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Keywords: takaful (islamic insurance), factor, principal component analysis, binary logistic regression.

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I. Introduction

Individuals are exposed to several risks, which they can and cannot control, throughout their life. These risks include illness, old age, death, etc. individual risks, as well as fire, earthquake, flood, etc. natural risks. Individuals take precautions to eliminate and reduce these risks that they are exposed. One of the ways that people can reduce their risks is insurance. Insurance is a system designed to provide protection to individuals and businesses against risks. The insurance guarantees the damages that will arise as a result of the risks with the premiums collected from individuals or businesses that are exposed to the same risks. In this sense, insurance is an economic tool that allows individuals or businesses to meet a small amount of premium rather than large amounts of financial losses (Vaughan & Vaughan, 2003, 34).

Insurance systems don't contradict the Islamic rules because it is a system of mutual help. But conventional insurance includes the factors of uncertainty and gambling in the insurance contract, and interest in its investments, which don't comply with the requirements of the Islamic rules (Fitriah & Amin, 2011). Uncertainty can be in terms of the contract terms and the claim payments' source, and gambling may arise from any speculative factors present in the insurance contract(Redzuan, Rahman, & Aidid, 2009). Financial interest can be received from the investment of funds collected from the participants. These factors cause Islamic people to stay away from the conventional insurance system because of their religious rules. Therefore, Islamic insurance system has been developed to attract the Islamic people in the insurance system. Thus, insurance can be classified as a conventional insurance and an Islamic insurance, and they have different structure. Islamic insurance is known as takaful. Takaful and conventional insurance structure base on different principles. Takaful is an insurance system that suites to Islamic regulations.

The takaful system was laid in 1970s for people who don't want to enter the conventional insurance system due to the necessity of Islamic religion. The growing needs of the Muslims for an insurance protection triggered the Islamic insurance, and the first practice of takaful experienced in Sudan in 1979. takaful stands for guarantee, and the word is derived from the Arabic word Al-Kafala. This guarantee signifies mutual

solidarity, cooperation and mutual guarantee. In other words, takaful is an Islamic insurance system and operates the principle of cooperation and donation (Maysami & Williams, 1999). It is created a unity by a group of people who exposed same risks to guarantee one another from certain risks. Moreover, risk is divided collectively the group of participants in takaful. Individuals get over together the consequences of the possible risks in takaful designed as a mutual insurance scheme.However, the uncertainty, gambling and interest elements that are considered to be the cause of the conventional insurance being incompatible with the Islamic principles are not included in takaful (Razak, Idris, Yusof, Jaapar, & Ali, 2013).

Takaful participants provide jointly financial contribution to any members in risk, therefore they guarantee and protect one another against defined risks mutually (Hassan, Jusoh, & Hamid, 2014). As a result of the participants' financial contribution as donations, a co-operative pool can be formed. In other words, insured of takafulpay contributions on the basis of donation and the accumulated funds are managed according to interest-free basis. The individuals are both the participants and the owners of the funds in takaful, so takaful involve both a mutual cooperation among participants in dealing with losses and sharing investment income between the insurer (Kwon, 2007). As a result, takaful is based on three basic principles. These principles are mutual and shared responsibility, co-operation with one another and mutual protection, and joint indemnity from risks results with contribution.

Turkey is a country where the majority of population belonging to Islamic religion. Therefore, determining the factors affecting individuals towards takaful is important in terms of the system development. Thus, in the study, the relationship between the socio-demographic characteristics with risk profiles of the individuals and participation in the takaful system was investigated. In literature, no study was found in which risk was considered as an influencing factor. Moreover, the current study is aimed to determine take the opinions of individuals on conventional insurance and to determine the awarenessof takaful with compability for Turkish people.

In this framework, the study consists of four sections. The following section includes literature review. In the second section, information about the methodology is given andin third section analysis results are explained. The last part is devoted to the general evaluation.

II. Literature Review

Many studies have been made about takaful, after the emergence of the system and putting into practice of the system. Initial studies have been aimed to explain the operation of the system entirely. After the understanding of the operation of the system by the societies, further studies have been applied on the system from different scope. In other studies, many analyzes have been carried out, such as preferences, and awareness of takaful and conventional Insurance,analysis of takaful demand and determinants of takaful individual or corporate demand, determinants of financial performance of takaful firms, the relationship between takaful and Islamic principles, et.al. The most of the research on takaful has been made in Malaysia, which has the most developed takaful system.

The prerequisite for the takaful system development is to be awared of the existence, to be had knowledge about the operation of the system, and to be understood differences between conventional insurance by societies. Based on this idea, Maysami & Williams (2006) studied the association between the awareness of the existence takaful and religious perceptions of this financial services empirically. They defined that Muslims were largely unaware of the existence of takaful, and Muslims with 'conservative values' are less aware of Islamic insurance than Muslims with 'liberal values. Similarly, Matsawali et. al. (2012) examined the public preferences and understanding between takaful and conventional insurance. They identified that despite respondents couldn't understand takaful, a big majority of the respondents preferred takaful more than conventional insurance. Therefore, this study proposed that the takaful companies had to educate the public to increase their understanding. A similar study was also done by Coolen-Matari (2013) and the awareness and real demand for takaful products among Muslims in the UK was examined in this study. The findings showed that awareness about takaful insurance wasn't enough, but they were only aware of the Riba and Maysir concepts. Moreover, about half the respondents weren't sure whether takaful insurance was in accordance with Islam. Getting takaful with banking channels rather than with independent takaful institutions and using for the Islamic insurance Arabic terms was chosen most of respondents. Salman, Rashid, & Hassan (2017) examined the non-Muslim and Muslim insurance policy holders' awareness and knowledge of insurance and takaful in India. According to the results of the study that awareness and knowledge of takaful in India was very low. Moreover, owners of non-Muslim insurance policies didn't know that the insurance involves interest, uncertainty and gambling, but most of Muslims know. Muslims thought that conventional insurance had to be prohibited based on religious teachings, unlike non-Muslim. Takaful and conventional insurance across 14 countries, and the difference in the insurance demand dynamics of the two insurance types over the 2005–2014 period were evaluated by Akther, Pappas, & Khan (2017). Their methodology was based on panel regressions and took into account the periods during

and after the global financial crisis. The demand of takaful and conventional insurance was negatively affected by GDP/capita, but takaful had a greater resilience during crisis. The conventional insurance was negatively related to saving rate, this result showed that conventional saving products were replacing as conventional insurance. Moreover, average income had positively (negatively) relation with takaful demand in the Middle East (ASEAN), this result was evaluated with difference practices relating to Islamic finance in the two regions.

Another important issue is the determination of factors affecting takaful demand. There are a lot of studies on this subject, especially about family takaful. The economic indicators were used by Redzuan, Rahman, & Aidid (2009). They studied the driving force of family takaful consumption in Malaysia for the period 1985-2007. According to this study results, income per capita was a robust predictor of family takaful demand, long-term interest rate and composite stock index had, but inflation and savings rates hadn't significant relationship with family takaful consumption. Yazid, Arifin, Hussin, & Daud (2012) handled economic indicators together with socio-economic factors. Because the percentage of society covered by family takaful contracts in Malaysia was lower than conventional insurance, a conceptual framework for the determinants of family takaful demand was investigated. The seven socio-demography (life expectancy, dependency ratio, education, age, urbanization, household size, employment status) and nine economic factors (income, inflation, interest rate, financial developments, savings, unemployment rate, pensions, stock, price of takaful) were found the main determinants of family takaful. Sherif & Shaari (2013), determinants of demand on family takaful in Malaysia taken the economic indicators and social demographic factors such as Yazid et.al. The driving forces that influence economics and socio-demographic variables family takaful demand in Malaysia were detected. They indicated that income, Islamic banking development, education, dependency ratio and Muslim population factors were positively, inflation, real interest rate, financial development and life expectancy were negatively related to family takaful demand. Redzuan (2014)investigated the driving force consumption of the life insurance and family takaful, it was found that income, education level, and employees'provident fund were among significant predictors of the life insurance and family takaful consumption.

Sherif & Hussnain (2017) aimed to examine same factors affecting the family takaful demand in the 15 countries from the Middle East and North Africa(MENA) region. Their results proved that the relationship between the demand for family takaful in MENA and Islamic banking deposits, education, dependency rate, female, life expectancy and Muslim population had significantly a positive relationship, but inflation, financial development and male life expectancy had significantly a negative relationship. The factors that influence the demand for family takaful and conventional insurancewere investigated by Abdullah (2012). He used multiple regressions model for the period of 1990-2009. This study results indicated that GDP per capita, saving and religion related to the demand for family takaful and the demand for life insurance, but education related to the demand for only family takaful. On the other hand customer price index and saving negatively influenced the demand for family takaful and, age, saving and religion had a negative effect on life insurance. Moreover even behavioral factors could affect consumer's intention to participate in family takaful. Husin & Ab Rahman (2013)found that intention toward participating in family takaful scheme was affected by attitude, subjective norm and perceived behavioral control, moderating factors like demographic variables, consumer knowledge, situational factors and consumer level of religiosity. Even the conditions for the takaful system may be effective, and Arifin & Sulong (2013) demonstrated that, agency system reputation of takafuloperators, products and services, marketing and advertising of takaful products were the main determinants for family takaful demand. On the other hand, corporate demand could be effected by many factors about takaful. Hamid, Osman, & Nordin (2009) examined empirically the determinants of corporate demand for takaful using data from public listed companies at Bursa Malaysia the period of 2002-2006. They found that leverage, expected bankruptcy costs, tax considerations, company size, and managerial ownership had a significant influence.

In order to evaluate takaful firms and conventional insurance, it can be studied determinants of financial performance. In this context, Ismail (2013), examined the determinants of financial performance of takaful and conventional insurance companies in Malaysia for the period of 2004 to 2007. According to the results of panel data analysis, company size, takafuland solvency margin were statistically significant determinants of performance in takaful companies. On the other hand, profit/interest rate levels, company size, reinsurance, solvency margin, liquidity, and premium growth were statistically significant determinants in conventional insurance.

Most of the studies carried out in Turkey have attempted to develop systematic suggestions by presenting the function of the system. Therefore, studies conducted in this way have been carried out as theoretical study without empirical study. There are various problems of takaful practices in Turkey which limits the growth of the takaful market despite its high growth potential, for this reason takaful implementations cannot meet the expectation of the Turkish market (Aslan, 2015) Similarly, Sezal (2017) arrived result that

Turkey takaful system has manyproblems which limits the growth potential of the takaful market, so this system cannot meet the needs of the Turkish market. In the study of Altıntaş (2016) asserted that Turkey takaful insurance system would increase insurance premium production in the near future, but prerequisites for achieving this result were developing the legal infrastructure and ascending public awareness on takaful. In this context, unlike previous studies, this study aims to determine what the effective factors in people's participation in the takaful system in Turkey.

III. Research Methodolgy

This research uses explanatory model which explores the impact of cause and reason and attempts to justify the hypotheses developed based on literature and considering Turkish case of takaful system. To obtain this relationship explanatory variables are defined as follows. The first one is socio-demographic characteristics and risk profiles and the second one including opinions obtained regarding the conventional and takaful system with the scale developed. For the second factor, survey questionnaire containing 30 items scaled at five- point Likert scale was prepared based on literature and individuals' participationintakaful system in Turkey. With these questions, it was aimed to reveal the factors affecting the participation to the takaful system and on the basis of these factors, the hypotheses of study were developed.

Hypotheses developments:

Ho: Socio-demographic attributes of individuals influence individual's participation in takaful system.

H_1: Socio-demographic attributes of individuals do not influence individual's participation in takaful system.

Ho: Risk profiles of individuals influence individual's participation in takaful system.

H_1: Risk profiles of individuals do not influence individual's participation in takaful system.

H_0: Conventional insurance system influences individual's participation in takaful system.

H_1: Conventional insurance system do not influence individual's participation in takaful system.

Ho: Awaranessof individuals regarding takaful system influences individual's participation in takaful system.

H_1: Awaraness of individuals regarding takaful system do not influence individual's participation in takaful system.

Ho: Compability of the takaful system influencesindividual's participation in takaful system.

H_1: Compabilityof the takaful system do not influence individual's participation in takaful system.

Considering that hypotheses are evaluated over null hypotheses, it is more appropriate toexpress the related hypotheses as above. Thus, while alternative hypotheses indicate the claims that to be proven, the evaluations regarding the null hypotheses were taken into consideration to test the accuracy or validity of the claims.

The model to be developed and tested with this perspective is as shown in Figure 1.

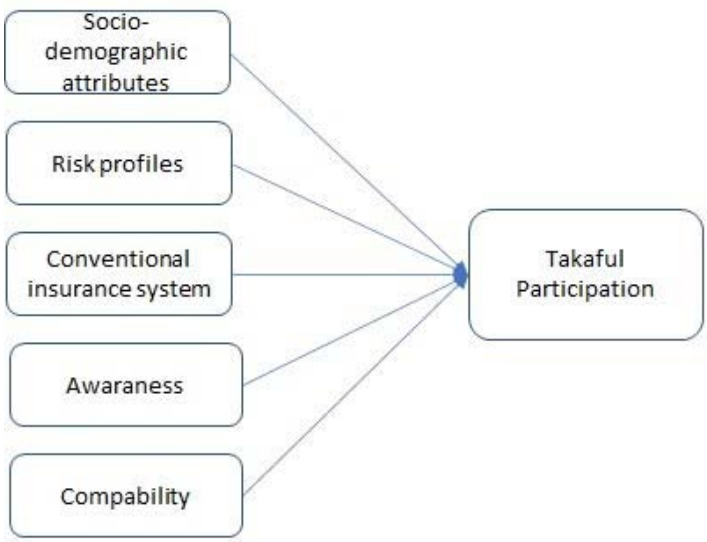

Figure 1: Conceptual Model for Determinants of TakafulParticipation

In the study,422 salaried individuals with an age 18 years old and over was selected as a sample. They were asked questions regarding socio-demographic attributes such as gender, age, education level etc. and other scaled item questions to reveal the factors namely opinions of conventional insurance system, awareness and compabilityof takaful system. Due to monetary and time constraints convenient sampling approach was applied and the sample data obtained via online. The

data analyzed using IBM SPSS and FACTOR statistical package programs.

IV. Methods

Three different methods were used in this study for data analysis which are univariate descriptive analysis, factor analysis and binary logistic regression analysis, respectively. Firstly, a univariate descriptive analysis was conducted to determine the socio-demographic attributes of the respondents such as gender, age etc and their risk profiles.

After that, Explatory Factor Analysis (EFA) was performed to reveal the dimensions (factors) of the self-administered survey-based questionnaire regarding takaful system. EFA is useful for assessing the dimensionality of questionnaire scales that measure underlying latent variables. From a practical standpoint, a researcher might want to know if a new scale can be considered uni-or multi-dimensional. Responding to this can help researchers reduce the total number of variables into smaller number of factors, which are composed of highly related variables. EFA remains a very popular data analysis technique. However, criticism of conventional EFA practices have frequently been stated for ordinal scale variables. The reason is that EFA practices has been restricted by the range of options available in commercial statistical packages (Baglin, 2014).

Dealing with this common situation of analyzing ordinal data as derived from Likert-type scale is handled FACTOR package computer program which is free, stand alone, easy-to-to use and powerful for EFA analysis. The EFA analysis based polychoric correlations instead of Pearson correlation most computer package used. The package also produces reliability analysis via Cronbach alfa index which is very common to evaluate reliability for these kinds of scale questions (Lorenzo-Seva & Ferrando, 2006).

Lastly, determining the independent variables, Binary logistic regression analysis was performed to determine the effects of these variables on determining the intention to purchase takaful products. Logistic analysis for binary outcomes attempt to model the odds of an event's occurrence and to estimate the effects of independent variables on these odds. The odds for an event compares the probability of an event occurs to the probability of an event not occur (Equation1).

$$Odds = \frac{\mathrm{p(x)}}{1-\mathrm{P(x)}} \quad (1)$$

In order to ensure that the odds ratio does not take any value below zero, the logarithm of odds is taken and logit values are obtained. Logit values can be calculated using Equation 2 for a single explanatory variable.

$$ln = \mathrm{p}_{\frac{(y=1)}{P\,(y=0)}} = ln\left(\frac{P}{1-P}\right) = e^{(\beta_0+\mathrm{B}x_1)} \quad (2)$$

These logit values give exponential logistic coefficients. β_0 is constant and β is the regression coefficient. The impact of predictor variable is usually explained in terms of odds ratios.

After analyzing regression, the model developed must be tested and confirmed to be used in decision analysis. For this aim, Omnibus test of the model coefficients, Hosmer-Lemeshow goodness of fit test, measures of explanation variance via pseude R^2 values such as Cox & Snell R^2 and Nagelkerke R^2 and classification success analysis results were obtained.

V. Analysis Results

Univariate descriptive analysis was carried out to reveal the general structure of the sample before proceeding with the analysis aimed at determining the factors affecting the participation of the Takaful system. Then, the EFA analysis was performed to reveal the structures of the questionnairedeveloped. Lastly, with obtaining inputs binary logistic regression analysis conducted.

a) Descriptive Analysis Results

In this section, descriptive statistical analysis results are included in order to have general information about the sample. The outputs are illustrated in Table 1.

Table 1: Descriptive Analysisfor Socio-Demographic Attributes with Risk Profiles

D.V. #	Measures	Scale	Frequency	Frequency %
1	Gender	Female	165	39.1
		Male	257	60.9
2	Age	18-24	56	13
		25-34	181	42.9
		35-44	148	35.1
		45-54	33	7.8
		55-over	4	.9
3	Marital Status	Married	249	59.1
		Single	173	40.9
4	Education	Primary/Secondary	28	6.6
		High school	88	20.9
		University	240	56.9
		Graduation	66	15.5
5	Income Level	Very low income	37	8.8
		Low income	86	20,4
		Middle income	121	28.7
		High income	178	42.2
6	Occupation	Public	172	40,8
		Private	240	56.9
		Other	10	2,3
7	Risk Attitude	Risk Lover	142	33,6
		Risk-averse	231	54,7
		Risk-neutral	49	11,6
8	Takaful Participation	Participation	185	43.9
		Non-participant	237	56.1

According to Table 1, 60.9 percent of the respondents are male, while 39.1 percent are female. In terms of age majority of the respondents are between 25-34 with 42.9 percent and follows 35-44 age range with 35.1 percent. The married respondents has 59.1 percent while single respondents with 40.9 percent. In terms of the level of education, the majority of the respondents has university degree with 56.9 percent. Regarding income level, with 42.2 percent high income level constitute the vast majority. In terms occupation, 56.9 percent of the respondents are working in the private sector. Most of the respondents has risk averse with 54.7 percent. takaful participation is 43.9 percent and non-participation percent are 56.1.

b) Factor Analysis Results

In order to determine the intention of the respondents to participation of the takaful products, a scale with 30 items was prepared regarding their opinions about conventional insurance system and takaful system. To test the structural validity of this scale, the FACTOR program specifically developed for Likert-type ordinal questions was used. Firstly, Kaiser-Meyer-Olkin (KMO) and Barlett sphericity test values were obtained to determine the suitability of the dataset for factor analysis, The KMO sample adequacy value was founded as .83 and this size is sufficient for EFA analysis. Also, significance of Barlett test of sphericity indicates that correlation relations between items are appropriate for analysis ($\chi^2 406 = 4403$, $p < .01$). Then Principal Component analysis was performed with Varimax rotation to ensure full indepence between variables.

As a result of the analysis, it was determined that the 30-item scale has a three-factor structure and these factors explain 61% of the total variance. The factor loads of the items were above .05. EFA results for these items and their factor loadings are shown in Table

2. Values with a factor load of less than .3 were not shown in table. As seen in Table 2, after the rotation, the first factor explained the variance by .348, the second factor .156 and third factor .109 explained remaining variance respectively. Considering the items under the factors, the factors were named conventional system, awareness and compabilityof the takaful system.

Table 2: Rotated Loading Matrix

Factors	Items /Questions	Conventional insurance	Awareness	Compabili
Conventional System	I think the conventional insurance system is necessary	0.847		
	I think the conventional insurance system is useful	0.848		
	I think the conventional insurance system is an effective tool to manage risk	0.803		
	I know the payment will be made in conventional insurance system when the risk occurs	0.736		
	The conventional insurance system is enough to protect me	0.737		
Awareness	I know how insurance premiums are evaluated		0.430	
	I have all kinds of information about the takaful		0.805	
	I know how takaful system works		0.830	
	I know investment tools of takaful system		0.890	
	I know how the insurance premiums I invested are evaluated in takaful system		0.843	
	I know that participants have own funds in takaful system		0.815	
	I know that participants share the profit and loss resulting from fund management in takaful system		0.788	
	I know that takaful system is more risky for participants		0.648	
	I know that if there is a delay in paying my contributions, I would not be charged with default interest		0.687	
	I know that the payments I make in takaful system are donations		0.705	
	I know that payment will be made in takaful system when the risk occurs		0.509	
Compability	I am uncomfortable with the premiums I have deposited are being used in investment instruments with interest			0.750
	I trust takaful system			0.597
	I think takaful system is necessary			0.808
	I think that takaful system is useful			0.793
	I think that the takaful system will be developed in Turkey			0.701
	I think that takaful system is an efficient tool to manage risk			0.651
	takaful system is enough to protect me			0.548
	I prefer takaful system instead of conventional insurance system			0.841
	I care non-interest insurance system			.726
	I find tekaful system is more appropriate than conventional insurance for me			0.834
Eigen Values		10.11	4.55	3.171
Proportion Variance		0.348	0.156	0.109
Total Variance		0.616		
Reliability		0.857	0.908	0.905

**Loadings lower than absolute 0,3 omitted*

In this study, Cronbach's coefficient alfa was used to calculate the internal consistency coefficients of the items included in the questionnaire through 422 individuals questioning. Forthe overall reliability, the Cronbach's alpha value was .893. The alpha values of the conventional insurance, awareness and compability of the subscales were, .857, .908 and .905 respectively indicate that the the level of construct validity and internal consistency of this questionnaire were provided.

c) Binary Logistic Regression Results

In this research, binary logistic regression analysis was performed in accordance with the dependent variable indicating "0" value is set for non-participants of takaful and "1" is set for takaful participants. As independent variables, socio-demographic characteristics, risk profiles and factors obtained as a result of factor analysis and named as conventional insurance system, awareness and compability were used. Table 3 shows the results of binary logistic regression analysis performed using these variables.

Table 3: Binary Logistic Regression Results

Variables	bj	S(bj)	Wald	df	ρ	Odds Oranı Exp (bj)	95% C.I for Exp (b)	
							Lower	Upper
Gender (1)	.089	0269	.110	1	.741	1.093	.646	1.850
Age			4.411	4	.353			
Age(1)	-1.908	1.312	2.116	1	.146	.148	.011	1.940
Age (2)	-2.172	1.257	2.984	1	.084	.114	.010	1.340
Age (3)	-1.738	1.245	1.949	1	.163	.176	.015	2.018
Age (4)	-1.664	1.293	1.656	1	.198	.189	.015	2.388
Marital Status (1)	.222	.328	.457	1	.499	1.248	.656	2.374
Risk Attitude			3.972	2	.137			
Risk Lover	.799	.436	3.356	1	.057	2.223	.946	5.22
Risk-averse	.358	.410	.762	1	.383	1.430	.641	3.19
Security system			3.033	2	.220			
Security system (1)	-.376	.843	.199	1	.656	.687	.132	3.58
Security system (2)	.122	.837	.021	1	.884	1.130	.219	5.823
Household income			13.858	4	.008			
Household income (1)	.576	.353	2.658	1	.103	1.779	.890	3.556
Household income (2)	-.290	.415	.491	1	.484	.748	.332	1.686
Household income (3)	-.756	.488	2.421	1	.120	.470	.181	1.217
Education level			8.501	3	.037			
Education level (1)	-1.140	.609	3.502	1	.061	.320	.097	1.055
Education level (2)	-.306	.449	.465	1	.495	.736	.305	1.775
Education level (3)	.330	.365	.816	1	.366	1.391	.680	2.844
Conventional_Security	-1.543	1.613	77,346	1	.000	.214	.152	.301
Awaraness	-.059		.207	1	.649	.942	.729	1.217
Compability	.202		2.278	1	.131	1.224	.941	1.591
Constant	1.466		,827	1	.363	4.334		

As can be seen from Table 3, rather than socio-demographic characteristics, the risk profiles of the participants were found as an effective variable toward takaful participation and its odds ratio was 2.223 (95% confidence interval was .946-5.22). This ratio indicates that, with controlling other variables, risk-lovers (high risk perception) responders are 2,223 times more likely to participate in takaful system than risk-neutral participants.

Table 3 shows that the conventional insurance system was statistically significant factor for the participation of takaful system. Odds ratio for this variable was founded .214 (.152 and .301 at 95% confidence interval). This means that when other variables are controlled, a 1-unit change in thoughts about the conventional insurance system will lead to .214 times decrease in the probability of participating in the takaful system. It is important to determine the validity and accuracy of this developed the binary logistic model in order to use these results to be used by decision makers, The evaluations of the model are shown in Table 4.

Table 4: Evaluation of the Model

Tests	χ^2	df	Value	ρ
Omnibus Test	145.320	20		.000
Hosmer & Lemeshow Test	4.05	8		.895
Cox&Snell R^2			.31	
Nagelkerke R^2			.41	
Classification Success			75%	

As seen in Table 4, the omnibus test of model coefficients indicated that the new model including all explanatory variables improved model accuracy with comparing baseline model including only intercept variable ($\chi^2 = 145.320$, df = 20, $\rho < .05$). No statistically significant Hosmer & Lemeshow of the goodness of fit test result indicated that the model is good fit to the data as $\chi^2 = .895$, $\rho > .05$. R^2 values, which show the rate of change of the determined variables in the dependent variable, werefound as .31 for Cox & Snell R^2 and .41 for Nagelkerke R^2 respectively. These findings show that the variance of 31% to 41% in the takaful participation of the responders was explained by these variables.The classification success value also indicated that the model is successful at a rate of 75% in classifying the respondents as participating in the system or not.All of these analysis results imply that overall the developed model is valid and has good classification capability. Thus, the results can be used for any decisions regarding takaful participation in Turkey.

VI. Conclusion

People use insurance to protect themselves from the risks they are exposed to. Insurance can be classified as a conventional insurance and an Islamic insurance (takaful), Islamic insurance is known as takaful. It is expressed that conventional insurance includes the factors of uncertainty and gambling, and interest in its investments, which don't comply with the requirements of the Islamic rules. Therefore, since Turkey is a country where the majority of the population belongs to the Islamic religion, the takaful system is expected to be more easily accepted. For this reason, determining the factors affecting participation in the takaful system is of great importance for the development of the system.The objective of the current study is to explore the participation of the Turkish people into the takaful system and to determine the variables that may influence it. Unlike other studies, this study included socio-demographic characteristics as well as risk profiles of individuals as an influential factor.

In the study, a sample of 422 responders asked to respond about their socio-demographic characteristics such as gender, age, education level and their risk profiles. In addition, in order to reveal opinions of responders about the conventional and takaful system, self-administered survey questionnaire including 30 items based on five-point Likert scale were developed with reviewed literature studies and considering Turkish case. In an addition, this study was carried out EFA analysis using FACTOR program which was developed much more appropriate for Likert type questions. Thus, more accurate results were obtained in the evaluation of the conceptual structure. As a result of the analysis, socio-demographic characteristics and risk profiles of individuals were determined as variables that could be effective in the participation of the takaful system. Binary logistic regression was conducted, to define how effective these variables for participation of the respondents to the system. As a matter of fact, the results obtained were found to be effective factors in the risk profiles of the responders with the opinions of the conventional insurance system. These findings have significant implications for the theory, for policy makers and regulators as well as for practitioners. Hence the takaful companies and takaful policies' providers are required to emphasize this aspect i.e. risk, in order to popularize these services and convince customers to adhere to them instead of only conventional insurance services.

The extension of this study can be made to compare the factors with other Muslim countries, in addition, the viewpoints of Islamic religion and levels of religious life that are expected to affect individuals can be included in the future studies.

References Références Referencias

1. Abdullah, N. I. (2012). Analysis of demand for family takaful and life insurance: a comparative study in Malaysia. Journal of Islamic Economics, Banking and Finance, 113(470), 1-20.
2. Akther, W., Pappas, V., & Khan, S. U. (2017). A comparison of Islamic and conventional insurance demand: Worlwide evidence duruing the Global Financial Crisis. Research in İnternational Business and Finance, 42, 1401-1412.

3. Altıntaş, K. M. (2016). Alternative Insurance System within the Framework of Islamic Banking: Application of Takaful System İn Turkey. Bolu Abant İzzet Baysal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 16(2), 115-142.
4. Arifin, J., & Sulong, A. S. (2013). A conceptual model of literature review for family Takaful (Islamic Life Insurance) demand in Malaysia. International Business Research, 6(3), 210-216.
5. Aslan, H. (2015). Takaful (Islamic Insurance) Applications in Turkey: Problems and Proposals. Uluslararası İslam Ekonomisi ve Finansı Araştırmaları Dergisi, 1(1), 93-117.
6. Baglin, J. (2014). Improving Your Explatory FActor Analysis for Ordinal Demonstration Using FACTOR. Practical assessment, Research, and Evaluation, 19(19).
7. Coolen-Matari, T. (2013). Islamic insurance (takaful): demand and supply in the UK. International Journal of Islamic and Middle Eastern Finance and Management, 6(2), 87-104.
8. Fitriah, A. R., & Amin, H. (2011). Determinants of Islamiic Insurance Acceptance: An Emprical Analysis. International Journal of Business and Society, 12(2), 37-54.
9. Hamid, M. A., Osman, J., & Nordin, B. A. (2009). Determinants of corporate demand for Islamic Insurance in Malaysia. International Journal of Economics and Management, 3(2), 278-296.
10. Hassan, H. A., & Abbas, S. K. (2019). Factors Influencing the Investor's Intention to Adopt Takaful (Islamic Insurance) products. Journal of Islamic Marketing, 11(1), 1-13.
11. Hassan, L. A., Jusoh, W. W., & Hamid, Z. (2014). Determinant of customer loyalty in Malaysian Takaful Industry. 130, s. 362-370.
12. Husin, M. M., & Ab Rahman, A. (2013). What drives consumers to participate into family takaful schemes?A literature review. Journal of Islamic Marketing, 4(3), 264-280.
13. Ismail, M. (2013). Determinants of financial performance: The case of general takaful and insurance companies in Malaysia. International Review of Business Research Papers, 9(6), 111-130.
14. Kwon, W. J. (1999). An Analysis of Islamic Takaful Insurance-A Cooperative Insurance Mechanism Ramin Cooper Maysam. Journal of Insurance Regulations, 18(1), 109-124.
15. Kwon, W. J. (2007). Islamic Principle and Takaful Insurance: Re-evaluation. Journal of Insurance Regulation, 26(1).
16. Lorenzo-Seva, U., & Ferrando, P. J. (2006). FACTOR: A Computer Program to Fit the Exploratory Factor Analysis Model. Behavior Research MEthods, 38(1), 88-91.
17. Matsawali, M. S., Abdullah, M. F., Yeo, C. P., Abidin, S. Y., Zaini, M. M., Ali, H. M., & Yaacob, H. (2012). A study on takaful and conventional insurances preferences: The case of Brunei. International Journal of Business and Social Science, 3(22).
18. Maysami, R. C., & Williams, J. J. (2006). Evidence on the relationship between Takaful insurance and fundamental perception of Islamic Principles. Applied Financial Economics Letters, 2(4), 229-232.
19. O'Connell, A. A. (2006). Logistic Regression Models for Ordinal Response Variables. Series: Quantative Applications in the Social Sciences.
20. Razak, M. I., Idris, R., Yusof, M. M., Jaapar, W. E., & Ali, M. N. (2013). Acceptance determinants towards takaful products in Malaysia. International Journal of Humanities and Social Science, 3(17), 243-525.
21. Redzuan, H. (2014). Analysis of the Demand for Life Insurance and Family Takaful. In Proceedings of the Australian Academy of Business and Social Sciences Conference, 1-16.
22. Redzuan, H., Rahman, Z. A., & Aidid, S. S. (2009). Economic determinants of family takaful consumption: Evidence from Malaysia. International Review of Business Research Papers, 5(5), 193-211.
23. Redzuan, H., Rahman, Z., & Aidid, S. (2009). Economic determinants of family takaful consumption: Evidence from Malaysia. International Review of Business, 5(5), 193-211.
24. Salman, S. A., Rashid, H. M., & Hassan, R. (2017). Awaraness and Knowledge of Insurance and Takaful in India: A survey on Indian Insurance Policy Holders. Man in India, 97(11), 127-140.
25. Sezal, L. (2017). Turkish Insurance sector evaluation and implemantation of interest-free. The Journal of International Social Research, 10(52), 1156-1167.
26. Sherif, M., & Hussnain, S. (2017). Family Takaful in developing countries: the case of Middel East and North Africa (MENA). International Journal of Islamic and Middle Eastern Finance and Management, 10(3), 371-399.
27. Sherif, M., & Shaari, N. A. (2013). Determinants of demand on family Takaful in Malaysia. Journal of Islamic Accounting and Business Research, 4(1), 26-50.
28. Ustaoğlu, M. (2014). Alternative Interest-Free Insurance and Investigating Public Awaraness by Income LEvel: Emprical Analysis. Siyaset, Ekonomi ve Yönetim Araştırmaları Dergisi, 2(2), 109-130.
29. Yazid, A. S., Arifin, J., Hussin, M. R., & Daud, W. N. (2012). Determinants of family takaful (Islamic life insurance) demand: a conceptual framework for a Malasian study. International Journal of Business and Management, 7(6), 115-127.