An Empirical Investigation on the Significance of Knowledge, Safety and Health Concern, Media Exposure and Attitude in Influencing Individual's Intention to Purchase Halal Personal Care Products

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ABSTRACT

The purpose of the paper is to empirically investigate the effect of knowledge, safety and health concern, media exposure and attitude in influencing individual's intention to purchase halal personal care products. Data were collected from 405 Muslim respondents in Klang Valley, Malaysia using a combination of purposive and quota sampling techniques. The data were later analysed using the Statistical Package for Social Sciences (SPSS) – Version 21 and Partial Least Square–Structural Equation Modelling (PLS-SEM) – Smart PLS 3. The results revealed that knowledge, safety and health concern and media exposure were found to be the significant determinants of attitude. It was also found that one's intention to purchase the products was significantly and positively influenced by attitude. Using DTPB as the underpinning theory of the study, this paper empirically justified the effect of knowledge, safety and health concern, media exposure and attitude on purchase intention in the context of halal personal care products. Most of the purchase intention studies on halal personal care products emphasised on the main constructs of TRA and TPB as the main factors that will affect one's intention and they seemed to ignore the importance of the antecedents of these constructs in predicting individual's intention. Therefore, this study attempts to close this theoretical gap by integrating the relevant antecedents of attitude, subjective norm, and perceived behavioural control in DTPB model as a new approach in predicting customers' behavioural intention in the context of halal personal care products. This study would be useful for marketers, manufacturers, and product managers as the findings would help them formulate and pursue relevant marketing strategies for their companies' promotional activities.

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1. Introduction

Halal is derived from the Arabic word which means permissible and lawful in comparison to the word haram, which means prohibited and unlawful [1]. Based on the halal point of view, any foods or products that are meant to be consumed should not be contaminated with pork or alcohol and that livestock should be slaughtered in accordance with Islamic principles [2]. Toyyiban is an even broader concept than halal, which means good, clean, wholesome, and ethical [3]. Under the concept of toyyiban, food and other consumables must be good or wholesome in terms of quality, safety, cleanliness, purity and authenticity [4,5].

According to Halal Development Corporations [6], one of the most profitable and rewarding halal industry after halal food and Islamic financial services is halal personal care products. For instance, in 2013 alone, Muslim customers consumed US$46 billion on halal personal care products which is 6.78% of the global expenditure, and this figure is predicted to increase to US$73 billion by 2019, making up over 8.2% of the global expenditure [7]. This growing halal personal care products industry is deemed by analysts as the next in line for growth after the profitable halal food and Islamic financial services [8].

In the local scene, halal personal care products contributed 10 to 20 per cent of the local personal care products market [9]. As of third quarter of 2015, Malaysia's export value for halal personal care products stood at RM1.7 billion, reflecting 5.5 per cent of the total halal exports which is valued at RM31.1 billion [10]. In addition, Malaysia's halal personal care products industry recorded sales of approximately RM3 billion in 2013 with the growth rate of 13 per cent annually [8,11].

However, in a world that is becoming more spiritually conscious, the acceptance and awareness level towards halal personal care products is still low within the Muslim community [5,11]. A research by [6] also found that the customers' acceptance and awareness towards halal personal care products in Malaysia was comparatively low. For instance, both Muslim and non-Muslims in Malaysia are familiar and aware with the concept of halal foods products but the term halal personal care products are relatively new even for Muslim consumers [8]. Additionally, not all Muslims look for the halal certifications when they purchase personal care products [12] and majority of them would purchase these products without the halal certifications when there were no alternatives [11].

Due to their lack of awareness and understanding on this halal concept, Muslim customers in Malaysia, therefore, have turned to conventional and imported brands whose halal status and safety issues are questionable and doubtful [13]. For example, according to the 2014's EuroMonitor's Trade Sources and National Statistics, only 0.5 percent of the Muslim customers in Malaysia are using Safi, the leading halal local brand for personal care products [14]. It seems that the local halal personal care products have yet to become a "household brand" for Muslim customers in Malaysia [15]. This raises the issue of examining what factors that may actually affect their behavioural intention to purchase these halal products.

From the theoretical standpoint, this study extends the purchase intention research on halal personal care products by applying the decomposed theory of planned behaviour (DTPB) as the underpinning theory of the study. Most of the purchase intention studies on halal personal care products emphasised on the main constructs of Fishbein and Ajzen's [16] Theory of Reasoned Action (TRA) and Ajzen's [17]'s Theory of Planned Behaviour (TPB) as the main factors that will affect one's intention and they seemed to ignore the importance of the antecedents of these constructs in predicting individual's intention [5,11].

This was further supported by Ali's *et al.*, [18] study whose findings also discovered that no previous research on halal personal care products had empirically examined the antecedent of attitude, subjective norms, and perceived behavioural control in a single model. Therefore, this study

attempts to close this theoretical gap by integrating the relevant antecedents of attitude, subjective norm, and perceived behavioural control in DTPB model as a new approach in predicting customers' behavioural intention in the context of halal personal care products.

However, due to a relatively big research framework, the authors have decided to discuss only the antecedents of attitude (i.e. knowledge, safety and health concern and media exposure) in this particular article. Meanwhile, the antecedents of subjective norm (i.e. friends' influence and family members' influence) and antecedents of perceived behavioural control (i.e. self-efficacy and resource facilitating condition) are discussed in other articles.

2. Research Framework

The research framework in this study was adapted from [17] and [19] and it is shown in Figure 1.
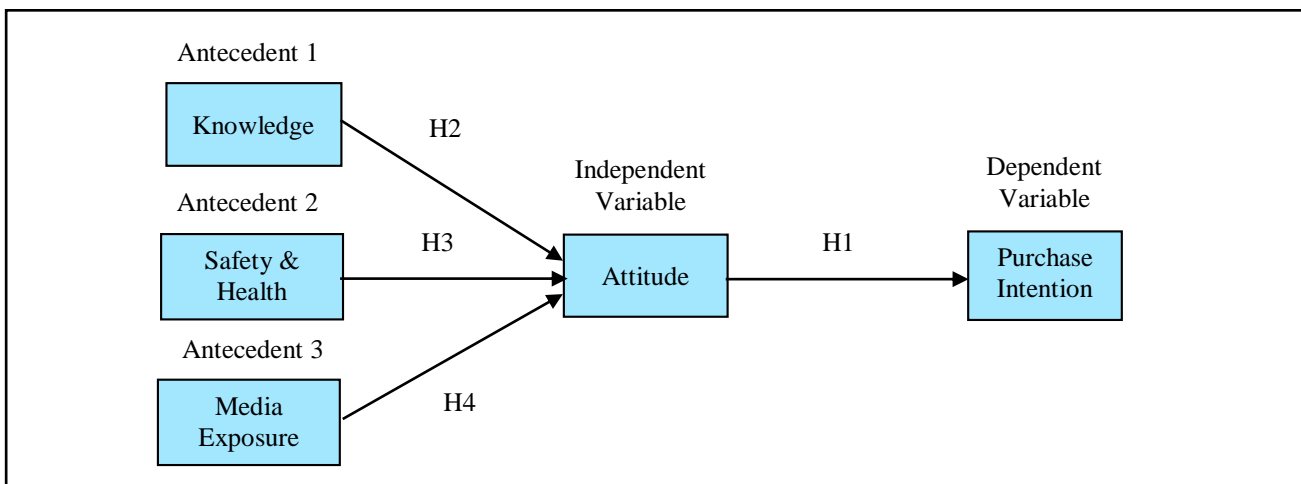

Fig. 1. Research Framework, Source: [17] and [19]

3. Methodology

The target population of this study was all Muslim respondents over the age of 20 to 60 years old at six major cities in Klang Valley, Malaysia. Based on the natures and objectives of the research, the present study used a combination of purposive and quota sampling method in choosing the appropriate respondents for the study. These two sampling techniques were utilized so as to provide findings of a higher degree of accuracy and generalizability [20].

With regards to the sample size, the researcher referred to the sample size as recommended by Israel [21] whose calculation was based on the Precision Levels where the Confidence Level was 95% and P = 0.5. According to Israel [21], a sample size for a population of more than one hundred thousand with precision level of ± 5% was 400 observations. This provided the researcher with a sample size that exceeded the minimum sample size as recommended by most researchers [22-25]. To avoid biases and possibility of unreturned questionnaires, 450 questionnaires were distributed at the identified locations.

In this study, a self-administered questionnaire was used as the main research instrument because it can provide high response rates, reduce the missing data, and shorten the data collection period [20]. Items used to measure attitude and knowledge were adapted from the scale used by Abd Rahman *et al.*, [2]. In addition, items used to measure safety and health concern were adapted from the instruments used by Haque *et al.*, [26] while, items used to measure media exposure were

generated based on the work of Md Husin *et al*., [27]. Finally, items used to measure purchase intention were based on the instruments used by Abd Rahman *et al*., [2].

The data collection process was conducted at six major cities in the Klang Valley area namely Kuala Lumpur, Klang, Kajang, Subang Jaya, Petaling Jaya, and Shah Alam. Meanwhile, the questionnaires of the study were pre-tested and refined prior to field work and the respondents were conveniently intercepted at shopping centres.

4. Results

A total of 450 copies of the questionnaires were distributed to target respondents. Out of the 450 copies, 430 copies were returned and only 405 copies could be used for further analysis, thus, yielding a response rate of 90 per cent.

4.1 Measurement Model Analysis

To assess the measurement model, two types of validity were examined namely convergent validity and discriminant validity.

4.1.1 Convergent validity

Convergent validity is the degree to which a measure correlates positively with another measures of the same construct [28,29]. Establishing convergent validity involves satisfying the conditions imposed upon indicators' loadings, composite reliability, and the average variance extracted (AVE) [30]. Based on an established rule of thumbs, the indicators' loadings of an item should exceed the threshold value of 0.60 [31,32], while, the cut-off point for both the composite reliability and AVE is 0.70 and 0.50 respectively [33]. In the initial round of the analysis, no item was found to have low factor loadings, thus, allowing the researcher to proceed with the analysis of composite reliability and AVE.

Table 1
summarizes the indicators' loadings, AVE and composite reliability of all the constructs in the final round of analysis

Constructs	Items	Loadings	AVE	CR
Attitude	ATT1	0.832	0.665	0.922
	ATT2	0.852		
	ATT3	0.859		
	ATT4	0.830		
	ATT5	0.823		
	ATT6	0.680		
Knowledge	BK1	0.724	0.525	0.846
	BK2	0.714		
	BK3	0.703		
	BK4	0.768		
	BK5	0.712		
Safety and Health Concern	CH1	0.759	0.541	0.854
	CH2	0.820		
	CH3	0.682		
	CH4	0.697		
	CH5	0.710		
Media Exposure	DM1	0.768	0.655	0.904

	DM2	0.840		
	DM3	0.887		
	DM4	0.822		
	DM5	0.717		
Intention to Purchase	ITP1	0.732	0.625	0.909
	ITP2	0.784		
	ITP3	0.777		
	ITP4	0.855		
	ITP5	0.805		
	ITP6	0.786		

Based on Table 1, all the indicators' loadings, AVE, and composite reliability for all the constructs under study surpass the 0.60, 0.50 and 0.70 cut-off point respectively, thus, fulfilling all the three criterions of convergent validity.

4.1.2 Discriminant validity

The second criterion to be fulfilled for the measurement model analysis is to evaluate the discriminant validity of the indicators. Discriminant validity is the degree to which a construct is truly different from other constructs in the model. In this study, the cross-loadings analysis, Fornell-Larcker criterion analysis and Heterotrait-Monotrait (HTMT) criterion analysis were used to measure the discriminant validity [33].

Specifically, an indicators' loading on the associated construct should be greater than any of its cross-loadings (i.e. its correlation) on other constructs [33]. Based on Table 2, the indicators' loadings on the associated construct (bolded) are all greater than its cross-loadings on other constructs, thus, indicating an adequate level of discriminant validity.

Table 2
Cross Loadings

	Attitude	Knowledge	Safety	Media	Intention
Att1	**0.832**	0.243	0.404	0.163	0.501
Att2	**0.852**	0.313	0.478	0.205	0.551
Att3	**0.859**	0.26	0.415	0.285	0.543
Att4	**0.83**	0.248	0.394	0.141	0.502
Att5	**0.823**	0.207	0.402	0.113	0.525
Att6	**0.68**	0.22	0.322	0.28	0.446
Know1	0.196	**0.724**	0.331	0.193	0.134
Know2	0.187	**0.714**	0.361	0.156	0.16
Know3	0.121	**0.703**	0.244	0.138	0.064
Know4	0.227	**0.768**	0.379	0.227	0.155
Know5	0.3	**0.712**	0.354	0.153	0.279
Safety1	0.308	0.398	**0.759**	0.269	0.251
Safety2	0.434	0.39	**0.82**	0.219	0.379
Safety3	0.33	0.438	**0.682**	0.249	0.309
Safety4	0.316	0.261	**0.697**	0.318	0.327
Safety5	0.408	0.266	**0.71**	0.328	0.363
Media1	0.154	0.246	0.291	**0.768**	0.063
Media2	0.094	0.191	0.26	**0.84**	0.097

Media3	0.306	0.238	0.361	**0.887**	0.248
Media4	0.154	0.149	0.273	**0.822**	0.134
Media5	0.123	0.112	0.267	**0.717**	0.102
ITP1	0.41	0.178	0.305	0.119	**0.732**
ITP2	0.409	0.138	0.3	0.154	**0.784**
ITP3	0.485	0.143	0.311	0.152	**0.777**
ITP4	0.552	0.226	0.406	0.156	**0.855**
ITP5	0.585	0.173	0.382	0.136	**0.805**
ITP6	0.518	0.292	0.412	0.17	**0.786**

Next, the discriminant validity of the measurement model was tested using the criteria suggested by Fornell *et al*., [34]. Specifically, this criteria requires that the square root of each construct's AVE should be greater than its highest correlation with any other construct [33]. Based on Table 3, the square root of AVE (bolded) are all greater than the off-diagonal elements in their corresponding row and column, thus, suggesting a sufficient level of discriminant validity.

Table 3
Fornell-Larcker Criterion

	1	2	3	4	5
1. Attitude	**0.815**				
2. ITP	0.629	**0.791**			
3. Know	0.307	0.245	**0.724**		
4. Media	0.241	0.187	0.242	**0.809**	
5. Safety	0.497	0.449	0.473	0.373	**0.735**

Source: [33] PLS–SEM (Smart PLS 3) Output

The final criterion to establish discriminant validity of the measurement model is through HTMT criterion analysis, a more advanced method of detecting discriminant validity [35]. Henseler *et al*., [35] suggested a threshold value of 0.90 if the path model includes the constructs that are conceptually very similar. However, when the constructs in the path model are theoretically more distinct, a lower thresholds value of 0.85 is acceptable. This study followed the latter since the path model in this study was theoretically more different. Table 4 shows that all the HTMT values in this study were less than the cut-off point of 0.85, thus, suggesting an acceptable level of discriminant validity.

Table 4
Heterotrait-Monotrait (HTMT) Criterion

	1	2	3	4	5
1. Attitude					
2. ITP	0.702				
3. Know	0.335	0.258			
4. Media	0.234	0.18	0.273		
5. Safety	0.58	0.529	0.587	0.435	

Source: [33] PLS–SEM (Smart PLS 3) Output

In total, the measurement model in this study demonstrates both the convergent validity and discriminant validity, thus, permitting the researcher to proceed with the structural model analysis

4.2 Structural Model Analysis

Assessing the structural model involves evaluating R2, beta and the corresponding t-values [36]. To obtain the t-values, a bootstrapping procedure with 1000 resamples was applied [31]. In addition, researchers should also report predictive relevance (Q2) and effect sizes (f2) [36,37]. The results of the structural model analysis in this study is shown in Table 5.

Table 5
Results of the Structural Model Analysis

H	R'ships	Std Beta	Std Error	t-value	R^2	f^2	Q^2	Decisions
H1	ATT --› ITP	0.312	0.053	5.691***	0.209	0.088	0.157	Supported
H2	BK --› ATT	0.087	0.044	1.919**	0.257	0.008	0.281	Supported
H3	CH --› ATT	0.434	0.051	8.660***		0.178		Supported
H4	DM --› ATT	0.059	0.038	1.479*		0.004		Supported

Notes: *p < 0.10, **p < 0.05, ***p < 0.01
Source: [33] PLS–SEM (Smart PLS 3) Output

First, one needs to look at the antecedents of attitude. Knowledge (β = 0.087, t = 1.919, p < 0.10), safety and health concern (β = 0.434, t = 8.660, p < 0.10) and media exposure (β = 0.059, t = 1.479 p < 0.10) all positively affected attitude, thus, giving support for H2, H3 and H4. This three constructs explained 25.70 per cent of the variance in attitude and based on the suggestion of Chin [31], this R2 value can be considered weak. Surprisingly, safety and health concern was the strongest predictor of attitude with a beta value of 0.434.

Next, one needs to look at the predictor of intention to purchase. Attitude (β = 0.312, t = 5.691, p <0.10) positively influenced the intention to purchase, thus, providing support for H1. This particular construct explained only 20.9 per cent of the variance in purchase intention and based on the suggestion of Chin [31], this R2 value can be considered weak.

Subsequently, one needs to assess the effect sizes (f2). As asserted by Sullivan *et al*., [38], "While a P value can inform the reader whether an effect exists, the P value will not reveal the size of the effect. In reporting and interpreting studies, both the substantive significance (effect size) and statistical significance (P value) are essential results to be reported" (p.279). In assessing effect sizes, [36] suggested that the change in the R2 value should also be examined. The method suggested is to examine the R2 change when a specified exogenous construct is omitted from the model. This is to evaluate whether the omitted construct has a substantive impact on the endogenous construct. To measure the magnitude of the effect size, the researcher used Cohen 's [39] guideline which is 0.02, 0.15, and 0.35, representing small, medium, and large effects respectively. Looking at the f2 values in Table 5, it can be observed that all the relationships showed substantive impact whereby there were 3 relationships with small effect sizes and 1 with medium effect sizes.

Finally, it is also important to measure the predictive relevance of the model by using the blindfolding procedure [36]. Blindfolding is a sample reuse technique that omits every dth data point in the endogenous construct's indicators and estimates the parameters with the remaining data points [32,40,41]. Hair *et al*., [36] suggested that the blindfolding procedure should only be applied to endogenous constructs that have a reflective measurement (multiple items or single item). If the Q2 value is larger than 0, the model has predictive relevance for a certain endogenous construct and otherwise if the value is less than 0 [42,33]. Based on Table 5, it can be seen that all the Q2 values are more than 0 ranging from 0.157 to 0.281, thus, suggesting a sufficient predictive relevance.

5. Discussions

Based on Table 5, attitude (β = 0.312, p < 0.10, t = 5.691) was found to have a positive effect on intention to purchase, thus, giving support to H1. This result was in line with the findings of other halal-related [43,2]. For example, a study on the customers' intention to purchase halal cosmetics and personal care products by Ansari *et al.*, [43] revealed that attitude had a strong significant influence on behavioural intention. The results suggest that the formation of positive attitude towards halal products and services should take place before halal personal care products can be fully accepted by individuals. Meanwhile, knowledge (β = 0.087, p < 0.10, t = 1.919) was found to have a positive effect on attitude, thus, H2 was also supported. This was consistent with the findings of other halal-related studies [44,45]. For example, Aziz's *et al.*, [44] study on non-Muslims' halal purchase intention in Malaysia revealed that the attitude toward halal products was significantly and positively influenced by their knowledge on the products. Additionally, in a study investigating non-Muslims behaviour towards halal food in United Kingdom, Ayyub and Rana [45] found that knowledge was one of the factors influencing non-Muslims' attitude towards halal food.

This finding of the study indicates that individuals who were more knowledgeable on the concept of halal personal care products would likely show a positive attitude towards the products, thus, leading to higher intention to purchase them. Likewise, as Muslim consumers become more knowledgeable about their religion, they will inevitably become more particular on the type of products and services that they are consuming.

As expected, the results of this study also supported H3 that safety and health concern (β = 0.434, p < 0.10, t = 8.660) had a significant positive effect on individual's attitude towards halal personal care products. This result was in line with the findings of other halal-related studies [46,47]. For instance, in a study to explore the attitude and perception of non-Muslim customers towards halal product in Malaysia, Ismail and Kauthar [46] found that higher level of safety and health concern resulted in a more favourable attitude toward the products. Furthermore, other study also provided support for the proposition that safety and health concern was an antecedent of attitude [47].

The result shows that the religious motives were not the only reason that would influence people's attitude and perceptions towards halal personal care products. More importantly, it was the products' cleanliness, safety, and quality that would determine the customers' attitude toward the products. Therefore, it is the responsibility of the product manufacturers to not only produce the products that are halal but also free from illegal ingredient and substances which are hazardous and harmful to customers' body and skin.

Finally, media exposure (β = 0.059, p < 0.10, t = 1.479) was also found to have positive effect on attitude, thus, H4 was supported. This was consistent with the findings of other halal-related studies [48,49]. For example, in their study to examine the people's awareness and perception on halal food products in Malaysia, Ambali *et al.*, [48] found that customers who were more exposed to media would develop positive attitude toward halal food products. Furthermore, in an exploratory study investigating the drivers of consumers' attitude and willingness to pay for halal logistics in Malaysia, Fathi *et al.*, [49] found that media exposure had a significant and positive effect on attitude toward halal logistics. They further suggested the need for both electronic and printed media companies to highlight the many benefits and advantages of halal logistics so as to encourage positive attitude toward them.

The significant finding implies that media exposure was an important and emerging factor which may influence the customers' decision to purchase and acquire halal personal care products. Through this media exposure, enterprises were able to promote their products and services, thus, helping them increase their market shares and profitability [50].
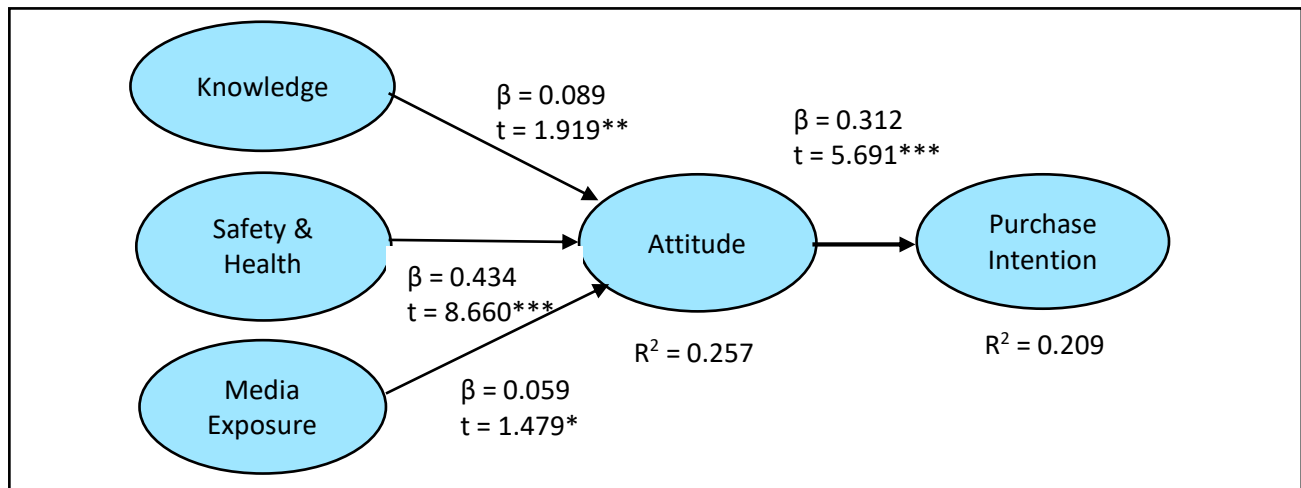
Notes: *p < 0.10, **p < 0.05, ***p < 0.01*

Fig. 2. Empirical Results
Source: [33] PLS–SEM (Smart PLS 3) Output

6. Limitations and Future Research Direction

Although this study has been able to fill both the conceptual and theoretical gaps, it has a number of limitations. Firstly, the study concentrates mainly on the quantitative methods. However, other methods of data collection such as mail surveys or a combination of qualitative methods (i.e. in-depth interviews and focus groups) and quantitative methods can be considered in the future so as to provide findings of a higher degree of validity and reliability.

Secondly, this study was conducted in Malaysia, thus, the findings may not be generalizable to the customers from other countries. Although Malaysia is a Muslim country, the factors that seemed to be statistically significant in this study might not be important to the respondents from other Muslim countries. Customers from these countries might not share the same exposure, knowledge, cultural values, and products' legal framework and policies. Therefore, replicating this study into other Muslim countries such as Indonesia, Brunei, Pakistan, United Arab Emirates (UAE) and Saudi Arabia may suggest other relevant factors that could have a significant influence on subjective norm.

Thirdly, this DTPB model was only tested on halal non-food study (i.e. halal personal care products), thus, limiting the generalizability of the results to other halal-related studies. Therefore, future research could extend the model to include other halal product and service sectors such as food, financial, and pharmaceutical segments. It will be interesting to learn whether the findings generated in this study is consistent with the results generated from other halal-related studies.

Fourthly, this study utilised Muslims in general as the target respondents, thus, limiting our understanding on the behavioural intention of both users and non-users of the products. Therefore, future study may investigate the behavioural intention of both users and non-users separately. It will be exciting to know whether the factors influencing the behavioural intention of users are consistent with that of non-users.

Fifthly, due to time and financial constraints, the existing study was relying primarily on samples drawn specifically from users of halal personal care products in Klang Valley, Malaysia. As a result, the findings of the study cannot be generalized to other users from other parts of Malaysia. Therefore, future research may replicate this study by collecting a much larger sample from a wider geographical area so as to provide findings of a higher degree of accuracy and generalizability.

Finally, due to limited publication, only a restricted number of halal-related studies utilizing DTPB were discussed in this study. Notwithstanding of the above limitations, this study contributes towards a better understanding of the factors that may influence individual's intention to purchase halal personal care products.

7. Conclusions

In this study, the researcher adapted DTPB as the underpinning theory of the study in order to provide a better understanding of the factors that influenced one's intention to purchase halal personal care products. DTPB was chosen over TRA and TPB for a number of reasons. Although TRA and TPB have been widely applied in the marketing field, they were not utilized in this study since the researcher was more interested in examining a more complete set of antecedents that could better predict the intention to purchase the products.

By decomposing attitudinal, normative, and perceived control structures, the researcher expects to have a higher explanatory power and a more precise understandings of the antecedents of behaviour. However, due to a comparatively big research framework, the authors have decided to discuss only the antecedents of attitude (i.e. knowledge, safety and health concern and media exposure) in this particular journal. Meanwhile, the antecedents of subjective norm (i.e. friends' influence and family members' influence) and antecedents of perceived behavioural control (i.e. self-efficacy and resource facilitating condition) are discussed in other manuscripts.

In addition, the primary reason why DTPB was chosen in the study was due to its advantages. As has been mentioned earlier, the decomposition of beliefs will result in a clearer understanding of the relationship between factors and the specific impacts these factors can have on behaviour. By focusing on specific beliefs, the model will become more relevant to practitioners who are interested in examining a more specific set of antecedents that could better predict the customers' intention to purchase the products.

None of the purchase intention study on halal personal care products had utilized DTPB as the underpinning theory of their research. This was further supported by Ali's *et al.,* [18] study whose findings also revealed that no previous research on halal personal care products has holistically examined the antecedent of attitude, subjective norm, and perceived behavioural control in a single model. Therefore, this study attempts to close this theoretical gap by incorporating the relevant antecedents of attitude, subjective norm, and perceived behavioural control in DTPB model as a new approach in predicting customers' behavioural intention in the context of halal personal care products.

Although DTPB was specifically tailored to understand the adoption of information technology (IT), antecedents such as interpersonal referents (i.e. friends' influences and family members' influences), self-efficacy (i.e. self-confidence), and resource-facilitating conditions (i.e. time, money, and information) can still be applied into the research of other natures including that of halal personal care products. Therefore, this study will provide an interesting platform to explore the robustness and rigorousness of the theory in predicting the customers' intention within different research context, thus, improving our understanding of the factors that influence one's intention to purchase these halal products.

The results of the study indicated that the model provided a clearer understanding of the relationship between factors and the specific impacts these factors could have on behaviour. From the practical point of view, the model is very much relevant to practitioners who are interested in examining a more specific set of antecedents that could better predict the customers' intention to purchase halal personal care products. Furthermore, the specific antecedents tested in this study

would make it easier for marketers and product managers to formulate and pursue relevant marketing strategies for their companies' promotional activities, thus, enhancing their organization's competitive advantage in the market.

Acknowledgement

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