC positively affects ATT towards consuming halal foods.

H6. RC positively affects RSI.

H7. RC positively affects consumers’ WP for halal certified food.

H8. RC positively moderates the impacts of (a) subjective norm and (b) PBC on consumers’ WP for halal certified food.

Research methodology

Measure of the constructs

The data were collected through a survey instrument and the variables relevant for the proposed model were included in the questionnaire, namely, ATT, SN, PBC, RSI, RC and WP for halal certified foods. Based on Ajzen’s (1985) study, each item included a scale for measurement such that the responses given could be measured for each variable on a five-point scale, indicating the degree to which they agreed or disagreed with the statements presented (from strongly disagree = 1 to strongly agree = 5). The items for the TPB variables were adapted from Ajzen (2002) and Arvola et al. (2008). ATT, SN, PBC and WP were measured with four, four, three and two item, respectively. RSI was measured using three items, adapted from Yazdanpanah and Forouzani (2015) and Tracy et al. (2012). The five items of interpersonal RC were adapted from Worthington et al. (2003) and Iranmanesh et al. (2018).

Data collection and the sample

The population for the present study comprised all Malaysian Muslims who were currently living in Johor, Penang, Kuala Lumpur and Sabah. These locations were justified based on Iranmanesh et al. (2017a), who claimed that these places could be taken as representative of the whole of Malaysia. Johor, Penang, Kuala Lumpur and Sabah are representative of the South, North, Central and East regions of Malaysia, respectively. Geographically, the selected states cover the nation’s cultural and regional heterogeneities. Respondents were given a hard copy of the questionnaire and asked to complete it for data collection purposes. As access to a list of all elements of the population was impossible, the data were collected using a convenience sampling technique. The questionnaire was administered to respondents in restaurants and coffee shops, as individuals with different characteristics are available in these locations and potential respondents also have time to answer the questionnaire. To ensure that the respondents were Muslim, a filtering question was used.

A sample of 153 is needed for a statistical power of 0.95 for model testing; hence, G*Power was used to calculate the sample size based on statistical power (Faul et al., 2009). From a total of 350 questionnaires, which were distributed, 289 responses were returned of which 12 were incomplete and had to be discarded; hence, a total of 277 valid and usable responses were returned, representing a 79.1 per cent response rate. Given that our sample size exceeded 153, its power also exceeded 0.95.

The final sample consisted of 131 men (47.3 per cent) and 146 women (52.7 per cent). There were 98 respondents (35.4 per cent) between the ages of 15 and 24 years, followed by 68 respondents (24.6 per cent) between the ages of 25 and 34 years old, 58 respondents (20.9 per cent) between 35 and 44 years old and 53 (19.1 per cent) respondents aged 45 years. All respondents were Muslims.
Analysis
Owing to the exploratory nature of our study, the partial least squares (PLS) technique of structural equation modelling using SmartPLS version 3.0 was considered the most appropriate approach to test the research model. The current study used a two-step approach for data analysis, as is recommended by Hair et al. (2014) for such a study. First, the model for measurement was analysed and second, the relationships among the structures of the underlying constructs were evaluated (Zainuddin et al., 2017; Iranmanesh et al., 2017b; Soltanian et al., 2016). The present research used this method to determine the reliability and validity of the measures before identifying the relationships within the model.

Results
Measurement model results
Convergent validity was examined through factor loading, average variance extracted (AVE) and composite reliability (CR) (Nikbin et al., 2015; Kurniawan et al., 2017; Gilani et al., 2017). Table I shows that the CR of all constructs was higher than 0.7; the factor loadings were above 0.4; and the values of AVE were above 0.5. These findings indicated a satisfactory convergent validity (Hair et al., 2014).

As suggested by Henseler et al. (2015), the heterotrait-monotrait ratio of correlations (HTMT) was used to evaluate the discriminant validity. The values of HTMT were less than 0.85 (Table II), which confirmed the discriminant validity of all constructs (Kline, 2016).

Table I.
<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Factor loadings</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT</td>
<td>I think that consuming halal food is important</td>
<td>0.912</td>
<td>0.940</td>
<td>0.798</td>
</tr>
<tr>
<td></td>
<td>I think that consuming halal food is beneficial</td>
<td>0.932</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I think that consuming halal food is wise</td>
<td>0.875</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I think that consuming halal food is favourable</td>
<td>0.852</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>My family thinks that I should consume halal food rather than non-halal food</td>
<td>0.838</td>
<td>0.930</td>
<td>0.768</td>
</tr>
<tr>
<td></td>
<td>Most people I value would consume halal food rather than non-halal food</td>
<td>0.864</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>People I value (such as my friends) think I should consume halal food</td>
<td>0.913</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>My close friends, whose opinions are important to me, think that I should consume halal food</td>
<td>0.888</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>If I wanted to, I could consume halal food instead of non-halal food</td>
<td>0.929</td>
<td>0.833</td>
<td>0.644</td>
</tr>
<tr>
<td></td>
<td>I think it is easy for me to consume halal food</td>
<td>0.936</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>It is mostly up to me whether or not to consume halal food</td>
<td>0.438</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSI</td>
<td>I think of myself as a user of halal food</td>
<td>0.958</td>
<td>0.960</td>
<td>0.889</td>
</tr>
<tr>
<td></td>
<td>Consuming halal food is an important part of me as Muslim</td>
<td>0.951</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eating halal food fits with the kind of person I want to be</td>
<td>0.919</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RC</td>
<td>My religious beliefs lie behind my whole approach to life</td>
<td>0.774</td>
<td>0.913</td>
<td>0.679</td>
</tr>
<tr>
<td></td>
<td>I spend time trying to grow in understanding of my faith</td>
<td>0.840</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Religious beliefs influence all my dealings in life</td>
<td>0.900</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Religion is especially important to me</td>
<td>0.884</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I often read about my faith</td>
<td>0.704</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WP</td>
<td>My WP more to purchase halal food is very high</td>
<td>0.966</td>
<td>0.967</td>
<td>0.936</td>
</tr>
<tr>
<td></td>
<td>I intend to pay more to purchase halal foods</td>
<td>0.968</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Average variance extracted (AVE); composite reliability (CR)
mean and standard deviation of the constructs are displayed in Table II. The results show that the participants have high ATT, SN, perception of behavioural control and WP for halal certified foods. The respondents also identified themselves as halal food users and have a strong commitment to religious rules.

Structural model results
The accuracy of the model’s predictions was determined through the proportion of variance explained (Yusof et al., 2017; Foroughi et al., 2016). The $R^2$ value for ATT was 0.473, for self-identity was 0.325 and for WP was 0.634. It is important to mention that the TPB components accounted for 48.7 per cent of the variance in “WP”, and the extended TPB model accounted for 63.4 per cent of the variance in “WP”. Beyond using $R^2$, to measure predictive relevance, the Stone–Geisser $Q^2$ (cross-validated redundancy) value was used. In the current research, this value was 0.384, which is considerably higher than zero, demonstrating that our model displays good predictive relevance (Chin, 2010). Therefore, the model was an acceptable fit and had high predictive relevance.

In addition to the above, to test the structural model, non-parametric bootstrapping was applied (Wetzels et al., 2009). The results indicated that ATT ($\beta = 0.321$ and $p < 0.001$), RSI ($\beta = 0.164$ and $p < 0.05$) and RC ($\beta = 0.421$ and $p < 0.001$) all have positive effects on WP. However, the impact of SN ($\beta = 0.013$ and $p > 0.05$) and PBC ($\beta = -0.075$ and $p > 0.05$) on WP were not supported. Thus, $H1$, $H4$ and $H7$ were supported, whereas $H2$ and $H3$ were not supported. RC has a positive relationship with ATT ($\beta = 0.688$ and $p < 0.001$) and RSI ($\beta = 0.570$ and $p < 0.001$). Therefore, $H5$ and $H6$ were supported.

The product indicator approach (standardised) was used to create an interaction construct (Hair et al., 2014). The results indicated that the interaction of RC and PBC positively affected the WP. Hence, $H8b$ was supported, whereas $H8a$ was not.

To compare the strength of the effect of the proposed factors, we tested their respective effect size ($f^2$) (Hair et al., 2014). According to Cohen and Cohen (1983), $f^2$ values between 0.02 and 0.15 are considered to indicate small effects, while values between 0.15 and 0.35 indicate medium effects and those above 0.35 indicate large effects. From Table III, it can be observed that RC has the highest effect on Muslim consumers’ WP for halal food, followed by ATT and RSI. Considering the moderating effects, the interaction of RC and subjective norm has no effect on willingness: this is consistent with the $p$-value result, which shows a non-significant effect. The interaction of RC and PBC has a small effect, which is also in line with the $p$-value, as this relationship is significant at the 0.05 level.

Figure 2 illustrates that, whereas PBC has a positive effect on WP with high RC, it has a negative effect among Muslim consumers with low RC.

Discussion and implications
The present study used the TPB and further attempted to incorporate important constructs such as self-identity and RC into the TPB model to better understand Muslim consumers’

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Mean</th>
<th>Standard</th>
<th>ATT</th>
<th>SN</th>
<th>PBC</th>
<th>RSI</th>
<th>WP</th>
<th>RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT</td>
<td>4.478</td>
<td>0.669</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>4.390</td>
<td>0.834</td>
<td>0.709</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>4.230</td>
<td>0.807</td>
<td>0.579</td>
<td>0.812</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSI</td>
<td>4.369</td>
<td>0.887</td>
<td>0.698</td>
<td>0.611</td>
<td>0.538</td>
<td></td>
<td></td>
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<tr>
<td>WP</td>
<td>4.343</td>
<td>0.783</td>
<td>0.733</td>
<td>0.545</td>
<td>0.418</td>
<td>0.596</td>
<td></td>
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</tr>
<tr>
<td>RC</td>
<td>4.198</td>
<td>0.761</td>
<td>0.739</td>
<td>0.706</td>
<td>0.550</td>
<td>0.612</td>
<td>0.770</td>
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</tr>
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</table>
WP for halal certified food. The study showed that the TPB component explained 48.7 per cent of the variance in Muslim consumers’ WP for halal certified food. Although, this predictive power is higher than the power found in the meta-analysis of Armitage and Conner (2001), i.e. 39.0 per cent, the extended TPB model of this study can explain 63.4 per cent of the variance in WP by considering the roles of RSI and RC, and the contribution of these two variables was high in terms of explained variance. Thus, it is reasonable to argue that RSI and RC are important factors in motivating Muslims to pay for halal certified foods.

The results show that ATT is a significant predictor of Muslim consumers’ WP for halal certified food. This finding is consistent with earlier research on the intention to purchase halal products (Lada et al., 2009; Alam and Sayuti, 2011). This implies that if Muslims find that consuming halal food is beneficial and important, then their positive ATT will motivate them to pay a higher price to purchase halal certified foods. In light of this finding, it would be desirable for policymakers and marketers to design education and training programmes highlighting the importance of halal certification to provide assurance to the customer that the ingredients and production process are in accordance with strict halal practices.

The relationship between SN and WP was not supported in this study, which is in contrast to the findings of Alam and Sayuti (2011) and Lada et al. (2009). As the halal label provides enough information on the ingredients and production process of certified foods, consumers do not rely on other people’s opinions when deciding whether to pay for halal certified foods. For Muslim consumers, the approval of others is not an important factor in whether they purchase halal products or not; their focus is on implementing the rules of Islam regardless of the opinions and thoughts of others, including those significant to them.
The results confirmed the findings of Alam and Sayuti (2011) that PBC did not affect WP for halal certified foods. The results reported by Bonne and Verbeke (2006), however, contradicted these findings, as they found that PBC did play an important role in influencing consumers to purchase halal food. It is possible that the mean value of our study may explain the insignificant relationship we found. That is, with an average PBC score of 4.230 out of 5, the average respondent believed that consuming halal food was an easy task, and according to Hoffman and Novak (1996), the individual’s abilities and perceived challenges must be balanced and should exceed the minimum limit to produce a feeling of flow. Ajzen (1991) also stated that PBC is not a predictor of behaviour under conditions of very high volitional control. Thus, the perception of a high level of control over purchasing halal food may cause this factor to lose its importance in the decision-making process of Muslim consumers.

In the extended model, the results reveal that RSI have an effect on the WP in addition to one’s ATT. This result confirms the findings of Fielding et al. (2008) and Yazdanpanah and Forouzani (2015), who argued that self-identity does indeed enhance the TPB’s predictive power; this also supports the identity theory of Stryker and Burke (2000). In other words, the greater an individual’s perception of being a halal food user, the greater is his or her WP for halal certified foods. Policymakers and marketers can enhance the RSI of Muslim consumers by reminding them of their past behaviour.

RC was a strong predictor of ATT, RSI and WP for halal certified foods. This finding is consistent with other studies, which have demonstrated the important role of religiosity in influencing an individual’s perceptions (Lindridge, 2005), ATT (Garg and Joshi, 2018) and behavioural intention (Asnawi et al., 2018). Religious people tend to implement religious rules and practices without question. As such, they hold a positive ATT towards consuming halal food, have a high intention to pay more for halal certification to be assured about the halalness of the food that they consume and identify themselves as consumers of halal food.

Notably, the results reveal that RC moderates the relationship between PBC and WP for halal certified foods. This finding indicates that WP is higher among Muslim consumers with high RC than among those with less RC and this difference increases when PBC is increased (Figure 2). RC does not moderate the impact of SN on WP. As SN themselves have no effect on WP, this result indicates that regardless of the extent to which a Muslim consumer is committed to Islam, other people’s opinions have no effect on his or her WP for halal certified foods. This indicates that the insignificant effect of SN is not because of contextual factors such as RC and this factor is not important among Muslim consumers in Malaysia.

In terms of theoretical implications, to the best of our knowledge, the present research is the first to use the TPB to explain Muslims’ WP for halal certified foods. The results show that two traditional cognitive factors, namely, SN and PBC, have no effect on WP for halal certified foods. Furthermore, this study extends the TPB through the addition of RSI and RC. According to these results, both RSI and RC play important roles in shaping Muslim consumers’ WP for halal certified foods. Based on the effect size result, the role of RC is even greater than that of ATT. Furthermore, RC affects both ATT and RSI as drivers of WP. The increased ability of the TPB in explaining WP by adding two factors reinforces the importance of considering additional variables beyond ATT, SN and PBC in explaining the variations in Muslim consumers’ behaviour. This study also extends the literature by testing the moderating effect of RC.

The findings reported in this study are important in our understanding of the role of ATT, RSI and RC in shaping Muslim consumers’ WP for halal certified foods. Our findings indicate that RC is a predictor of ATT and RSI, although omitted by previous research.
Furthermore, the WP for halal foods is influenced by ATT, RSI and RC. Thus, we can conclude that RC is a useful addition to the TPB for explaining Muslims’ behaviour.

The findings of the current research can benefit policymakers and marketers in a very practical manner. Marketers need to focus on the Muslim consumer’s ATT and RSI to enhance their WP for halal certified foods. As the evidence shows that RC among Muslim consumers affects their ATT and RSI, marketers should consider that for the more religious Muslim consumer, any new products on the market need to be prepared in accordance with the spiritual and religious requirements of Islam and be duly certified on the labelling for the religious-minded consumer to acknowledge. As PBC has a significantly higher impact on the WP of Muslim consumers with high RC compared to those with low commitment, focussing on the importance of consuming halal food may motivate highly religious consumers to pay more for halal certified foods to maintain consistency with their Muslim self-identity standards.

Limitations and future studies
The aim of the present study has been successfully met; however, its limitations must be addressed for the sake of future research in this area. Firstly, although we extended the TPB by considering RSI and RC, other characteristics should also be considered in future research, such as trust (Stefani et al., 2008), moral obligation (Arvola et al., 2008) and involvement or values. In addition, other factors that are important in WP for halal certified foods should be investigated. Secondly, the sample of the study was limited to Malaysia, and as RC and PBC may differ in other parts of the world, it would be desirable to conduct a similar study in other countries, including non-Islamic countries.

References


Further reading


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