Exploring the theory of planned behaviour (TPB) in relation to a halal food scandal: the Malaysia Cadbury chocolate case

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Abstract

The aim of this paper is to revisit the theory of planned behaviour (TPB) in relation to the halal food market, specifically in the context of the Cadbury scandal. The present survey (with 132 respondents) replicates the original study of TPB in the context of halal food, done before the scandal, and the results are compared. We rationalize the differences, and assess the impact of the halal scandal on consumer purchasing behaviour. In doing so, we validate the impact of a food scandal in terms of the purchasing intentions of halal customers under a new (post-scandal) condition of uncertainty. The results provide in-depth insights into halal purchasing behaviour and are intended to be used: (a) to increase the understanding of the impact of a food scandal on purchasing behaviour, (b) to clarify whether a food scandal has a real effect on customers, and (c) to ascertain whether the determinants of purchasing intention are similar before and after a food scandal.

Introduction

In 2014 there was a controversy in Malaysia over the halal status of two of Cadbury's chocolate products. The controversy originated form the claim of the Malaysian Ministry of Health (MoH) that its lab test indicated that the Cadbury products were not fulfilling the necessary conditions to carry the halal logo. This claim was then rebutted by JAKIM, the Malaysian halal certification body. The contradictory information from two reliable government sources perplexed consumers and affected their purchasing behaviour. Globally, indeed, the case created confusion among Muslims. Moreover, the controversy had a significant impact on halal food consumption (Ali *et al*., 2017).

The common practice in the halal industry is for a halal logo to be displayed on food packaging. The logo is the main source of reference for consumers. In the view of Muslim consumers, a product with a halal logo is safe, both physically and spiritually. However, the Cadbury case had shaken Muslim consumers' trust in the reliability of halal certification. Studies on halal purchasing intentions had previously assumed full consumer confidence in halal certification. Nevertheless, a little research has been done on halal purchasing intentions in different settings, including where confidence has been shaken after food scandals. The present research was carried out to ascertain whether the determinants of purchasing intention are similar between before and after a food scandal.

The objective of the research is to revisit and extend the important findings Alam and Sayuti (2011) on the theory of planned behaviour (TPB) in the context of the halal food sector. Their investigation on the TPB in halal settings was carried out at a time when there had been no food scandals; and cross-validation, empirical corroboration and extension are crucial for evidence of the generalizability of the TPB (Schoenherr and Swink, 2012). A theory's predictive validity and generalizability are important in determining the quality of the research and for further theory development (Douglas and Craig, 2006). Alam and Sayuti (2011) themselves noted that their findings could be of value for future research in different settings, and such research in turn would increase the generalizability of their theory. The present research is a replication of Alam and Sayuti's (2011) work, and so it allows us determine whether there are differences in the determinants of purchasing intentions (using the TPB) in relation to halal food before and after a halal food scandal.

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Materials and methods

Impact of the food scandal on consumption

Myriad food scandals have impacted the halal food industry over the years (Table 1) (although, notably, after the 2011 study by Alam and Sayuti). In all these, government and halal food consumers have demanded that all the products be removed from the shelves as soon as possible (Ali and Suleiman, 2018). Moreover, the scandals shook consumer confidence (Ali *et al.*, 2017). Consumers exercised their rights and demanded more product information about foods before making decisions to buy (Tan *et al.*, 2017). As indicated in Table 1, halal food scandals are a global phenomenon, although the number of people who follow all the strict halal dietary requirements varies considerably regionally; additionally, individual consumers may relax their purchasing behaviour when travelling abroad (Ali *et al.*, 2017).

Table 1. Selected halal food scandals

Product	Country	Year	Description
Poultry and Beef	Brazil	2017	Unsanitary practices such as processing rotten meat and shipping exports with traces of salmonella, as well as document falsification for halal exports to Europe, China and the Middle East.
Beef	Pakistan	2016	Haram meat believed to be halal due to unawareness (Shahzad, 2017)
Snacks	United Kingdom	2015	Contamination of halal Indian-style snacks with pork (Smith and Dunn, 2015)
Cadbury	Malaysia	2014	Contamination of halal-certified chocolate with pork (Tan *et al.*, 2017)
'Halal' Pork	China	2013	Pork artificially treated to look like beef (Hamid, 2013)

Generally, the authentication of halal food is an obligation that derives from a combination of religious self-identity and social pressure (Bonne *et al.*, 2007; Ali *et al.*, 2017). Scandals within the halal food industry will undermine the fulfilment of religious obligations and so affect consumption behaviour. The issue is exacerbated when the scandal relates to a food product that has been halal certified, as this can damage the reputation of the whole industry and affect consumer behaviour in relation to other products. The literature on consumer behaviour in food consumption has paid little attention to the investigation of the effect of food scandals, especially in relation to halal food.

Hypothesis development

Consumer behaviour in relation to halal food has been investigated in a wide range of contexts (e.g. McKechnie *et al.*, 2006; Bonne *et al.*, 2007; Suddin *et al.*, 2009; Ali *et al.*, 2017; Khan *et al.*, 2017). One of the most prominent attitude models used in understanding consumer behaviour in the food sector is derived from the seminal work of Ajzen (1991) on attitude theories known as TPB, which is an extension of the theory of reasoned action (TRA) of Ajzen (1985). TPB improves on TRA by including perceived behavioural control as an additional variable, thereby increasing its predictive power. Previous literature has confirmed the importance of TPB in food research in general (e.g. Sparks *et al.*, 1995; Cook *et al.*, 2002; Tarkiainen and Sundqvist, 2005; Alam and Sayuti, 2011). TPB has been used in the study of many different food markets, such as organic (Tarkiainen and Sundqvist, 2005; Chen and Lobo, 2012), vegetarian (Cron and Pobocik, 2013; Yue, 2013) and halal (Bonne *et al.*, 2007; Alam and Sayuti, 2011; Ali *et al.*, 2017). For the case of halal food, Bonne *et al.* (2007) established that the independent elements of attitude, subjective norm and perceived behavioural control have significant effects on halal meat consumption. Therefore, for the purpose of the present research, TPB operationalizes the same three conceptually independent determinants of behavioural intentions – attitude, perceived behaviour control and subjective norm – and examines their effects on halal purchasing intentions (Ajzen, 1985; 1991).

Attitude can be defined as the psychological tendency to evaluate a particular behaviour, (i.e., food consumption), either positively or negatively (Alam and Sayuti, 2011). In the context of halal foods, evaluation can be assumed as a question of whether the consumption of halal food will have a favourable or unfavourable effect on the individual (Bonne *et al.*, 2007; Alam and Sayuti, 2011; Ali *et al.*, 2017). Previous literature has suggested that attitude is one of the leading factors in determining purchasing behaviours (Cazacu *et al.*, 2014). For example, a significant relationship between attitude and halal food purchasing intention was found by Bonne and Verbeke (2006), Alam and Sayuti (2011) and Ali *et al.* (2017). Indeed, since a majority of studies have found a significant relationship, this research assumes the generalizability of the findings to a type of food involved in a scandal. This leads to the first hypothesis:

H1: There is a positive relationship between consumer attitude and purchasing intention in relation to halal food, even after a scandal.

Subjective norm focuses on the social pressure on individuals to perform or not to perform a certain behaviour (Bonne *et al*., 2007). Subjective norm, also known as social norm, is another important factor in the TPB model (Ajzen, 1991; Vermeir and Verbeke, 2006). In the food literature, subjective norm has been shown to be an important predictor of consumption. For example, a significant relationship was found between subjective norm and food purchasing intention in the context of sustainable foods (Vermeir and Verbeke, 2006), organic foods (Arvola *et al*., 2008) and halal foods (Alam and Sayuti, 2011). Subjective norm is claimed to be highly related to culture (Maya *et al*., 2011). From the perspective of halal food consumption, culture is shaped not only by geography or race but also by religion, as halal is a way of life determined by Islamic law. A stronger intention to purchase halal food is anticipated among the Muslims living in an Islamic country, as a result of subjective norm. Thus, this research anticipated an important effect of culture in determining halal food purchasing intention. This research hypothesized that:

H2: There is a positive relationship between subjective norm and purchasing intention in relation to halal food, even after a scandal.

Ajzen (1991) defined perceived behaviour control as the degree to which a person expects to behave freely in a matter of interest. Relative to actual control, perceived behaviour control is of greater influence where the (perceived) difficulty of the relevant behaviour is greater Perceived behaviour control can be used to explain two key aspects of behaviour (Ajzen, 1991; Alam and Sayuti, 2011). First, it can explain how much control a person has over his/her behaviour. Second, it can indicate how confident a person is in performing or not performing the behaviour. Alam and Sayuti (2011) found that halal food purchases are highly correlated with perceived behavioural control. In the food industry, for instance, the halal logo plays a key role (Ali *et al*., 2017). However, the theory of perceived behaviour control suggests that consumers will tend to avoid a behaviour when they feel they have no control over the situation (Bonne *et al*., 2007). Since, in the context of the present study, the halal status of Cadbury was at stake after the scandal, there was a perplexing scenario for halal food consumers; in terms of perceived behavioural control, in exercising their purchasing intention they were operating in an uncontrolled and uncertain situation. The more control an individual feels that he/she has in making purchases of a food product involved in a scandal,

the more likely he/she will do so. Therefore, the hypothesis is:

H3: There is a positive relationship between perceived behaviour control and purchasing intention in relation to halal food, even after a scandal.

Adapted from Alam and Sayuti (2011), the conceptual framework is as depicted in Figure 1. As per the hypotheses development, attitude, subjective norm and perceived behaviour control are hypothesized to have significant and positive relationships with the intention to purchase halal food (H1, H2 and H3 respectively). Furthermore, the results of the hypothesis testing will indicate whether purchasing behaviour in relation to halal food is similar before and after a scandal.
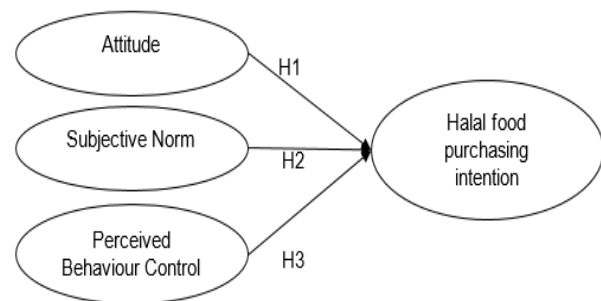

Figure 1. Schematic diagram of the conceptual framework

Sample and data collection

To test the hypotheses, data from Malaysians who had been consuming Cadbury chocolate were controlled and collected. The research tested the TPB model through surveys of Malaysian halal food consumers for three compelling reasons. Firstly, the intention is to study differences of consumer behaviour before and after a food scandal. Therefore, the setting of the respondents needs to be controlled. As this study is essentially a replication of the investigation by Alam and Sayuti (2011) of TPB in the Malaysian halal food industry, it needs similar types of respondents to enable comparability. For the purpose of this study, only respondents who has consumed Cadbury Chocolate were asked to fill the questionnaire. Secondly, the Cadbury scandal chiefly impacted the Malaysian market, and so Malaysian data were needed. Thirdly, identical social norms and awareness of halal food consumption should be similar to Alam and Sayuti's (2011) work that focus in Malaysia, and a cross-country study would not be suitable for the research. The primary data for this study were collected through personally administered questionnaires. Non-probability convenience sampling was used, due to time constraints and for

convenience. Thirty-eight business research students at Universiti Kebangsaan Malaysia were assigned as enumerators for this research as part of their course assignments. Each was asked to collect data from four persons aged over 21 years who were both Muslim and consumers of Cadbury chocolate. The age criterion of 21 years or older was based on the findings of Harker *et al.* (2010) whereby consumers below this age do not show a positive attitude towards food choice.

There were 153 respondents. However, after data screening 21 responses were discarded because they were incomplete, and the final sample was 132. The effective response rate was 86.3 percent. Table 2 summarizes the demographic characteristics of the respondents. As shown in Table 2, 74 percent of the samples were female. Most respondents were aged 21–40 years. Non-response bias was tested using the Mann-Whitney U test (Lo and Power, 2010). The test was carried out by comparing early responses (first 50 questionnaires) and late responses (last 50 responses) (Swafford *et al.*, 2006). The result indicated no statistical differences between early and late responses. The p values relating to the differences in age and gender were 0.364 and 0.601 respectively (i.e., p>0.05). Thus, the data were not affected by time of response; and, most importantly, non-response does not contribute to bias. Harmann's one-factor test was used to check common method bias (Podsakoff *et al.*, 2003). The total variance of the first factor was 39.2 and it did not affect the validity of the results as this first factor was not explained by the majority of the variances among the variables, thus confirming the absence of common method bias.

Table 2. Demographic characteristics of respondents (n=132)

	Frequency	%
Gender		
Male	34	26
Female	98	74
Age group		
21-30 years	42	32
31-40 years	51	39
41-50 years	39	29

Measures

A questionnaire similar to that employed by Alam and Sayuti (2011) was personally administered to the respondents. The questionnaire was divided into three sections: (1) the explanation on the Cadbury Case scandal that in this section the control variable questions were asked to respondents whether they has consumed Cadbury Chocolate product (2) demographic characteristics such as gender and

age; and (3) questions measuring the TPB factors in relation to halal food consumption. The instrument used a six-point Likert scale, where 1 indicated "strongly disagree", 2 "disagree", 3 "somewhat disagree", 4 "somewhat agree", 5 "agree" and 6 "strongly agree". The questionnaire was then pilot tested on a sample of 20 respondents before the full survey, to check usability. The questionnaire was prepared in both English and Malay and underwent a three-stage translation process (Flynn *et al.*, 2010; Tan *et al.*, 2017): (a) initial translation from English (existing literature) into Malay by marketing academics in Malaysia; (b) the Malay version was back-translated to English for a check on validity by another academic; and (c) the translated English version was checked against the original questionnaire for any discrepancies.

Reliability, content validity and construct validity

Data reliability is evidenced by Cronbach's alpha (Nunnally, 1978), with values for subjective norm, attitude and perceived behaviour control of 0.841, 0.677 and 0.751 respectively. As suggested by Nunnally (1978), content validity is an important feature of a comprehensive research measure. Content validity is evidenced in this research as the questionnaire items in this study were adapted from the questionnaire of Alam and Sayuti (2011). In addition, the data are free from the multicollinearity issue. As shown in Table 3, the value of the variance inflation factor (VIF) is less than 10 and the value of the tolerance level is more than 0.01 (Kleinbaum *et al.*, 2013). Moreover, the value of the Durbin-Watson statistic is 1.618, which is within the acceptable range and shows that there are no auto-correlation problems in the data.

Results

Hypothesis testing

Multiple regression analysis was used to test the model and the hypotheses followed the guidelines established by Hair *et al.* (2014). Halal food purchasing intention was used as the dependent variable in the multiple regression analysis, with attitude, subjective norm and perceived behaviour control as independent variables. Figure 2 presents a summary of the results of hypothesis testing. As shown in Table 3, only subjective norm (β=0.259, p<0.01) and perceived behaviour control (β=0.708, p<0.001) were significantly related to the dependent variable, thus supporting H2 and H3. There was no significant relationship between attitude and the dependent variable, leading to the rejection of H1.
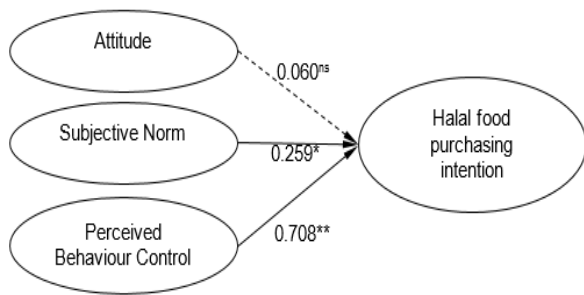
Figure 2. Hypothesis testing

Notes: Significance at: *p <0.01 and **p<0.001; ns: not significant; Dashed arrow: non-significant

Table 3. Regression results

Variable	β	t-value	Tolerance	VIF	Relationship to purchasing intention
Attitude	0.060ns	1.481	.813	1.230	Rejected
Subjective Norm	0.259*	2.902	.564	1.772	Supported
Perceived Behaviour Control	0.708**	11.792	.564	1.773	Supported

Notes: Significance at: *p <0.01 and **p<0.001; ns: not significant; R^2 0.737; adjusted R^2 0.731; Dependent variable: halal food purchasing intention

Discussion

Determinants of behavioural intention – total sample

Regression analysis was conducted on the TPB components. Table 3 presents the regression results. Only subjective norm and perceived behaviour control are significant predictors of halal purchasing intention, while attitude is not.

Revisiting Alam and Sayuti's (2011) findings, the results differ slightly. Alam and Sayuti (2011) argued that their work on TPB model facilitates the prediction of intention to purchase halal food products in Malaysia. However, the results of the research replication in this paper suggest otherwise. In Alam and Sayuti's (2011) work, all the relationships in the TPB model were found to be positive, with high significance values. Contradicting their results, the relationships testing in the present research suggested that not all the relationships are significant. Specifically, the relationship between attitude and halal food purchasing intention is not significant. Nonetheless, the relationships of subjective norm and perceived behaviour control to the intention to purchase halal food are strengthened. In short, the generalizability of the application of TPB to halal food purchasing is also dependent upon the time when the research is done and external pressures. For example, the research has shown that a food scandal that impacted the industry played a major role in determining purchasing intentions in relation to halal food. Similarly, acknowledging the contribution of TPB in increasing the understanding of halal food purchasing intentions, this research suggests that the TPB should be extended by including an additional construct that would reflect (or measure) the degree of uncertainty consumers face in making their purchasing decisions. However, it should be noted that the explained variance (R^2=0.73) in the present study is higher than that in the research by Alam and Sayuti (2011) (R^2=0.21) using the TPB framework.

Role of attitude (H1)

The main finding is the insignificant relationship between attitude and the intention to purchase halal foods. The insignificant relationship empirically evidenced the judgement of purchasing intention of the food involved in the scandal, which in this case Cadbury chocolate is predetermined. In other words, the evaluation judgement of the consumption of the product that involved in a scandal is either absent or very limited. Food scandals make consumers concerned about the status of the halal products they intend to purchase. Consumer over-reliance on halal certification bodies may be a factor in this (Ali and Suleiman, 2018). Another factor is the collectivist nature of Islamic culture, whereby halal consumers may avoid certain products over which there is a general, collective doubt, rather than being risk takers as individuals (Bonne *et al.*, 2007). Ali *et al*. (2017) argued that complying with halal dietary requirements is less likely in foreign countries due to the absence of social pressure. Since the data were collected from Malaysians in Malaysia, where the Cadbury scandal occurred, the data derived for individual factors such as attitude and social norm are not free from the influence of social pressure. The consumption of food involved in a scandal would run counter to social norms. Especially in the Cadbury scandal, JAKIM's rebuttal of the validity of the MOH's claims had confused consumers and forced them to make individual judgements on the halal status of the Cadbury products and eventually their purchasing intentions more widely. The non-significant relationship shows how a food scandal can impact the consumers' trust in the halal status of a particular product (Ali *et al*., 2016). It is now empirically evidenced that attitude has a strong influence on consumers in their commitment to purchasing products affected by a scandal.

Role of subjective norm (H2)

The significant and positive relationship between subjective norm and halal purchasing intention can be regarded as similar to the finding of Alam and Sayuti (2011). Similarly, the findings also corroborate the research of Ali *et al.* (2017) and Bonne *et al.* (2007). The significant relationship suggests that the subjective norm of halal food consumption is intact in both situations, i.e. both before and after the scandal. In fact, in Malaysia, at least, Islam is a collectivist rather than individualistic culture (Bonne, 2007). Furthermore, driven by strong domestic consumer demand in Malaysia, the government has put halal on the national agenda for many years. This strong demand also indicates a solid subjective norm among purchasers. Therefore, halal certification has underpinned the prospering halal food industry. At the same time, it has shaped the culture whereby the superiority of a product with halal certification over food products without it is assumed (Zailani *et al.*, 2010). Consumers expect high integrity from the logo presented on the packaging (Ali *et al.*, 2017). It can also be argued that the Cadbury scandal was not new to the halal food industry, as there had been many other cases before, albeit of lower profile. Therefore, consumers are accustomed to such scandals, as evidenced by the consistency of the findings on the subjective norm of halal purchasing intention before and after the Cadbury scandal. Moreover, the strength of the effect of subjective norm actually increased, as reflected in the fact that there are now calls for certification (in effect, a tangible subjective norm) to be applied to aspects of production not presently certified (Ali *et al.*, 2017).

Role of perceived behaviour control (H3)

The present study found that, after the food scandal, purchasing intention had a stronger relationship with perceived behaviour control than it had in the study by Alam and Sayuti (2011), conducted before the scandal. The strong relationship in this study likely reflects the fact that consumer belief in the product was dented by the food scandal. Consumers are now making greater efforts to control behaviours like impulse buying, which is especially characteristic of purchases of chocolate, like Cadbury products. Consumers are now demanding more information after learning that there is the possibility of the halal logo on product labels being misused (Tan *et al.*, 2017). In other words, the information conveyed through the halal logo alone is not sufficient to determine consumers' purchasing intention (Ali *et al.*, 2017). The increase in the effect of perceived behaviour control can also be argued to be due to

the timing of the research. The findings might have differed if the research was done later, when the scandal had cooled down more. Moreover, there are many cases that exemplify this situation when the effect of perceived behaviour control has decreased, for instance after extensive marketing by the firm impacted by a scandal, to win back consumers' trust, especially on the halal status of the product.

Theoretical implications

Theoretically, it is clearly shown that the generalization of TPB in the halal food context should be done carefully. Since halal food consumption is strongly related to spiritual and religious elements, purchasing behaviour is more prone to uncertainty. Many studies have found positive relationships between TPB elements and purchasing intention. However, after a scandal, there are noteworthy differences between TPB elements and buying intention, relative to the normal situation. Halal purchasing behaviour changes according to the situation; if the status of halal food is doubted, consumers tend to avoid performing the behaviour, rather than being engaged in the judging of the advantages and disadvantages of such action. Consumers also opt to have more control over the behaviour, even though social pressure is similar. Therefore, the interpretation of the results of the TPB model in halal research should also take into account the situation of the market at a particular time.

Practical implications

In practice, managers can learn the costs of a food scandal. Any sort of scandal – whether it concerns a product or a managerial issue – can negatively impact a business. The case of Cadbury has shown that a scandal does not need concrete evidence – mere speculation is enough to do the damage. In addition, this research allows managers to understand, from the marketing point of view, what influences purchasing behaviour, especially after a scandal. Managers should note that personal attitude is the most important determinant of TPB but that it is absent from purchasing behaviour after a scandal. Enlightened by this, managers should mitigate any individual issue which is more related to social belief and trust in the product.

In addition, the research has shown how important halal certification is to consumers. Total reliance on halal certification signifies the need for policy-makers to strengthen the current mechanism. In the era of the internet of things, relying upon the display of a logo alone is far from sufficient. Consumers need more information on halal food

to determine their purchasing behaviour; therefore, more data need to be incorporated on websites and applications. Moreover, consumers now are data driven and need solid evidence of any claims. Thus, policy-makers need a solid understanding of halal purchasing behaviour in order to give consumers the data that they really require.

Conclusion

Because the generalization of the TPB in relation to halal food purchasing intention after scandal could not be assumed, this research deemed it crucial to revisit Alam and Sayuti's (2011) suggestions and findings. Therefore, this paper offers another perspective on the interpretation of the TPB, under different conditions. The paper tested the generalizability of key variables in the TPB model. Our findings, in general, corroborated the TPB model. However, it was found that not all the key variables in the TPB model had a similar effect on purchasing intention in relation to halal food both before and after a scandal. The study shows that halal purchasers have more perceived control of behaviour when purchasing food after a scandal, whilst the subjective norm was found to be consistent in its effect. Moreover, the study empirically demonstrated the effect of a food scandal on the attitudes of halal consumers.

Nonetheless, the study does have a number of limitations. Firstly, the research was using the Cadbury scandal alone as the research context. Therefore, the generalizability of the results to different types of product may be limited. It would be of great interest to conduct similar research immediately after another food scandal, to validate the findings. Secondly, the data were collected only in Malaysia and the results might differ with data from another geographical area. Future comparative research between countries could be conducted to find points of theoretical agreement. Thirdly, the basic TPB model was used as the basis of the study, but this limits the number of explanatory factors examined. A more comprehensive and extended model of TPB could be used in future research to investigate purchasing behaviour after a food scandal.

Acknowledgement

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