

The Mediating Role of Purchase Intention towards the Actual Purchase Behaviour of Halal Bakery Product among Consumers in Petaling district, Selangor

Nurzulain Zulkfli¹, Zuraini Mat Issa¹, Norhidayah Abdullah¹

¹*Faculty of Hotel and Tourism Management, Universiti Teknologi MARA, Cawangan Selangor, Kampus Puncak Alam, 42300 Bandar Puncak Alam, Selangor, Malaysia.*

Abstract

The addition of individual ingredients in bakery products is to provide certain functions which may affect the characteristics of the end products. However, the halal status of the ingredients used in bakery products has been an issue among Muslims consumers that can influence their purchasing decision. Therefore, this study aims to examine the mediating effect of purchase intention towards the relationship between the Theory of Planned Behaviour (TPB) attributes and the actual purchase behaviour. A validated questionnaire was distributed to 476 consumers representing 95.2 per cent of response rate in Petaling district, Selangor using a purposive sampling method. The gathered data were screened for completion and those that fulfilled the inclusion criteria. The SPSS version 24 and PLS-SEM were then used to analyse the data. The findings revealed that the subjective norms and perceived behavioural control of the TPB attributes were shown to influence purchase intention and actual purchase behaviour significantly. This study also confirms that purchase intention mediates the relationship between TPB attributes and actual purchase behaviour. The findings supported previous studies that before conducting any actual purchases, the consumers' intention to purchase the products would lead the process. The outputs of this empirical study provide evidence that competition in the halal bakery market exists together with consumer demands for the halal bakery products. Hence, the manufacturers can develop effective strategies in emphasizing all the TPB attributes to increase purchase intention, which would finally influence the actual purchase behaviour.

Keywords: actual purchase behaviour, bakery products, halal, purchase intention, theory of planned behaviour

1.0 Introduction

Halal food represents an important sector in the food industry. Halal prioritizes cleanliness and health, and this makes consumers have more confidence in consuming halal products compared to the non-halal products (Ahmad & Salehuddin, 2013). In food production, halal principle is not only a representative part of Islamic law but covers all aspects of food processes from selection of the ingredients and apparatus used to the production of the finished products (Ambali & Bakar, 2013).

Consumers nowadays are concerned about the sources of ingredients used in food production (Hung et al., 2016) and this is reflected before they make any food-related purchasing decision (Basha et al., 2015). In bakery products, there are the rising concerns related to the shariah-compliance consumption among Muslim consumers (Khalek, 2018) especially in terms of the origin of the ingredients used in said products (Norrakiah et al., 2015).

Bakery products are known to have a variety of ingredients used in order to fulfil consumers' demand. The specific ingredient used in the bakery products portrays the main characteristic of the finished product. However, the substitution or addition of impermissible or fraudulent ingredients intentionally or unintentionally is considered as food adulteration (Spink & Moyer, 2011). This occurrence has increased the doubtfulness and insecurity towards the food sold in the market. Similarly, this issue has encouraged non-Muslim countries to re-think about the halal food concept (Alam & Sayuti, 2011).

Besides, increasing concern regarding health-conscious in society leads to consumers accepting the halal food due to the benefit gained from consuming food that are clean and hygienic (Arif & Sidek, 2015). Hence, the issue of the halal certification for each ingredient used arise in the food production-consumption chain (Arsil et al., 2018). Halal certification gives an indication and provides a guarantee that the product is halal and safe to consume (Khan & Haleem, 2016). It is therefore crucial to study about the acceptability of bakery products in view of halal on how this will affect the purchasing behaviour among Muslim and non-Muslim consumers (Aditami, 2016). Thus, this study aims to examine the mediating role of purchase intention towards the relationship between the Theory of Planned Behaviour (TPB) attributes namely attitude, subjective norms, perceived behavioural control, and actual purchase behaviour in the context of halal bakery products.

2.0 Literature Review

Halal Food Authority (HFA) (2016) defines halal as "permitted, permissible, and lawful" while haram on the other hand, means "forbidden and unlawful" in Islamic law (Mathew, 2014). Although the halal concept is well known for food products, it is not limited to just food as this concept applies to matters beyond (Alam & Sayuti, 2011). Most non-Muslims consumers think that the halal concept is only applicable to meat products (Bonne et al., 2007; Haque et al., 2015), alcohol (Ahmad et al., 2015; Alzeer et al., 2018), pork (Alzeer et al., 2018), and their derivatives in foods consumption. Halal primarily applies to a variety of foods, including bakery products, where the food consumed should give benefits and is harmless to the consumers (Arif & Sidek, 2015). Many studies on consumer food choices have been conducted using the TPB (Alam & Sayuti, 2011; Bonne et al. 2007). According to Omar et al. (2012), TPB is a valid model for evaluating consumers' confidence in halal purchase intention in order to choose the existing halal products in the market.

In Malaysia, both Muslim and non-Muslim consumers are concerned about halal food (Rezai et al., 2012). For Muslims, the concern arises due to religious belief that is stated in the Islamic law and how halal guarantees the cleanliness and safety of the food (Aziz & Chok, 2013). Similarly, non-Muslims in Malaysia are shown to not only be aware of the existence of halal food, but they understand that the halal principles are related to food safety as well (Rezai et al., 2012). The concerns arise among the consumers regarding halal include the ingredients added to the product (Mohamed et al., 2016). For Muslims, any products with uncertain halal status can be categorised as syubhah or doubtful products (Buang & Hamidon, 2016). Muslims are advised to avoid consuming syubhah foods.

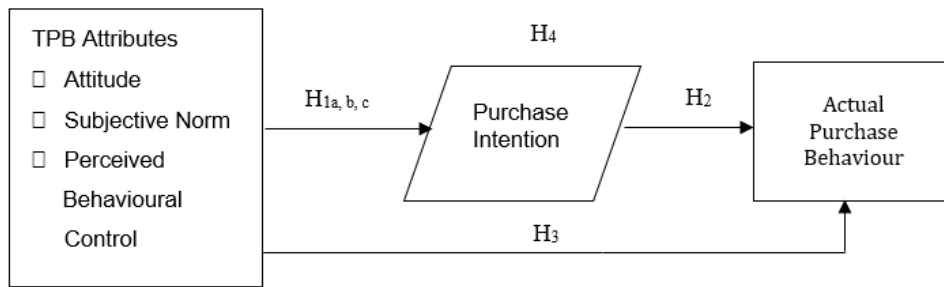
Furthermore, the halal status of food can be addressed with the help of modern science and technology to ensure that the processed food does not contain any non-halal substances (Fadzlillah et al., 2011). In the last few years, the exposure regarding pork and lard related products, particularly in bakery products, have increased (Norrakiah et al., 2015). Some manufacturers tend to mix non-halal substances in their bakery products to gain more profit (Aditami, 2016).

As mentioned by Ajzen (1991), intentions would be expected to influence the performance of a person towards their behavioural control, and with the presence of performance, this should lead the individual's behavioural control to the extent that the person is

motivated to try. Apart from that, Bonne et al. (2007) stated in their study that other related ingredients used in bakery products such as meat products are proven to be successful in predicting the intention of Muslim consumers to purchase or not with the aid of the TPB. It is believed that purchase intention can affect the customers' buying decision (Omar et al., 2012). According to Afendi et al. (2014), before the actual purchases are conducted, the intention to purchase halal products has led the process.

As illustrated in the TPB model, a personal routine entailing certain behaviour is determined by other individuals who have the intention to perform that behaviour (Mohamed Omar et al., 2012). Besides, TPB has been the underpinning outline for several studies on consumers' purchase intention in many areas (Aditami, 2016; Afendi et al., 2014; Alam & Sayuti, 2011). The factors which influence their intention and purchasing behaviour consist of: 1) how attitude influences the target behaviour, 2) for subjective norms; how behaviour affects the thought which influences the behavioural intention to purchase halal bakery products, 3) how perceived behavioural control affects behaviour, and 4) how purchase intention mediated the relationship of the TPB attributes and the actual purchase behaviour (Aditami, 2016; Ajzen & Fishbein, 1977; Alam & Sayuti, 2011)

Mohamed Omar et al. (2012) mentioned that TPB is a credible model used in evaluating the perception of consumers in figuring out their intention in buying the existing halal products in the market. This is further supported by Aditami (2016) that bakery products consumption in the context of halal purchase intention can be explained through the TPB model. Hence, the following theoretical framework was proposed (Figure 1).



Note: H_{1a, b, c} refers the hypotheses between each sub-variable of TPB attributes and purchase intention, where H_{1a} refers to the hypothesis between attitude and purchase intention, H_{1b} refers to the hypothesis between subjective norm and purchase intention, and H_{1c} refers to the hypothesis between perceived behavioural control and purchase intention. H₂ refers to the hypothesis between purchase intention and the actual purchase behaviour. H₃ refers to the hypothesis between the overall TPB attributes to the actual purchase behaviour. H₄ refers to the hypothesis that purchase intention mediates the relationship between the TPB attributes and the actual purchase behaviour.

Figure 1 : Proposed Theoretical Framework

3.0 Methodology

In this study, a quantitative non-experimental correlational survey was conducted to determine the correlations between the variables, namely TPB attributes, and the purchase intention towards halal bakery products. A quantitative non-experimental survey was conducted to obtain information in investigating the research questions regarding consumers' purchase intentions towards halal bakery products. Several screening questions were asked before the targeted respondents answered the questionnaire. The screening questions were asked to ensure that the respondents fulfil the inclusion criteria: aged 16 years and above, residing in Petaling district areas, as well as purchased and consumed any type of bakery product.

A purposive sampling was adopted in this study for the selection of respondents. This sampling was selected since the focus of this study is only on the consumers who purchased bakery products in the respective areas of the Petaling district, Selangor. At each selected area, 100 questionnaires were distributed to the targeted respondents who have just finished purchasing the products at the conveniently selected bakeries.

A validated questionnaire obtained from Nurzulain et al. (2019) was used in this study. A total of 500 questionnaires were conveniently distributed to purchasers of bakery products at selected bakery shops

situated in various locations in Petaling district, Selangor. Prior to further analyses, data were subjected to a cleaning process to ensure all data collected met the criteria. Incomplete questionnaire and questionnaire filled up by respondents who did not fulfil the inclusion criteria were discarded ($n = 24$, 4.8%). The usable data were then subjected to SPSS version 24 (SPSS, Inc.) software for descriptive statistics and PLS-SEM to examine the mediation effect towards the proposed relationship.

3.1 PLS-SEM

Before the data were run using the PLS-SEM, few criteria were analysed in order to ensure the assumptions were met. As mentioned by Hair et al. (2014) and Chin (1998), before the structural model was assessed, the evaluation of the measurement model needs to be reviewed first. The following aspects are as follow:

i. Convergent validity

Convergent validity refers to statistical testing to validate whether indicators of the latent construct should be related to each other (Trochim, 2006). The results show that the latent constructs have a suitable degree of reliability with the lowest reliability value of 0.821, and the respective latent variables had internal consistencies at a good level. As mentioned by Hair et al. (2014); Hair et al. (2010); Chin (1998), and Cronbach (1971), the convergent validity output demonstrated evidence of unidimensionality for each individual latent variable. Thus, this study exhibited a good level of convergent validity.

ii. Discriminant validity

Discriminant validity is a statistical test done on any arising possibility that discriminate between different constructs by ensuring that the inter-correlations of the model constructs are not high (Andreev et al., 2009). The results indicated that the Average Variance Extraction, Fornell-Larcker, Composite Reliability (ρ), and Cronbach Alpha (α) together with HTMT analysis and Cross-loading of the measurement model are accepted based on their corresponding suggested thresholds. Thus, this study shows that there is a good level of discriminant validities and all of the indicators applied in this study are valid.

3.2 Methods of Evaluation

The main objective of the application on PLS-SEM is to evaluate the structural model. The method of evaluation is to assess the coefficient of determination (R^2), predictive relevance (Q^2 and q^2), and effect size (f^2). Hair et al. (2014) mention that this evaluation represents the amount of variance in the endogenous latent construct that is explained by the particular exogenous latent constructs.

3.3 Evaluating the Mediating Effect

According to Preacher and Hayes (2008), Hayes (2009), Henseler et al. (2009), and Zhao et al. (2010), testing the significance of indirect effect using a bootstrapping procedure of the paths is vital to confirm the existence of the mediating effect in the study. The indirect effect testing using the bootstrapping procedure was evaluated by applying the t-test procedure as suggested by Hair et al. (2014) and Iacobucci et al. (2007). Hence, the final assessment was conducted to test for the presence of a mediator effect of the latent constructs of the structural model in this study.

4.0 Findings

Out of the 500 questionnaires distributed, only 476 sets (95.2%) were found usable and they were analysed using SPSS version 24 and PLS-SEM. Table 1 summarises the demographic profiles of the respondents. The majority of the respondents were female ($n = 284$, 59.7%), aged between 21 and 25 years old ($n = 102$, 21.4%), and have a pre-university qualification ($n = 176$, 37%). Slightly more than fifty per cent of the respondents were Muslims ($n = 243$, 51.1%).

Table 1 : Demographic profiles of the respondents ($n = 476$)

Characteristic ($n = 476$)	Frequency, n	Percentage, %
Gender		
Male	192	40.3
Female	284	59.7
Religion		
Muslim	243	51.1
Non-Muslim	233	48.9

Table 1 : Demographic profiles of the respondents (n = 476) – continued

Characteristic (n = 476)	Frequency, n	Percentage, %
Age		
16 – 20 years	50	10.5
21 – 25 years	102	21.4
26 – 30 years	93	19.5
31 – 35 years	88	18.5
36 – 40 years	53	11.1
41 – 45 years	55	11.6
46 – 50 years	23	4.8
51 – 55 years	9	1.9
56 – 60 years	3	0.6
Education		
Secondary school	97	20.4
Pre-university level (including STPM, certificates, diploma)	176	37.0
Bachelor degree	156	32.8
Postgraduate degree	44	9.2
Others	3	0.6

Table 2 shows the R square (R^2) value for Actual Behaviour was 0.667, suggesting that attitude, subjective norms, perceived behavioural control, and purchase intention were able to explain the 66.7 per cent variance towards actual behaviour. It has been shown in Table 2 that each of the endogenous latent construct in the model possessed an adequate level of predictive relevance in reference to their respectively exogenous latent constructs and this is particularly due to the values of Q^2 which can be categorised as having a medium (0.289 and 0.247 respectively) predictive relevance effect (Hair et al., 2014).

Table 2 : R^2 and Q^2 assessments of the structural model

Endogenous LV	R^2	Remark for R^2	Q^2	Remark for Q^2
Purchase Intention	0.778	Large	0.289	Medium
Actual Behaviour	0.667	Large	0.247	Medium

Note: LV = Latent variable.

Table 3 indicates that perceived behaviour control has a medium effect size on actual behaviour ($f^2 = 0.158$) endogenous latent variable. Besides, Table 3 also indicates that attitude and subjective

norms have a small effect size in reference to actual behaviour. Similar to that, small effect size was also found when it involves purchase intention in reference towards actual behaviour. The results show that Malaysian consumers accepts halal bakery products consumption. According to Ali et al. (2017), the social influence by Muslims towards non-Muslim consumers who live in their community is relevant and this significantly influences the purchase intention that leads to actual purchase of halal products. Besides that, Mat Isa and Mohamed Ismail (2015) pointed out that members of a society which practises the halal concept will influence others in the society to be interested in learning more about halal food. Moreover, the results of this study are further supported by the study by Bonne et al. (2007). It is found in this study that perceived behavioural control has a significant relationship with actual behaviour. As pointed out by Mathew et al. (2014), consumers having the intention in using or purchasing a product believe that they will accept the product, and once they have started using it, will continue to use it.

Table 3 : Effect size (f^2) of endogenous latent variables of first-order structural model

	f^2	Remark
Endogenous LV: Actual Behaviour		
Exogenous LV: Attitude	0.001	Small
Exogenous LV: Subjective Norm	0.024	Small
Exogenous LV: Perceived Behaviour Control	0.158	Medium
Exogenous LV: Purchase Intention	0.062	Small

Note: LV refers to Latent Variable.

The results indicated in Table 4 shows that only one path coefficient was insignificant for at least 95 per cent level of confidence interval and this is due to the fact that the observed t-value for each of the path coefficient was actually smaller than the 95 per cent critical value of t-statistics (i.e. Observed t-value < 1.96), which is ATT → AB ($\beta = 0.042$, $t = 0.751$, $p = .452$). The results of the 95 per cent bootstrap confidence interval for each path coefficient were also found to be lacking in consistency when compared to the results obtained from the observed t-value assessment. The bootstrap confidence interval approach also indicated that only one path coefficient, which is ATT → AB was not significant. The results indicated that consumer behaviour and their purchasing decision are the evidence that competition in the

halal bakery market exists together with consumer's demands for halal products, healthy, and varied food available in bakeries. Attitude on the other hand, appears to be insignificant, which can be further explained as individually, attitude does not have a direct effect in increasing the potential of actual purchase behaviour of the consumers in the Petaling district. A likely reason for the lack of correlation between attitude and behaviour is low perceived self-efficacy. This means that people feel that the implementation of the behaviour of which they have a positive attitude will be difficult or even impossible (Bagozzi, 1992; De Vries et al., 1988).

Table 4 : Path evaluation

Path	PC	Observed t-value ^a	Significance 2-tailed	95% Bootstrap confidence interval	
				Bootstrap-t	Bootstrap BCa
ATT → AB	0.042	0.751 (NS)	0.452	(-0.070, 0.146)	(-0.070, 0.146)
SN → AB	0.170	3.228**	< 0.01	(0.067, 0.271)	(0.070, 0.273)
PBC → AB	0.388	7.661**	< 0.01	(0.293, 0.491)	(0.282, 0.425)
PI → AB	0.294	4.768**	< 0.01	(0.171, 0.411)	(0.173, 0.412)

Note:

ATT refers to attitude; AB refers to actual behaviour; SN refers to subjective norms; PBC refers to purchase behavioural control; PI refers to purchase intention; PC refers to path coefficient; NS refers to not significant; ** significance at $p < 0.01$.

In explaining the first-order structural model as demonstrated in Table 5, purchase intention contributed a partially mediated effect when it comes to the relationship of SN → AB and PBC → AB, due to the fact that the direct path of this particular relationship was significant. However, the analysis also indicated that purchase intention gave a fully mediated effect when it comes to the relationship of ATT → AB as the direct path of this relationship was not significant. The result obtained was similar to Afendi et al. (2014), where before the actual purchases were conducted, the intention to purchase halal products led the process. It is further supported by Aditami (2016) and Alam and Sayuti (2011) where there is a significant relationship between perceived behavioural control and subjective norms towards the actual purchase behaviour. However, the impact of the results is mediated by the third variable which is purchase intention. Besides, Ajzen and Fishbein (1977) explained that the TPB model is a complete theory of

behaviour, where it is believed that the components and other relevant variables can influence behaviour and have impact towards intention.

Table 5 : Evaluation of the mediating effect

Path	Path analysis			Mediation type
	IEC ^a	Path	PC ^a	
ATT → PI → AB	0.059**	ATT → AB	0.042 (NS)	Fully Mediated
SN → PI → AB	0.064**	SN → AB	0.170**	Partially Mediated
PBC → PI → AB	0.104**	PBC → AB	0.388**	Partially Mediated

Note:

ATT refers to attitude; PI refers to purchase intention; AB refers to actual behaviour; SN refers to subjective norms; PBC refers to purchase behavioural control; PC refers to path coefficient; NS refers to not significant, ** significant at $p \leq 0.01$.

5.0 Conclusion and Recommendations

To sum up, it can be concluded that subjective norms and perceived behavioural control had significant positive effects on actual purchase behaviour except for attitude. Furthermore, the purchase intention was found to mediate TPB attributes and actual purchase behaviour. Apart from that, this study found that the availability of the products and the opportunity to be able to purchase halal bakery products will influence the purchase behaviour of the consumers. In the view of a management perspective, the results of this study can provide support, especially regarding the investment decision for Malaysian citizens.

Few recommendations for future research can be conducted. Researchers could embrace the comparison of different bakery consumers, especially between Muslim and non-Muslim consumers in terms of purchase and behaviour in different scenarios. Future researchers can focus on specific groups according to their behavioural pattern during the purchasing and consumption processes, especially in the bakery.

6.0 Limitations

The limitation of this study is the development of bias in terms of the responses given by the respondents. In this study, the data are evaluated as a whole without distinguishing the different groups of religions (e.g. Muslim and non-Muslim). Some items may easily be endorsed by Muslim consumers but not by the non-Muslims. Hence,

different results may be produced when both groups of religions are examined.

Acknowledgement

This research was supported by Institute of Research Management and Innovation, Universiti Teknologi MARA (Ref. No. 600-IRMI 5/3/GIP (031/2019)).

References

- Aditami, S. (2016). *The Analysis of Halal Product Purchase Intention Using Theory Of Planned Behavior (TPB): An Application on Bakery Product Consumption* (Doctoral dissertation, Universitas Muhammadiyah Surakarta).
- 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. N., Yang, T. A., & Abdullah, W. N. W. (2015). Perceived versus actual knowledge of alcohol and halal food among food technology undergraduate students in a Malaysian university. *Journal of Islamic Marketing*, 6(3), 294-313.
- Ahmad, M. & Salehuddin, N. A. (2013). Perceptions and Behavior of Muslims and Non-Muslims towards Halal Products. *Journal of Social and Development Sciences*, 4(6), 249-257.
- Ajzen, I. & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*.
<https://doi.org/10.1037/0033-2909.84.5.88>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- 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.
- Ali, A., Xiaoling, G., Sherwani, M., & Ali, A. (2017). Factors affecting Halal meat purchase intention. *British Food Journal*, 119(3), 527-541.
- Alzeer, J., Rieder, U., & Hadeed, K. A. (2018). Rational and practical aspects of Halal and Tayyib in the context of food safety. *Trends in Food Science & Technology*, 71, 264-267.

- Ambali, A. R. & Bakar, A. N. (2013). Halāl food and products in Malaysia: People's awareness and policy implications. *Intellectual Discourse*, 21(1), 7-32.
- Andreev, P., Heart, T., Maoz, H., & Pliskin, N. (2009). Validating formative partial least squares (PLS) models: Methodological review and empirical illustration. ICIS 2009 proceedings, 193.
- Arif, S. & Sidek, S. (2015). Application of Halalan Tayyiban in the standard reference for determining Malaysian halal food. *Asian Social Science*, 11(17), 116.
- Arsil, P., Tey, Y. S., Brindal, M., Phua, C. U., & Liana, D. (2018). Personal values underlying halal food consumption: evidence from Indonesia and Malaysia. *British Food Journal*, 120(11), 2524-2538.
- 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 & Agribusiness Marketing*, 25(1), 1-23.
- Basha, M. B., Mason, C., Shamsudin, M. F., Hussain, H. I., Salem, M. A., & Ali, A. (2015). Consumer acceptance towards organic food. *GJISS*, 4(3), 29-32.
- Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly*, 178-204.
- Bonne, K., Vermeir, I., Bergeaud-Blackler, F., & Verbeke, W. (2007). Determinants of halal meat consumption in France. *British Food Journal*.
- Buang, A. H. & Hamidon, S. F. (2016). Halal, haram dan syubhah dalam makanan dari perspektif syariah dan undang-undang. *Albasirah Journal*, 6(1), 49-61.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Cronbach, L. J. & Thorndike, R. L. (1971). Educational measurement. *Test Validation*, 443-507.
- de Vries, H., Dijkstra, M., & Kuhlman, P. (1988). Self-efficacy: The third factor besides attitude and subjective norm as a predictor of behavioural intentions. *Health Education Research*, 3(3), 273-282.
- Fadzlillah, N. A., Man, Y. B. C., Jamaludin, M. A., Rahman, S. A., & Al-Kahtani, H. A. (2011). Halal food issues from Islamic and modern science perspectives. In *2nd International Conference on Humanities, Historical and Social Sciences*, 171, 159-163.

- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective*. Pearson Education.
- Hair, J. F. Jr, Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Halal Food Authority (2016). Definition of Halal - Know Halal Food Procedure and Rules | HFA - Halal Food Authority. Retrieved January 15, 2018, from <http://halalfoodauthority.com/definition-of-halal>
- Haque, A., Sarwar, A., Yasmin, F., Tarofder, A. K., & Hossain, M. A. (2015). Non-Muslim consumers' perception toward purchasing halal food products in Malaysia. *Journal of Islamic Marketing*, 6(1), 133-147.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408-420.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing* (pp. 277-319). Emerald Group Publishing Limited.
- Hung, Y., de Kok, T. M., & Verbeke, W. (2016). Consumer attitude and purchase intention towards processed meat products with natural compounds and a reduced level of nitrite. *Meat Science*, 121, 119-126.
- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology*, 17(2), 139-153.
- Khalek, A. A. (2018). Entrepreneurship and the Halal Wave in Malaysia. In *global entrepreneurship and new venture creation in the sharing economy* (pp. 191-205). IGI Global.
- Khan, M. I. & Haleem, A. (2016). Understanding halal and halal certification & accreditation system: A brief review. *Saudi Journal of Business and Management Studies*, 1(1), 32-42.
- Mat Isa, M. P. & Mohamed Ismail, R. (2015). Understanding the level of halal awareness among Muslim and non-Muslim young consumers in Malaysia. In: Symposium on Technology Management and Logistics (STMLGoGreen), 8-9 December 2015, Universiti Utara Malaysia.

- Mathew, V. N., Abdullah, A. M. R., & Ismail, S. N. (2014). Acceptance on Halal Food among Non-Muslim Consumers. *Procedia - Social and Behavioral Sciences*.
<https://doi.org/10.1016/j.sbspro.2014.01.1127>
- Mathew, V. N. (2014). Acceptance on halal food among non-Muslim consumers. *Procedia-Social and Behavioral Sciences*, 121, 262-271.
- Mohamed, Y. H., Rahim, A. R. A., Ma'ram, A. B., & Hamza, M. G. (2016). Halal traceability in enhancing halal integrity for food industry in Malaysia—a review. *International Research Journal of Engineering and Technology*, 3(03), 68-74.
- Norrakiah, A. S., Shahrul Azim, M. G., Sahilah, A. M., & Abdul Salam, B. (2015). Halal analysis of raw materials, ingredients and finished bakery products using PCR and gene chip southern-hybridization for detection of porcine DNA. *International Food Research Journal*, 22(5), 1883-1887.
- Nurzulain, Z., Zuraini, M. I., Norhidayah, A., & Muhammad Afiq, M. (2019). Psychometric evaluation of purchase intention and actual purchase behaviour towards halal bakery products using Rasch analysis. *Malaysian Applied Biology*, 48(2), 19-25.
- 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.
- Preacher, K. J. & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Rezai, G., Mohamed, Z., & Shamsudin, M. N. (2012). Non-Muslim consumers' understanding of halal principles in Malaysia. *Journal of Islamic Marketing*.
- Spink, J. & Moyer, D. C. (2011). Defining the public health threat of food fraud. *Journal of Food Science*, 76(9), R157-R163.
- Trochim, W. M. (2006). Convergent and discriminant validity. Accessed on 30th January 2020.
<http://www.socialresearchmethods.net/kb/convdisc.php>
- Zhao, C., Gao, F., & Wang, F. (2010). An improved independent component regression modeling and quantitative calibration procedure. *AIChE Journal*, 56(6), 1519-1535.