

## Does Education Moderates the Relationship Between Decision Factors and Purchase Decision of Family *Takaful* Protection in Malaysia?

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**Abstract:** Despite the provision of various incentives by the Malaysia Government in encouraging more people to purchase family Takaful as a form of savings instrument and also as a means of risk transfer, the penetration rate is still very low in comparison with other developing economies. There are some factors that lead to this problem. Based on many previous researches, focus have been found on the demographic and economic factors, consumer knowledge, awareness, religious perception, quality of services and relationship marketing as well. It can be concluded that even though some studies have been conducted in the same areas but the factors driving the purchasing decision of family Takaful in this country are still unclear. Therefore, the extension research of family Takaful will be studied to find out the other factors contributing to the purchasing decision of family Takaful in the Malaysia context. The objective of this study is to examine whether the factors of reputation and image, products and services, as well as marketing and advertising affecting the policyholders purchasing decision of family Takaful. Besides, this study also aims to investigate the effect of education as a moderator on the relationship between reputation and image, products and services and marketing and advertising on purchase decision in family Takaful. The research was based on quantitative method and involved survey questionnaires. The data were analyzed using Structural Equation Modeling using IBM-SPSS-AMOS 21.0. The result revealed that all factors in this study are significantly related to the purchasing decision of family Takaful. As for moderating effect of education, this study discovered that education significantly moderated the effects of reputation and image, products and services, as well as marketing and advertising on purchase decision in family Takaful.

**Key words:** Takaful • Islamic Insurance • Family Takaful • Purchase Decision • Moderator • Malaysia

### INTRODUCTION

**Preamble:** The word Takaful is in fact derived from the word *kafala*, which means ‘joint guarantee’ or ‘guaranteeing each other’ which is also explained as a pact that guarantees individuals in a group against loss or damage faced by anyone of them [1, 2]. Besides, Takaful also means a scheme based on brotherhood, solidarity and mutual assistance to the participants in case of need whereby the participants mutually agree to contribute for that purpose [3]. Takaful also is a financial transaction of

a mutual co-operation between two parties towards providing a financial security for one of them against any misfortune [4]. In addition, the Takaful system is known as a concept of mutual cooperation (*ta’awun*) and donation (*tabarru’*), where the risk is shared collectively and voluntarily by the group of participants to guarantee mutual protection of the members [5, 6]. Based on the Qur’an, Allah mentioned that: “...Help you one another in Al Birr and At Taqwa (virtue, righteousness and piety); but do not help one another in sin and transgression...” (Al-Maidah, 5:2).

Over the past two decades, the Takaful industry has established itself worldwide, both in Muslim and non-Muslim countries. For instance, this industry is concentrated in the Middle East, such as in Saudi Arabia, Bahrain, Iran, Qatar with new Takaful operations opening up in Egypt, UAE and Kuwait. Meanwhile, in the Far East this industry also concentrated such as in Malaysia, Indonesia, Singapore and Brunei followed by the development of Takaful operations. On top of that, the Takaful industry has experienced a significant development as it is one of the important components in the Islamic finance system. The growth story for Takaful continues with positive growth momentums in the key markets especially in Saudi Arabia, UAE and Malaysia in terms of gross contribution by countries [7]. From the report, the gross Takaful contribution in GCC region is accounted around US\$8.9 billion in 2014 from an estimated US\$7.9 billion in 2013. Within the Gulf region, the total gross Takaful contribution for Saudi Arabia was at 77%, followed by UAE, which accounts for 15%. The rest of the Gulf countries accounted for just 8% of gross Takaful contributions. In the ASEAN region, the gross Takaful contribution is accounted for US\$4.2 billion in 2014 from an estimated US\$3.5 billion in 2013. Within ASEAN, Malaysia and Indonesia have reported with nearly three-quarters share which is 71% and 23% of total gross contribution. Meanwhile, the rest of ASEAN countries accounted for 6% of gross Takaful contributions.

Through this, it can be concluded that Takaful in Malaysia is continuously creating a root that is strong enough to further enhance the development of such industry in that country. The Takaful industry in Malaysia has been undergoing a steady growth over the years. The growth of this industry can be seen through its business performance over the last five (5) years. It is disclosed that the total of Takaful business performance in terms of gross contribution increased from RM4, 794 million in 2011 to RM6, 769 million in 2015 [8]. The gross contribution for family Takaful business was increased from RM3, 704 million in 2011 to RM5, 098 million in 2015. Similarly for general Takaful business, the gross contribution also increased, albeit only at a slower pace from RM1, 090 million in 2011 to RM1, 671 million in 2015. In short, it has to be stressed that the Takaful industry in Malaysia has strongly contributed by family Takaful business compared with the general Takaful business which finally remained the major income generator for the Takaful industry in Malaysia. Through the pattern of gross contribution it seems to indicate that family Takaful

become a form of popular savings instrument especially among Malaysian Muslims in general and has its appeal due to its *shari'ah* compliant attributes [9]. It is evidenced that Malaysia remains predominantly with family Takaful by making up over 75% of total global Takaful contributions [10, 11].

The domination of family Takaful business shows that there is room to harness the appeal of family Takaful as a tool for long-term savings and investment, whilst protecting against financial vulnerabilities arising from critical illness, death, disability or unemployment, or providing for children's education. However, even though Malaysia being dominated by the family Takaful business, it was reported that there is a large untapped market that still exists with the family Takaful penetration rate was merely 14.5% of the Malaysian population compared to the 41.2% penetration rate for conventional life insurance in 2014 [12]. It can be concluded that there is a large gap between the family Takaful and the conventional life insurance by which the family Takaful has a large opportunity to boost untapped areas in their business to compete with its conventional peers. This showed there is tremendous potential for further growth in the family Takaful segment in Malaysia.

Since the market penetration rate for family Takaful is still underpenetrate, it is worthwhile to highlight that a majority of Malaysian population still does not have a family Takaful plan. The result of this led to find out what are the determinant factors which play an important role in purchasing family Takaful. Therefore, it is essential to identify the important factors that lead to the family Takaful purchasing decision among the policyholders. Even though many studies have been conducted in the same areas but the factors driving the purchasing decision of family Takaful are still unclear. It was believed there are many factors that can be explored for increasing the family Takaful market penetration in this country. Thus, the objectives of this study are as follows. Firstly, to review past literature and identify and empirically validate the determinant factors that affects purchasing decision in family Takaful. Secondly, to test the role of education variables in the relationship between a set of determinant factors and purchasing decision of family Takaful. This paper is divided into five parts. Section 1 illustrated on the introductory in the field of study. Section 2 review the relevant literature related to determinants of family Takaful purchasing decision. In this section, the study proposes a model depicting the determinant factors as antecedents of purchasing

decision in family Takaful. Following this, the study also proposes a number of research hypotheses. Section 3 discussed on the methodology and Section 4 presents the results and findings from this study. In the final section this study concentrates on the discussion and conclusion.

### Literature Review

**Purchasing Decision for Family Takaful:** Making a decision involves a choice among alternatives and usually concern people (human resources); money (budgeting); buying and selling (marketing); or how to do things (operations); how to do things in the future (strategy and planning) [13]. The decision making will be about who made the decision and if the decision is an informed one or otherwise. In line with this, consumers represent the most important stakeholder in home buying decision and must directly seek their opinions to understand what they need and demand [14]. It is stated that consumers who were in taking purchasing decision influenced by external and internal factor [15]. External factor is consisted: cultural, sub-cultural, demographics, social status, reference group, family and marketing activities. While internal factor is consisted: perception, learning, memory, motives, personality, emotions and attitudes. On the other hand, purchasing activity of consumer also influenced by: 1) reason of consumer characteristic consisted of: demographics, personality, psychographics, life-style, culture, values and reference group and 2) behavior process consisted of: motivations, perceptions, learning, attitude formations and decision making and 3) purchasing activity of consumer started from: need recognition, search for alternatives, evaluation of alternatives, purchase and use of product, evaluation of consumption experience, feedback and decision making [16].

Purchase decision is defined as an experience that involves the acquisition of goods and services in exchange for a payment. Sometimes purchases also represent as an investment. It is found that models of consumer decision-making which include service value explain significantly more variance in purchase intentions than models which include only service quality or cost factors [17]. Consumers are selecting financial industries by considering various features of the service proposition. For example, in the context of conventional insurance, the basic concerns of the consumers when purchasing insurance are the need, coverage and duration of the insurance [18]. It is clearly understood that the

purchase of life insurance is the most important consumer purchasing decisions [19] and is able to satisfy the need for security in Abraham's Maslow "hierarchy of need" [20]. Therefore, every consumer has the technique and method of making the decision to make any purchasing [21]. This is supported that the decision making process is dependent upon the customer's knowledge and understanding on how insurance or any other financial services or products can give benefits or fulfill certain needs of their lives [22].

### Review on Factors of Purchasing Decision for Family Takaful:

Most of the current literature has focused on the demographic and economic factors in predicting life insurance as well as family Takaful consumption [6, 23, 24, 25, 26, 27, 28 and 29]. It is found that there are positive significant relationship between Takaful agents' Islamic ethical behavior towards customers 'satisfaction, trust and commitment [30]. Meanwhile, it is disclosed that the practice of Islamic relationship marketing (IRM) which measured by Islamic ethical behavior, social, structural and financial bonds have significantly affected the customers' satisfaction, trust and commitment [31]. This is in accordance with the previous study that Takaful operators and agents need to be concern with the marketing approach and must parallel with the *maqasid shari'ah* to ensure future customer retention [32]. Another factor influencing the acceptance towards Takaful products in Malaysia consists of service quality, customer's perception and products features. They also suggested that Takaful companies need to take an aggressive promotion in order to increase level of acceptance towards Takaful product [33].

In a study which set out to determine the preference of Takaful buy customers are because they have a good understanding on Takaful concept and *shari'ah* compliance; they also have awareness on the relationship between Takaful and religion; Takaful agents' role in explaining the Takaful benefits and yet respondents are hopeful of the growth and development of Takaful operations [34]. In further research, the results demonstrated that marketing, religion and age have a significant relationship with planning to participate in Takaful plans among non-Takaful customers [35]. Meanwhile, the factors from Takaful managers' perspective that deters the public from participating in Takaful could be listed as follows such as lack of public awareness in the advantages of Takaful over insurance products, the limited range of product varieties, the

shortage of relevant expertise to explain Takaful products, the need to improve the distribution channels and marketing strategies [36]. This factor is useful for industry so that they can put their efforts to make the public increase their intention to participate in the Takaful plans. Furthermore, mass media and word of mouth had an impact on influencing their social pressure to purchase family Takaful scheme [37].

As mentioned in the literature review, studying in such an area, would provide a new insight to the factors that influence policyholders toward the decision to purchase family Takaful plans. There will be multiple variables that can be used to check which factors contributed more to the purchasing decision of family Takaful. Inclusion of these variables should help identify a comprehensive set of predictor variables. These factors can possibly help the industry to develop the underserved areas in family Takaful as well as to develop the Takaful industry itself. Following this, it eventually led to the formation of the conceptual framework of this study. Perhaps this current study is slightly different from other previous studies and could fill the gap in the existing literature of family Takaful. These factors are highlighted and discussed in brief below.

**Reputation and Image:** Many previous researchers affirmed that a good reputation or image helps to increase sales and market share of the company [38] and to establish as well as maintain a loyal relationship with customers [39, 40, 41, 42, 43]. This finding corroborates the ideas which affirmed that the strong image of the bank institution [44,45,46] and its reputation [47,48,49,50,51] were important contributors in selection of Islamic banking among customers. This is in line with the Takaful study, which found that a majority of respondents chose reputation as their reason for choosing Takaful in dealing the business [52].

**Products and Services:** The innovation of products and services are needed as parts of demand for customers in order to continue to develop the business competition. Innovation is important as it can help in increasing the range of products and services to meet more sophisticated and complex requirements of today's consumers and business which ultimately contribute towards creating a new market or expand existing markets for Islamic products and services[53]. From the previous study, it was summarized that they focused both on the customer' awareness and satisfaction of products and

services in Islamic banks [47, 49,51, 54, 55,56]. A few of the studies focused only on consumers of Islamic banking products [45, 57, 58, 59]. Meanwhile, some other researchers focused only on consumers' attitude, perception and knowledge of Islamic financial products [50, 60]. The findings observed in the study of the selected Takaful products to investigate consumer perceptions of Takaful business in Brunei [52]. The results indicated that products are one of top reasons for choosing a Takaful company because a majority of respondents agreed that Takaful products are easier and understandable.

**Marketing and Advertising:** The development of the Islamic financial system in Malaysia is witnessing a positive growth not only among Muslims, but also for non-Muslims. In order to promote the Islamic financial products and services, many kinds of marketing and advertising tools are used to promote such products and services intensively. The marketing concept which contains Islamic principles and values incorporates the principle of maximizing the value of 'justice' for the welfare of the wider community [61]. Therefore, any type of marketing and advertising should not have to contain information which is misleading and unnecessarily excessive [62]. There are three criteria in selecting an advertisement [63]. First, choosing a bank which featured advertisements that were virtuous. Second, choosing a bank that offers attractive prizes which are not contrary to Islamic values and third, choosing a bank that runs promotions with a method which is in accordance with the *Syari'ah* principle. There has been some research on marketing and advertising which can influence the customer's buying behaviour [64;65]. In addition, there have also been studies which have focused on the implication of marketing and advertisement factors on the selection of Islamic banks [46, 55, 57, 61, 63, 66].

**Education:** Many researchers identified that demographic is one of the factors carried out in the previous study of Islamic insurance as well as in conventional life insurance. It refers to the vital and measurable statistics of population [20] and have received broader acceptance that lend themselves easily to quantification as well as easy classification [67, 68]. Since education is one of the demographic characteristics that has emerged as consequential influence on human behavior, thus, it was used as criterion in a variety of categorizations such as a determinant of socio economic level. This can be seen

through the result of studies that found the level of education has a significant difference with the reason to purchase family Takaful or conventional life insurance [69, 70, 71]. These findings further supports the the idea that well educated buyers are relatively better in decision making [72]. However, it is found the role of education as moderating variable on the relationship of determinant factors and family Takaful purchasing decision are little explored. As a result, this study will evaluate the education variable as moderator on the relationship between a set of determinant factors and family Takaful purchasing decision.

**Conceptual Model:**

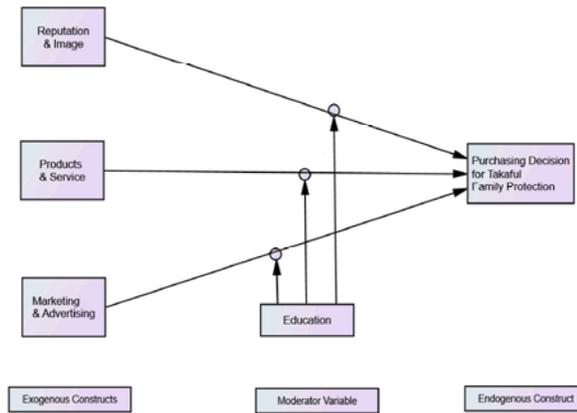


Fig. 1: The Conceptual Framework

**Hypothesis Development:** Based on the previous studies, the researcher outlined several hypotheses for this study. The developments of the related hypotheses are as follows:

**Reputation and Image:** The result in the previous study found that a majority of the respondents chose reputation as their reason for choosing the Takaful Company [52]. The audit checklist to evaluate the factors that customers take into account when they are making an insurance purchase decision and found that company’s reputation is one of the important factors in fire insurance and homeowners’ insurance purchase decisions [70]. It is highlighted that reputation as well as image have a significant role in influencing the purchasing behavior [73]. Meanwhile, in the context of Islamic banking, the findings seem to be consistent that Islamic reputation and image are the most important factors in dealing with the Islamic bank [47,49, 74]. This was strongly supported

that a good corporate image or reputation helps to establish and maintain a loyal relationship with customers [39,40, 41].

**Hypothesis1:** Reputation and image has positive and significant influence on customers’ purchasing decision for family Takaful.

**Products and Services:** The finding in the conventional study discovered that service quality offered by companies and agents play an important role in life insurance purchase decisions [70]. This finding is in agreement with the previous researcher that the services from agents or Takaful officer is an important factors to be considered in joining family Takaful [71]. In addition to this, most of the respondents chose products as their reason for choosing a Takaful Company [52]. Further work in the Islamic finance study concludes that the attitude of Muslims in Loughborough towards Islamic finance products is positive and encouraging [60]. Besides, a few studies have attempted to explain the attributes of products and services is one of the factors that contributed as the selection criteria to be consider in Islamic banking [63, 75].

**Hypothesis 2:** Products and services has positive and significant influence on customers’ purchasing decision for family Takaful.

**Marketing and Advertising:** The findings was found that there was a positive and significant relationship between participation in family Takaful and promotion [71]. This result has been proved by related studies in the banking area that mass media marketing is one of the important factors for Muslims in selection of banks [55]. These results are consistent with those others of other studies and suggest that marketing and advertising represented a new approach in the banking industry to build close and long-term relationships with its customers. Through the marketing and advertising it help to provide an understanding of the customers and their satisfaction considering the increasing competition [76]. However, these results differ with those others studies that mass media advertising was not the most important criterion for the selection of Islamic banking [77, 78].

**Hypothesis 3:** Marketing and advertising has positive and significant influence on customers’ purchasing decision for family Takaful.

**Education as Moderator:** People with higher education levels are believed to engage in greater information gathering and usage before decision making [79]. Many empirical studies have revealed that education are known to have direct association with family Takaful as well as in Islamic banking [63, 69, 71, 80 and 81]. In the other context of studies, education has been examined as a moderating variable [72, 82, 83]. These results are consistent with those other study that found the education moderate the effects of performance expectance, effort expectance, social influence, perceived credibility, perceived financial cost, perceived self-efficacy on banking needs [84]. Thus, this study intend to assess education as a moderator the relationship between exogenous constructs and purchasing decision in family Takaful. Therefore, the following hypothesis is proposed.

**Hypothesis 4a:** Education moderate the relationship between reputation & imge and the purchasing decision in family Takaful.

**Hypothesis4b:** Education moderate the relationship between products & service and the purchasing decision in family Takaful.

**Hypothesis 4c:** Education moderate the relationship between marketing & advertising and the purchasing decision in family Takaful.

## METHODOLOGY

**Research Design:** This study is considered confirmatory since the theoretical framework is developed using solid literature. The data was collected using self-administered questionnaires which were given to the randomly selected selected respondents.

**Sampling Method:** This study employed the probability sampling method to select respondents. The sampling frame consist of all family Takaful subscribers from five Takaful companies in Malaysia. Approximately 500 self-administered questionnaire were distributed to the randomly selected subscribers. After few weeks, a total of 332 questionnaires were returned. And from 332 questionnaires, only 316 were usable.

**Research Intrument:** A self-admnistered questionnaire was used as the instrument in this study. It was divided into five (6) sections: 1) Section A: Purchasing Decision

of family Takaful; 2) Section B: Reputation and Image; 3) Section C: Products and Services; 4) Section D: Reputation and Image and Section 5) Section E: Marketing and Advertising and 6) Section F: Demographic Profile. The questionnaire on reputation and image; products and services; marketing and advertising and demographic profile was adapted from previous study [63]. Meanwhile, the questionnaire for purchasing decision of family Takaful was also adapted from the past study [85].

## Measurement of Constructs

### Endogenous Construct

**Purchasing Decision:** The endogenous construct in this study is purchasing decision (PD) of family Takaful. It is measured by the following four items: (1) to use the service again; (2) to recommend the service to others; (3) to make the same choice if had to do it again and (4) to remain loyal to service providers. The items for purchasing decision was measured using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 ( Strogly agree).

### Exogenous Construct

**Reputation and Image:** The items of reputation and image (RI) in this study was measured by the following four items: (1) the financial performance of Takaful companies; (2) the management of Takaful companies; (3) Takaful compliance to the ethics of buying ans selling and (4) the integrity of Takaful companies. The variable for reputation and image was measured using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 ( Strogly agree).

**Products and Services:** The items of products and services (PS) in this study was measured using the following five (5) items which are based on: (1) interesting rate of profit; (2) reasonable financing rate; (3) value added Takaful facilities; (4) reasonable service charges and (5) security guarantee. The variable for products and services was measured using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 ( Strogly agree).

**Marketing and Advertising:** The items of marketing and advertising (MA) in this study was measured using the following six (6) items which are based on: (1) the ads contained a good value; (2) prizes offered; (3) publicity in media; (4) leaflets; (5) customer service relations (CSR) program by Takaful companies and (6) the convincing agents. The variable for marketing and advertising was measured using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 ( Stron gly agree).

**Moderator Variable**

**Education:** The level of respondents' education is used as a moderator variable in the relationship between the determinants factors (exogenous) and the purchasing decision of family Takaful. The ordinal scale was used to measure the respondent's education.

**Analysis**

**Respondents' Demographics:** A list of the respondents' demographic characteristics is provided in Table 1. The respondents were almost equally apportioned between males (52.8 per cent) and females (47.2 per cent). Majority of the respondents were between 31 to 40 years old (40.8 per cent) and majority of the respondents were married (74.7 per cent). Approximately 37.3 per cent of the respondents were from junior college as their level of education. Concerning the respondents income, majority of them earned between RM 3, 001 to RM 5, 000 (76.3 per cent). Majority of them have their dependents between 3 to 4 person in their family.

From the result, it indicated that there is a significant association between probability of detection and GST rate, ( $\chi^2=2.888, p<0.10$ ). Based on phi coefficient value in table 1, -0.262 showed that there is a small effect association between probability of detection and GST rate. According to [4] criteria, it showed that 0.10 is small effect, 0.30 for medium effect and 0.50 is considered large effect.

Followed by the percentage of each classed for probability of detection and GST rate, the crosstabulation result is shown in Table 1. Based on that table, 29.4% of registration with no risk detected involved in mixed supply which is combination either standard rate, zero rate, exempt supply, relief or out of scope supply. However, about 70.6% of registrants with no risk detected supply with standard rate which is 6 per cent. For registrants with risk detected, there were 56% involved in mixed supply while 44% of them were supplying to their customers with the charged standard rate of 6 per cent. Furthermore, according to these results, 45.2% of the registrants were involved in mixed supply and 54.8% of the registrants only supply for standard rate.

**The Confirmatory Factor Analysis (CFA):** The Confirmatory Factor Analysis (CFA) is required to validate the measurement model of all latent constructs for uni-dimensionality, validity and reliability [86, 87, 88, 89]. Figure 1 illustrates the pooled measurement model of latent constructs in AMOS Graphic. The output of CFA shows the factor loading for every item, the factor loading for every component and the correlation between the constructs.

Table 1:

Demographic Variables	Percent (%)
Age (year)	
Below 30 years	27.8
31-40 years	40.8
41-50 years	28.5
51 and above	2.8
Gender	
Female	47.2
Male	52.8
Marital Status	25.3
Single	74.7
Married	
Education	
High School	16.1
Junior College	37.3
College Diploma	15.2
Bachelor Degree	23.7
Master Degree	4.7
PhD and Professional	2.8
Income	
RM 3000 and below	16.1
RM 3001-RM 5000	76.3
RM 5001 and above	7.6
Dependents	
0 person	25.3
1-2 person	32.0
3-4 person	42.7

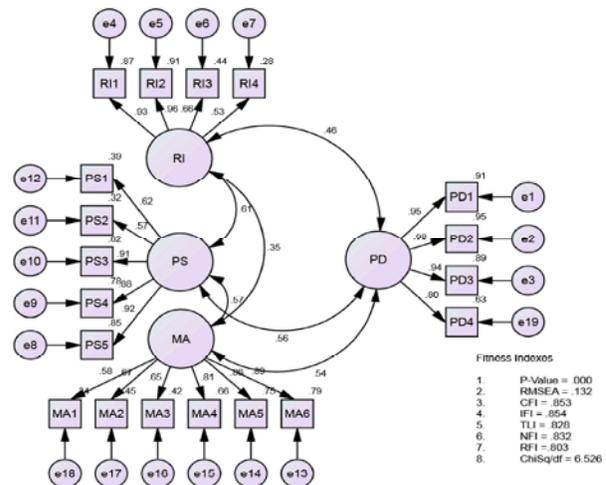


Fig. 1: The pooled measurement model for confirmatory factor analysis (CFA)

**Assessing the Validity and Reliability of a Measurement:** The Pooled-CFA is employed to assess the measurement model for all constructs together at once is implemented [86, 88, 89, 90, 91]. The measurement model pooled CFA is shown in figure 1.

Moreover, several fitness indexes must be achieved to the required level to achieve construct validity. As shown in Figure 1, certain fitness indexes do not achieve the required level. Besides, it was found that there are few useless items due to the lower factor loading. These have caused the measurement model for the constructs to have poor fit. Therefore, the researchers have to drop the useless items (RI4, PS2, MA1, MA2 and MA3) and run the measurement model again. The result is shown in Figure 2 and the fitness indexes for the model are assessed in the following Table 2.

**Unidimensionality:** Uni-dimensionality is assessed through the goodness of fit indexes, the standardized residuals and the modification indices generated by AMOS software. In addition, the uni-dimensionality can be attained if the measuring items obtain adequate factor loadings for the particular latent construct [86, 88, 92].

**Validity:** Validity is referring to the capability of the instrument to measure what it supposed to be measured for a construct [92, 93]. Three types of validity are required for a measurement model, for instance, Convergent Validity, Construct Validity and Discriminant Validity [86, 92, 93].

**Convergent Validity:** Convergent Validity is achieved when the value of Average Variance Extracted is greater or equal to 0.5 [89, 92, 93].

**Construct Validity:** Several fitness indexes must be achieved to the required level to achieve construct validity. It is highlighted that the construct validity for measurement model is achieved when all Fitness Indexes achieved the required level [86, 89] level as shown in Table 2.

**Discriminant Validity:** Table 3 presented the Discriminant Validity Index Summary for all latent constructs in the study. The discriminant validity of the construct is achieved if the diagonal values (in bold) is higher than the values in its row and column. Another condition for discriminant validity is the correlation between exogenous constructs must not exceed 0.85. As it clearly shown from Table 3, the discriminant validity among the constructs in the model is achieved [86, 87, 88, 89].

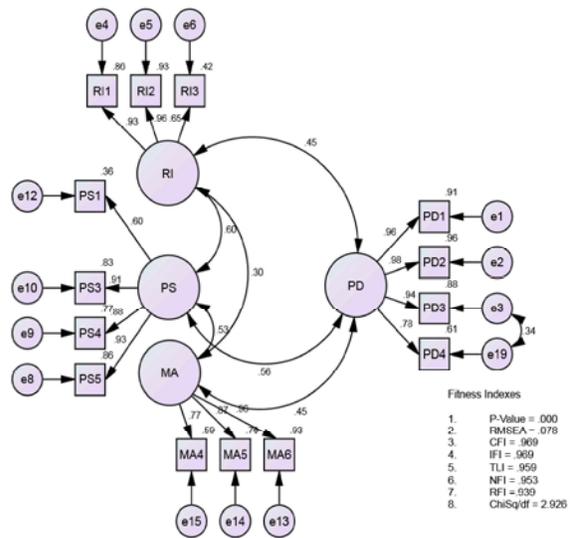


Fig. 2: The new measurement model after the items were deleted

Table 2: The Fitness Indexes for new Measurement Model

Name of Category	Name of Index	Index Value	Comments
1. Absolute fit	RMSEA	0.078	The required level is achieved
2. Incremental fit	CFI	0.909	The required level is achieved
3. Parsimonious fit	Chisq/df	2.926	The required level is achieved

Table 3: The CFA Report for every construct in the model

Construct	Item	Factor Loading	CR (Minimum 0.6)	AVE (Minimum 0.5)
RI	RI1	0.93	0.891	0.736
	RI2	0.96		
	RI3	0.65		
PS	PS1	0.60	0.904	0.707
	PS3	0.91		
	PS4	0.88		
	PS5	0.93		
MA	MA4	0.77	0.903	0.757
	MA5	0.87		
	MA6	0.96		
PD	PD1	0.91	0.955	0.844
	PD2	0.96		
	PD3	0.88		
	PD4	0.61		

**Reliability:** When assessing the reliability of the constructs, there are three assessments need to be evaluated namely Composite Reliability (CR) and Average Variance Extracted (AVE) [86, 88 and 94]. The CR measures the reliability and internal consistency for a latent construct. The value should be than 0.60 is required. Menwhile, the AVE indicates the average

percentage of variation as explained by the items measuring the construct and should exceeding 0.50 to achieve the convergent validity. As a summary, all constructs in this study have fulfilled the Composite Reliability and Convergent Validity criteria. The results can be seen in Table 3 above.

**Normality Distribution:** The data is considered normally distributed if the absolute value of its skewness fall within -1.5 to 1.5 range [86, 88, 91, 94]. As shown in Table 4, the data is considered to be normally distributed and fit to analyze using parametric statistical analysis.

Table 4: The Assessment of normality for all items

Variable	skew	c.r.	kurtosis	c.r.
PD4	.566	4.111	-.203	-.736
MA4	.618	4.481	.180	.652
MA5	.565	4.097	.202	.734
MA6	.306	2.218	-.813	-2.952
PS1	.115	.834	-.156	-.567
PS3	.484	3.509	-.421	-1.526
PS4	.538	3.904	-.026	-.096
PS5	.509	3.696	-.390	-1.416
RI3	.700	5.078	.156	.567
RI2	.370	2.684	-.153	-.554
RI1	.402	2.915	-.227	-.823
PD3	.789	5.729	.295	1.069
PD2	.575	4.174	-.250	-.905
PD1	.514	3.727	-.407	-1.477
Multivariate			40.459	16.990

**Structural Equation Modeling (SEM):** Structural Equation Modeling (SEM) is one of the more powerful statistical methods for multivariate analysis [87, 95 and 96]. One can use SEM to analyze a complex relationship among several constructs in the model [87, 89, 93 and 96]. After the entire requirement for measurement model is achieved, the study could move into modelling the structural model to estimate the interrelationships among the constructs using Structural Equation Modelling (SEM) and test the stated hypotheses in the study.

**Analysing the Structural Model:** The structural equation modelling procedure estimates the standardized path coefficients as well as the regression path coefficient between constructs of the model. The AMOS Graphic output shows the results in Figure 3 and Figure 4 respectively. The value of coefficient of determination R<sup>2</sup> is 0.37. The figure indicates the contribution of exogenous constructs RI, PS and MA in estimating the endogenous construct PD is 37%.

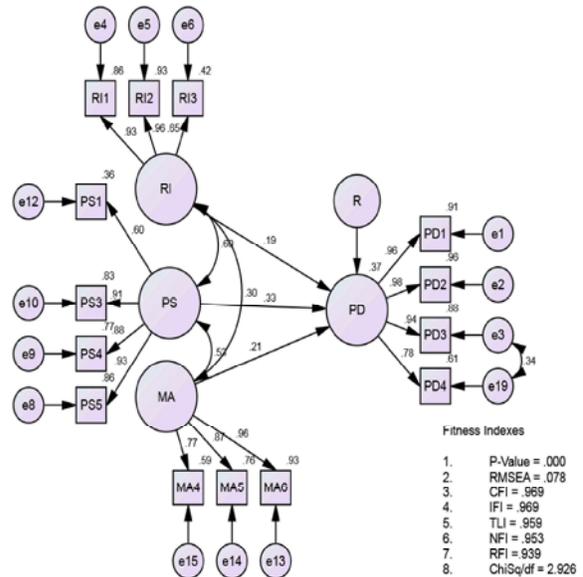


Fig. 3: The Standardized Path Coefficients between constructs in the model

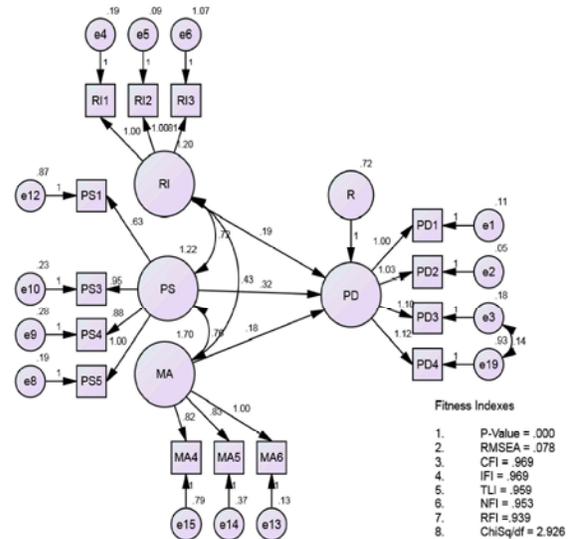


Fig. 4: The regression path coefficients between constructs in the model

Table 5 shows the regression path coefficients for all three exogenous constructs toward the endogenous construct that extracted from Figure 3.

Table 5: The regression path coefficient and its significance

	Estimate	S.E.	C.R.	P	Result
PD <--- RI	.186	.059	3.149	.002	Significant
PD <--- PS	.317	.067	4.706	.001	Significant
PD <--- MA	.175	.047	3.736	.001	Significant

The analysis continues to test the study's hypothesis. The results are presented in Table 6.

Table 6: The Hypothesis Testing for every path and its conclusion

	Hypothesis Statement	P-Value	Result
1	RI has a significant effect on PD	.002	Supported
2	PS has significant effect on PD	.001	Supported
3	MA has significant effect on PD	.001	Supported

**Testing Moderator Effect in the Model:** This study would employ the proposed method to test the moderator effect in the model [86, 91]. The moderator variable in this study is education. The model showed education as a moderator effect on PD from three constructs, RI, PS and MA respectively. The testing process need to be conducted to confirm these effects. The results are presented in the tables below.

Table 7a: The moderator test for low education group data

Model 1	Constrained Model	Unconstrained Model	Chi-Square Difference	Result on Moderation	Result on Hypothesis
Chi-Square	310.440	214.454	95.986	Significant	Supported
DF	72	71	1		

The hypothesis statement:

H4a: Respondent's education moderates the relationship between RI and PD

Table 7b: The moderator test for high education group data

Model 1	Constrained Model	Unconstrained Model	Chi-Square Difference	Result on Moderation	Result on Hypothesis
Chi-Square	216.694	171.276	45.424	Significant	Supported
DF	72	71	1		

The hypothesis statement:

H4a: Respondent's education moderates the relationship between RI and PD

Table 8a: The moderator test for low education group data

Model 2	Constrained Model	Unconstrained Model	Chi-Square Difference	Result on Moderation	Result on Hypothesis
Chi-Square	264.512	214.454	50.058	Significant	Supported
DF	72	71	1		

The hypothesis statement:

H4b: Respondent's education moderates the relationship between PS and PD

Table 8b: The moderator test for high education group data

Model 2	Constrained Model	Unconstrained Model	Chi-Square Difference	Result on Moderation	Result on Hypothesis
Chi-Square	204.392	171.270	33.122	Significant	Supported
DF	72	71	1		

The hypothesis statement:

H4b: Respondent's education moderates the relationship between PS and PD

Table 9a: The moderator test for low education group data

Model 3	Constrained Model	Unconstrained Model	Chi-Square Difference	Result on Moderation	Result on Hypothesis
Chi-Square	269.774	214.454	55.320	Significant	Supported
DF	72	71	1		

The hypothesis statement:

H4c: Respondent's education moderates the relationship between MA and PD

Table 9b: The moderator test for high education group data

Model 2	Constrained Model	Unconstrained Model	Chi-Square Difference	Result on Moderation	Result on Hypothesis
Chi-Square	273.027	171.270	101.757	Significant	Supported
DF	72	71	1		

The hypothesis statement:

H4c: Respondent's education moderates the relationship between MA and PD

## CONCLUSION

The purchasing decision in family Takaful model was developed by which the a set of factors were well explored and defined. The development model was empirically tested through questionnaire survey among family Takaful participants of five major Takaful companies in Malaysia. The analysis identified the factors in the developed model consists of reputation and image, products and services and marketing and advertising. Meanwhile, the outcome in this study is known as purchasing decision in family Takaful and it is measuring using four items.

Utilising the result of CFA and SEM, it was found that these three factors which are reputation and image, products and services, marketing and advertising have a significant positive influence on the purchasing decision in family Takaful. This information is very useful to Takaful institutions and policy makers that enable them to formulate appropriate strategies to increase the market penetration for family Takaful in the long-run for Malaysia.

The discussion of moderating effect in this study, show that education moderates the relationship between a set of factors (reputation and image, products and services, marketing and advertising) and purchasing decision in family Takaful. This suggested that through education the respondents are more enough to understand the importance of having protection for themselves by purchase family Takaful or conventional life insurance.

## REFERENCES

1. Yusof, M.F., 1996. *Takaful: Sistem Insurans Islam*. Utusan Publications & Distributors Sdn. Bhd. Cheras, Kuala Lumpur.
2. Ahmad, M.S., 2007. *Takaful in Southeast Asia: The Growing Pains and Challenges* (11).
3. *Islamic Financial Services Act 2013*. IFSA. (2013). The Commissioner of Law Revision. Kuala Lumpur.
4. Billah, M.M., 2003. *Islamic Insurance (Takaful)*. Selangor: Ilmiah Publisher Sdn Bhd.
5. Ali, M., 2006. *Basis and Models of Takaful: The Need for Ijtihad*. Takaful Articles.
6. Redzuan, H., Z. Abdul Rahman and S.H. Aidid, 2009. Economic Determinants of Family Takaful Consumption: Evidence from Malaysia. *International Review of Business Research Papers*, 5(5): 193-211.
7. Earnst and Young's Global Takaful Insight. (2014). *Market Updates: Growth Momentum Continues*, 1-16. UK.
8. *Annual Takaful Statistics Report*. (2011-2015), Bank Negara Malaysia.
9. Abdul Rahman, Z., R. Mohd Yusof and F. Abu Bakar, 2008. Family Takaful: It's role in social economic development and as a savings and investment instrument in Malaysia – An Extension. *Shariah Journal*, 16(1): 89-105.
10. Odierno, H.S., 2014. Key Trends in the Takaful Sector: Takaful Market Update. *Takaful and Mutuality*, 2-3.
11. RHB Research Institute Sdn Bhd. 2014. *Top Malaysia Small Cap Companies*. Malaysia.
12. *Malaysian Takaful Dynamics*. 2015. Central Compendium.
13. Fitzgerald, S.P., 2002. *Decision Making*. Capstone Publishing, United Kingdom.
14. Razak, D.A. and F.M. Taib, 2011. Consumers' Perception on Islamic Home Financing: Empirical Evidence on Bai Bithaman Ajil (BBA) and diminishing partnership (DP) modes of financing in Malaysia. *Journal of Islamic Marketing*, 2(2): 165-176.
15. Hawkins, D., 2007. *Consumer Behavior: Building Marketing Strategy – 10th edition*. McGraw-Hill.
16. Wells, W.D. and D. Prensky, 1996. *Consumer Behavior*. John Wiley & Sons, Inc., Canada.
17. Cronin, J.J., M.K. Brady, R.R. Brand and J. Donald, 1997. A cross-sectional test of the effect and conceptualization of service value. *Journal of Services Marketing*, 11(6): 375-391. <https://doi.org/10.1108/08876049710187482>
18. Meyers, D., 1995. *Consumer Buying Habits: Key to Making Sale*. National Underwriter, 99 (12).
19. Anderson, D.R. and J.R. Navin, 1975. Determinants of Young Marrieds' Life- Insurance Purchasing Behaviour: An Empirical Investigation. *Journal of Risk and Insurance*, 42(3): 375-387.
20. Schiffman, L.G. and L.L. Kanuk, 1994. *Consumer Behavior* (5th ed.). Prentice Hall, Englewood Cliffs, NJ.
21. Glenn, W.C. and J.B. Blaize, 1989. *Consumer Behavior: A Decision-Making Approach*. South Western Publishing.
22. Abd. Manab, N., R. Ab. Rashid and Y. Ibrahim, 2004. Awareness and Ownership of Family Takaful Scheme among Muslim Community in Malaysia. *Journal of Muamalat and Islamic Finance Research*, 1(1): 121-136.

23. Anonymous. 2009. Islamic Finance: the Determinants of the Demand for Family Takaful in Malaysia, pp: 1-24.
24. Hamid, M.A., J. Osman, B. Ariffin and A. Nordin, 2009. Determinants of Corporate Demand for Islamic Insurance in Malaysia. *International Journal of Economic and Management*, 3(2): 278-297.
25. Mahmud, N.L., 2012. Takaful Demand and Economic Variables Interaction: The Time Series Analysis for Period of 2000-2010. PhD Thesis. International Centre of Education in Islamic Finance (INCEIF).
26. Gustina and N.I. Abdullah, 2012. Analysis of Demand for Family Takaful and Life Insurance: A Comparative Study in Malaysia. *Journal of Islamic Economics, Banking and Finance*, 68(8): 67-86.
27. Ansaari, S. and M. Farooq, 2012. The Demand Determinants of Takaful (Islamic Insurance) by conventional and Islamic Banks in Pakistan, 3rd International Conference on Business and Economics, pp: 2859-2873.
28. Sherif, M. and N.A. Shaairi, 2013. Determinants of demand on family Takaful in Malaysia. *Journal of Islamic Accounting and Business Research*, 4(1): 26-50.
29. Ulbinaite, A., M. Kucinskiene and Y. Le MouUec, 2013. Determinants of Insurance Purchase Decision Making in Lithuania. *Inzinerine Ekonomika-Engineering Economics*, 24(2): 144-159.
30. Salleh, M.C.M., N.I. Abdullah and S.S. Razali, 2013. The Relationship of Takaful Agents' Islamic Ethical Behavior towards Customers' Satisfaction, Trust and Commitment: A Preliminary Analysis. *Journal of Islamic Finance and Business Research*, 2(1): 77-88.
31. Salleh, M.C.M. and R. Ramli, 2013. The Effect of Takaful Agents' Islamic Relationship Marketing Practice on Customer Satisfaction, Trust and Commitment: An Empirical Study on 800 of Family Takaful Customers. *International Convention of Islamic Management*, University Malaya.
32. Salleh, M.C.M., 2014. Islamic Relationship Marketing Practice, Customer Satisfaction and Retention: A Mediation Analysis. *Australian Journal of Basic and Applied Sciences*, 8(5): 51-55.
33. Razak, M.I.M., R. Idris, M.M. Yusof, W.E. Jaapar and M.N. Ali, 2013. Acceptance Determinants towards Takaful Products in Malaysia. *International Journal of Humanities and Social Science*, 3(17): 243-252.
34. Kamil, N.M. and N. Mat Nor, 2014. Factors Influencing the Choice of Takaful Over Conventional Insurance: The Case of Malaysia. *Journal of Islamic Finance*, 3(2): 001-014.
35. Mohamed, O.E.B. and S.Y. Alhabshi, 2015a. Low Market Penetration of Takaful Among Malaysians: Non-Takaful Customers' Perspective. *International Journal of Ethics in Social Sciences*, 3(1): 5-20.
36. Mohamed, O.E.B. and S.O. Alhabshi, 2015b. Factors Influencing the Penetration Rate of Malaysian Takaful Industry from Takaful Managers' Perspective. *International Journal of Excellence in Islamic Banking & Finance*, 5(1): 1-13.
37. Husin, M.M., N. Ismail and A.A. Rahman, 2016. The roles of mass media, wordofmouth and subjective norm in family takaful purchase intention. *Journal of Islamic Marketing*, 7(1): 42-58.
38. Shapiro, C., 1982. Consumer Information, Product Quality & Seller Reputation. *The Bell Journal of Economics*, 13(1): 20-35.
39. Yoon, E., V. Kijewski and H.J. Guffey, 1993. The Effects of Information and Company Reputation on Intentions to Buy a Business Service. *Journal Business Research*, 3004(814): 215-228.
40. Robertson, T.S., 1993. How to Reduce Market Penetration Cycle Times. *Sloan Management Review*, 35(1): 87-96.
41. Andreassen, T. and B. Lindestad, 1998. The Effect of Corporate Image in the Formation of Customer Loyalty. *Journal of Service Research*, 1(1): 82-92.
42. Weiwei, T., 2007. Impact of Corporate Image and Corporate Reputation on Customer Loyalty: A Review. *Management Science and Engineering*, 1(2).
43. Ali, I. and J.F. Ali, 2011. Corporate Social Responsibility, Corporate Reputation and Employee Engagement, pp: 1-17.
44. Ekrem, C., H. Ayyildiz and B. ER, 2007. Effects of Image and Advertising Efficiency on Customer Loyalty and Antecedents of Loyalty: Turkish Banks Sample. *Banks and Banks System*, 2(1): 56-71.
45. Rammal, H.G. and R. Zurbrugg, 2007. Awareness of Islamic banking products among Muslims: The case of Australia. *Journal of Financial Services Marketing*, 12(1): 65-74. doi:10.1057/palgrave.fsm.4760060
46. Haque, A., K. Ahmed and S.I. Jahan, 2010. Shariah observation: Advertising Practices of Bank Muamalat in Malaysia. *Journal of Islamic Marketing*, 1(1): 70-77. doi:10.1108/17590831011026240
47. Naser, K., A. Jamal and L. Al-Khatib, 1999. Islamic Banking: A Study of Customer Satisfaction and Preferences in Jordan. *International Journal of Bank Marketing*, 17(3): 135-150.

48. Almossawi, M., 2001. Bank Selection Criteria Employed by College Students in Bahrain: An Empirical Analysis. *International Journal of Bank Marketing*, 19(3): 115-125.
49. Dusuki, A.W. and N.I. Abdullah, 2007. Why do Malaysian customers patronize Islamic banks? *International Journal of Bank Marketing*, 25(3): 142-160. doi:10.1108/02652320710739850
50. Gait, A. and A. Worthington, 2008. An Empirical Survey of Individual Consumer, Business Firm and Financial Institution Attitudes Towards Islamic Methods of Finance. *International Journal of Social Economics*, 35(11): 783-808.
51. Mansour, W., M.B. Abdel hamid, O. Masood and G.S.K. Niazi, 2010. Islamic banking and customers? preferences: the case of the UK. *Qualitative Research in Financial Markets*, 2(3): 185-199. doi: 10.1108/17554171011091746
52. Bashir, M.S. and N.H.H. Mail, 2011. Consumer Perception on Takaful Business in Brunei Darussalam. *International Conference on Management Proceeding*, pp: 1144-1163.
53. Aziz, Z.A., 2005. Islamic finance - promoting the competitive advantage.
54. Al-Ajmi, J., H.A. Hussain and N. Al-Saleh, 2009. Clients of conventional and Islamic banks in Bahrain: How they choose which bank to patronize. *International Journal of Social Economics*, 36(11): 1086-111. doi:10.1108/03068290910992642
55. Haron, S., N. Ahmad and S.L. Planisek, 1994. Patronage Factors of Muslim and non-Muslim Customers. *International Journal of Bank Marketing*, pp: 32-40.
56. Ahmad, N. and S. Haron, 2000. Perceptions of Malaysian Corporate Customers Towards Islamic Banking Products and Services. *International Journal of Islamic Financial Services*, 3(4).
57. Gerrard, P. and J.B. Cunningham, 1997. Islamic banking: a study in Singapore. *International Journal of Bank Marketing*, 15(6): 204-216. doi:10.1108/02652329710184433
58. Metawa, S.A. and M. Almossawi, 1998. Banking Behavior of Islamic Bank Customers: Perspectives and Implications. *International Journal of Bank Marketing*, 16(7): 299-313.
59. Bley, J. and K. Kuehn, 2003. Conventional Versus Islamic Finance: Student Knowledge and Perception in the United Arab Emirates. *International Journal of Islamic Financial Services*, 5(4): 1-13.
60. Yusof, M.E. and A.S. Shamsuddin, 2003. Muslim Consumers Attitude towards Islamic Finance Products in a Non Muslim Country. *Jurnal Kemanusiaan*, pp: 94-103.
61. Hassan, A., A. Chachi and S.A. Latiff, 2008. Islamic Marketing Ethics and Its Impact on Customer Satisfaction in the Islamic Banking Industry. *J.KAU:Islamic Economic*, 21(1): 23-40.
62. Chachu<sup>3</sup>a, G., H. Kucharski, A. Lubac<sup>e</sup> and K. Ma<sup>3</sup>achowska, (2012). The Influence of Selected Aspects of Islam on Advertising Efforts, [http://nic.hb.se/assets/media/the\\_influence\\_of\\_selected\\_aspects\\_of\\_Islam\\_on\\_advertising\\_efforts.pdf](http://nic.hb.se/assets/media/the_influence_of_selected_aspects_of_Islam_on_advertising_efforts.pdf) 2010.
63. Adnan, A.A., 2010. Penentu Pemilihan Institusi Perbankan Islam Dalam Kalangan Muslim di Terengganu. Tesis Doktor Falsafah. Universiti Sains Malaysia. Tidak diterbitkan.
64. Abideen, Z. and S. Saleem, 2011. Effective Advertising and its Influence on Consumer Buying Behavior. *European Journal of Business and Management*, 3(3): 55-66.
65. Gilaninia, S. and B.G. Ghashlagh, 2012. Relationship Marketing System and Its Impact on Customer Buying Behavior. *Journal of Basic and Applied Scientific Research*, 2(3): 2473-2479.
66. Hakim, S.A., O.K. Bhatti and I. Al-jubari, 2011. Advertising of islamic banking products. *Annals of Management Research*, 1: 60-70.
67. Kucukemiroglu, O., 1999. Market Segmentation by Using Consumer Lifestyle Dimensions and Ethnocentrism: An Empirical Study. *European Journal of Marketing*, 33(5/6): 470-87.
68. Bojanic, D.C., 2007. Customer Profile of the "Carryout" Segment for Restaurants. *International Journal of Contemporary Hospitality Management*, 19(1): 21-31.
69. Mohd Zain, A.N., 2000. Insurans Islam (Takaful): Persepsi Kakitangan Universiti Utara Malaysia. Thesis Sarjana. Universiti Utara Malaysia. Tidak diterbitkan.
70. Chow-Chua, C., 2000. A Demand Audit of the Insurance Market in Singapore. *Managerial Auditing Journal*, 15(7): 372-382.
71. Mansor, M.R., 2004. Industri Takaful Keluarga di Kalangan Masyarakat: Satu Tinjauan di Tanjung Malim, Perak. Thesis Sarjana. Universiti Pendidikan Sultan Idris. Tidak diterbitkan.

72. Akram, U., P. Hui, M.K. Khan, M. Hashim and S. Rasheed, 2016. Impact of Store Atmosphere on Impulse Buying Behaviour: Moderating Effect of Demographic Variables. *International Journal of u- and e- Service, Science and Technology*, 9(7): 43-60.
73. Fianto, A.Y.A., D. Hadiwidjojo, S. Aisjah and S. Solimun, 2014. The influence of brand image on purchase behaviour through brand trust. *Business Management and Strategy*, 5(2): 58-76.
74. Hamzah, N., N.M. Ishak and N.I.M. Nor, 2015. Customer Satisfaction on Islamic Banking System. *Journal of Economics, Business and Management*, 3(1): 140-144.
75. Awan, A.G. and M. Azhar, 2014. Consumer Behaviour towards Islamic Banking in Pakistan. *European Journal of Accounting Auditing and Finance Research*, 2(9): 42-65.
76. Gilaninia, S. and B.G. Ghashlagh, 2012. Relationship Marketing System and Its Impact on Customer Buying Behavior. *Journal of Basic and Applied Scientific Research*, 2(3): 2473-2479.
77. Gerrard, P. and J.B. Cunningham, 1997. Islamic banking: a study in Singapore. *International Journal of Bank Marketing*, 15(6): 204-216. doi:10.1108/02652329710184433
78. Marimuthu, M., C.W. Jing, L.P. Gie, L.P. Mun and T.Y. Ping, 2010. Islamic Banking: Selection Criteria and Implications. *Global Journal of human Social Science*, 10(4): 52-62.
79. Capon, Noel and Marian Burke, 1980. Individual, Product Class and Task-Related Factors in Consumer Information Processing. *Journal of Consumer Research*, 7: 314-26.
80. Mohd Nor, M.Z.A., 2009. Awareness and ownership of family Takaful plan among Muslim community in Kuala Lumpur. Universiti Utara Malaysia. Unpublished Dissertations.
81. Ahmad Musadik, S.H.S., 2010. Factors Influencing The Tendency To Subscribes With Takaful Among Martial Arts Practitioners. Master Thesis. Universiti Utara Malaysia.
82. Cooil, B., T.L. Keiningham, L. Aksoy and M. Hsu, 2007. A Longitudinal Analysis of Customer Satisfaction and Share of Wallet: Investigating the Moderating Effect of Customer Characteristics. *Journal of Marketing*, 71: 67-83.
83. Husin, M.M. and A.A. Rahman, 2013. What drives consumers to participate into family Takaful schemes? A literature review. *Journal of Islamic Marketing*, 4(3): 264-280.
84. Ammar, A. and E.M. Ahmed, 2016. Factors influencing Sudanese microfinance intention to adopt mobile banking. *Cogent Business & Management*, 1-20. <http://dx.doi.org/10.1080/23311975.2016.1154257>
85. Cronin, J.J., Jr., M.K. Brady and G.T.M. Hult, 2000. Assessing the effects of quality, value and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76: 193-218.
86. Awang, Z., 2015. SEM Made Simple: A Gentle Approach to Learning Structural Equation Modeling. MPWS Publisher. Bangi Selangor. Malaysia.
87. Awang, Z., A. Afthanorhan, M. Mohamad and M.A.M. Asri, 2015a. An evaluation of measurement model for medical tourism research: the confirmatory factor analysis approach. *International Journal of Tourism Policy*, 6(1): 29-45.
88. Kashif, M., S.Z.M. Samsi, Z. Awang and M. Mohamad, 2016. EXQ: measurement of healthcare experience quality in Malaysian settings: A contextualist perspective. *International Journal of Pharmaceutical and Healthcare Marketing*, 10(1): 27-47.
89. Afthanorhan, A., Z. Awang and S. Fazella, 2017. Developing the patients' loyalty model for medical tourism industry: the case of Malaysia. *International Journal of Society Systems Science*, 9(2): 139-164.
90. Awang, Z., 2012. Structural Equation Modeling using Amos Graphic. UiTM Press Publisher. Shah Alam. Selangor. Malaysia.
91. Awang, Z., 2014. Structural Equation Modeling for Academicians and Practitioners. MPWS Publisher. Bangi Selangor. Malaysia.
92. Mohamad, M., M. Mohammad, N.A.M. Ali and Z. Awang, 2016. Measuring Positive Youth Development: The Confirmatory Factor Analysis (CFA).
93. Yusof, Y., Z. Awang, K. Jusoff and Y. Ibrahim, 2017. The influence of green practices by non-green hotels on customer satisfaction and loyalty in hotel and tourism industry. *International Journal of Green Economics*, 11(1): 1-14.
94. Kashif, M., S.Z.M. Samsi, Z. Awang and M. Mohamad, 2016. EXQ: measurement of healthcare experience quality in Malaysian settings: A contextualist perspective. *International Journal of Pharmaceutical and Healthcare Marketing*, 10(1): 27-47.

95. Lamb, E.G., K.L. Mengersen, K.J. Stewart, U. Attanayake and S.D. Siciliano, 2014. Spatially Explicit Structural Equation modeling. *Ecological Society of America*, 95(9): 2434-2442.
96. Hoque, A.S.M.M, Z. Awang, K. Jusoff, F. Salleh and H. Muda, 2017. Social Business Efficiency: Instrument Development and Validation Procedure using Structural Equation Modelling. *International Business Management*, 11(1): 222-231.