

Factors Influencing the Yemeni Customers' Intention to Adopt *Takaful* Products

Abdelghani Echchabi^{a*} and *Abdullah Mohammed Ayedh*^b

^aCollege of Business, Effat University, Jeddah, Saudi Arabia

^bFaculty of Economics and Muamalat, Islamic Science University of Malaysia, Negeri Sembilan, Malaysia

Abstract: The purpose of this study is to examine the Yemeni customers' intention to adopt *takaful* products, and to explore the potential factors that influence their decision. This study applies SEM and one sample *t*-test to analyse the collected data. The results indicate that among the factors included in this study, only compatibility positively and significantly affects the adoption intention. This is the first study that addresses the adoption of *Takaful* products in Yemen and the factors that influence it. Furthermore, this study extends the Innovations Diffusion Theory (IDT) by applying it to a different setting.

Abstrak: Tujuan dari penelitian ini adalah untuk menguji niat pelanggan Yaman 'untuk mengadopsi produk takaful, dan untuk mengeksplorasi faktor-faktor potensial yang mempengaruhi keputusan mereka. Penelitian ini menggunakan SEM dan satu sampel *t*-test untuk menganalisis data yang dikumpulkan. Hasilnya menunjukkan bahwa diantara factor-faktor yang termasuk dalam penelitian ini, hanya kompatibilitas positif dan signifikan yang mempengaruhi niat adopsi. Penelitian ini adalah studi pertama yang membahas penerapan produk takaful di Yaman dan faktor-faktor yang mempengaruhinya. Selain itu, penelitian ini memperluas Teori Inovasi-inovasi Difusi (IDT) dengan menerapkannya pada pengaturan yang berbeda.

Keywords: islamic finance; *takaful*, islamic insurance; Yemen

JEL classification: D1, M3, M5

Introduction

With increasing risks associated with fast economic and social development, insurance operations become crucial. Despite the popularity and high demand for insurance products worldwide, they have a relatively low level of penetration in the Muslim world. This low level of penetration applies to most of the Muslim countries. However, it is more apparent in the case of Yemen (Schwefel 2011). This situation initially indicates that there is a great potential for *takaful* among Muslim customers in Yemen and similar settings.

It is worth noting that Yemeni people are religiously-oriented, therefore it is hypothesised that the Islamic aspect of any product or service offered initially matters to them. For instance, when a Yemeni conventional insurance company by the name “United Insurance” introduced *takaful* products in 2008, around 80 percent of the existing customers changed to *takaful* (Saif 2012).

Furthermore, Saif (2012) argued that the insurance sector realized the importance of *takaful* products in terms of attracting Yemeni customers and investors. This has therefore led the insurance companies, as well as some Yemeni Islamic banks, to introduce *takaful* products and to launch new *takaful* companies and subsidiaries.

Currently, the total worldwide *takaful* premiums covering life and non-life contracts are expected to reach USD7.4 billion by 2015 (Aziz et al. 2011). Nevertheless, a basic requirement for the future growth of the *takaful* industry is the positive perception and acceptance of *takaful* products as an alternative to the existing conventional insurance products.

Hence, extensive studies on customers’ intention to adopt *takaful* products are highly required in this context i.e. Yemen, which carries much of the Islamic heritage and traditions.¹

Accordingly, various studies have empirically investigated customers’ intention to adopt *takaful* products in several contexts. A majority of these studies were conducted in South East Asian and European countries. Specifically, Rahman et al. (2008) examined Malaysian undergraduate students’ purchasing behaviour regarding *takaful*/insurance products. They emphasised five main factors, namely: services delivery, services provision, reputation, electronic services and convenience. By applying paired sample *t*-test to a sample of 537 undergraduate students, the findings showed that the undergraduate students opine that insurance products are better than *takaful* products in all the aforementioned dimensions. Nevertheless, when religiosity is included in the model, the findings revealed that it is ranked highest among the remaining dimensions. Furthermore, their findings indicated that there is a tendency for the respondents to be willing to shift to *takaful* products for their future contracts.

In the same context, Rahim and Amin (2011) investigated the factors influencing *takaful* acceptance among Malaysian customers, focusing on attitude, subjective norm, amount of information (AOI), and acceptance of *takaful*. Their sample included 176 respondents and applied multiple regression analysis. Their results showed that attitude, subjective norm, and AOI are influential predictors of *takaful* acceptance in Malaysia.

Furthermore, Aziz et al. (2011) studied the government servants’ perception of mo-

¹ <http://whc.unesco.org/en/list/385> retrieved on 13 December, 2013

tor *takaful*, covering a sample of 300 respondents and applying multiple regression and Pearson correlation analyses. Their model was based on four main explanatory variables, namely, product knowledge, awareness, advertising and benefit of the product. The results indicated that all the aforementioned explanatory variables significantly influence the level of acceptance of motor *takaful* products by Malaysian government employees. The latter was found to be positive.

Ayinde and Echchabi (2012) examined the Malaysian customers' willingness to adopt *takaful* products as well as the factors that may influence their behaviour, covering a sample of 200 respondents and applying Structural Equation Modelling (SEM) and *t*-test. The findings indicated that the Malaysian customers are willing to adopt *takaful* products, and their decision depends on two factors i.e. compatibility and awareness.

In addition, Razak et al. (2013) attempted to identify the level of acceptance of *takaful* products among Malaysian communities and to determine the important factors that influence Malaysians to purchase *takaful* products, covering a sample of 100 respondents. The results emphasised five main explanatory variables, namely, perception, product features, promotion, benefit and service quality. The results indicated that all the variables included in the model are significantly affecting the level of acceptance of *takaful* products. Furthermore, the results showed a high level of acceptance of *takaful* products in Malaysia.

In a different context, Bashir and Mail (2011) examined the customers' perception of *takaful* products in Brunei Darussalam. The authors studied a sample of 100 respondents and applied descriptive statistics. Their findings showed that the most common is-

sue encountered by the *takaful* policyholders is the long and complicated claiming process.

On the other hand, Echchabi and Echchabi (2013) investigated the level of acceptance of *takaful* products among French Muslims, and the factors that influence their decisions, using a sample of 100 respondents and applying SEM and *t*-test. Their findings indicated that subjective norm has a positive influence on the attitude towards *takaful* products. Furthermore, attitude and perceived behavioral control were found to have a positive influence on the intention to adopt these products. Finally, the French Muslims have shown strong willingness to adopt *takaful* products as an alternative to the existing conventional insurance products depending on the aforementioned dimensions.

Finally, Coolen-Maturi (2013) examined the demand for *takaful* products among Muslims in the UK, using a sample of 230 respondents. Their results showed that there is a lack of awareness about *takaful* among Muslims in the UK. Furthermore, the respondents preferred to buy *takaful* policies through banking institutions rather than the independent *takaful* institutions.

From the above studies it can be noted that they were mostly conducted in Asia and Europe, while none of the studies were conducted in Arab countries, and particularly in Yemen, which is a fast growing context for *takaful* industry. Furthermore, they have used different models, or based on different explanatory factors. This fact has led to a mixture of findings and conclusions regarding similar issues. In contrast, this study attempts to lay the ground for a comprehensive framework to be applied in the future studies on this topic. For that matter, this study applies an extended and adjusted version of the Innovations Diffusion Theory (IDT) which is

in line with the *takaful* products, and the Yemeni setting. Using this framework, the current study fills up the gap by examining the Yemeni customers' intention to adopt *takaful* products, and the factors that may potentially influence their decisions. Hence, this is an attempt to answer two main questions, as follows:

1. Are the Yemeni customers intending to adopt *takaful* products?
2. What are the factors that influence the Yemeni customers' intention to adopt *takaful* policies?

The findings of this study have significant implications for the theory, policy makers and practitioners, which will be discussed in later sections. The remainder of the paper is organised as follows: Section 2 presents the model applied in this study i.e. IDT. Section 3 explains the research methodology, including the structure of the instrument used and the statistical tools applied in this study. Section 4 discusses the main results, and finally section 5 covers the implications, recommendations and limitations of this study.

Overview on the Islamic Finance Regulations in Yemen

Islamic finance emerged in Yemen back in 1996, whereby a first Islamic financial institution (IFI) by the name Islamic Bank of Yemen for Finance and Investment (YSC) was established by virtue of the Act number 21 of the Yemeni commercial law, with initial capital of USD10 million. In the same year, Tadhamon International Islamic Bank (TIIB) was subsequently established with capital of USD 93 million. Currently TIIB is considered one of the largest Islamic banks in Yemen with over 50 branches throughout the country. In 1997, Saba Islamic Bank (SIB)

was subsequently established, and grew at a fast pace to its present 18 branches in both Yemen and Djibouti. Subsequently, Shamil Bank of Yemen and Bahrain (SBYB) was established in 2002. In addition, there are four conventional banks that established windows to provide Islamic banking services i.e. bank of Yemen and Kuwait, International Bank of Yemen, Bank of Yemen & Golf, and CACBank (Central Bank of Yemen 2009). All these banks established Islamic windows within the last three years only (Alsaïd 2012).

One of the requirements to establish an IFI in Yemen is to form a *Shari'ah* supervisory board (SSB) comprising three to seven members from the *Shari'ah* specialist scholars in *Fiqh al-Muamalat* (Islamic commercial jurisprudence). The Yemeni law of Islamic finance states that an SSB shall participate in forming and approving the Islamic financial products and it shall review the institution's transactions and make the decisions in accordance with the provisions of *Shari'ah*. In addition, there is no clear regulation by the Yemeni Central Bank with regard to the issue of SSB, and the requirement to maintain SSB independence (Yemen Islamic Bank Law 2009).

Moreover, the Islamic finance law in Yemen gives the decision making power to the SSB as the IFI's management has no rights to compromise or refuse SSB decisions and management is required by law to follow the resolutions. The SSB shall issue an annual report on the extent of the IFI's commitment to and compliance with the *Shari'ah* teaching and the extent of IFI commitment to the *Shari'ah* audit guidance and distribute the report to the shareholders. Finally, the SSB members shall meet regularly and should disclose the number of meetings held annually (Yemen Islamic Bank Law 2009).

It is noteworthy that the Yemeni law number 21, issued in 1996, was amended in 2009 under law number 16 to accommodate the establishment of IFIs in the country. This law permits the establishment of IFIs and Islamic banking windows subject to the Yemeni Central Bank approval. The latter is also given depending on the financial products to be launched by these IFIs.

Research model and Hypotheses Development

The products and services adoption, especially for relatively new products and services, has been extensively studied in the existing literature through several models. This includes theory of reasoned action (Ajzen and Fishbin 1980), theory of planned behaviour (Ajzen 1991), decomposed theory of planned behaviour (Taylor and Todd 1995), technology acceptance model (Davies 1989), innovations diffusion theory (Rogers 2003), etc.

These models were earlier used as the basis for the studies on technology innovations (Tan and Teo 2000; Teo and Pok 2003; Fisher and Chu 2009; Sharma and Bock 2005; Taylor and Todd 1995; Shih and Fang 2004; Puschel et al. 2010; Nor 2005; To et al. 2008; Al-Majali and Nik Mat 2010; Hightower and Brightman 1994; Suki 2010; Folorunso et al. 2010); however, recently, they were further extended and adjusted to study other products and services, such as foodstuffs, banking services, insurance services, etc. (Abdullah and Abdul Rahman 2007; Rammal and Zurbruegg 2007; Gerrard and Cuningham 2003; Thambiah et al. 2010; Ayinde and Echchabi 2012). Among these models, IDT is the most widely applied and tested across fields (Almobarraz 2007).

Rogers (2003, p. 12) defines innovation as “an idea, practice, or project that is perceived as new by an individual or other unit of adoption.” The “newness” aspect in that sense is relative, as innovations might have been conceived for a long time, but it could still be perceived as new compared to a longer existing substitute. In the context of the current study, the *takaful* industry is relatively new compared to the long existing conventional insurance industry. Hence, it is still considered an innovation in this respect.

Hence, the “newness” characteristic stimulates a process of three main steps identified by Rogers (2003) as knowledge, persuasion and decision. In this context, the process starts by exposure to the innovation and its main features in order to acquire the necessary knowledge about it. This knowledge about the innovation usually results in developing either a positive or negative attitude about the innovation, and finally the potential adopter or group of adopters decide either to adopt or reject the innovation based on the first two steps.

IDT originally consisted of five main dimensions, namely, relative advantage, compatibility, complexity, trialability and observability. Rogers (2003, p. 229) defines relative advantage as “the degree to which an innovation is perceived as being better than the idea it supersedes.” Compatibility is defined as “the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters” (p. 15). Complexity refers to “the extent to which an innovation is perceived as relatively difficult to understand and use” (p. 15). Trialability refers to the “degree to which an innovation may be tried out prior to final use” (p. 16). Finally, observability is defined as “the degree to which the results of an innovation are visible to others” (p.16).

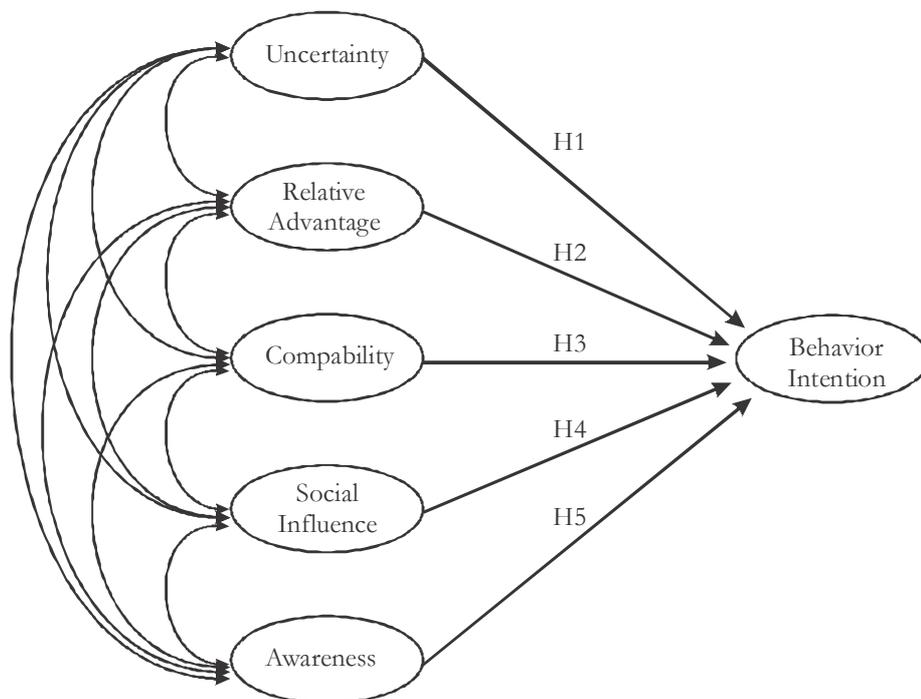
The model was updated and adjusted in the subsequent empirical studies, depending on the respective fields. In the specific area of Islamic banking, Islamic finance, or *takaful*, the studies have identified uncertainty, social influence and awareness as potential determinants of Islamic banking and *takaful* products adoption (Abdullah and Abdul Rahman 2007; Thambiah et al. 2010; Echchabi and Olaniyi 2012; Rammal and Zurbruegg 2007). Particularly, uncertainty is often considered a major obstacle to the adoption of innovations (Sahin 2006), as the latter remains relatively new at the early stages and its nature and features remain not fully known by the potential adopters. On the other hand, the decision of potential adopters to adopt or reject an innovation is generally dependent upon the influence of social groups, such as family, peers, colleagues, etc.

Thus, the final model shown in Figure 1 includes five explanatory variables, namely,

uncertainty, relative advantage, compatibility, social influence and awareness. Among these variables, only uncertainty is expected to have a negative influence on behavioral intention. Accordingly, the following hypotheses are posited and further discussed.

The insurance business is commonly associated with the uncertainty lying in the future expectations (Economides 1982; Guiso and Jappelli 1998). Though the *takaful* industry operates under the Islamic principles that ban *Riba*, and particularly *Gharar* and *Maysir*, the customers' association between insurance industry and uncertainty might still be entrenched (Echchabi and Aziz 2012). Furthermore, the *takaful* products are still relatively new, which implies that a number of their features are still ambiguous to customers (Matsawali et al. 2012). Hence, it is hypothesised that uncertainty associated with *takaful* products and their features has a negative effect on their adoption.

Figure 1. Research Model



H1: Uncertainty has a negative influence on the Yemeni customers' intention to adopt takaful products.

As far as relative advantage is concerned, the conventional insurance products relatively benefit from the long market existence compared to the *takaful* equivalent (Salman 2014). However, the latter has a number of unique features that give it a relative advantage over the former (Ayinde and Echchabi 2012). For instance, the *takaful* products provide their users with a more prompt claim of deposits due to the flexibility of the system. Furthermore, it equips its users with the social prestige associated with the Islamic principles of *takaful* products. More importantly, *takaful* promotes a sense of solidarity among the users (Matsawali et al., 2012). Hence, it is hypothesised that the relative advantage of *takaful* over conventional insurance regarding these dimensions, has a positive influence on these products' adoption.

H2: Relative advantage has a positive influence on the Yemeni customers' intention to adopt takaful products.

Takaful is notably an insurance arrangement that operates in line with the *Shari'ah* principles (Hussain and Pasha 2011; Swartz and Coetzer 2010). This dimension has been identified in the literature as one of the main criteria motivating customers to opt for *takaful* rather than the conventional equivalent (Abdullah et al. 2012; Ayinde and Echchabi 2012). In addition, customers are usually in search of products and services that are in line not only with their religious beliefs, but also with their lifestyle and social prestige (Langer 2014). Furthermore, the Yemenis are known for their strong religious orientation and social connectedness (Saif 2012). Hence, it is hypothesised that the com-

patibility of the *takaful* products with the religious beliefs, social prestige and lifestyle of the customers has a positive influence on their adoption of these products.

H3: Compatibility has a positive influence on the Yemeni customers' intention to adopt takaful products.

The Yemenis are commonly known for their religious orientation and social connectedness (Saif 2012). These two dimensions put together insinuate that the Yemenis' decisions are highly dependent upon their religious beliefs as well as the influence of their social environment. As *takaful* products are generically in compliance with the religious beliefs of the Yemenis, it is expected that the social environment will favor them over their conventional equivalent. Hence, it is hypothesised that the social influence has a positive influence on the Yemenis' adoption of *takaful* products.

H4: Social influence has a positive influence on the Yemeni customers' intention to adopt takaful products.

Awareness of products and their features is required prior to their adoption (Roberts and Gregor 2005; Boztepe 2012). This principle is also valid in the case of *takaful* products, which have a number of features that are relatively new and unique and thus relatively unclear to customers (Ainley et al. 2007). These features range from the technicalities of the structure to the simplest mechanisms of applications and claims. Hence, it is hypothesised that awareness has a positive influence on the adoption of *takaful* products.

H5: Awareness has a positive influence on the Yemeni customers' intention to adopt takaful products.

As mentioned earlier, the Yemeni people are religiously-oriented. Hence, the Islamic aspect of any product or service offered initially matters to them. This proposition is supported by the experience of the insurance company by the name of “United Insurance” which introduced *takaful* products in 2008. In that specific instance, around 80 percent of the existing customers changed to *takaful* (Saif 2012). Furthermore, the insurance sector realized the importance of *takaful* products in attracting the Yemeni customers and investors, and therefore led the insurance companies, as well as some Yemeni Islamic banks, to introduce *takaful* products and to launch new *takaful* companies and subsidiaries (Saif 2012). Hence, it is hypothesised that the Yemeni customers are willing to adopt *takaful* products.

H6: The Yemeni customers are willing to adopt takaful products.

Methods

The current study focuses on the Yemeni context. The target sample size was 200 respondents determined through the previous similar studies in this area (Mazanai and Fatoki 2010; Ismail et al. 2013; Muhamat et al. 2011, etc.). Out of the distributed questionnaires only 123 were properly and completely filled in and returned. Thus, a response rate of over 61 percent was achieved. Specifically, 39 percent of the respondents are using *takaful* products, while 61 percent use conventional insurance products.

The survey questionnaire was designed to collect information about the perception of the customers toward the attributes of the *takaful* as well as their intention to adopt and/or continue using it in their future transac-

tions. For measuring this information, a Likert type scaling was used (1 = Strongly Disagree and 7 = Strongly Agree). 33 items were listed in this section and most of them were derived from the previous studies conducted in other countries as highlighted above, as well as from current *takaful* literature with necessary adaptations made for the specific context of this study, mainly from Ayinde and Echchabi (2012). The second section of the questionnaire explored information about respondents’ profiles, i.e. gender, age, marital status, employment status, etc. The questionnaire was made in English and was subsequently translated into Arabic and distributed as such.

The data gathered were subsequently analyzed using structural equation modelling and one sample *t*-test. The choice of this technique was inspired by Hair et al. (2010) as well as from similar studies conducted in this area. It is worth mentioning that the analysis was done through AMOS 18 and SPSS 18.

The demographic information indicates that 87.8 percent of the respondents are male, while 12.2 percent are female. In terms of age grouping, a majority of the respondents are between 20 and 30 years i.e. around 61.8 percent, while the remaining 32.5 percent are between 31 and 40 years. Overall, around 66.7 percent are married while the remaining 33.3 percent are single.

Regarding the level of education, around 65.9 percent hold a bachelor’s degree, 20.3 percent hold a Master’s degree, and 11.4 percent hold a diploma. In terms of occupation, 87 percent of the respondents are working in the private sector, and 9.8 percent are students.

Table 1. Profile Analysis

Demographics	Categories	Percentage
Gender	Male	87.8
	Female	12.2
Age	Less than 20 years	2.4
	20 to 30 years	61.8
	31 to 40 years	32.5
	41 to 50 years	3.3
Education level	Diploma	11.4
	Professional certificate	1.6
	Bachelor's degree	65.9
	Master's degree	20.3
	PhD degree	0.8
Marital Status	Married	66.7
	Single	33.3
Occupation	Public sector	2.4
	Private sector	87
	Self-employed	0.8
	Student	9.8
Usage of insurance products	<i>Takaful</i>	39
	Conventional insurance	61

Findings and Discussions

Reliability and Validity Measures

Prior to the structural model estimation through Structural Equation Modelling (SEM), a basic requirement is the analysis of the model validity. The latter is made up of four main elements, namely, convergent validity, discriminant validity, face validity, and nomological validity.

Convergent validity refers to the requirement that the items measuring a given construct should share a high proportion of common variance. There are several tools to as-

sess convergent validity, including average variance extracted (AVE), factor loadings, as well as reliability measures (Cronbach Alpha for this study) (Hair *et al.*, 2010). Accordingly, it is suggested that a Cronbach Alpha greater or equal to 0.6 is acceptable, similarly, and acceptable level of AVE and factor loadings should be 0.5 and above.

In this regard, Table 2 shows that the Cronbach Alpha values are ranging between 0.727 and 0.904. Furthermore, the AVE values range between 0.561 and 0.734. Hence, all the requirements for convergent validity are met, since the factor loadings are also all greater than 0.5. Thus, convergent validity is achieved in this model.

In addition, discriminant validity refers to the requirement that each construct in the model is distinct from the remaining constructs. There are different ways to assess discriminant validity. In this study the correlation between constructs will be fixed to 1 and the fit indices for the baseline and restricted models will then be compared. At this level, discriminant validity is achieved if the difference in fit indices between the two models is significant. In this regard, the results in Table 3 show a Chi square value of 1352.41 and 475 degrees of freedom for the baseline model, and a Chi square value of 1469.07 and 490 degrees of freedom for the restricted models. This amounts to a Chi square difference of 116.66 and degrees of freedom difference of 15. By comparing the Chi square difference with the tabulated Chi square value corresponding to a degree of freedom of 15 and a confidence margin of 0.05, namely, 24.99, it can be concluded that the fit indices for the baseline and restricted model are significantly different. Hence, discriminant validity is achieved by this model. Besides these two validity measures, face

Table 2. Convergent Validity Measures

	Cronbach Alpha	AVE AVE
Uncertainty	0.727	0.579
Relative advantage	0.887	0.561
Compatibility	0.895	0.704
Social influence	0.893	0.710
Awareness	0.904	0.734
Behavioural intention	0.869	0.612

Table 3. Discriminant Validity Measures

Elements	Chi square	DF
Baseline model	1352.416	475
Restricted model	1469.077	490
Change	116.661	15

validity and nomological validity were also analyzed by consulting the experts in this field, as well as the previous studies.

Finally, the results indicate that the model's Comparative Fit Index (CFI) is 0.811 and RMSEA value is 0.110. These values are acceptable values for both indicators (Broyles et al. 2010; Singh et al. 2011; Kim and Forsythe 2010). Hence, the overall model is validated.

Hypotheses Testing

In order to test the hypotheses posited above, the path analysis using SEM is applied for the first five hypotheses, while *t*-test is used to test the sixth hypothesis. In this regard, the mean values in Table 4 indicate high values for compatibility, behavioral intention and relative advantage, with significant *t*-test

values. This result indicates that the Yemeni customers are appreciative of the relative advantage of *takaful* over conventional insurance, especially in terms of service quality, promptness in claims payment, and offering social prestige to the users. Similarly, it implies that the customers are initially intending to adopt *takaful* products, shown by the high mean value and the significance of its difference from the neutral point of reference. Hence, hypothesis 6 is supported. Furthermore, the high mean value for "compatibility" and its significant difference from the mean indicates that the Yemeni customers consider *takaful* to be compatible with their social and religious values, their financial needs, and previous insurance contracts, as well as their lifestyle.

On the other hand, the results indicate that the mean for "social influence" and "awareness" is slightly greater and significantly different from the neutral value. These values show that the Yemeni customers generally do not consider the opinions of each other prior to decision making. Furthermore, the results indicate that a majority of the respondents consider themselves to be aware and understand the principles and operations of *takaful*.

In addition to the *t*-test results above, a one way ANOVA test has also been conducted to identify possible differences across demographic groups regarding all the model dimensions. The results of the ANOVA test are reported in the appendices. In terms of gender, the results indicate that there is a significant difference between male and female respondents regarding the relative advantage of *takaful* products, whereby male respondents have a more positive perception regarding this aspect. In terms of marital status difference, the results indicate that married re-

Table 4. Descriptive Analysis and *t*-test

	Mean	t	Standard Deviation
Uncertainty	2.5183	-16.137 ***	1.01836
Relative advantage	4.7022	7.181 ***	1.08448
Compatibility	5.3870	12.974 ***	1.18564
Social influence	4.3220	2.371 **	1.50597
Awareness	4.6260	5.091 ***	1.36369
Behavioural intention	5.2398	11.874 ***	1.15808

***, **, and * refer to significant *t*-test at 1 percent, 5 percent and 10 percent respectively.

spondents have a tendency to be more aware of *takaful* operations compared to single respondents. Finally, in terms of occupation, the results reveal that self-employed respondents are more likely to perceive the *takaful* products as uncertain compared to other groups. Similarly, the respondents employed in the private sector have a tendency to be more aware of *takaful* operations compared to other groups.

On the other hand, the results in Table 5 indicate that uncertainty does not have a significant influence on behavioral intention. Hence, hypothesis 1 is rejected. This contradicts the findings of Tan and Teo (2000), Teo and Pok (2003), Fisher and Chu (2009), Nor (2005), and Sharma and Bock (2005). This might be explained by the pre-notion that customers usually have about the amount of risk involved in the insurance business, which might have made it an irrelevant selection dimension for *takaful* insurance by Yemeni customers. In addition, the Yemeni business environment is an uncertain environment due to political instability which might also be one of the reasons that drive the Yemeni customers to disregard the uncertainty aspect of *takaful* products.

Furthermore, relative advantage does not have a significant influence on behavioral intention. Hence, hypothesis 2 is rejected. This contradicts the findings of Taylor and Todd (1995), Tan and Teo (2000), Teo and Pok (2003), Shih and Fang (2004), Nor (2005), Puschel et al. (2010). This result might be explained by the strong Islamic religious culture as well the traditions and norms associated with it, which might have made the immediate difference between *takaful* and conventional insurance irrelevant for the Yemeni customers.

In addition, compatibility has a significant positive influence on behavioral intention. Hence, hypothesis 3 is supported. This finding is in line with Tan and Teo (2000), Fisher and Chu (2009), Nor (2005), Puschel et al. (2010), and To et al. (2008). However, they contradict the findings of Teo and Pok (2003), Shih and Fang (2004), and Al-Majali and Nik Mat (2010). This implies that the compatibility of *takaful* principle with the social and religious values, lifestyle, and financial needs, is an important factor for Yemeni customers in selecting their *takaful* insurance contracts, which is in line with the nature of the Yemeni population.

Table 5. Standardized Total Effects

	Awareness	Social Influence	Compatibility Advantage	Relative	Uncertainty
Behavioral	0.094	0.165	0.288**	0.139	-
Intention	0.094	0.165	0.288**	0.139	-0.033

On the other hand, social influence does not have a significant influence on behavioral intention. Hence, hypothesis 4 is rejected. This contradicts the findings of Taylor and Todd (1995), Echchabi and Olaniyi (2012), Al-Majali and Nik Mat (2010), Puschel et al. (2010), and Teo and Pok (2003). This implies that the Yemeni customers' decision to purchase either type of insurance policies is not subject to social groups influence, but rather individualistic in nature, which complies with the nature of the Yemeni population as aforementioned.

Finally, awareness does not have a significant influence on behavioral intention.

Hence, hypothesis 5 is rejected. This contradicts the findings of Thambiah et al. (2010), To et al. (2008), Abdullah and Abdul Rahman (2007), and Rammal and Zurbruegg (2007). This might be explained by the strong religious knowledge among educated Yemeni citizens.

Thus, among the five explanatory variables initially included, only one is found to be significantly influencing the intention of the Yemeni customers to adopt *takaful* products instead of conventional insurance policies. Specifically, compatibility explains about 43 percent of the variation in the behavioral intention.

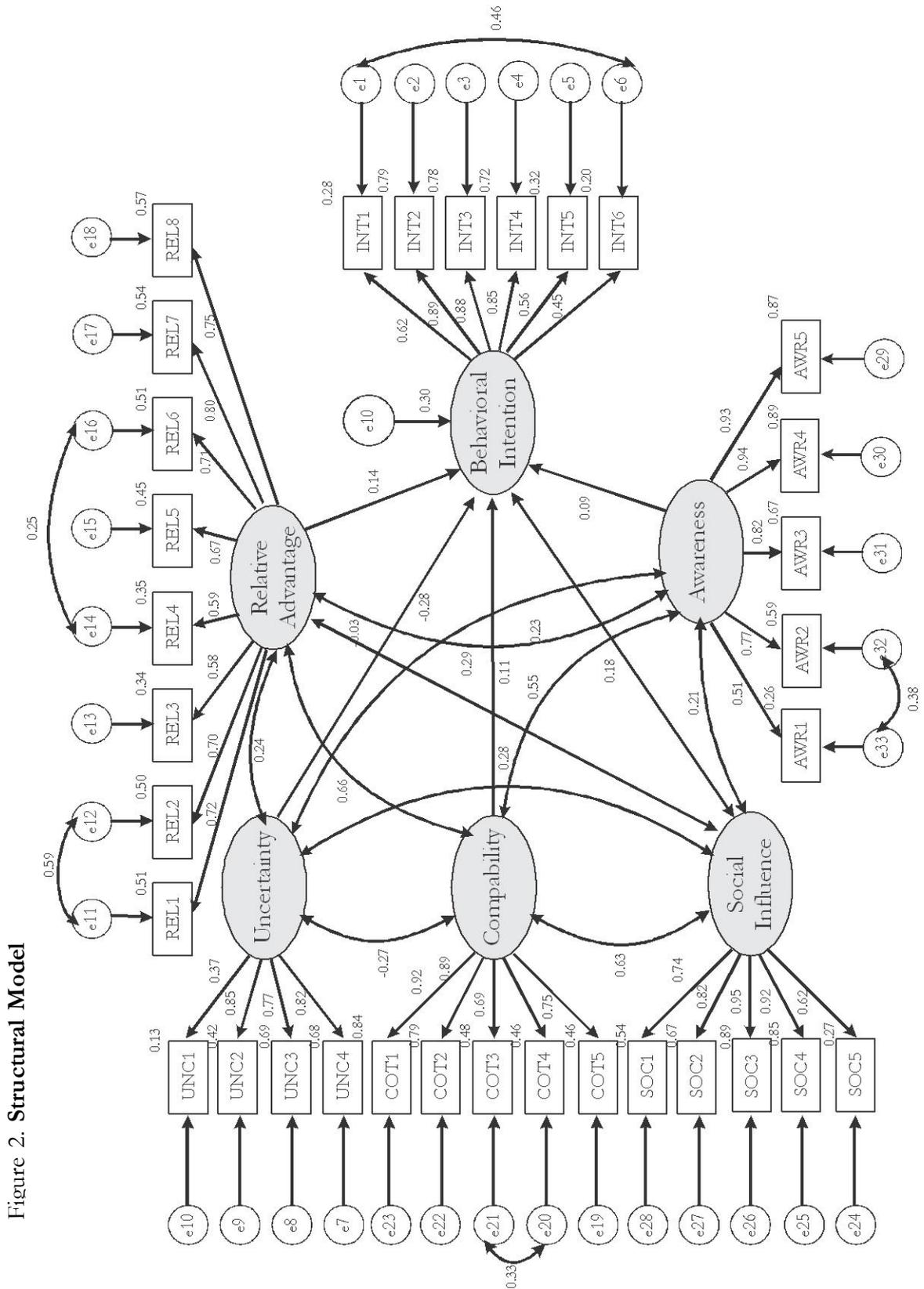


Figure 2. Structural Model

Conclusions

The objective of the current study was two-fold i.e. to explore the intention of the Yemeni customers to adopt *takaful* products and to determine the variables that may influence it. The results indicated that the Yemeni customers are generally intending to adopt *takaful* products. On the other hand, the findings revealed that the main variable that influences the customers' decision is compatibility.

These findings have significant implications for the theory, for policy makers and regulators as well as for the practitioners. Particularly, this study is an extension of the IDT to a different setting and to a different area of study that has been under-researched previously. Hence, this study proves the applicability of this theory in a relatively newer context. Accordingly, the findings showed that when dealing with *takaful* products, the Yemeni customers –and other citizens with similar backgrounds and traits– mostly stress and consider the compatibility aspect of these services with their religious and social values, lifestyle and previous insurance contracts. In addition, the above findings are considered a major step toward the establishment of a comprehensive framework to be applied when studying the customers' perception of *takaful* products in similar settings.

Hence, the *takaful* companies and *takaful* policies' providers at different levels are required to emphasize this aspect i.e. compatibility, in order to popularize these services and convince customers to adhere to them instead of the existing insurance services. This endeavour is especially relevant in this era where the *takaful* industry is operating under-potential and where it is still commonly per-

ceived as a mere replication of the conventional insurance products. Furthermore, the *takaful* companies should conduct large scale advertising campaigns to meet the potential demand for these products. These campaigns should mainly emphasize the dimensions that are highly regarded by the Yemeni customers.

Similarly, it is recommended that the policy makers and regulators smoothen the regulatory and fiscal processes to allow the *takaful* industry to flourish not only in Yemen but globally. Notably, a comprehensive and distinct regulatory framework for *takaful* would certainly allow the *takaful* players to compete on relatively comparable grounds with the conventional insurance providers. Specifically, the policy makers are highly required to ensure the compatibility of the *takaful* practices with the *Shari'ah* rules. This requirement is due to the significance of this dimension to differentiate between conventional insurance and *takaful* products, and which is highly regarded by the Yemeni customers as well.

Finally, the current study has a number of limitations that should be taken into account in the future studies in this area. Firstly, the sample size is relatively limited, though accurately calculated, hence the results cannot be generalized to the whole Yemeni population. Thus, it is recommended that future studies select a larger and more representative sample size, in order to generalize the results to the whole country. It is recommended future studies also extend these findings to other contexts and preferably use other models as well. In addition, it is recommended that future studies focus on specific *takaful* products, and preferably life vs non-life products.

References

- Abdullah, R. F. S., and A. Abdul-Rahman. 2007. Factors influencing knowledge of islamic banking services: The case of Malaysian bank managers. *Review of Islamic Economics* 11 (2): 31-54.
- Abdullah, A. A., R. Sidek, and A. A. Adnan. 2012. Perception of non-muslim customers towards islamic banks in Malaysia. *International Journal of Business and Social Science* 3 (11): 151-163.
- Ainley, M., A. Mashayekhi, R. Hicks, A. Rahman, and A. Ravalia. 2007. *Islamic Finance in the UK: Regulations and Challenges*. UK: Financial Services Authority.
- Ajzen, I., and M. Fishbein. 1980. *Understanding Attitudes and Predicting Social Behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- Ajzen, I. 1991. The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes* 50: 179-211.
- Al-Majali, M., and N. K. Nik Mat. 2010. Application of decomposed theory of planned behaviour on internet banking adoption in Jordan. *Journal of Internet Banking and Commerce* 15 (2): 1-7.
- Almobarraz, A. 2007. Perceived attributes of diffusion of innovation theory as predictors of internet adoption among the faculty members of Imam Mohammed Bin Saud University. *Unpublished PhD thesis*. University of North Texas, USA.
- Ayinde, L. O., and A. Echchabi. 2012. Perception and adoption of Islamic insurance in Malaysia: An empirical study. *World Applied Sciences Journal* 20 (3): 407-415.
- Aziz, W. A. B. W. A., A. B. C. Mat, and E. A. M. E. W. Zin. 2011. A study of contributing factors in Islamic Motor insurance. *Gaziantep University Journal of Social Sciences* 10: 1-20.
- Bashir, M. S., and N. H. N. Mail. 2011. Consumer perceptions of islamic insurance companies in Brunei Darussalam. *International Journal of Emerging Sciences* 1 (3): 285-306.
- Boztepe, A. 2012. Green marketing and its impact on consumer buying behaviour. *European Journal of Economic and Political Studies* 5 (1): 5-21.
- Broyles, A. A., T. Leingpitul, R. H. Ross, and B. M. Foster. 2010. Brand equity's antecedent/consequence relationships in cross-cultural settings. *Journal of Product and Brand Management* 19 (3): 159-169.
- Coolen-Maturi, 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.
- Davies, F. D. 1989. Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly* 13 (3): 319-340.
- Echchabi, A., and O. N. Olaniyi. 2012. Using theory of reasoned action to model the patronization behaviour of islamic banks' customers in Malaysia. *Research Journal of Business Management* 6 (3): 70-82.
- Echchabi, A., and F. Echchabi. 2013. Islamic insurance in the European countries: Insights from French Muslims' perspective. *WSEAS Transactions on Business and Economics* 10 (3): 125-132.
- Echchabi, A. and H. A. Aziz. 2012. Empirical investigation of customers' perception and adoption towards Islamic banking services in Morocco. *Middle East Journal of Scientific Research* 12 (6): 849-858.
- Economides, N. 1982. The demand for life insurance: An application of the economics of uncertainty: A comment. *The Journal of Finance* XXXVII (5): 1305-1309.

- Fisher, R., and S. Z. Chu. 2009. Initial online trust formation: The role of company location and web assurance. *Managerial Auditing Journal* 24 (6): 542-563.
- Folorunso, O., R. O. Vincent, A. F. Adekoya, and O. Ogunde. 2010. Diffusion of innovation in social networking sites among university students. *International Journal of Computer Science and Security* 4 (3): 361-372.
- Gerrard, P., and J. B. Cuninghame. 2003. The diffusion of internet banking among Singapore customers. *International Journal of Bank Marketing* 21 (1): 16-28.
- Guiso, L., and T. Jappelli. 1998. Background uncertainty and the demand for insurance against insurable risk. *Working Paper No. 2*. Centre for Studies in Economics and Finance, University of Salerno.
- Hair, J. F., W. C. Black, B. J. Babin, and R. E. Anderson. 2010. *Multivariate Data Analysis* (7th ed.). Upper Saddle River, N. J.: Prentice Hall.
- Hightower, R. and H. J. Brightman. 1994. A test of Rogers' optional adoption decision model in an organizational setting. *Journal of Information Technology Management* 5 (1): 11-19.
- Hussain, M. M. and A. T. Pasha. 2011. Conceptual and operational differences between general *takaful* and conventional insurance. *Australian Journal of Business and Management Research* 1 (8): 23-28.
- Ismail, I., N. N. Mat Desa, and N. N. A. Taupek. 2013. Do civil servants accept islamic banking system in Malaysia?" *International Journal of Education and Research* 1 (1): 1-7.
- Kim, J., and S. Forsythe. 2010. Factor affecting adoption of product virtualisation technology for online consumer electronics shopping. *International Journal for Retail and Distribution Management* 38: 190-204.
- Langer, Y. 2014. Low cost innovations in resource-constrained markets: An adoption study. *Unpublished Masters' Thesis*. University of Twente, Netherlands.
- Matsawali, M. S., M. F. Abdullah, Y. C. Ping, S. Y. Abidin, M. M. Zaini, H. M. Ali, F. Alani, and H. Yaacob. 2012. A study on *takaful* and conventional insurance preferences: The case of Brunei. *International Journal of Business and Social Science* 3 (22): 163-176.
- Mazanai, M., and O. Fatoki. 2012. Perceptions of start-up and medium-sized enterprises (SMEs) on the importance of business development services providers (BDS) on improving access to finance in South Africa. *Journal of Social Sciences* 30 (1): 31-41.
- Muhamat, A. A., M. N. Jaafar, and N. A. Azizan. 2011. An empirical study on banks' clients' sensitivity towards the adoption of Arabic terminology amongst Islamic banks. *International Journal of Islamic and Middle Eastern Finance and Management* 4 (4): 343-354.
- Nor, K. M. 2005. An empirical study of internet banking acceptance in Malaysia: An extended decomposed theory of planned behaviour. *Unpublished PhD Thesis*. Southern Illinois University Carbondale.
- Püschel, J., J. A. Mazzon, and J. M. C. Hernandez. 2010. Mobile banking: proposition of an integrated adoption intention framework", *International Journal of Bank Marketing* 28 (5): 389-409.
- Rahim, F. A., and H. Amin. 2011. Determinants of islamic insurance acceptance: An empirical analysis. *International Journal of Business and Society* 12 (2): 37-54.
- Rahman, A. A., N. A. Ali, A. C. Seman, and W. M. W. Ahmad. 2008. Comparative study between auto *takaful* and auto insurance purchasing behaviour among Malaysian undergraduates. *Shariah Journal*, Vol. 16 (1): 75-88.
- Rammal, H. G., and R. Zurbruegg. 2007. Awareness of islamic banking products among muslims: The case of Australia. *Journal of Financial Services Marketing* 12 (1): 65-74.

- 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.
- Roberts, H., and S. Gregor. 2005. Why Australian merchants aren't adopting E-Money. *Journal of Research and Practice in Information Technology* 37 (1): 11-25.
- Rogers, E. 2003. *Diffusion of Innovations*. New York: The Free Press.
- Sahin, I. 2006. A detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology* 5 (2): 14-23.
- Saif, M. 2012. Islamic insurance: A competitive business in Yemen. *Yemen Times News Letter* 1545 (9th February). Retrieved on December 12, 2013, available online at: <http://www.yementimes.com/en/1545/business/360/Islamic-insurance-a-competitive-business-in-Yemen.htm>.
- Salman, S. A. 2014. Contemporary issues in *takaful*, *Asian Social Science* 10 (22): 210-216.
- Schwefel, D. (2011), *Towards a national health insurance system in Yemen*, World Bank, Washington, USA.
- Sharma, S., and G. Bock. 2005. Factors influencing individual's knowledge seeking behaviour in electronic knowledge Repository, *ECIS 2005 Proceedings*, Paper 49, Retrieved at <http://aisel.aisnet.org/ecis2005/49>.
- Shih, Y., and K. Fang. 2004. The use of a decomposed theory of planned behaviour to study Internet banking in Taiwan. *Internet Research* 14 (3): 213-223.
- Singh, R., H. S. Sandhu, B. A. Metri, and R. Kaur. 2011. Organisational performance and retail challenges: A structural equation approach. *iBusiness* 3: 159-168.
- Suki, N. M. 2010. An empirical study of factors affecting the internet banking adoption among Malaysian customers. *Journal of Internet Banking and Commerce* 15 (2): 1-11.
- Swartz, N. P., and P. Coetzer. 2010. *Takaful*: An Islamic insurance instrument. *Journal of Development and Agricultural Economics* 10 (10): 333-339.
- Tan, M., and T. S. H. Teo. 2000. Factors influencing the adoption of internet banking. *Journal of the Association for Information Systems* 1 : 5: 1-44.
- Taylor, S., and P. Todd. 1995. Understanding information technology usage: A test of competing models. *Information Systems Research* 6 (2 p): 144-176.
- Teo, T. S. H., and S. H. Pok. 2003. Adoption of WAP enabled mobile phones among Internet users. *Omega - The International Journal of Management Science* 31 (6): 483-498.
- Thambiah, S., U. C. Eze, K. S. Tan, R. J. Nathan, K. P. Lai. 2010. Conceptual framework for the adoption of Islamic retail banking services in Malaysia. *Journal of Electronic Banking Systems* 2010: 1-10.
- To, P. L., C. Liao, C. J. Chiang, M. L. Shih, and C. Y. Chang. 2008. An empirical investigation of the factors affecting the adoption of instant messaging in organisations. *Computer Standards and Interfaces* 30: 148-156.

Appendix 1. Gender Difference

		Sum of Squares	df	Mean Square	F	Sig.
Uncertainty	Between Groups	1.082	1	1.082	1.043	0.309
	Within Groups	125.440	121	1.037		
	Total	126.521	122			
Relative advantage	Between Groups	10.767	1	10.767	9.817	0.002
	Within Groups	132.718	121	1.097		
	Total	143.485	122			
Compatibility	Between Groups	2.558	1	2.558	1.832	0.178
	Within Groups	168.941	121	1.396		
	Total	171.499	122			
Social influence	Between Groups	7.854	1	7.854	3.535	0.062
	Within Groups	268.837	121	2.222		
	Total	276.691	122			
Awareness	Between Groups	1.613	1	1.613	.867	0.354
	Within Groups	225.263	121	1.862		
	Total	226.877	122			
Intention	Between Groups	4.383	1	4.383	3.330	0.070
	Within Groups	159.237	121	1.316		
	Total	163.619	122			

Appendix 2. Age Difference

		Sum of Squares	df	Mean Square	F	Sig.
Uncertainty	Between Groups	2.396	3	.799	.766	.515
	Within Groups	124.125	119	1.043		
	Total	126.521	122			
Relative advantage	Between Groups	3.526	3	1.175	.999	.396
	Within Groups	139.959	119	1.176		
	Total	143.485	122			

Appendix 2 (Continued)

		Sum of Squares	df	Mean Square	F	Sig.
Compatibility	Between Groups	4.945	3	1.648	1.178	.321
	Within Groups	166.554	119	1.400		
	Total	171.499	122			
Social influence	Between Groups	13.489	3	4.496	2.033	.113
	Within Groups	263.201	119	2.212		
	Total	276.691	122			
Awareness	Between Groups	13.222	3	4.407	2.455	.067
	Within Groups	213.655	119	1.795		
	Total	226.877	122			
Intention	Between Groups	1.855	3	.618	.455	.714
	Within Groups	161.764	119	1.359		
	Total	163.619	122			

Appendix 3. Education Level Difference

		Sum of Squares	df	Mean Square	F	Sig.
Uncertainty	Between Groups	1.462	4	.365	.345	.847
	Within Groups	125.060	118	1.060		
	Total	126.521	122			
Relative advantage	Between Groups	3.067	4	.767	.644	.632
	Within Groups	140.418	118	1.190		
	Total	143.485	122			
Compatibility	Between Groups	2.510	4	.628	.438	.781
	Within Groups	168.989	118	1.432		
	Total	171.499	122			
Social influence	Between Groups	15.950	4	3.988	1.805	.132
	Within Groups	260.740	118	2.210		
	Total	276.691	122			
Awareness	Between Groups	15.405	4	3.851	2.149	.079
	Within Groups	211.472	118	1.792		
	Total	226.877	122			
Intention	Between Groups	5.927	4	1.482	1.109	.356
	Within Groups	157.692	118	1.336		
	Total	163.619	122			

Appendix 4. Marital Status Difference

		Sum of Squares	df	Mean Square	F	Sig.
Uncertainty	Between Groups	1.317	1	1.317	1.273	0.261
	Within Groups	125.204	121	1.035		
	Total	126.521	122			
Relative advantage	Between Groups	.107	1	.107	.090	0.765
	Within Groups	143.378	121	1.185		
	Total	143.485	122			
Compatibility	Between Groups	1.530	1	1.530	1.089	0.299
	Within Groups	169.969	121	1.405		
	Total	171.499	122			
Social influence	Between Groups	5.094	1	5.094	2.270	0.135
	Within Groups	271.597	121	2.245		
	Total	276.691	122			
Awareness	Between Groups	9.920	1	9.920	5.533	0.020
	Within Groups	216.957	121	1.793		
	Total	226.877	122			
Intention	Between Groups	.004	1	0.004	0.003	0.956
	Within Groups	163.615	121	1.352		
	Total	163.619	122			

Appendix 5. Occupation Difference

		Sum of Squares	df	Mean Square	F	Sig.
Uncertainty	Between Groups	9.170	3	3.057	3.099	0.029
	Within Groups	117.352	119	0.986		
	Total	126.521	122			
Relative advantage	Between Groups	3.946	3	1.315	1.122	0.343
	Within Groups	139.539	119	1.173		
	Total	143.485	122			
Compatibility	Between Groups	0.131	3	.044	0.030	0.993
	Within Groups	171.369	119	1.440		
	Total	171.499	122			

Appendix 5 (Continued)

	Sum of Squares	df	Mean Square	F	Sig.	
Uncertainty	Between Groups	9.170	3	3.057	3.099	0.029
Social influence	Between Groups	0.266	3	0.089	0.038	0.990
	Within Groups	276.425	119	2.323		
	Total	276.691	122			
Awareness	Between Groups	21.944	3	7.315	4.247	0.007
	Within Groups	204.933	119	1.722		
	Total	226.877	122			
Intention	Between Groups	0.555	3	0.185	0.135	0.939
	Within Groups	163.064	119	1.370		
	Total	163.619	122			