A Study on Factors Influencing Muslim's Consumers Preferences Towards Takaful Products In Malaysia

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ABSTRACT

Since the enactment of the Takaful Act 1984, Malaysia's Takaful industry has been achieving momentum and increasingly recognized as a significant contributor to Malaysia's overall Islamic financial system. Hence, for continuing future progress in financial industry's rapid development, Malaysian government through Bank Negara Malaysia (BNM), invites financial institution across the world to establish Takaful and retakaful operations in Malaysia to conduct foreign currency business. Nowadays, Muslim's consumers have the option to choose either Takaful or conventional insurance product. In addition, based on the nature of Takaful product descriptions, it has a higher preference since it is Syariah compliant which align with the Islamic regulation. However, the concept of Takaful is still vague to many people even to the Muslim because there is no proper explanation to educate them on lot of hidden advantages of it. Therefore, this study investigates the causal relationship between consumer awareness, perception and religiosity towards Muslim's consumer preferences on Takaful product. Primary data were collected through series of questions in a questionnaire that were distributed among Muslim's Takaful customers of selected Takaful agencies. Analysis on the collected data was performed through confirmatory factor analysis (CFA) and structural equation modelling (SEM) using lavaan package in R software. A CFA result show fit indices that met the recommended values criteria. In addition, the path analysis in SEM reports that two out of three independent variables are significant contributors to Muslim's customers' preferences towards Takaful.

Keywords: Takaful, awareness, perception, religiosity, preferences, R lavaan package, R sem package

JEL Classification: G22

INTRODUCTION

Malaysia has been promoting the idea of implementing the development of its Takaful industry. With the enactment of the Takaful Act 1984, Syarikat Takaful Malaysia Berhad (STMB) is the first Takaful Company that has been established in 1985. Since then, Malaysia's Takaful industry has been achieving momentum and increasingly recognized as a significant contributor to Malaysia's overall Islamic financial system. According to Borneo Post (2014), RHB Research said Takaful Malaysia's RM139 million profit for the 2013 financial year had beaten street estimates by 115 percent. Thus, for continuing future progress in industry's rapid development, Malaysia invites financial institution across the world to establish Takaful and retakaful operations in Malaysia to conduct foreign currency business (Bank Negara Malaysia, 2007).

Takaful has been introduced due to the fast growth of the Islamic financial and Takaful development in Malaysia. In general terminology, insurance is the is the equitable transfer of the risk of a loss, from one entity to another in exchange for payment where the insured parties transfer the risk to the insurer which is the insurance company and not in line with Islamic *Shariah*. Asserts that, Takaful differ from conventional insurance since the relationship between the parties is not an insured and insurer but it is between participants and Takaful operator. Guaranteeing each other is the main principle of Takaful. In general, Muslim jurists agree that Takaful is in accordance with the Islamic *Shariah*, as halal concept of tabarru' (donation or contribution). Hence, both Takaful operator and the participants are mutually helping each other for financial protection (Billah, 2007). Such mutual co-operative between both parties is certainly in line with the Quranic verses of mutual co-operation as Allah commanded *"… and co-operate you one another in righteousness and piety and do not co-operate in sin and rancor…"*. From this Quranic verses (5:2), it can be concluded that practice of Takaful concept that is based on mutual co-operation is permissible in the eyes of Allah. Hence, in order for Takaful transaction to become valid it should be free from prohibited element such as uncertainty, interest and gambling.

Muslim consumers are now able to choose Takaful instead of conventional insurance policy due to development and growth of Takaful as a *Shariah* compliant insurance. Therefore, the Muslim preferences on Takaful should be taken into consideration by investigating the Muslim's level of knowledge on Takaful, perception of Takaful that influenced their personal financial choices and religious factor that comply with *Shariah* concept. The complete information on importance and advantages of Takaful to a Muslim is needed to ensure they have a clear understanding of Takaful.

Usually, Muslim consumer that engaged with Takaful will have some valid factors on what lead them to choose Takaful. Muslim consumers' preferences may influence by their religious awareness since Takaful is *Shariah* compliance (Noresma, 2004). Those with religious knowledge tend to accept Takaful facilities that conform to *Shariah* laws in accordance with a *fatwa* that was issued in Malaysia by the National Religious 1982, stating that conventional insurance is not permissible due to the elements of *gharar* (risk), *maysir* (gambling) and *riba* (interest). In a study by Hamid and Othman (2009), they tries to investigate this issue by conducting a

preliminary study on the level of knowledge and understanding of people among Muslims in Malaysia towards the concepts, Arabic and *Shariah* terms in Islamic Insurance (takaful). Their finding shows that most of the respondents do not know and understand about the concept that is newly practiced in takaful i.e. *al-ujrah* (commission) and *al-wakalah* (agent).

Takaful facilities is believed to be popular among the Malaysian since the majority of the population is Muslim even though there is still a number of Muslim who prefer conventional insurance without taking into consideration of the Takaful as their personal insurance. To some or maybe large number of Muslim consumers, they still did not understand well the concept of Takaful and not aware about the existence of this Takaful product (Haron, Ahmad and Planisek, 1994). Muslim consumer that engaged with Takaful will have some valid factors on what lead them to choose Takaful. According to Gopy and Ramayah (2007), those factors should be investigated and give deep understanding on the reasons why Muslim customers prefer Takaful to wide range of conventional insurance and vice versa. According to Mohd. Izhar, Tariq Masood and Mohd Saeed Khan (2010), it is observed that customer awareness on Islamic insurance products remain low, however this is often attributed to a limited understanding of Islamic finance in the banking and insurance world.

Keeping all the ideas discussed earlier, identification of what is Muslim perception on choosing Takaful besides conventional insurance will also investigate in this study. Different perception in individual happens because Takaful is still in developing stage where there might have some weaknesses in Takaful compared to conventional insurance in term of service, product, model and implementation. The crucial goal of this study is to identify the factors that influence Muslim consumers' preferences towards Takaful.

It is predicted that Muslim consumer prefers to engage in Takaful as compared to conventional insurance because Takaful is comply with *Shariah*, but what are the factors that can affect their preferences. Thus, this study will tend to answer the following objectives:

1. To determine whether customers' awareness influence Muslim consumer preferences towards Takaful?
2. To determine whether customers' perception influence Muslim customer preferences towards Takaful?
3. To determine whether religious factors influence Muslim consumer preference towards Takaful?

METHODOLOGY

The data for this study was collected through self-administered structured questionnaires distributed to selected respondents who are currently a customer of Takaful products. The questionnaire consists of 17 items using a 5-point Likert scale ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree". However, there exist limitations in this study relative to the population under study. The population of this study is Muslims' consumers of Takaful product, which are widely spread all over the

geographic area of Malaysia. Thus, obtaining a representative sample in a short time period might be a bit difficult. Keeping that in mind, this study may not be suitable for generalising towards all the Muslims' consumers, but it will create a foundation for a larger study that involves a more representative sample with a larger variety in the socio-demographic profiles. Due to this limitation, this study concentrates in a smaller area by considering sampling three Takaful agencies in a selected area. Cluster sampling technique is applied in this study such that three Takaful agencies were selected at random and all customers from the selected agencies were asked to willingly participate in the survey. The duration of data collection process was approximately one month. Fifty sets of questionnaire were distributed at each of the three selected agencies and out of the total 150 set of questionnaires distributed, 108 customers responded to the survey resulted in 72% response rate. However, after data screening and data cleaning process, only 89 responses can be used for further analysis. Even though the number of usable sampled data for analysis in this study is small, it does meet the criteria as suggested by Wolf, Harrington, Clark, and Miller (2013). Their study highlighted that the sample size requirements ranges from as minimum as 30 cases for a simple CFA with four indicators, up to 450 cases for a more complex model such as the mediation models. In addition, using G*Power version 3.1.9.2 with three predictors in the model, the minimum calculated sample size required was 54 cases given values for $\alpha = 0.05$, power $(1 − \beta) = 0.95$ and effect size $f^2 = 0.35$ (Faul, Erdfelder, Lang, and Buchner, 2007).

The methods for data analysis employed in this study were the Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) path analysis, through R lavaan package (Rosseel, 2012). The objects cfa and sem in R lavaan package are masked from R sem package (Fox et al., 2012).

The data analysis stages were summarised as follows:
1. Gathering the appropriate data and importing data into R system.
2. Writing the model syntax
3. Running the CFA through R `lavaan` package
4. Evaluate the fit indices and compared with the fit indices criteria values (refer Table 1)
5. Examine the modification indices for model respecification if fit indices in stage 4 was not met
6. Model modification and re-run analysis until all fit indices criteria is met or at acceptable value
7. Perform the path analysis of the main construct through SEM

The scope of this research is to find out what are the significant determinants of Muslim consumer preferences towards Takaful products. It is believed that all the three factors under study (Awareness, Perception, and Religious Factor) has a positive influence on the tendency of Muslim consumers to participate in Takaful products.

The analysis mentioned above is analyzed using R `lavaan` package. The following R code will perform all the seven stages describe in data analysis procedures.

Stage 1

```
> library(lavaan)
> takaful <- read.csv("takaful_new.csv", header = TRUE, sep = ",")
> Data <- takaful
> item_names <- names(Data)[1:23]
> sapply(Data[, item_names], function(X) sum(is.na(X)))
>    Data$item_na   <-    apply(Data[,item_names],1,function(X)sum(is.
na(X))>0)
> table(Data$item_na)
> Data <- Data[!Data$item_na, ]
> head(Data)

   id gender age    race   status   educ    B1 B2 B3 B4 C1 C2 C3 C4
1  1  female 21-25  malay  single   Diploma 3  3  3  3  4  2  4  4
2  2  female 26-30  malay  single   Diploma 4  4  4  4  3  3  4  3
3  3  male   41-45  malay  married  SPM     4  4  4  5  4  3  3  4
4  4  female 41-45  malay  single   SPM     4  3  4  4  4  2  2  2
5  5  female 36-40  malay  married  SPM     5  4  4  4  5  3  4  4
6  6  female 41-45  malay  married  Degree  4  4  3  3  3  3  3  4

   D1  D2   D3   D4   D5   E1   E2   E3   E4   item_na
1  3   3    2    3    4    3    3    3    3    FALSE
2  4   4    2    5    4    3    4    4    2    FALSE
3  4   4    2    5    4    3    4    4    2    FALSE
4  5   4    3    4    4    5    5    5    5    FALSE
5  5   4    3    4    4    5    5    5    5    FALSE
6  4   4    2    4    4    4    5    5    5    FALSE
```

Stage 2

```
>  model <- ' custpref =~ B1 + B2 + B3 + B4
+ awareness =~ C1 + C2 + C3 + C4
+ perception =~ D1 + D2 + D3 + D4 + D5
+ relfactor =~ E1 + E2 + E3 + E4 '
```

Stage 3

```
> fit <- cfa(model, data = Data[, item_names])
```

Stage 4

```
>    fitMeasures(fit,    c("chisq","df","pvalue","gfi","rmr","rmsea","agfi",
"nfi","tli","cfi"))

chisq   df       pvalue gfi   rmr    rmsea agfi  nfi   tli   cfi
219.057 113.000 0.000  0.782 0.062 0.103 0.704 0.742 0.821 0.852

> ChiSq_df <- fitMeasures(fit, "chisq")/fitMeasures(fit, "df")
> ChiSq_df

chisq
1.939
```

Stage 5

```
> mi<-modindices(fit,power=TRUE,delta=0.1,alpha=0.05,high.power=0.75)

> mi[mi$op == "=~",]
```

Partial output of the modification index is shown below. Modification indices were examine to improve the model until the final model obtained.

```
    lhs     op rhs mi    epc    sepc.lv sepc.all sepc.nox delta ncp  power decision
1 custpref =~    B1 NA     NA     NA      NA       NA       NA    0.1  NA    NA
2 custpref =~    B2 0.000  0.000  0.000   0.000    0.000    0.1  NaN   NaN
3 custpref =~    B3 0.000  0.000  0.000   0.000    0.000    0.1  NaN   NaN
4 custpref =~    B4 0.000  0.000  0.000   0.000    0.000    0.1  NaN   NaN
5 custpref =~    C1 2.272  0.208  0.125   0.188    0.188    0.1  0.525 0.112(i)
6 custpref =~    C2 7.041 -0.406 -0.243  -0.320   -0.320    0.1  0.428 0.100***
```

Stage 6
```
> model <- ' custpref =~ B1 + B3
+ awareness =~ C1 + C3 + C4
+ perception =~ D1 + D2 + D4
+ relfactor =~ E1 + E2 + E3 + E4'
> fit <- cfa(model, data = Data[, item_names])
> fitMeasures(fit, c("chisq","df","pvalue","gfi","rmr","rmsea","agfi", "nfi",
"tli","cfi"))

 chisq     df pvalue    gfi    rmr  rmsea   agfi    nfi    tli    cfi
68.561 48.000  0.027  0.898  0.033  0.069  0.835  0.865  0.936  0.953

> ChiSq_df <- fitMeasures(fit, "chisq")/fitMeasures(fit, "df")
> ChiSq_df

chisq
1.428
```

Stage 7
```
> co2.model <- ' custpref =~ B1 + B3
+ awareness =~ C1 + C3 + C4
+ perception =~ D1 + D2 + D4
+ relfactor =~ E1 + E2 + E3 + E4
+ custpref ~ awareness + perception + relfactor'
> fit3 <- sem(co2.model, data = Data[, item_names])
> summary(fit3, fit.measures = FALSE, standardized = TRUE, rsq = TRUE)
> fitMeasures(fit, c("chisq", "df", "pvalue", "gfi", "rmr", "rmsea", "agfi",
"nfi", "tli", "cfi"))

 chisq     df pvalue    gfi    rmr  rmsea   agfi    nfi    tli    cfi
68.561 48.000  0.027  0.898  0.033  0.069  0.835  0.865  0.936  0.953
```

The following table summarised the cutoff value for evaluating the proposed model. Result for the analysis should meet at least one fit criteria index for each of the measures.

Criteria for Model Fit Assessment

Table 1

Fit	Characteristics	Recommended fit values	Literature
Measures of Absolute Fit: the degree to which the proposed model predicts the observed covariance matrix			
Goodness-of-Fit Index (GFI)	Overall degree of fit	> .90	Browne and Cudect (1989)
Root Mean Square (RMR)	Average residuals between observed and estimated input matrices	< 0.10	Tabachnik and Fidell (2007)
Root Mean Square Error of Approximation (RMSEA)	Average discrepancy per *df* expected to occur in the population	< .05 (good) < .08 (acceptable) < .10 (mediocre)	Browne and Cudect (1993) MacCallum et al. (1996)
Measures of Incremental Fit: Compares the proposed model to a realistic null or baseline model			
Adjusted Goodness-of-Fit Index (AGFI)	Goodness-of-fit adjusted by degrees of freedom (*df*)	> .80	Chau and Hu (2001)
Normed Fit Index (NFI)	Relative comparison of the proposed model to the null model	> .90	Bentler and Bonett (1980)
Tucker-Lewis Index (TLI)	Comparative index between the proposed and null model	> .90	Bentler and Bonett (1980)
Comparative Fit Index (CFI)		> .90	Bentler (1990)
Measure of Parsimonious Fit: Diagnostic on model fit due to over fitting data with too many coefficient			
Normed chi-square	χ^2/df	between 1.0 and 3.0 is considered good < 5.0 is acceptable	Bagozzi and Yi (1988) Marsh and Hocevar (1985)

RESULTS

This study employ validity checks through the overall fit model assessment. Table 2 provides a summary result on the several fit measures used in this study as discussed earlier in the previous section.

Overall Model Fit Assessment on Full Model

Table 2

	Fit Indices	Fit Statistics	Recommended Fit Criteria
	Chi-square (χ^2)	219.057 $p = .000$	$p > .05$
	Degrees of freedom (df)	113	
Overall Model Fit	Normed χ^2	**1.939**	Between 1.0 & 3.0
	GFI	.782	Over .90
	AGFI	.704	Over .80
	NFI	.742	Over .90
	TLI	.821	Over .90
	CFI	.852	Over .90
	RMR	**.062**	Lower than .08
	RMSEA	.103	< .10

Based on the result, the normed fit index and root mean square (RMR) provides an acceptable value. However, other fit indices use in the model validation do not met the criteria, which indicate a poor fit. Thus, a re-specification on the model has to be carried out before the SEM is employed. This was done by thoroughly examine the modification index and carefully eliminate item that may cause the problem one by one until the acceptable fit was achieved. The final fit index result after items deletion was summarized in Table 3 shown below.

Overall Model Fit Assessment on Final Model

Table 3

	Fit Indices	Fit Statistics	Recommended Fit Criteria
	Chi-square (χ^2)	68.561 $p = .028$	$p > .05$
	Degrees of freedom (df)	48	
Overall Model Fit	Normed χ^2	**1.428**	Between 1.0 & 3.0
	GFI	.898	Over .90
	AGFI	**.835**	Over .80
	NFI	.865	Over .90
	TLI	**.936**	Over .90
	CFI	**.953**	Over .90
	RMR	**.033**	Lower than .08
	RMSEA	**.069**	< .10

The re-specified model indicates sufficient fulfillment of the item validity. Furthermore, according to Table 3 the assessment on the re-specified model indicate an acceptable fit since all the fit indices under consideration are well above the recommended value. Even though the GFI and NFI index value is lower than the recommended value, but the value do not differ much from the recommended value and is much better improvement from the original model. Thus, the re-specified model is considered adequate and acceptable for further analysis using SEM.

The structural equation modeling (SEM) test whether the direct factors of the proposed model under study (awareness, perception and religious factor) can explain

a significant part of Muslim customers' preferences towards Takaful. This is accessed by testing the following research hypothesis:

Hypothesis: The proposed model of direct factors combined (awareness, perception and religious factor) provides a significant model fit in explaining Muslim customers' preferences towards Takaful
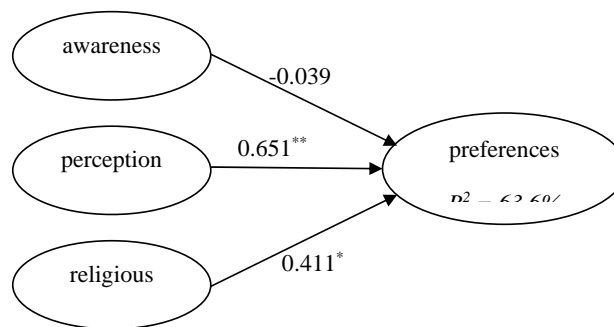
Path coefficients (β) for direct factors on Muslim customers' preferences towards Takaful Product (N = 89)

Table 4

##	Estimate (β)	Std.err	Z-value	P(>|z|)	Decision
## Regressions:					
## custpref ~					
## awareness	-0.039	0.402	-0.097	0.922	Not Supported
## perception	0.651	0.203	3.213	0.001	Supported
## relfactor	0.411	0.168	2.449	0.014	Supported

Path coefficients of the proposed research model

Figure 1

Proposed research model and gathered data were tested for goodness-of-fit by performing the structural equation modeling (SEM) procedures built in the R package "lavaan"and the result shown in Figure 1 and Table 4 above. The proposed research model fit indices were presented in the earlier section in Table 3 and the results of CFA analysis showed that all the fit indices are well above the cut-off value or near the margin indicate there is a good fit for the proposed model. Thus, the proposed model of direct factors combined provides a significant model fit in explaining Muslim consumers' preferences towards Takaful. Furthermore, the coefficient of determination or the squared multiple correlation (R^2) that measures the amount of variability in the dependent variable explained by the proposed research model indicate a percentage of 63.6% explained variance by the direct factors combined and considered to indicate large effect size according to Cohen (1988). Examining the effect of each of the independent variable towards the dependent variable (refer Table 4) indicates that perception and religious factor play a significant influence

towards preferences in Takaful product, but awareness does not play an influential role. This means that Muslim consumers' who perceived Takaful product is better than conventional product and those who have a higher religiosity value tend to have a higher preferences towards Takaful.

RECOMMENDATION

Based on the findings, several recommendations has been made towards organization specifically the Takaful Operator and for future research. This section discuss the recommendation towards the organization first and followed by the recommendation toward future research studies.

Three recommendations has been identified towards the organization to look into and consider on the implementation. Firstly, even though awareness was found to be insignificant predictor, but Takaful companies must still work to increase awareness of Takaful in order to achieve full potential. They may organize high-profile media campaigns such as creating television advertisement and hiring famous and well-known celebrities to endorse Takaful products. It is important to ensure that Takaful agents are well trained and acknowledge the advantages of takaful. Social media would also play an important position in explaining the benefits of Takaful through expo, exhibition and road show for public awareness. Secondly, through the researcher's findings, Muslim consumer has an excellent perception towards Takaful. Thus, Takaful companies should held motivational talk on what they can offer to steadily increase and maintain consumer's perception about Takaful. Besides that, Takaful company should be able to highlight on the differences between Takaful and conventional insurance for public to have better understanding and knowledge on Takaful from those motivational program. In addition, Takaful Company should stress on the advantages of Takaful compared to conventional insurance to convince consumer a strong perception towards Takaful services. A good perception can be achieved by helping to promote words of mouth with regard to how Takaful services can improve one's personal life by encouraging existing participants to influence prospective consumers in their preferences towards Takaful products. Finally, researchers has found that Muslim consumer have quite high positive attitude towards Takaful based on their religious factor. This will give an advantage for Takaful companies or organization to have more space to spread its wings and take positive acceptance of the Muslim consumer toward Takaful. Thus, Takaful companies need to promote the benefits of Takaful product aggressively together with government initiative in instilling high Islamic religious values among Muslim consumers, especially to the Generation-Y, the young generation .

From the findings, several recommendation for the future research are also proposed. First of all, it is recommended that the scope of this research could be expanded to a bigger number of respondents and cover a wider geographical area. The respondents could also be from those who are not a customer of Takaful product so that a better understanding on the decision of participating in Takaful product could be achieved. Secondly, it is recommended that study could be carried out on Takaful

company's preferences towards retakaful or study on corporate consumer like firms and organizations toward shifting their current practice toward Takaful product. Since this involve financial cost and other criteria that is crucial for the profit of the organization, the influential factor in choosing Takaful could be essential to the corporate consumer. Last but not least, it is recommended that more variable is added to this study in order to have a more thorough explanation in helping consumer to make their decision to participate in Takaful product. Example of other variable that may have an impact or influence customer decision are income level, location or environmental factor, security, and etc. In fact, if there is a mutual agreement between the researcher and the Takaful operators to use secondary data from their customer database, the finding might be more reliable and effective in predicting the actual reason in influencing the customers decision to participate in Takaful products.

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