

# Predicting customers' adoption of Islamic banking services in Tunisia: A Decomposed Theory of Planned Behaviour approach

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## Abstract

**Objective** -The main purpose of the study is to examine the willingness of the Tunisian customers to adopt Islamic banking services, and the factors that may influence their decision.

**Methods** - A total of 100 questionnaires were randomly distributed to Tunisian banking customers, out of which 93 were properly filled and returned. Multiple regression and one sample t-test were subsequently applied.

**Results** – The results showed that uncertainty, compatibility, awareness as well as subjective norm, have a significant impact on the attitude towards Islamic banking services in Tunisia. Likewise, normative belief was also found to have a significant influence on subjective norm, with particular reference to the parents, siblings, peers and colleagues, as the main referent groups. In addition, self-efficacy was found to have a significant influence on perceived behavioural control, and finally, attitude and subjective norm were found to have a significant impact on the intention to adopt Islamic banking services in Tunisia.

**Conclusions** -Tunisian customers are willing to shift to Islamic banking services.

Keywords: Tunisia, Islamic Bank, Decomposed theory of planned behaviour

## Abstrak

**Tujuan** – Tujuan utama dari penelitian ini adalah untuk menganalisa kemauan nasabah warga Tunisi untuk mengadopsi jasa perbankan syariah dan juga faktor-faktor yang mempengaruhi keputusan mereka.

**Metode** – Dari 100 lembar kuesioner telah dibagikan kepada para nasabah bank Tunisia secara acak, 93 lembar telah diisi dan kembali. Regresi berganda dan one-sample t-test juga digunakan.

**Hasil** – Hasil menunjukkan bahwa ketidakpastian, kompatibilitas, kesadaran dan norma subyektif memiliki pengaruh yang signifikan kepada sikap dalam menggunakan jasa perbankan syariah di Tunisia. Demikian juga, kepercayaan normatif juga memiliki pengaruh yang signifikan terhadap norma subyektif, dalam hubungannya dengan orang tua, kerabat, kelompok, dan teman sejawat sebagai grup yang menjadi referensi utama. Sebagai tambahan, kemampuan diri didapati memiliki pengaruh yang signifikan kepada kontrol perilaku yang dipersepsikan. Akhirnya, sikap dan norma subyektif memiliki pengaruh yang signifikan kepada niat nasabah untuk mengadopsi jasa perbankan syariah di Tunisia.

**Kesimpulan** – Nasabah warga Tunisia memiliki keinginan untuk beralih ke jasa perbankan syariah

Kata kunci: Tunisia, perbankan syariah, Decomposed Theory of Planned Behaviour

## **1. Introduction**

With an annual growth rate ranging between 10 and 20% (Rehlander and Csonka, 2009) and an impressive increase in its global assets from \$5 billion in 1985 (Iqbal, 1997) to \$100 billion in the beginning of this millennium (Martens, 2001) and exceeding \$1 trillion worldwide in 2011 (AFDB, 2011), Islamic finance is riding high and is expected to know more success since its assets are forecasted to reach \$4 trillion by 2015 (Rehlander and Csonka, 2009). Moreover, its ability to overcome the financial crisis gave it the opportunity to realize a triumph, to take advantage over conventional banking and to get more attention from politicians, investors, bankers, theoreticians and researchers.

However, this fast-growing finance industry remains at a rudimentary stage in panoply of Muslim countries especially in North Africa and particularly in Tunisia which forms, with Egypt and Morocco, a group named by Rehlander and Csonka (2009) 'newcomers'. In fact, Islamic banking was still relegated to the background with the Tunisia's deposed president Ben Ali whereby it was always linked to Islamic political and radical movements. To this reason, it added the unfamiliarity of Tunisians with Islamic banking services and the very slow evolution of banking activities.

Presently, the Tunisian Islamic political party has won the election and promised to promote Islamic banking services as it was declared by a member of the executive board R. Saidi (Ayari, 2011). Hence, Tunisia is currently painting its face with a new design during next years and aspires to become the Islamic financial hub in North Africa as it was mentioned by the secretary general of the Council For Islamic Banks And Financial Institutions (CIBAFI) E. Khoja in the first Islamic Finance Maghreb Forum held in Tunisia in 2011 (El Oudi, 2011a).

However, Islamic banking products and services are more expensive than conventional ones according to the deputy CEO of Amen Bank A. Kram (El Oudi, 2011b). With high costs of these products and services and their convenience to *Shari'ah*, the question that imposes itself is how will the customers behaviour be with regard to these products? Studies with such a core have been severely conducted in the South East Asian countries but remain scarce in North Africa and particularly in Tunisia.

Hence, the aim of this paper is to study the perception and the willingness of Tunisian customers to shift to Islamic banking services via the adapted Decomposed Theory of Planned Behaviour in order to detect the dimensions determining the banking decisions of Tunisian

customers vis-à-vis Islamic banking services. In contrast with the previous studies on the potential selection criteria of Islamic banking services (Erol and El-Bdour, 1989; Haron, Ahmed and Planisek, 1994; Naser, Jamal and Alkhatib, 1999; Hegazy, 1995; Metwally, 1996; Okumus, 2005; Erol, Kaynak and El-bdour, 1990; Edris, 1997; Gerrard and Cuningham, 1997), DTPB is expected to offer a more comprehensive framework to study the factors that lead customers to opt for Islamic banking services, in the sense that it identifies the main stimulators and channels of the patronisation behaviour vis-à-vis Islamic banking services.

The outline of the remainder of this paper is as follows: Section 2 sheds some light on Islamic banking in Tunisia. The focus of Section 3 is to provide a bird's eye view on the literature related to Islamic banking. Section 4 lays out the model and research hypotheses on which this work is centred. Section 5 explains the methodology to use for the empirical part. Section 6 highlights empirical results and Section 7 summarizes and concludes the study.

## **2. Theoretical framework**

According to Visser (2009), the major difference between Islamic and conventional banking lies in the four fundamental rules of the former i.e. prohibition of *Gharar* (excessive uncertainty), prohibition of *Maysir* (gambling), prohibition of unethical investments e.g. investment in pork, alcohol, or pornography related activities, etc. and last but not least, the prohibition of *riba*.

Iqbal, Ahmed and Khan (1998) added that risk sharing, emphasis on productivity rather than credit worthiness as well as the moral dimensions of Islamic banking are distinctive features of latter. And this is supported by Zaher and Hassan (2001).

These features that make Islamic banking different than the conventional, subsequently dictated that the studies on customers' behaviour in general and patronization behaviour in particular should be undertaken differently, by taking into account other dimensions that reflect the specificity and features of Islamic banking.

The basis of the customers to select their banks, either from conventional or Islamic industry has been widely studied in the literature. Specifically, the studies on Islamic banks customers' selection criteria started in the 1980s by the work of Erol and El-Bdour (1989) who have explored the selection criteria of Islamic banks' customers in Jordan. Their findings showed that religiosity is not the main factor of Islamic banks selection; rather, factors such as efficient service, reputation and image, quality and reputation were more important to the respondents.

To some extent, these results were similar to those of Haron, Ahmed and Planisek (1994) and Naser, Jamal and Alkhatib (1999).

Nevertheless, Hegazy (1995) studied the selection criteria of the banks' customers in Egypt, and he found that religion is the main factor for Islamic banks selection. His findings are more or less similar to those of Metwally (1996) as well as Okumus (2005). However, this contradicts with the findings of Erol, Kaynak and El-bdour (1990), Edris (1997), as well as Gerrard and Cuningham (1997), who have found that religion is not among the factors that influence the selection of Islamic banks.

It is worth mentioning that the above studies have focused on the factors that determine the selection of banks by the customers, mainly through their attitude. Nevertheless, there are other dimensions that determine services adoption, beside attitude, i.e. the control over the behaviour as well as the influence of a set of referent groups (Ajzen, 1991). These three dimensions together are the main pillars of the psychometric theory of planned behaviour (Ajzen and Fishbein, 1980). The theory suggests that behavioural intention is predicted by three main determinants i.e. attitude towards the behaviour, subjective norm and perceived behavioural control (Caperchione, Duncan, Mummery, Steele and Schofield, 2008). In other words, the extent to which individuals have a positive (negative) attitude towards a particular behaviour, think that significant others-referent groups- want (do not want) them to engage in that behaviour, and believe that they are able (unable) to perform the behaviour, serves as determinant of their willingness (non-willingness) to perform that behaviour (Lee, Cerreto and Lee, 2010).

The attitude towards the behaviour is determined by the sum of accessible behavioural beliefs, which refers to the subjective probability that the behaviour will achieve expected outcomes positively or negatively. Subjective norm is determined by the sum of normative beliefs which reflects the perceived behavioural expectation or opinions of important referents individuals or groups. Perceived behavioural control is determined by the sum of accessible control beliefs which refers to the perceived presence of requisite resources and opportunities to perform a given behaviour (Ajzen, 1991).

Because of the combination of the belief structures into unidimensional constructs, Taylor and Todd (1995b) suggest that the three above mentioned belief structures should be decomposed in order to better understand the relationships between the belief structures and the antecedents of behavioural intention. They consider that treating these beliefs as monolithic will obscure the

true influence of each of them. This has subsequently given birth to the decomposed theory of planned behaviour, which is the extension of theory of planned behaviour.

Taylor and Todd (1995b) initially suggest that the behavioural belief should be decomposed based on the innovations diffusion theory (IDT) (Rogers, 1983) and Technology Acceptance Model (TAM) (Davies, 1989), including only three main dimensions, namely, compatibility, complexity and relative advantage. Nevertheless, the subsequent studies proved that some of the other dimensions of IDT as well as other dimensions have also a significant influence on the attitude towards behaviour, including uncertainty (Tan and Teo, 2000; Teo and Pok, 2003; Nor, 2005; Fisher and Chu, 2009; Sharma and Bock, 2005), awareness (Rammal and Zurbruegg, 2007, Abdullah and Abdul Rahman, 2007; Thambiah, Eze, Tan, Nathan and Lai, 2010), and subjective norm (Taylor and Todd, 1995a; Abduh, 2012). Hence, the belief structure will be decomposed into six main dimensions i.e. uncertainty, relative advantage, complexity, compatibility, awareness and subjective norm.

On the other hand, the control belief structure is decomposed into two main constructs. The first is of internal control order i.e. self-efficacy, while the second is external in nature i.e. facilitating conditions (Taylor and Todd, 1995a). Finally, Taylor and Todd (1995b) consider that the decomposition of normative beliefs should be related to the divergence of opinions among referent groups. Particularly, in cases where referent groups are expected to be of similar opinions, decomposition will not provide any additional contribution. Hence the normative belief structure will not be further decomposed, but will rather be kept as such.

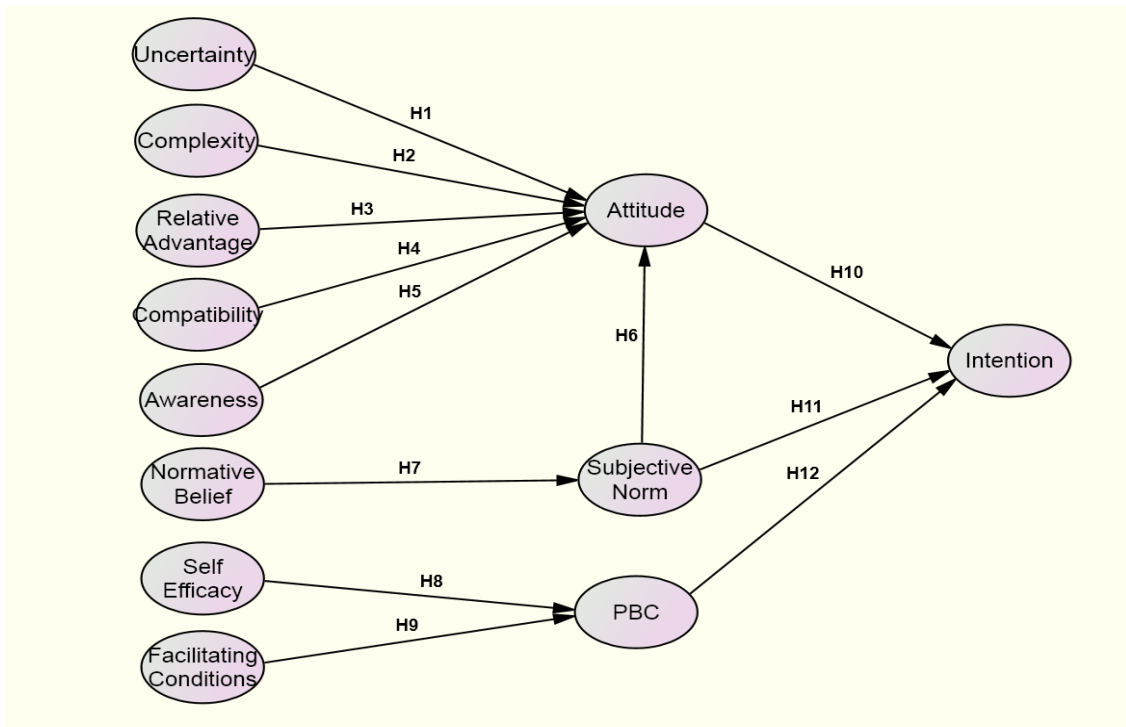


Figure 1: Research model

Based on the above model, the following hypotheses are formulated:

- H1:* Uncertainty has a negative influence on the attitude towards Islamic banking services.
- H2:* Complexity has a negative influence on the attitude towards Islamic banking services.
- H3:* Relative advantage has a positive influence on the attitude towards Islamic banking services.
- H4:* Compatibility has a positive influence on the attitude towards Islamic banking services.
- H5:* Awareness has a positive influence on the attitude towards Islamic banking services.
- H6:* Subjective norm has a positive influence on the attitude towards Islamic banking services.
- H7:* Normative belief has a positive influence on subjective norm.
- H8:* Self efficacy has a positive influence on the perceived behavioural control.
- H9:* Facilitating conditions have a positive influence on the perceived behavioural control.
- H10:* Attitude has a positive influence on the intention to adopt Islamic banking services in Tunisia.
- H11:* Subjective norm has a positive influence on the intention to adopt Islamic banking services in Tunisia.
- H12:* Perceived behavioural control has a positive influence on the intention to adopt Islamic banking services in Tunisia.

*H13*: There is no difference in the willingness to adopt Islamic banking services in Tunisia between male and female respondents.

### **3. Methodology**

In the current study, the data has been collected using self-administered questionnaire, which was distributed randomly to the bank customers in Tunisia. The study does not only cover the main cities in Tunisia, but the other small cities as well. Hence, the sample composition is random since no specific criterion has been considered for sample selection.

The questionnaire contains two main sections. The first one is designed to collect information about the constructs of the decomposed theory of planned behaviour based on Taylor and Todd (1995a, 1995b), Rogers (1983), Davies (1989), Sharma and Bock (2005), Tan and Teo (2000), Teo and Pok (2003), Rammal and Zurbruegg (2007), Ndubisi (2004), Shih and Fang (2004), Lin (2005), To, Liao, Chiang, Shih and Chang (2008), Williams (2009), Fisher and Chu (2009), Puschel, Mazzon and Hernandez (2010), Al-Majali and Nik Mat (2010), and Beigina *et al.* (2010), the items under this section are measured using seven points likert scale (1=Strongly disagree and 7=Strongly agree). The second part is meant to collect information about the demographic variables of the respondents.

The questionnaire was made in English and subsequently translated into French to be distributed as such, since French is the second main language in the country and majority of Tunisian people can speak French fluently. The translation process was guided by language experts in both French and English to avoid any kind of biasness. For this matter, three experts were selected based on their prior academic and practical expertise in this area, and their affirmed strengths in both languages.

The target sample size in this study was 100 respondents, calculated based on the following formula:

$$SS = \frac{(Z^2) \times (p) \times (1 - p)}{C^2}$$

SS= Sample Size

Z = Z-value

P = Percentage of population.

C = Confidence interval.



Though this sample size seems relatively limited, it is due to the current critical situation in the country, which made it complicated to collect a relatively larger data set. Furthermore, this sample is considered acceptable given the samples used in similar studies (Suki, 2010; Echchabi and Echchabi, 2013). Out of these 100 respondents, only 93 were properly filled and returned, thus a response rate of 93%, which is considered acceptable based to the previous studies (e.g. Dusuki and Abdullah, 2007). Multiple regression and one sample t-test were subsequently applied using SPSS18.

Multiple regression considered more suitable for this study because it is able to obtain values for latent variables for predictive purposes (Puschelet *al.*, 2010). Furthermore, the estimates reflect the latent variables by their indicators, which results in a more accurate analysis (Chin, 1998).

Out of the 93 respondents, around 62.4 percent are male, while 37.6 per cent are female, including 51.6 per cent of single respondents, 45.1 per cent of married respondents, 2.2 per cent divorced, while 1.1 per cent of the respondents are widowed. In terms of age decomposition, 67.7 per cent of the respondents are between 20 and 30 years, 24.7 per cent are between 31 and 40 years, 4.3 per cent are between 41 and 50 years, while the remaining 3.2 per cent are above 50 years old.

With regards to the level of education, around 38.7 per cent of the respondents are holding a PhD degree, 34.4 per cent are holding a Master's degree, 30.4 per cent are holding a Bachelor's degree, while 6.5 percent of the respondents are holding a Diploma, Baccalaureate (A-levels) or a secondary school level. Regarding employment grouping, 35.5 per cent are working in the public sector, 32.3 per cent are working in the private sector, and 31.2 per cent are students, while the remaining 1.1 per cent of the respondents are self-employed.

Table 1 Respondents' profiles

Variable	Categories	Percentage
Gender	Male	62.4
	Female	37.6
Age	20-30	67.7
	31-40	24.7
	41-50	4.3
	Above 50	3.2
Level of education	Secondary school	1.1
	Baccalaureate	2.2
	Diploma	3.2
	Bachelors	20.4
	Masters	34.4

	PhD	38.7
Marital status	Married	45.1
	Single	51.6
	Divorced	2.2
	Widowed	1.1
Type of employment	Public sector	35.5
	Private sector	32.3
	Self-employment	1.1
	Students	31.2

#### 4. Results

##### *Descriptive statistics*

The means and standard deviations shown in Table 2 below indicate that the respondents do not perceive the Islamic banking services as uncertain neither complex, this is shown by the mean value which is lower than 4 for all the items. Furthermore, the respondents also do not perceive the difference between Islamic and conventional banks in terms of quality of services, and pricing.

In addition, the customers also perceive that in general Islamic banking services are compatible with their religious and social values, financial needs as well as their lifestyle. In general, the means indicate that the respondents have a positive attitude about Islamic banking services, and they consider themselves as having the necessary knowledge about Islamic banking. Finally, the respondents show their willingness to adopt Islamic banking services. Nevertheless, whether these perceptions are important stimulators for the customers in making the decision to adopt Islamic banking services or otherwise, they will be tested in the subsequent sections.

Table 2: Descriptive statistics and reliability measures

Elements	Means	Std. Dev	Cronbach alpha	AVE
<i>Uncertainty</i>	<i>2.3312</i>	<i>1.36302</i>	<i>0.917</i>	<i>0.754</i>
Unc1	2.38	1.601		
Unc2	2.46	1.557		
Unc3	2.16	1.469		
Unc4	2.16	1.555		
Unc5	2.49	1.679		
<i>Complexity</i>	<i>2.8796</i>	<i>1.52462</i>	<i>0.904</i>	<i>0.74</i>
Comp11	3.04	1.738		
Comp12	2.99	1.760		
Comp13	2.90	1.824		
Comp14	2.89	1.747		
Comp15	2.57	1.709		
<i>Relative advantage</i>	<i>4.0570</i>	<i>1.23018</i>	<i>0.899</i>	<i>0.532</i>

Rel1	4.55	1.809		
Rel2	3.54	1.779		
Rel3	3.47	1.508		
Rel4	3.91	1.730		
Rel5	4.03	1.784		
Rel6	3.80	1.632		
Rel7	4.05	1.556		
Rel8	3.90	1.460		
Rel9	4.13	1.795		
Rel10	5.18	1.888		
<i>Compatibility</i>	<i>5.4688</i>	<i>1.48924</i>	<i>0.946</i>	<i>0.824</i>
Compt1	5.74	1.693		
Compt2	5.89	1.651		
Compt3	5.13	1.603		
Compt4	5.24	1.644		
Compt5	5.34	1.684		
<i>Perceived behavioural control</i>	<i>5.3835</i>	<i>1.36019</i>	<i>0.812</i>	<i>0.728</i>
PBC1	5.22	1.594		
PBC2	5.55	1.598		
PBC3	5.39	1.581		
<i>Facilitating conditions</i>	<i>4.3333</i>	<i>1.34033</i>	<i>0.860</i>	<i>0.595</i>
FC1	4.37	1.705		
FC2	4.65	1.785		
FC3	4.27	1.900		
FC4	4.38	1.876		
FC5	4.29	1.704		
FC6	4.05	1.814		
<i>Self-efficacy</i>	<i>4.7276</i>	<i>1.33781</i>	<i>0.771</i>	<i>0.539</i>
SE1	4.27	1.656		
SE2	4.46	1.827		
SE3	5.45	1.779		
<i>Normative beliefs</i>	<i>3.8078</i>	<i>1.37889</i>	<i>0.891</i>	<i>0.563</i>
NB1	4.14	1.920		
NB2	3.26	1.693		
NB3	4.31	1.922		
NB4	4.35	1.920		
NB5	4.12	1.938		
NB6	3.71	1.797		
NB7	3.47	1.767		
NB8	3.10	1.751		
<i>Attitude</i>	<i>5.3029</i>	<i>1.60444</i>	<i>0.914</i>	<i>0.857</i>
At1	4.94	1.660		
At2	5.38	1.811		
At3	5.33	1.759		
At4	5.37	1.768		
At5	5.30	1.737		
At6	5.51	1.659		
<i>Subjective norms</i>	<i>4.3208</i>	<i>1.62690</i>	<i>0.957</i>	<i>0.828</i>
SN1	4.52	1.897		

SN2	4.45	1.862		
SN3	4.31	1.788		
SN4	5.16	1.789		
SN5	4.44	1.803		
SN6	4.17	1.773		
<i>Intention to behave</i>	<i>4.4211</i>	<i>1.36657</i>	<i>0.961</i>	<i>0.842</i>
Int1	5.56	1.741		
Int2	5.58	1.670		
Int3	5.33	1.777		
Int4	5.56	1.691		
Int5	5.08	1.890		
Int6	5.00	1.911		
<i>Awareness</i>	<i>4.6317</i>	<i>1.65610</i>	<i>0.941</i>	<i>0.850</i>
Awr1	5.02	1.694		
Awr2	4.52	1.897		
Awr3	4.51	1.779		
Awr4	4.48	1.809		

#### *Reliability measures*

Prior to hypothesis testing through multiple regression and one sample t-test, it is important to diagnose the reliability of the constructs. Cronbach alpha is the most widely used objective measure of reliability (Vehkalahti, 2000). Alpha measures refers to the extent to which the items of the same construct measure the same concept, in other words, it measures the inter-relatedness of the items representing the same construct (Tavakol and Dennick, 2011). The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale (Gliem and Gliem, 2003). According to Hair, Black, Babin, and Anderson (2010), the Cronbach alpha should be at least 0.6. The results shown in Table 2 indicate that all the variables meet the threshold required, with Alpha's values ranging from 0.771 to 0.961.

In addition, Hair *et al.* (2010) consider that the average variance extracted (AVE thereafter) measure should also be assessed for more reliable results. The authors suggest that AVE should be at least 0.5. The above results indicate that this requirement is also met, with the AVE values ranging from 0.532 to 0.857.

The collinearity diagnostics indicate that there is no multicollinearity between the explanatory variables, for instance the VIF value for all the variables does not exceed the threshold of 10, as suggested by Stevens (2002). This means that there are no high correlations between the independent variables (Meyers, Gamst and Guarino, 2006).

*Hypothesis testing*

In order to examine the willingness of the Tunisian customers to adopt Islamic banking services, a one sample t-test is conducted for the specific variable intention and its various items. By setting the test value as 4 i.e. the neutral point, the results in Table 3 show that all the items are significant at 95% confidence level, which shows that the Tunisian customers are not indifferent about adopting Islamic banking services. The mean difference further shows that the Tunisian customers are willing to adopt (shift to) Islamic banking services, indicated by the positive mean difference for all the items. Hence, hypothesis 13 is rejected, since the respondents are not indifferent with regard to the adoption of Islamic banking services.

Table 3: One sample t-test result

	Test Value = 4					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Intention	2.972	92	.004	.42115	.1397	.7026
INT1	8.635	92	.000	1.559	1.20	1.92
INT2	9.126	92	.000	1.581	1.24	1.92
INT3	7.234	92	.000	1.333	.97	1.70
INT4	8.894	92	.000	1.559	1.21	1.91
INT5	5.488	92	.000	1.075	.69	1.46
INT6	5.046	92	.000	1.000	.61	1.39

The hypothesis testing was further done through multiple regression analysis. The results indicate that uncertainty has a significant negative influence on the attitude towards Islamic banking services adoption. Thus, hypothesis 1 is supported. This is in line with the findings of Tan and Teo (2000), Teo and Pok (2003), Fisher and Chu (2009), Nor (2005), as well as Sharma and Bock (2005). This implies that the uncertain aspect of banking services is still haunting the Tunisian customers, especially the uncertainty related to the interest rate fluctuations and high degree of exposure especially during crises. Thus, the Islamic banks as well as the authorities should increase the awareness of the Tunisian customers regarding the difference between the two modes of banking.

The results also show that complexity does not have any influence on the customers' attitude towards Islamic banking services. Hence, hypothesis 2 is rejected. This is similar to the findings of Tan and Teo (2000), while it contradicts with the findings of Fisher and Chu (2009), Shih and Fang (2004), Beigina, Besheli, Soluklu and Ahmadi (2011) as well as Taylor and Todd (1995b).

On the other hand, relative advantage does not have a significant influence on attitude. Thus hypothesis 3 is rejected. This result contradicts with those of Taylor and Todd (1995b), Tan and Teo (2000), Teo and Pok (2003), Shih and Fang (2004), Nor (2005) as well as Puschelet *al.* (2010).

Similarly, compatibility has a significant positive influence on attitude, which supports hypothesis 4. This is in accordance with the findings of Tan and Teo (2000), Fisher and Chu (2009), Nor (2005), Puschelet *al.* (2010) and To *et al.* (2008). Nevertheless, it contradicts with the findings of Teo and Pok (2003), Shih and Fang (2004), Al-Majali and Nik Mat (2010) and Beiginaet *al.* (2011). Compatibility in the current study was measured based on social values, religious values, financial and banking needs, lifestyle, as well as the nature of the banking contracts and their suitability with the customers' preferences. Hence, Islamic banks are recommended to offer banking services that responds to these dimensions.

Furthermore, awareness was found to have a significant positive influence on attitude, which supports and validates hypothesis 5. This is in line with the proposition of Thambiah *et al.* (2010), which is also in line with the findings of To *et al.* (2008), Abdullah and Abdul Rahman (2007) as well as Rammal and Zurbruegg (2007).

In the same context, the findings indicate that subjective norm has a positive significant influence on the attitude towards banking services. Thus hypothesis 6 is also supported. This outcome is similar to that of Taylor and Todd (1995b) as well as Abduh (2012). It is worth noting that the referent groups that are mostly considered by the respondents are parents, peers, siblings and colleagues. This implies that the Islamic banks should focus on these groups in their marketing and promotion strategy.

Table 4: Coefficients (Attitude as dependent variable)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.132	.644		.204	.839
	Uncertainty	-.204	.075	-.173	-2.702	.009
	Complexity	.089	.078	.079	1.141	.257
	Rel_Adv	-.049	.104	-.035	-.476	.636
	Compatibility	.749	.077	.711	9.739	.000
	Sub_Norm	.151	.057	.151	2.626	.011
	Awareness	.179	.065	.178	2.746	.008

In summary, four variables are significantly influencing the attitude towards Islamic banking services in Tunisia, out of the six variables taken into account initially. These four variables explain 84% of the variation in attitude.

On the other hand, normative belief has a positive significant influence on subjective norm, which supports hypothesis 7. The former explains 57% of the variation in the latter. This is in accordance with the findings of Shih and Fang (2004), Fisher and Chu (2009), as well as Beigina *et al.* (2011). Nevertheless, when the latter merely considered TPB framework without decomposing the belief structures into various salient beliefs, no significant influence of normative belief on subjective norm was found. Mainly due to the non-decomposition of the belief structures and the non-inclusion of the other DTPB dimensions.

Table 5: Coefficients (Subjective norm as dependent variable)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.875	.360		2.430	.017
	Norm_Blf	.944	.093	.754	10.151	.000

On the same note, self-efficacy has a significant positive impact on perceived control. This means that hypothesis 8 is supported. Particularly, the former explains 38% of the variation in the latter. This is in line with the findings of Sharma and Bock (2005), Taylor and Todd (1995a), Teo and Pok (2003), Ndubisi (2004), Nor (2005), Puschel *et al.* (2010), Al-Majali and Nik Mat (2010), Beigina *et al.* (2011), and To *et al.* (2008). Nevertheless, it contradicts the findings of Tan and Teo (2000), Lin (2005). Self-efficacy was measured in terms of financial resources, basic knowledge of Islamic banking principles and practice, as well as the overall ability of the respondents to adhere to Islamic banking services. This implies that the decision to adopt Islamic banking services in Tunisia is not related to the laws, circulars, and policies governing Islamic banking facilitating its effective usage, the extent to which the political conditions in the country motivate the customers to use Islamic banking, the extent to which the government supports Islamic banking and their use, the extent to which the government is active in setting up various facilities to enable the use of Islamic banking services, and finally the extent to which the government promotes and ensures effective usage of Islamic banking services. Rather, it is dependent upon the financial resources and awareness level about Islamic banking.

Furthermore, facilitating conditions does not have a significant influence on the perceived behavioural control, which is rejecting hypothesis 9. This result is compatible with those of Tan and Teo (2000), Shih and Fang (2004), Williams (2009) and Beigina *et al.* (2011). Nevertheless, these results contradict with those of Sharma and Bock (2005), Taylor and Todd (1995b), Nor (2005), and To *et al.* (2008), while Taylor and Todd (1995a) found that technology facilitating conditions have no impact on perceived behavioural control and Pusche *et al.* (2010) found that resource facilitating conditions have no impact on perceived behavioural control.

Table 6: Coefficients (Perceived behavioural control as dependent variable)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.129	.470		4.530	.000
	Fc_Cond	.170	.093	.168	1.830	.071
	Self_Effi	.532	.093	.524	5.710	.000

On the other hand, attitude and subjective norm were found to have a positive significant influence on the intention to adopt Islamic banking services. While, perceived behavioural control has no impact on intention. Hence, hypotheses 10 and 11 were all supported, while hypothesis 12 was rejected. This is in line with the findings of Taylor and Todd (1995b), Al-Majali and Nik Mat (2010), Pusche *et al.* (2010), and Teo and Pok (2003). The two variables explain 76% of the variation in the intention to adopt Islamic banking services.

Table 7: Coefficients (Intention as dependent variable)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.543	.337		1.613	.111
	Sub_Norm	.256	.058	.304	4.406	.000
	Attitude	.589	.072	.697	8.227	.000
	Perc_Beh_Ctrl	-.064	.075	-.061	-.842	.402

## 5. conclusions

The main objective of the study was to examine the willingness of the Tunisian customers to adopt Islamic banking services and to identify the variables that may influence the customers' adoption of Islamic banking services in Tunisia based on Decomposed Theory of Planned Behaviour. The results showed that uncertainty, compatibility, awareness as well as subjective norm, have a significant impact on the attitude towards Islamic banking services in Tunisia. Likewise, normative belief was also found to have a significant influence on subjective norm,



by particular reference to the parents, siblings, peers and colleagues, as the main referent groups. In addition, self-efficacy was found to have a significant influence on perceived behavioural control, and finally attitude and subjective norm were found to have a significant impact on the intention to adopt Islamic banking services in Tunisia. On the other hand, the results have also shown that the Tunisian customers are willing to shift to Islamic banking services.

The findings of the current study have significant contributions that can be categorised under contribution to the body of knowledge, contribution to the practitioners and stakeholders, as well as the contribution to the policy makers and regulators. In terms of contribution to the body of knowledge, the study explored the prospects of the Islamic banking industry in another context, that of Tunisia, which has not yet been studied in the literature. Hence the study filled this gap in the literature. Furthermore, the study extends and tests the decomposed theory of planned behaviour in another context and another area i.e. Islamic banking services adoption.

On the other hand, the current study gives hindsight for the practitioners and stakeholders on the Tunisian customers' behaviour and attitude towards Islamic banking services, which should subsequently allow them to establish the necessary strategies to attract customers and retain the existing customers. Furthermore, this study provides great indications to the policy makers and regulators on the perception of the Tunisian banking customers, which should be taken into account in order to formulate and develop policies and regulations to ameliorate the Islamic banking industry in Tunisia.

The current study has a number of limitations that should be taken into account in the future researches in this area. Firstly, the sample size used in this study is relatively limited, hence the findings of the current study cannot be generalised to the whole Tunisian population. Secondly, the variables and dimensions used in the current study are not exhaustive, thus future studies have interest in including other variables and dimensions in order to obtain more comprehensive findings. The future studies are also recommended to extend the current framework to other settings. Finally, it is also advised that future studies utilise a more advanced statistical technique for data analysis, specifically, Structural Equation Modelling (SEM).

### **References**

Abduh, M. (2012). The analysis of depositors' withdrawal behaviour in Malaysian Islamic banks. *Unpublished PhD thesis*, Malaysia: International Islamic University Malaysia.

- Abdullah, R.F.S., & Abdul Rahman, A. (2007). Factors Influencing Knowledge of Islamic Banking Services: The Case of Malaysian Bank Managers. *Review of Islamic Economics, 11(2)*, 31-54.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behaviour and Human Decision Processes, 50*, 179-211.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- Al-Majali, M., and Nik Mat, N.K. (2010). Application of decomposed theory of planned behaviour on internet banking adoption in Jordan. *Journal of Internet Banking and Commerce, 15(2)*.
- Beiginia A. R, Besheli A. S., Suluklu M.E. and Ahmadi M. (2011). Mobile Banking Adoption based on the Decomposed Theory of Planned Behaviour. *European Journal Economics Finance and Administration Sciences, 1450-2275*.
- Caperchione, C., Duncan, M., Mummery, K., Steele, R. & Schofield, G. (2008). An examination of the mediating relationship between body mass index and the direct measures of the theory of planned behaviour on physical activity intention. *Psychology, Health and Medicine, 13(2)*, 168-179.
- Chin, W.W. (1998). Issues and opinion on structural equation modelling. *MIS Quarterly, 22(1)*, 7-16.
- Davies, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly, 13(3)*, 319-340.
- Dusuki, A.W., and Abdullah, N.I. (2007). Why do Malaysian Customers Patronise Islamic Banks? *International Journal of Bank Marketing, 25(3)*, 142-160
- Echchabi, A., & Echchabi, F. (2013). Islamic insurance in the European countries: Insights from French Muslims perspective. *WSEAS Transactions on Business and Economics, 10(3)*, 125-132.

- Edris, T. (1997). Services considered important to business customers and determinants of bankselection in Kuwait: A segmentation analysis. *International Journal of Bank Marketing*,15(4), 126-34.
- Erol, C. and El-Bdour, R. (1989).Attitudes, behaviour and patronage factors of bank customers towards Islamic banks. *International Journal of Bank Marketing*,7(6), 31-37.
- Erol, C., Kaynak, E., & El-Bdour, R. (1990). Conventional and Islamic banks: Patronage behaviour of Jordanian customers. *International Journal of Bank Marketing*, 8(4), 25-35.
- Fisher, R., & Chu, S.Z. (2009). Initial online trust formation: The role of company location and web assurance. *Managerial Auditing Journal*, 24(6), 542-563.
- Gerrard, P., & Cunningham, J. (1997). Islamic banking: A study in Singapore. *InternationalJournal of Bank Marketing*, 15(6), 204-16.
- Gliem, J.A., and Gliem, R.R. (2003). Calculating, interpreting and reporting Cronbach's Alpha reliability coefficient for likert-type scales. Midwest Research to Practice Conference in Adult, Continuing and Community Education. Ohio: Ohio State University.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010). *Multivariate data analysis, seventh edition*. Prentice Hall, Upper saddle river. N. J.
- Haron, S., Ahmad, N. and Planisek, S. (1994). Bank patronage factors of Muslim and non-Muslim customers. *International Journal of Bank Marketing*, 12(1), 32-40.
- Hegazy, I.A. (1995). An Empirical Comparative Study between Islamic and Commercial Banks' Selection Criteria in Egypt. *International Journal ofContemporary Management*, 5(3), 46-61.
- Iqbal, Z. (1997). Islamic Financial Systems. *Finance and Development*.
- Iqbal, M., Khan, T., & Ahmed, A. (1998). Challenges facing Islamic banking. *Occasional paper 2*, Jeddah: *IRTI/IDB*.
- Lin, Y.M. (2005). Understanding students' technology appropriation and learning perceptions in online learning environments. *Unpublished PhD thesis*. United States: University of Missouri-Columbia.

- Lee, J., Cerreto, F. A., & Lee, J. (2010). Theory of Planned Behavior and Teachers' Decisions Regarding Use of Educational Technology. *Educational Technology & Society*, 13(1), 152–164.
- Martens, A. (2001). La Finance Islamique: Fondements, Théorie et Réalités. *Centre de recherche et développement en économie, cahier 20-2001*, Université de Montréal.
- Metwally, M. (1996). Attitudes of Muslims towards Islamic banks in a dual-banking system. *American Journal of Islamic Finance*, 6, 11-17.
- Meyers, L.S., Gamst, G., & Guarino, A. (2006). *Applied multivariate research: Design and interpretation*. Thousand Oaks, CA: Sage Publishers.
- Naser, K., Jamal, A. and Al-Khatib, K. (1999). Islamic banking: a study of customer satisfaction and preference in Jordan. *International Journal of Bank Marketing*, 17(3), 135-50.
- Ndubisi, N.O. (2004). Factors influencing e-learning adoption intention: Examining the determinant structure of the decomposed theory of planned behaviour constructs. Paper presented at the HERDSA Conference. Miri, Sarawak, 4-7 July. Retrieved from <http://www.herdsa.org.au/conference2004/Contributions/RPapers/P057-jt.pdf>.
- 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.
- Okumus, S.H. (2005). Interest free banking in Turkey: a study of customer satisfaction and bank selection criteria. *Journal of Economic Cooperation*, 26(4), 51-86.
- Püschel, J., Mazzon, J.A., and Hernandez, J.M.C., (2010). Mobile banking: proposition of an integrated adoption intention framework. *International Journal of Bank Marketing*, 28(5), 389-409.
- Rammal, H.G. and Zurbruegg, R. (2007). Awareness Of Islamic Banking Products Among Muslims: The Case Of Australia. *Journal of Financial Services Marketing*, 12(1), 65-74.
- Rogers, E. (1983). *Diffusion of Innovations*. New York: The Free Press.

- Sharma, S and Bock, G. (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., & Fang, K. (2004). The use of a decomposed theory of planned behaviour to study Internet banking in Taiwan. *Internet Research*, 14(3), 213-223.
- Rehlander, T., & Csonka, A. (2009). *Islamic Finance Comes of Age*. Arthur D. Little, April. Retrieved at [www.adl.com](http://www.adl.com)
- AFDB (2011). *Islamic Banking and Finance in North Africa*. African Development Bank, Tunisia.
- Ayari, S. (2011). *Ennahdha Promotes an Islamic Financial System*. TunisiaLive, November. Retrieved at <http://www.tunisia-live.net/2011/11/10/ennahdato-reform-the-banking-system-and-to-give-tunisia-a-regional-active-role/>
- El Oudi, O. (2011a). *Tunisia Aspires To Become A Hub For Islamic Finance*. Business Life, August. Retrieved at <http://www.cibafi.org/Images/Attaches/201181825226431.pdf>
- El Oudi, O. (2011b). Tunisie: La finance islamique pour relancer l'économie!! WMC Finance, December. Retrieved at <http://finance.webmanagercenter.com/article-113782-tunisie-la-finance-islamique-pour-relancer-l-economie>
- Leaders (2012). *Tunisie: Loi de Finances 2012. Commentaire de la loi de finances 2012*. Leaders, January. Retrieved at <http://www.leaders.com.tn/article/commentaire-de-la-loi-de-finances-2012?id=7473>
- Stevens, J. (2002). *Applied Multivariate Statistics for the Social Sciences*. New York:Routledge.
- Suki, N.M. (2010). An empirical study of factors affecting the internet banking adoption among Malaysian consumers. *Journal of Internet Banking and Commerce*, 15(2), 1-11.
- Tan, M., & Teo, T.S.H. (2000). Factors Influencing the Adoption of Internet Banking. *Journal of the Association for Information Systems*, 1(5), 1-44.
- Tavakol, M., and Dennick, R. (2011). Making sense of Cronbach's Alpha. *International Journal of Medical Education*, 2, 53-55.

- Taylor, S., & Todd, P. (1995a). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144-176.
- Taylor, S., & Todd, P. (1995b). Decomposition and crossover effects in the theory of planned behaviour: A study of consumer adoption intentions. *International Journal of Research in Marketing*, 12,137-155.
- Teo, T. S. H., and Pok, S. H. (2003). Adoption of WAP-enabled mobile phones among Internet users. *Omega - The International Journal of Management Science*, 31(6), 483-498.
- Thambiah, S., Eze, U.C., Tan, K.S., Nathan, R.J., & Lai, K.P. (2010). Conceptual framework for the adoption of Islamic retail banking services in Malaysia. *Journal of Electronic Banking Systems*, Volume 2010, Article ID 750059, available online at <http://www.ibimapublishing.com/journals/JEBS/2010/750059/a750059.html>.
- To, P.L., Liao, C., Chiang, C.J., Shih, M.L., & Chang, C.Y. (2008). An empirical investigation of the factors affecting the adoption of instant messaging in organisations. *Computer Standards & Interfaces*, 30, 148-156.
- Vehkalahti, K. (2000). *Reliability of measurement scales*. Helsinki:The Finnish Statistical Society.
- Visser, H. (2009). *Islamic finance principles and practice*. UK: Edward Elgar Publishing Limited.
- Williams, P.W. (2009). Assessing mobile learning effectiveness and acceptance, Unpublished PhD thesis. Washington: George Washington University.
- Zaher, T.S., & Hassan, M.K. (2001). A comparative literature survey of Islamic finance and banking. *Financial Markets, Institutions and Instruments*, 10(4), 155-199.