

Does Religiosity Really Matter in Purchase Intention of Halal Certified Packaged Food Products? A Survey of Indian Muslims Consumers

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ABSTRACT

The primary aim of this research was to measure the influence of religiosity on the intention of Indian Muslim to purchase halal food products. An extended version of the theory of planned behaviour was used as a framework. Apart from Religiosity, the influence of subjective knowledge of halal was also tested. Data was collected from the Muslim consumers of six districts of Uttar Pradesh, India. The result of structural equation modelling (SEM) showed that religiosity had an indirect influence on purchase intention and subjective knowledge had neither direct nor indirect influence on the purchase intention of Indian Muslims. Except for self-efficacy, all other antecedents of TPB (Theory of Planned Behaviour) had a positive influence on the purchase intention. This is the first study conducted so far on Muslim consumers of India related to halal certified packaged food products. Policy implications have been discussed.

Keywords: Halal certified packaged food products, halal knowledge, Indian Muslim purchase intention, religiosity

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INTRODUCTION

Halal certification has become an essential criterion for selecting packaged food products for Muslim consumers. There is a huge demand for halal certified food products in Muslim majority countries like Malaysia and Indonesia. Some companies

offer Halal certified food products in Muslim minority countries as well. Halal certification offers a huge opportunity for markets all over the world for both domestic niche markets and for exporting to Muslim majority countries. A recent study commissioned by the government of UAE and conducted by Thomson Reuter estimates that food sector will grow at the rate of 10.8 percent annually from the US \$ 795 billion in 2014 to US\$ 2.5 trillion in 2019 and will constitute the 21.2 percent of global food expenditure.

There can also be a great demand for halal products in the domestic market in India as well, mainly due to its huge Muslim population, which presently stood at 172 million (Census, 2011). Despite such a huge potential, there is a lack of popular halal certified food products in India. Many companies are getting halal certification for exporting to Muslim countries but seem to be reluctant in offering halal certified products in the domestic market. Halal certification is seemingly a missed opportunity in India.

Researchers investigating the halal food purchase behaviour have focused mostly on halal meat (Bonne et al., 2007). However, there are studies, which have also investigated halal food purchase behaviour for other than meat products (Abu-Hussin et al., 2017; Rahman et al., 2015; Sahlan et al., 2019). Previous researchers have applied two main approaches. Some authors have tested a proposed model based on independent constructs identified through literature review but without applying a priori theory or Model (Aziz & Chok, 2013; Shaari &

Arifin, 2010). While many other authors have tested existing theoretical model (like TRA and TPB) by adding some additional variables (Bonne et al., 2007; Khan & Azam, 2016; Mukhtar & Butt, 2012) or sometimes only using original models without adding new variables (Alam & Sayuti, 2011; Lada et al., 2009). Even though such studies have also been conducted in Muslim countries like Malaysia, Indonesia, Saudi Arabia, Pakistan we need further evidence from countries like India where Muslims enjoy a unique position (Ahmad et al., 2019; Ali et al., 2018; Bashir et al., 2019; Elseidi, 2018; Ismail et.al. 2018). In India, Muslims are regarded as a minority. However, Muslims constitute a significant number in India amounting to 170 million. There is a vast potential for halal certified products.

Existing literature indicates that religiosity has inconsistent results in influencing the purchase intention of halal products. Although many studies have found a significant influence of religiosity on attitude and intention, there are studies in contrast as well. While many studies concluded that religiosity is important in halal purchase behaviour (Mukhtar & Butt, 2012), many others have reported that religiosity is not a significant predictor in purchase behaviour of halal certified food behaviour (Khan & Azam, 2016). Adding to this, Mukhtar and Butt (2012) had also concluded that only intrinsic religiosity was significant while extrinsic religiosity was not significant, in influencing halal food purchase behaviour. Therefore, the present study tests the direct and indirect influence

of religiosity and subjective knowledge of halal on TPB variables.

LITERATURE REVIEW

Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB)

Theory of reasoned action (TRA) proposes that subjective norm and attitude can predict behavioural intention, while behavioural intention can predict behaviour. Ajzen (1985, 1991) extended TRA by adding the variable of “perceived behavioural control”. Theory of planned behaviour (TPB) postulates that all three components, attitude, subjective norms and perceived behaviour control predicts behavioural intention, and in turn, behavioural intention predicts the actual behaviour. Thus, the theory of planned behaviour is essentially an extension of the theory of reasoned action. Ajzen (1991) suggested that many background factors might also influence behavioural intention and behaviour. In line with his suggestions, many researchers have added contextual variables, depending upon the specific research requirement and country of research. Similarly, in the case of halal purchase behaviour, researchers have also incorporated many other relevant variables dependent upon the need of the study.

The TPB model has been widely employed in food purchase intention studies and has produced decent prediction ability (McDermott et al., 2015; Riebl et al., 2015). TPB has been applied to range food products, which include organic food purchase behaviour (Yadav & Pathak, 2016),

green food purchase behaviour (Yadav & Pathak, 2017), sustainable food purchase behaviour (Vassallo et al., 2016), genetically modified food products purchase behaviour (Wunderlich et al., 2017). In context of halal TPB has been used by previous researchers in many countries like Malaysia (Ismail et al., 2018), Pakistan (Ahmad et al., 2019), South Africa (Bashir et al., 2019), China (Ali et al., 2018), Indonesia, UK (Elseidi, 2018). Figure 1 shows the hypotheses proposed in this study. Following section, provide the development of the hypotheses.

Attitude

Attitude towards behaviour is the consumers’ evaluation of the behaviour. Fishbein and Ajzen (1975) defined Attitude as “*a learned predisposition to respond consistently in a favourable or unfavourable manner with respect to a given object*”. In context of TPB based studies on halal food purchase, attitude has emerged as the best predictor of purchase intention (Alam & Sayuti, 2011; Ali et al., 2017; Al-Otoum & Nimri, 2015; Hussain et al., 2016; Khan & Azam, 2016; Öztürk et al., 2015). However, there are some pieces of evidence in contrast also, for instance, Omar et al. (2012) found that attitude was not significant in predicting halal purchase intention. On the other hand, Afendi et al. (2014), Hall and Sevim (2016), and Khalek and Ismail (2015) had found attitude as a significant antecedent of halal purchase intention. However, the relative importance of attitude among TPB variables was varied. Attitude was the second-best predictor in case of Khalek and Ismail

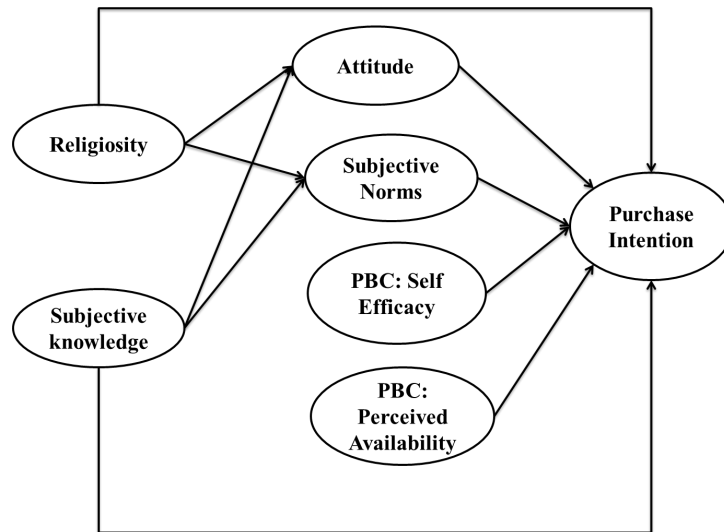


Figure 1. Proposed model

(2015), Lada et al. (2009), Mukhtar and Butt (2012), and Hall and Sevim (2016). However, in case of Afendi et al. (2014), it was third in relative importance. Hence, following hypothesis is presented.

H1: Attitude has a positive influence on purchase intention

Subjective Norms

Ajzen (1991) defined subjective norms as “the perceived social pressure to perform or not to perform the behaviour”. It is evident from the literature that subjective norms play a significant role in influencing the intention of consumers. Some notable studies in case of halal food products purchase intention are of Alam and Sayuti (2011), Lada et al (2009), Khan and Azam (2016), and Aziz and Chok (2013), and some other important examples from other food purchase studies are Johe and Bhullar (2016), Fang and Levy (2015), Rodríguez (2012), and Kim

(2014). Earlier studies have established that engaging in religious groups can create powerful bonds with society (Regnerus & Elder, 2003). Families are given more value than individuality in Islamic societies (Hameed and Al-Sheikh, 1978; cited in Al Jahwari, 2015). Further, in countries like India, which are called collectivist societies, subjective norms should be considered as an important socio-psychological parameter. Hence, following hypothesis is presented.

H2: Subjective norm has a positive influence on purchase intention

Perceived Behavioural Control

Perceived behavioural control (PBC) refers to the amount of easiness or difficulty that individuals recognise in performing a given behaviour. The probability of performance of the behaviour is high when individuals believe that they have sufficient resources needed to perform that behaviour. These

resources can be internal or external. Internal resources pertain to the individuals' self while external resources pertain to the environment. Thus, one kind of PBC refers to individuals' judgments of how easily (or with difficulty) they can perform a behaviour. We may refer to this as PBC-Self efficacy (PBC-SE) And, another kind of PBC is the amount of control from external elements (such as availability). Controls beliefs may depend on past background with the behaviour, however, sometimes also get influenced by secondary information about the behaviour, from experiences of others which may include, friends, family and colleagues. This study has operationalized the concept of PBC following Ali et al. (2017) and Bonne et al. (2007, 2009), where PBC has been considered as a two-dimensional construct.

PBC has been a significant predictor of halal purchase intention (Alam & Sayuti, 2011; Ali et al., 2017; Khan & Azam, 2016). However, it has been the weakest predictor in many halal food-related studies based on the TPB model. For example, in cases of Ali et al. (2017), Hall and Sevim (2016), and Khalek and Ismail (2015) found PBC as the third best predictor of halal food purchase intention. Alam and Sayuti (2011), and Khan and Azam (2016) found PBC as the second-best predictor of halal food after attitude. Afendi et al. (2014) and Omar et al. (2012) also found as second best in the prediction of halal food but after subjective norms. Thus, following hypotheses are proposed

H3: PBC (Self-efficacy) has a positive influence on purchase intention

H4: PBC (Availability) has a positive influence on purchase intention

Religiosity

Religiosity is an important constituent of subculture and has been defined as the degree of commitment towards one's religion, which can also be understood as the level of confidence in the religion (Gallagher & Tierney, 2013). *Religiosity is the chief source, which nurtures personal values (Fry et al., 2011, cited in Graafland, 2017), and values are amongst the most critical factors in the formation of attitudes (Fishbein & Ajzen, 1975; Graafland, 2017).* It is a fundamental and underlying factor which shapes individual decision-making and can affect individuals' attitude and behaviour (Delener, 1990; Islam, & Chandrasekaran, 2015; Wilkes et al., 1986). In the context of halal purchase studies, several studies have investigated the role of religion and religiosity. Mokhlis (2009) contrasted shopping behaviour among various religious groups. Bonne et al. (2006, 2007), and Bonne et al. (2008) had studied the role of religion about halal food products. Bonne et al. (2007) investigated the halal purchase intention of French Muslims and found interesting insights into how religious identity might produce differential effects in antecedents of purchase intention. Based on above discussion, following hypotheses are proposed

H5: Religiosity has a positive influence on purchase intention

H6: Religiosity has a positive influence on attitude

H7: Religiosity has a positive influence on subjective norms

Subjective Knowledge

Our knowledge helps in developing competence for taking or not taking action (Stehr, 1994). Knowledge refers to the understanding of a specific subject and its possible implication (CheAhmat et al., 2011). Knowledge is commonly referred to as “awareness, consciousness, or familiarity gained by experience or learning”. Knowledge plays a vital role in human behaviour specifically in the area of consumer behaviour. Only a few studies (e.g. Aziz & Chok, 2013; Hamdan et al., 2013; Salehudin & Luthfi, 2013) have investigated the influence of subjective knowledge of halal on purchase intention. However, there are many studies related to other food purchase behaviour, which have investigated such a relationship. Specifically, studies concerning organic food purchase behaviour have investigated this relationship. Aertsens et al. (2009) in a review of organic purchase intention reported subjective knowledge as an essential factor in determining organic food purchase. Further, Aertsens et al. (2011) in an empirical study found a significant and positive relationship between subjective knowledge and attitude toward organic food products. Therefore, following hypotheses are proposed.

H8: Subjective knowledge of halal has a positive influence on purchase intention

H9: Subjective knowledge has a positive influence on attitude

H10: Subjective knowledge has a positive influence on subjective norm

MATERIALS AND METHOD

A structured questionnaire consisting of 22 items were used to measure seven latent constructs; adapted from the existing literature. All items were measured using a seven point Likert scale ranging from strongly agree (7) to strongly disagree (1). Please refer to the Table 1 for the measurement Scales and their sources.

The data were analysed in three steps. First, data cleaning was done by removing missing values and unengaged responses (Sekaran & Bougie, 2016). In the second step, the measurement model is tested applying confirmatory factor analysis (CFA). Then finally, a multilevel structural model (SEM) is examined using the hypotheses testing. AMOS 21 software was used for conducting CFA and SEM. To meet the assumption of SEM, we checked for linear relationship using curve estimation, multicollinearity using variance inflation factor (VIF), and deviation from normality using Skewness and kurtosis. Through curve estimation in SPSS, it was inferred that all relations were linear as the value of F statistics was highest and value of R-squared is sufficiently high and significant in the linear models (Hair et al., 1998). This step was repeated several times to check all paths specified in the structural model. For checking multicollinearity, it was assured that all values of VIF were less than 10

Table 1

Measurement scales and their sources

Coding Scale and Items (statements)		Supporting Literature
Purchase Intention		
PI1	If these products were available in the shops, I would buy them.	Ajzen (1991, 2002), Kim (2014), Lada et al. (2009) and Venkatesh and Davis (2000)
PI2	I will make an effort to buy these products.	
PI3	I will buy these products even if they are slightly expensive.	
Attitude		
ATT1	Halal certification is a practical idea.	Ajzen (1991, 2002), Chung et al. (2012), Taylor and Todd (1995), and Yadav and Pathak (2016, 2017)
ATT2	Halal certification a beneficial for consumers like me	
ATT3	Halal certification is necessary for consumers like me	
ATT4	Halal certification is helpful for consumers like me	
Subjective Knowledge		
KNW1	I am confident in my knowledge of halal and haram	Flynn and Goldsmith (1999) and Salehudin and Luthfi (2013)
KNW2	I believe that my knowledge about halal and haram is above average.	
KNW3	I know a lot about of halal slaughtering (zabiah).	
Subjective Norms (3 items)		
SN1	My family members will approve if I buy certified halal Products	Ajzen (1991, 2002), Cook et al. (2002), Lada et al. (2009), Shakona (2013), and Venkatesh and Davis (2000)
SN2	Friends who are important to me would certified halal Products	
SN3	Overall most people who are important to me would certified halal Products	
Perceived Availability		
AVLB1	Halal certified products are available in most of the shops	Ajzen (1991, 2002), Alam and Sayuti (2011), and Hansen et al. (2004)
AVLB2	Many options are available in halal certified food items	
AVLB3	Information on halal certified products is clear	

Table 1 (Continued)

Coding Scale and Items (statements)		Supporting Literature
Self-Efficacy		Ajzen (1991, 2002), Hansen et al. (2004), and Taylor and Todd (1995)
PBC1	I have enough time to choose the best option for purchasing halal packaged food items	
PBC2	I have enough knowledge of ingredients labels for purchasing halal packaged food items.	
PBC3	I have enough money to choose the best option for purchasing halal packaged food items	
Religiosity		Alam et al. (2011) and Rehman and Shabbir (2010)
RELG1	I regularly offer prayers five times a day	
RELG2	I regularly fast in the month of Ramadan.	
RELG3	I pay (will pay) Zakat every year If I meet the prescribed criterion.	

(Hair et al., 1998). Criteria of Skewness (± 2) and kurtosis (± 3) were utilised to assess the deviation from normality (Kline, 2011).

RESULTS

Demographic Profile

We targeted Muslim consumers who were above 18 years of age and had some experience of using packaged food products. Data were collected from the six districts of the state of Uttar Pradesh. The data were collected by self-administering the questionnaire. Total 350 questionnaires were found useful after removing missing values and unengaged responses from a set of 600 questionnaires distributed to the respondents. The sample consisted of slightly higher proportion ($n=182$, 52%) of male respondents. About one third of the respondents were between 18 to 24 years of age ($n=120$). About 17 percent ($n=60$) were between 25 and 34. Moreover, roughly

39 % were between 35 to 54 years of age. Majority of the respondents (67%) were either graduate or above. Only 4 percent are high school or below while 29 % are intermediate. Please refer to the Table 2 for the demographic profile of the respondents.

Confirmatory Factor Analysis (CFA)

The measurement model was tested conducting first order confirmatory factor analysis (CFA) by employing the maximum likelihood estimation method in AMOS 21 software. The model exhibited sufficient level of model fit: CMIN=376.817, DF=188, CMIN/DF=2.01, CFI=0.942, SRMR=0.046, RMSEA=0.054, PClose=0.217 (Gaskin & Lim, 2016). The composite reliability (C.R.) indices were above 0.70 thus, fulfilling the recommended criterion (Hair et al., 1998). The value of C.R. ranged from 0.754 (for PBC-SE) to 0.873 (for attitude). To confirm the validity of measurement constructs both convergent validity and discriminant validity were assessed. All regression loading in

CFA ranged from 0.584 to 0.912 (> 0.50) and all values of average variance extracted ranged from 0.510 to 0.634 (> 0.50) thus, establishing convergent validity (Fornell & Larcker, 1981). Further, the discriminant validity was assessed using the Fornell and Larcker (1981) criterion, i.e. values of the square root of AVE's should be greater

than the corresponding pair of squared correlation between the constructs. In all cases, the value of AVE was greater than the value of squared correlation, exhibiting that each construct is distinct. Please refer to the Table 3 for regression coefficients for CFA and Table 4 for discriminant validity, AVE, and CR.

Table 2

Demographic profile of respondents

Variable	Frequency	Percent
Gender	Male	52
	Female	48
Age	18-24	35
	25-34	17
	35-44	24
	45-54	15
	55-65	5
	65+	4
	Educational	High School
Intermediate		29
Graduation		27
Post-graduation		35
Ph.D.		5
Employment	Govt. Job	17
	Own Business	22
	Not Working	20
	Private Job	22
	Students	19
Income	less than 2 lakh	37
	2-4lakh	24
	4-6 lakh	18
	6-10 lakh	17
	10 above lakh	3
City	Lucknow	17
	Bahraich	15
	Aligarh	20
	Moradabad	19
	Rampur	13
	Bijnor	15

Table 3

Measurement model. CFA factor loadings

Construct	Item	Regression Estimates for CFA		
		Standardized	Unstandardized	S.E.
Attitude	ATT5	0.821	1.000 (constrained)	
	ATT6	0.870	0.870	0.046
	ATT4	0.824	0.863	0.051
	ATT3	0.653	0.853	0.067
Knowledge	KNW4	0.820	1.000 (constrained)	
	KNW5	0.912	1.112	0.065
	KNW6	0.611	0.847	0.072
Perceived behavioural Control	PBC3	0.825	1.000 (constrained)	
	PBC1	0.584	0.724	0.076
	PBC4	0.714	0.769	0.075
Availability	AVLB2	0.683	1.000 (constrained)	
	AVLB3	0.794	1.409	0.126
	AVLB4	0.743	1.361	0.128
Religiosity	RELG2	0.746	1.000 (constrained)	
	RELG3	0.709	1.001	0.083
	RELG4	0.797	1.000	0.081
Purchase Intention	PI5	0.769	1.000 (constrained)	
	PI4	0.737	0.874	0.073
	PI7	0.725	1.140	0.094
Subjective Norms	SN3	0.762	1.000 (constrained)	
	SN2	0.711	0.734	0.063
	SN5	0.699	0.899	0.078

Table 4

Discriminant validity

	CR	AVE	MSV	1	2	3	4	5	6	7
1. Purchase Intention	0.788	0.553	0.366	0.744						
2. Attitude	0.873	0.634	0.381	0.605	0.796					
3. Subjective Knowledge	0.830	0.626	0.362	0.234	0.350	0.791				
4. PBC (self-efficacy)	0.754	0.510	0.172	0.305	0.285	0.349	0.714			
5. PBC (Control)	0.785	0.550	0.151	0.377	0.368	0.289	0.304	0.741		
6. Religiosity	0.795	0.565	0.362	0.346	0.365	0.602	0.357	0.388	0.752	
7. Subjective Norms	0.768	0.525	0.381	0.524	0.617	0.494	0.415	0.338	0.495	0.725

Table 5

Indirect effect of religiosity and Subjective knowledge on Purchase intention

	Indirect	Direct	Total
Subjective knowledge	0.14	-0.134	0.006
Religiosity	0.239	0.033	0.272

Structural Model and Results of Hypotheses Testing

Earlier, the structural model exhibited average fit, but the indices were not up to the mark. After taking cues from the modification indices, the error terms of attitude and subjective norms were covaried. After this arrangement, the model exhibited a reasonably well fit: CMIN=398.066, DF=192, CMIN/DF=2.073, CFI=0.937, SRMR=0.063, RMSEA=0.055, PClose=0.119 (Gaskin & Lim, 2016).

Among the first four hypotheses (H1: H4), which were based on the core model of the theory of planned behaviour, three hypotheses H1 and H2, H4 were accepted. Hypotheses H1: H4 postulated that purchase intention of halal certified products would be influenced by attitudes, subjective norms, self-efficacy and perceived availability. Thus, the results of the analysis confirmed that attitude (H1: $\beta=0.438$, $p<0.05$) towards halal certified products, subjective norms ($\beta=0.258$, $p<0.05$) and perceived availability ($\beta=0.132$, $p<0.05$) would influence the purchase intention of halal certified products. As the relation self-efficacy \rightarrow purchase intention (H3) was not supported, the study contends that there is no relationship between self-efficacy and purchase intention of halal certified products.

Among six hypotheses based on religiosity (H5a, H5b and H5c) and subjective knowledge (H6a, H6b and H6c) four hypotheses (H5b, H5c, H6b and H6c) were supported. Both the hypotheses, based on direct relationships, of religiosity with

purchase intention (H5a) and subjective knowledge with purchase intention (H6a) were not supported. The relationship, religiosity \rightarrow attitude (H5a: $\beta=0.268$, $p<0.05$) and religiosity \rightarrow subjective norms (H5b: $\beta=0.472$, $p<0.05$) were supported. Further, the relationship, subjective knowledge \rightarrow attitude (H5a: $\beta=0.195$, $p<0.05$) and subjective knowledge \rightarrow subjective norms, (H5b: $\beta=0.212$, $p<0.05$) were also supported. Figure 2 presents the results of hypotheses testing. We also checked the indirect effect of religiosity and subjective knowledge on purchase intention (see Table 5). We found that religiosity had significant indirect and total effect on purchase intention while subjective knowledge had no indirect effect on purchase intention. Thus, we can conclude that religiosity has the only indirect effect on purchase intention while subjective knowledge has neither direct nor indirect effect on purchase intention.

DISCUSSION

Implications

Understanding halal perceptions of consumers can be a principal tool for companies to gain a competitive advantage in the market (Hussain et al., 2016; Wilson & Liu, 2011). These findings have several compelling contributions for marketers and theory building in the area of religiosity and consumer behaviour. First as mentioned above we found that religiosity affects attitude, companies should advertise their products showing religious people as a user of these products and they should highlight

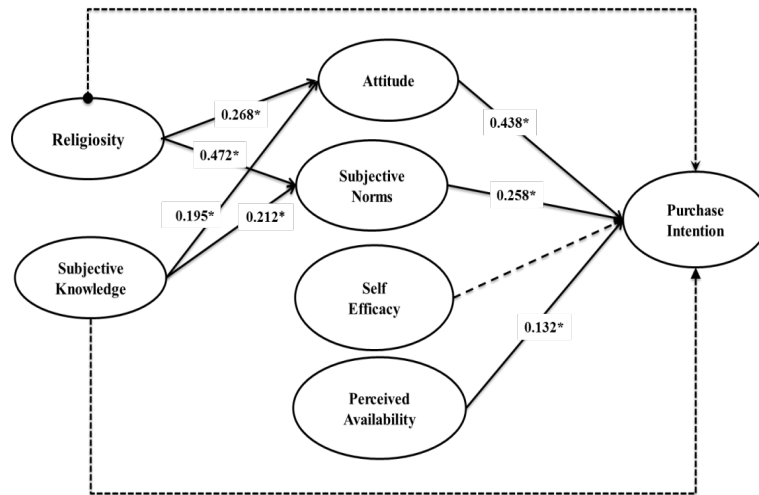


Figure 2. Results of hypotheses testing

Halal attribute of the product. Second, there is a positive relationship between attitude and purchase intention of halal food products. In order to promote the purchase for halal products, marketers should, therefore, try to enforce attitude towards halal products. For example, firms should give more emphasis on the benefits of using halal products. They should use the halal logo, labelling highlighting certification of the product as halal. Third, finding showed subjective norm influences the decision to purchase halal food products. The possible implication for this study is that a firm should promote their halal products as socially desirable and can be achieved by showing the use of these products by high profile people, Ulama (religious scholar and preachers), Head of Muslim organisations and celebrities. For example, India has some Muslim socially respectable celebrities, like Zaheer Khan, Irfan Habib, Irfan Pathan and Yusuf Pathan, advertisement by these

celebrities can be useful to make the halal products more socially desirable.

Future researchers should further investigate how different sect of Muslim, namely Shia, and Sunni respond to halal products. This will provide a better understanding. Moreover, this should be confirmed in different settings. Since in European countries Non-Muslim have also shown an inclination towards halal products. Hence, Indian Non-Muslim should also be studied in order to increase the opportunity for the halal market. We also support the call of Mukhtar and Butt (2012) for the study of halal products of specific categories, like cosmetics (Rahman et al., 2015), chocolates, meat, and cookies.

Limitations

The findings of this research cannot be generalised due to the small size of the sample. We have used only the sample of six Muslim populated districts in the

state of Uttar Pradesh, which cannot be representative of the whole country. Only limited market players are selling halal products in India; hence respondents may not be aware of the products. We have not specified the product category, which might have suffered from the lack of specification of the object. More specific category of the product would have provided better results (Ajzen, 1991). Religiosity scale used for this study is uni-dimensional, whereas most of the previous studies are based on multi-dimensional, like intrinsic, social extrinsic and personal extrinsic religiosity (Baazeem et al., 2016), intrapersonal, interpersonal religiosity (Mukhtar & Butt, 2012).

CONCLUSION

The current study aimed to contribute the understanding of the Muslim consumers' halal food purchase intention with emphasis on the roles of religiosity and subjective knowledge or subjective knowledge. The findings of this study offer several implications for policymakers and marketers to condition the Muslim consumers purchase intention. Of course, the current study is not free from the limitations of operationalisation the constructs, as this study uses a uni-dimensional construct of religiosity and subjective knowledge. The current study did not measure the influence of regional differences. Future researchers should also investigate how Non-Muslim perceives halal products.

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REFERENCES

- Abu-Hussin, M. F., Johari, F., Hehsan, A., & Nawawi, M. S. A. B. M. (2017). Halal purchase intention among the Singaporean Muslim minority. *Journal of Food Products Marketing*, 23(7), 769-782.
- Aertsens, J., Mondelaers, K., Verbeke, W., Buysse, J., & Van Huylenbroeck, G. (2011). The influence of subjective and objective knowledge on attitude, motivations and consumption of organic food. *British Food Journal*, 113(10-11), 1353-1378. <https://doi.org/10.1108/00070701111179988>
- Aertsens, J., Verbeke, W., Mondelaers, K., & Van Huylenbroeck, G. (2009). Personal determinants of organic food consumption: A review. *British Food Journal*, 111(10), 1140-1167.
- Afendi, N. A., Azizan, F. L., & Darami, A. I. (2014). Determinants of halal purchase intention: Case in Perlis. *International Journal of Business and Social Research*, 4(5), 118-123.
- Ahmad, A., Tangngareng, T., Harun, A., & Masri, M. (2019). Halal product: New market opportunity in challenging the industrial revolution 4.0. In *1st International Conference on Science and Technology, ICOST 2019*. Sidoarjo, Indonesia: European Alliance for Innovation (EAI).
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Berlin, Heidelberg: Springer.

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I. (2002). *Constructing a theory of planned behavior questionnaire*. Retrieved September 10, 2016, from <https://people.umass.edu/aizen/pdf/tpb.measurement.pdf>
- Alam, S. S., & Sayuti, N. M. (2011). Applying the Theory of Planned Behavior (TPB) in halal food purchasing. *International Journal of Commerce and Management*, 21(1), 8-20. doi:10.1108/10569211111111676
- Al Jahwari, D. S. (2015). *An integrative model of Muslim students' religiosity and travelling behavior to gaming destinations* (Doctoral dissertation), University of South Carolina, South Carolina, USA.
- Alam, S. S., Mohd, R., & Hisham, B. (2011), Is religiosity an important determinant on Muslim consumer behaviour in Malaysia? *Journal of Islamic Marketing*, 2(1), 83-96.
- Ali, A., Ali, A., Xiaoling, G., Sherwani, M., & Hussain, S. (2018). Expanding the theory of planned behaviour to predict Chinese Muslims halal meat purchase intention. *British Food Journal*, 120(1), 2-17. <https://doi.org/10.1108/BFJ-05-2017-0278>
- Ali, A., Xiaoling, G., Sherwani, M., & Ali, A. (2017). Factors affecting halal meat purchase intention: Evidence from international Muslim students in China. *British Food Journal*, 119(3), 527-541. <https://doi.org/10.1108/BFJ-10-2016-0455>
- Al-Otoum, F. J., & Nimri, R. S. (2015). Antecedents of consumers' behavior towards halal food among Jordanian customers: A structural equation modeling (SEM) approach. *Journal of Marketing and Consumer Research*, 12(1), 19-25.
- Aziz, Y. A., & Chok, N. V. (2013). The role of Halal awareness, Halal certification, and marketing components in determining Halal purchase intention among non-Muslims in Malaysia: A structural equation modeling approach. *Journal of International Food and Agribusiness Marketing*, 25(1), 1-23. <https://doi.org/10.1080/08974438.2013.723997>
- Bashir, A. M., Bayat, A., Olutuase, S. O., & Abdul Latiff, Z. A. (2019). Factors affecting consumers' intention towards purchasing halal food in South Africa: A structural equation modelling. *Journal of Food Products Marketing*, 25(1), 26-48.
- Baazeem, T., Mortimer, G., & Neale, L. (2016). Conceptualising the relationship between shopper religiosity, perceived risk and the role of moral potency. *Journal of Consumer Behaviour*, 15(5), 440-448.
- Bonne, K., Vermeir, I., Bergeaud-Blackler, F., & Verbeke, W. (2006). Factors influencing halal meat consumption: An application of the theory of planned behaviour. In M. Kaiser & M. E. Lien (Eds.), *Ethics and the politics of food*. Wageningen, Netherlands: Wageningen Academic Pub.
- Bonne, K., Vermeir, I., Bergeaud-Blackler, F., & Verbeke, W. (2007). Determinants of Halal meat consumption in France. *British Food Journal*, 109(5), 367-386. <https://doi.org/10.1108/0070700710746786>
- Bonne, K., Vermeir, I., & Verbeke, W. (2008). Impact of religion on halal meat consumption decision making in Belgium. *Journal of International Food & Agribusiness Marketing*, 21(1), 5-26.
- Bonne, K., Vermeir, I., & Verbeke, W. (2009). Impact of religion on Halal meat consumption decision making in Belgium. *Journal of International Food and Agribusiness Marketing*, 21(1), 5-26. <https://doi.org/10.1080/08974430802480628>
- Census. (2011) *Religion census 2011*. Retrieved November 3, 2017, from <http://www.census2011.co.in/religion.php>

- CheAhmat, N., Radzi, S. M., Zahari, M. S. M., Muhammad, R., Aziz, A. A., & Ahmad, N. A. (2011). The effect of factors influencing the perception of price fairness towards customer response behaviors. *Journal of Global Management*, 2(1), 22-38.
- Chung, J. E., Stoel, L., Xu, Y., & Ren, J. (2012). Predicting Chinese consumers' purchase intentions for imported soy-based dietary supplements. *British Food Journal*, 114(1), 143-161.
- Cook, A., Kerr, G., & Moore, K. (2002). Attitudes and intentions towards purchasing GM food. *Journal of Economic Psychology*, 23(5), 557-572. [https://doi.org/10.1016/S0167-4870\(02\)00117-4](https://doi.org/10.1016/S0167-4870(02)00117-4)
- Delener, N. (1990). The effects of religious factors on perceived risk in durable goods purchase decisions. *Journal of Consumer Marketing*, 7(3), 27-38.
- Elseidi, R. I. (2018). Determinants of halal purchasing intentions: Evidences from UK. *Journal of Islamic Marketing*, 9(1), 167-190. doi:10.1108/JIMA-02-2016-0013
- Fang, Z., & Levy, E. (2015). *An analysis of consumption and purchasing toward organic fruits: Cross-countries study between China and France* (Master thesis), Linnaeus University, Växjö, Sweden.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Boston, USA: Addison Wesley Publishing Company.
- Flynn, L. R., & Goldsmith, R. E. (1999). A short, reliable measure of subjective knowledge. *Journal of Business Research*, 46(1), 57-66.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388. doi:10.1177/002224378101800313
- Gallagher, S., & Tierney, W. (2013). Religion/spirituality. In *Encyclopedia of behavioral medicine* (pp. 1644-1646). New York, USA: Springer.
- Gaskin, J., & Lim, J. (2016). *Plugins - StatWiki*. Retrieved July 9, 2016, from <http://statwiki.kolobkreations.com/index.php?title=Plugins>
- Graafland, J. (2017). Religiosity, attitude, and the demand for socially responsible products. *Journal of Business Ethics*, 144(1), 121-138.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5). Upper Saddle River, USA: Prentice hall.
- Hall, E. E., & Sevim, N. (2016). Halal food consumption intention by Turkish immigrants. *International Journal of Business and Management Invention*, 5(11), 36-40.
- Hamdan, H., Issa, Z. M., Abu, N., & Jusoff, K. (2013). Purchasing decisions among Muslim consumers of processed halal food products. *Journal of Food Products Marketing*, 19(1), 54-61. <https://doi.org/10.1080/10454446.2013.724365>
- Hansen, T., Jensen, J., & Solgaard, H. (2004). Predicting online grocery buying intention: A comparison of the theory of reasoned action and the theory of planned behavior. *International Journal of Information Management*, 24(6), 539-550. <https://doi.org/10.1016/j.ijinfomgt.2004.08.004>
- Hussain, I., Rahman, S. u., Zaheer, A., & Saleem, S. (2016). Integrating factors influencing consumers' Halal products purchase: Application of theory of reasoned action. *Journal of International Food and Agribusiness Marketing*, 28(1), 35-58. <https://doi.org/10.1080/08974438.2015.1006973>
- Islam, T., & Chandrasekaran, U. (2015). Religiosity and ecologically conscious consumption behaviour. *Asian Journal of Business Research*,

- 5(2), 18-30. doi:10.14707/ajbr.150014
- Ismail, I., Abdullah, N. A. N., Ahmad, Z., & Sidek, N. L. (2018). Halal principles and halal purchase intention among Muslim consumers. In *Proceedings of the 3rd International Halal Conference (INHAC 2016)* (pp. 131-138). Singapore: Springer.
- Johe, M. H., & Bhullar, N. (2016). To buy or not to buy: The roles of self-identity, attitudes, perceived behavioral control and norms in organic consumerism. *Ecological Economics*, 128, 99-105.
- Khalek, A. A., & Ismail, S. H. S. (2015). Why are we eating halal – Using the theory of planned behavior in predicting halal food consumption among generation y in Malaysia. *International Journal of Social Science and Humanity*, 5(7), 608-612. <https://doi.org/10.7763/IJSSH.2015.V5.526>
- Khan, A., & Azam, M. K. (2016). Factors influencing halal products purchase intention in India: Preliminary investigation. *IUP Journal of Marketing Management*, XV(1), 20-35.
- Kim, Y. G. (2014). Ecological concerns about Genetically Modified (GM) food consumption using the Theory of Planned Behavior (TPB). *Procedia - Social and Behavioral Sciences*, 159, 677-681. doi:10.1016/j.sbspro.2014.12.467
- Kline, R. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, USA: Guilford Press.
- Lada, S., Tanakinjal, G. H., & Amin, H. (2009). Predicting intention to choose halal products using theory of reasoned action. *International Journal of Islamic and Middle Eastern Finance and Management*, 2(1), 66-76. doi:10.1108/17538390910946276
- McDermott, M. S., Oliver, M., Svenson, A., Simnadis, T., Beck, E. J., Coltman, T., ... & Sharma, R. (2015). The theory of planned behaviour and discrete food choices: A systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 1-11. doi:10.1186/s12966-015-0324-z
- Mokhlis, S. (2009). Relevancy and measurement of religiosity in consumer behavior research. *International Business Research*, 2(3), 75-84.
- Mukhtar, A., & Butt, M. M. (2012). Intention to choose Halal products: The role of religiosity. *Journal of Islamic Marketing*, 3(2), 108-120. doi:10.1108/17590831211232519
- Omar, K. M., Mat, N. K. N., Imhemed, G. A., & Ali, F. M. A. (2012). The direct effects of halal product actual purchase antecedents among the international Muslim consumers. *American Journal of Economics*, 2(4), 87-92. doi:10.5923/j.economics.20120001.20
- Öztürk, A., Sima, N. A. R. T., & Altunişik, R. (2015). Determinants of halal consumption behavior of consumers': A study with the theory of planned behavior. *Uluslararası İslam Ekonomisi ve Finansı Araştırmaları Dergisi*, 1(2), 141-160.
- Rahman, A. A., Asrarhighi, E., & Rahman, S. A. (2015). Consumers and halal cosmetic products: Knowledge, religiosity, attitude and intention. *Journal of Islamic Marketing*, 6(1), 148-163. doi:10.1108/JIMA-09-2013-0068
- Regnerus, M. D., & Elder, G. H. (2003). Religion and vulnerability among low-risk adolescents. *Social Science Research*, 32(4), 633-658.
- Rehman, A. U., & Shabbir, M. S. (2010). The relationship between religiosity and new product adoption. *Journal of Islamic Marketing*, 1(1), 63-69.
- Riebl, S. K., Estabrooks, P. A., Dunsmore, J. C., Savla, J., Frisard, M. I., Dietrich, A. M., ... & Davy, B. M. (2015). A systematic literature review and meta-analysis: The Theory of Planned Behavior's application to understand and predict nutrition-related behaviors in youth.

- Eating Behaviors*, 18, 160-178. doi:10.1016/j.eatbeh.2015.05.016
- Rodríguez, J. A. A. (2012). *Consumer preferences for organic food: Behavior building-up, importance of pricing, information and sensory issues* (Doctoral dissertation), Universitat Politècnica de Catalunya (UPC), Barcelona, Spain.
- Sahlan, M., Abu-Hussin, M., & Hehsan, A. (2019), Market coepetition. *Journal of Islamic Marketing*, 10(2), 465-475. <https://doi.org/10.1108/JIMA-04-2017-0046>
- Salehudin, I., & Luthfi, B. (2013). Marketing impact of halal labeling toward Indonesian Muslim consumer's behavioral intention based on Ajzen's Planned Behavior Theory: Policy capturing studies on five different product categories. *ASEAN Marketing Journal*, 3(1), 35-45. Retrieved November 7, 2019, from <http://journal.ui.ac.id/index.php/amj/article/view/2013>
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. Hoboken, USA: John Wiley & Sons.
- Shakona, M. Y. (2013). *The influence of religiosity on the intention of United States Muslim tourists to choose a shariah compliant hotel* (Doctoral dissertation), Clemson University, Clemson, USA.
- Shaari, J., & Arifin, M. (2010). Dimension of Halal purchase intention; A preliminary study. *International Review of Business Research Papers*, 6(4), 444-456.
- Stehr, N. (1994). *Knowledge societies*. London, England: Sage.
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information systems research*, 6(2), 144-176.
- Vassallo, M., Scalvedi, M. L., & Saba, A. (2016). Investigating psychosocial determinants in influencing sustainable food consumption in Italy. *International Journal of Consumer Studies*, 40(4), 422-434.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Wilkes, R. E. Burnett, J. J., & Howell, R. D. (1986). On the meaning and measurement of religiosity in consumer research. *Academy of Marketing Science*, 14(10), 47-56.
- Wilson, J. A., & Liu, J. (2011). The challenges of Islamic branding: Navigating emotions and halal. *Journal of Islamic Marketing*, 2(1), 28-42. doi:10.1108/17590831111115222
- Wunderlich, S., Gatto, K., & Smoller, M. (2017). Consumer knowledge about food production systems and their purchasing behavior. *Environment, Development and Sustainability*, 20(6), 2871-2881. doi:10.1007/s10668-017-0021-y
- Yadav, R., & Pathak, G. S. (2016). Intention to purchase organic food among young consumers: Evidences from a developing nation. *Appetite*, 96, 122-128. doi:10.1016/j.appet.2015.09.017
- Yadav, R., & Pathak, G. S. (2017). Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological Economics*, 134, 114-122. doi:10.1016/j.ecolecon.2016.12.019