

# Internet Banking Acceptance in the Context of Developing Countries: An Extension of the Technology Acceptance Model

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## Abstract

Advances in electronic banking technology have created new ways of handling banking transactions, especially via the online banking channel. In Saudi Arabia, internet banking is still in its early stages and it is not utilised as a considerable savings tool in operating costs for banks and in improving customer relationships. The intent of this research is to identify the factors affecting the adoption of Internet banking by customers in Saudi Arabia in the light of the technology acceptance model (TAM). The model was tested with a survey sample (n = 202). The findings of the study indicate that the security, quality of the Internet connection and awareness about Internet banking and its benefits have significant effects on the perceived usefulness (PU) and perceived ease of use (PEOU) of Internet banking acceptance. It was revealed that the effects of education and trust also have significant impact on the attitude towards the acceptance Internet banking. Overall, the results of this study are vital to both researchers and practitioners and it allowed us to understand TAMs validity in technology acceptance research.

**Keywords:** Internet banking, technology acceptance model (TAM), Saudi Arabia

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## 1. Introduction

The twenty-first century is characterised by the use of information and communication technology which has revolutionised our working and living patterns. A new era of banking, termed “e-banking” or “Internet banking” has emerged, where customers can perform their financial transactions electronically over the internet through their personal computer or laptop at a time convenient to them, without having to be restricted to regular branch operating hours. Furthermore, customer is expected to perform at least one of the following transactions online, namely viewing account balance and transaction histories, paying bills , transferring funds between accounts, ordering cheques, managing investments and stock trading (Alsajjan and Dennis,2006).

Internet banking is defined as “*the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit-taking, lending, account*

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*management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money.*" (Basel Committee Report on Banking Supervision, 1998, p.3).

According to Khalfan, et al., (2006) reasons for e-banking infrastructure investment include the promise of transaction cost reduction by limiting overheads associated with bank staff and bank branch costs and to provide better services to customers who increasingly desire 24 hour banking. In deed, Almogbil (2005) note that a common reason for bank adoption of e-banking is to maintain the bank's competitive position and image.

Factors affecting consumer acceptance and adoption of Internet banking have been investigated in many countries such as the US ( e.g. Lassar et al., 2005; *Kolodinsky et al., 2004*), Europe (see Littler and Melanthiou, 2006; Pikkarainen et al, 2004; Howcroft et al., 2002; Karjaluo et al., 2002; Daniel, 1999), Australasia (e.g. Lichtenstein and Williamson, 2006; Sathye 1999), and Asia (see Yiu et al., 2007; *Chan and Lu, 2004*; Suh and Han, 2002).

On the other hand, there are limited researches that capture the factors that have influenced customers' behaviour to adopt or use Internet banking in Saudi Arabia. A country that is found to have a strong religious belief which uses Shari'ah (Islamic Law) as its base constitution and population from many countries around the world. The latter will add an interesting diminution to the study and provide a unique insight into the nature and success factors that influence the customers' tendency to use Internet banking as a main banking Channel in such a mix culture. Moreover, as Saudi Arabia is now a member of the WTO, the findings from this study will help banks in Saudi Arabia in developing strategic plans to promote products or services and design easy and useful systems.

This paper is divided into six parts: the first and second parts contain the introduction and the literature review on theories that can be used to explain Internet banking and information systems acceptance. Moreover, previous research on the critical factors which may have significant impact on the acceptance of Internet banking will be discussed. The Third part presents the research methodology used in this work. The fourth part comprises of the results and analysis. In this part the data is analysed using partial least square analysis (PLS). The final two parts (five and six) consists of the discussion, conclusions and practical implications of the research.

## **2. Literature Review**

Organisations continue to substantially invest in IT hoping that it will improve their business process and increase their productivity. However, for technologies to improve productivity, they must be accepted by intended users (Venkatesh et al., 2003). Venkatesh et al., (2003) note that research in understanding user acceptance of new technology has resulted in several theoretical models with roots in information systems, psychology and sociology.

The current study proposes the application of the technology acceptance model (TAM) to capture factors which have significant impact on the acceptance of Internet banking. TAM is one of the most utilised models for studying IS acceptance (Al-Gahtani, 2001; Venkatesh and Davis, 1996; Davis *et al.*, 1989).

TAM involves two primary predictors for the potential adopter — perceived usefulness (PU) and perceived ease of use (PEOU) of technology as the main determinants of the attitudes toward a new technology. PU is the degree to which a person believes that using a particular system would enhance his or her job performance; while PEOU is the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). These two beliefs create a favourable behavioural intention toward using the IT that consequently affects its self-reported use (Davis *et al.*, 1989). TAM's theoretical background is based on TRA and it was specially tailored for understanding user acceptance of information system model. TRA seeks to explain an individual's action which is determined by his/her Behavioural Intention to perform it (Fishbein and Ajzen, 1975). Intention is considered a direct determinant of behaviour in the TRA that is influenced by the attitude (attitude toward performing behaviour), and subjective norms (social pressures to perform behaviour). TRA has been tested and used extensively as well as its extension, the theory of planned behaviour (TPB) (Ajzen, 1991).

TAM has been the instrument in many empirical studies and it has been found that its ability to explain attitude towards using an information system is better than TRA and TPB (Mathieson, 1991). King and He (2006) conducted a statistical meta-analysis of TAM as applied in various fields using 88 published studies and the results showed TAM to be a powerful, highly reliable, valid and robust predictive model that may be used in a variety of contexts. Wang, et. al, (2003) confirm the validity of TAM and support its use with different populations of users and different software choices.

Many researchers have suggested that external variables may be added to TAM as a way of improving the model's predictive power (AlSukkar, 2005; Davis et al., 1989; Davis, 1993). In particular, AlSukkar (2005) proposed an extended TAM framework to model behavioural intentions in developing countries so that it may have greater applicability.

## **2.2 Factors influencing the acceptance of Internet banking**

Many factors are seen to be influencing the acceptance of Internet banking and it is important to take these factors into account when studying customer attitudes towards Internet banking.

### **2.2.1 Awareness of Service and its benefits**

Pikkarainen (2004), has reported that the amount of information a customer has about Internet banking and its benefit may have a critical impact on the adoption of Internet banking. Moreover, Sathye (1999) note that low awareness of Internet banking is a critical factor in causing customers not to adopt internet banking. In addition Howcroft et al. (2002) find that lack of awareness of Internet banking services and its benefits are found to be reasons for consumers' reluctance to use Internet banking services. The authors propose the following hypothesis:

*H1: Awareness of services and its benefits has a positive impact on customer's perceived usefulness.*

### **2.2.2 Security**

Security and reliability of transactions over the internet is a burning issue and it is an important factor that customers consider before adopting Internet banking. Some customers avoid electronic banking as they perceive it as being easily susceptible to fraud. This perception can damage consumers' confidence of the online system as a whole. According to a study conducted by Sathye (1999), 73% avoided the adoption online, banking because they are concerned about safety and security of transactions over the internet. Moreover, Sathye (1999) found that consumers will not be ready to change from present familiar ways of banking to Internet banking unless their specific need is satisfied.

*H2: Security will positively influence the perceived ease of use of Internet banking.*

### **2.2.3 Quality of the Internet connection**

Quality of the Internet connection is seen to be an essential component for any Internet-based application. Sathye (1999) used Internet access as one of the factors affecting the adoption of Internet banking. Without a proper Internet connection the use of Internet banking is not possible. Pikkarainen et. al. (2004) identifies the importance of a decent Internet connection and its quality in adopting Internet banking and he conclude that without a proper Internet connection, the use of Internet banking is not possible. In the case of Saudi Arabia, the Internet was introduced in 1998 and is controlled by the Saudi government and fire walls were created to block users from accessing material on the Internet that violates religion or encroaches on the Saudi culture (e.g. pornographic sites).

*H3: Quality of the Internet connection has a positive impact on customer's perceived ease of use.*

### **2.2.3 Trust**

Customer attitudes towards Internet banking are driven by trust, which plays an important role in increasing usability within the internet banking environment. The issue of trust is more important in online as opposed to offline banking because transactions of this nature contain sensitive information and parties involved in the financial transaction are concerned about access to critical files and information transferred via the Internet (Alsajjan and Dennis, 2006; Suh and Han, 2002).

*H4: Customer's trust has a positive impact on his/her attitude towards using Internet banking.*

### **2.2.5 Demographic characteristics**

Many studies have investigated the effects of the customers' demographic characteristics such as age, gender and educational level on their attitude towards different banking technologies and individual acceptance of new technology. Furthermore , Lee and Lee's(2001) recent study shows that adopters of Internet banking tend to be more highly educated, more wealthy and younger with good knowledge of computers and especially familiarity with internet usage.

### **2.2.5.1 Age**

The technology acceptance literature proposes that there is a strong relationship between age and the acceptance of new technologies. Older customers are found to have negative attitudes towards technology and innovations. On the other hand younger adults are seen to be more interested in using new technologies, like the Internet to conduct activities such as looking for new products and product information to compare and evaluate their options. (Czaja and Sharit, 1998; Czaja *et al.*, 2001; Lu *et al.*, 2003).

Wang *et al.*, (2003) found that age has a significant influence on user acceptance of Internet banking. Moreover, Alagheband (2006) asserts that young individuals are more likely to adopt Internet banking. Generally, Harrison and Rainer, 1992 suggest that there is a strong relationship between age and the acceptance of innovation where he found that older consumers are found to hold more negative attitudes towards new technologies.

*H 5: Age has a significant impact on customer's attitude towards using Internet banking. Young customers are more likely to adopt Internet banking.*

### **2.2.5.2 Financial Income**

A final demographic factor of interest is income. Income has been shown to potentially exert a strong effect on the adoption and diffusion of technology. Older individuals between 26 and 45 are over-represented in categories of higher income, higher occupational positions, and higher educational qualifications (Venkatesh and Morris, 2000). According to a European survey conducted in 2002, adult decision makers with a personal annual income of 77, 240 USD are rapidly embracing new technology, with 26 per cent using a WAP (wireless application protocol) phone. (Crawford, 2002).

*H 6: Income has a significant impact on customer's attitude towards using Internet banking.*

### **2.2.5.3 Gender**

When it comes to gender, studies have found that there is a difference between the males and females in using various types of technology (Burke, 2002; Li *et al.*, 1999). Venkatesh and Morris, (2000), investigated gender differences in the overlooked context of individual adoption and sustained usage of technology in the workplace. They found gender an important determinant of short-term usage, and can be used to predict sustained usage behaviour in individual adoption and continued usage of technology in work places.

*H 7: Gender has a significant impact on customer's attitude towards using Internet banking. Males are more likely to adopt Internet banking.*

### **2.2.5.3 Education Level**

Education also plays a significant role with regards to attitude toward technology use. Higher educated customers such as university graduates are more comfortable in using technology, like the internet or Internet banking. A reason for this is that education is often positively correlated with an individual's

level of Internet literacy (Burke, 2002).

*H8: Education has a positive impact on customer's attitude towards using Internet banking.*

### **2.2.6 Internal TAM Variables and Hypotheses**

A wide range of research over the past decade provides evidence of the significant effect of perceived ease of use on usage intention in a way or other through its effect on perceived usefulness (Davis et al., 1989; Venkatesh and Morris, 2000; Venkatesh et al., 2003). Moreover, extensive research in information system context provides evidence of the significant effect of perceived usefulness on attitude towards usage (Davis et al., 1989; Jackson et al., 1997; Venkatesh and Morris, 2000; Venkatesh et al., 2003). Finally, attitude towards usage is found to impact the intention to use Internet banking context (Tan and Thoen, 2000).

*H9: Customer's perceived ease of use has a significant impact on his/her perceived usefulness of Internet banking.*

*H10: Customer's perceived usefulness has a positive impact on his/her attitude towards using Internet banking.*

*H11: Customer's perceived ease of use has a positive impact on his/her attitude towards using Internet banking.*

*H 12: Customer's attitude towards using Internet banking has a significant impact on his/her intention to use it.*

### **3. Research Methodology**

Drawing upon the earlier discussion based on the theoretical background and in order to study the determinants of customer attitudes towards Internet banking acceptance in Saudi Arabia, extended TAM was used taking into account the effect of a few additional important control variables (e.g. the quality of Internet connection, security, awareness of Internet banking and its benefits, self-efficacy, trust, resistance to change and demographic characteristic). The extended TAM variables used in this study is illustrated in Figure 1.

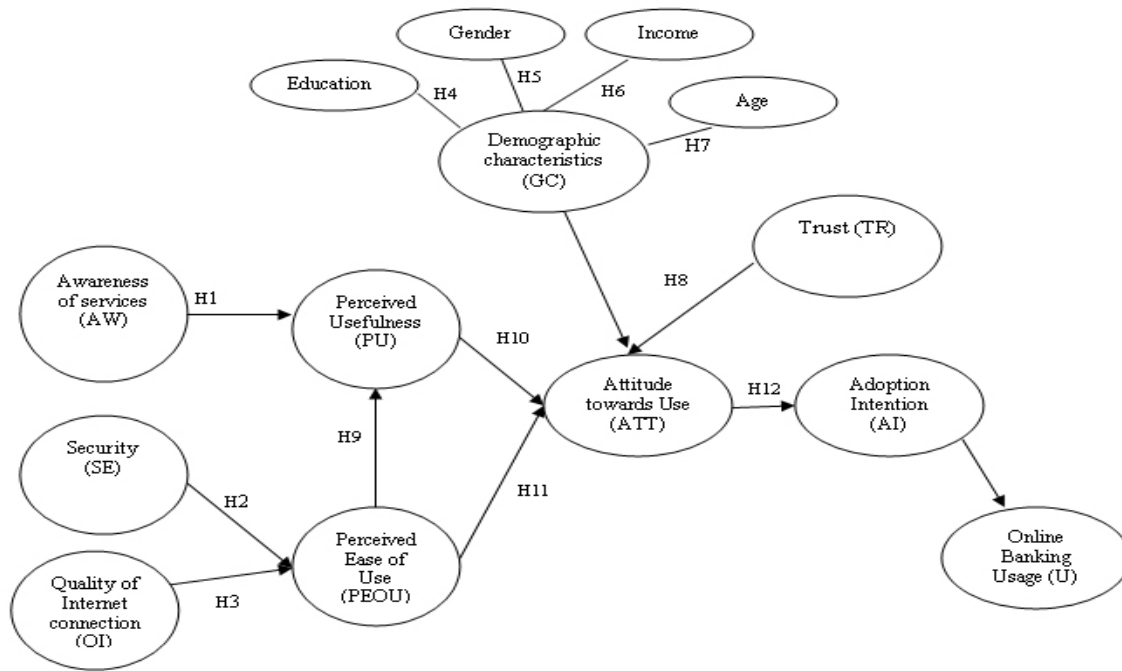


Figure 1. Research Model

### 3.1 Survey administration and measurement development

A survey technique was used to collect data and a sample of 400 people was randomly chosen from the Saudi community. Two hundred and two usable responses were collected, yielding a response rate of 50.5 percent. To ensure the validity and reliability of the questionnaire, a three-stage validation was conducted. First, whenever possible, items selected for the constructs were mainly adapted from prior studies with minor changes to fit Internet banking context. Second, the survey was pretested by three business professors with expertise in survey research, IS, and banking to identify any gaps or inconsistencies. Third, a pre-test of the questionnaire was administered to a sample of 20 bank customers randomly chosen in order to correct any issues related to language and response options. The researchers thus managed to make the appropriate changes in the survey questions before the distribution and administration process. Cronbach's alpha ( $\alpha$ ) values for all question items from this pre-test were above 0.80, suggesting adequate reliability of the questionnaire (Nunnally, 1978). Moreover, a seven-point likert scale ranging from (1) 'strongly disagree' to (7) 'strongly agree' were used to assess responses.

The final version of the questionnaire items used to measure each construct is presented in appendix A.

### 3.2 Respondent's profile

44% of the respondents were male and the largest proportion (35%) of respondents by age group, were those in the 26-35 years old category, followed by those in the 36-45 year category (29%). Slightly more than a fifth (23%) of the respondents were between 18-25 years old. 22% of the respondents indicated

Internet banking as their preferred method for performing banking transactions and only 9% of the respondents visited the bank to conduct their banking transactions. ATM usage prevailed as the main means of carrying out banking transactions, followed by the Internet and telephone banking respectively. The survey respondents were generally well educated with over 25% holding an advanced degree and 47% having a 4-year first degree. The results indicate that the largest proportion (33%) of respondents had advanced computer literacy and (31%) have intermediate computer literacy. Only a tiny proportion claimed to have no or little computer ability.

#### **4. Data analysis and Results**

Partial Least Squares (PLS), an implementation of structural equation modeling (SEM) was used to test the model and analyse the factors that affect customers attitude towards Internet banking acceptance. Moreover, this approach was chosen because of its ability to test causal relationships between constructs with multiple measurement items (Jöreskog and Sörbom, 1993). The test of the measurement model or the psychometric properties includes the estimation of internal consistency reliability and the convergent and discriminate validity of the instrument items. All reliability measures were well above the recommended level of 0.70 as an indicator for adequate internal consistency (Hair et al, 1995; Nunnally, 1978). The constructs also illustrated satisfactory convergent and discriminate validity. As suggested by Fornell and Larcker (1981), convergent validity is adequate when constructs have an Average Variance Extracted (AVE) of at least 0.5. Also, convergent validity can be examined when items loading is well above 0.5 (>0.5) on their associated factors as an indicator of adequate reliability (Hair et al., 1992). Table 2 lists the psychometric properties of the constructs. Moreover, *table 3* illustrates the discriminant validity of constructs, with correlation among constructs and the square root of average variance extracted (AVE) on the diagonal. All indicators load more highly on their own constructs than on other constructs. All these results point to the convergent and discriminate validity of our instrument items.

**Table 2**

**Psychometric properties of the constructs**

Constructs	Items	Loading	Composite reliability	Cronbachs alpha ( $\alpha$ )	Average Variance Extracted (AVE)
Quality of Internet Connection (QI)	QI 1	0.714	0.908	0.871	0.665
	QI 2	0.886			
	QI 3	0.868			
	QI 4	0.768			
	QI 5	0.829			
Awareness of services and its benefits (AW)	AW 1	0.913	0.835	0.767	0.658
	AW 2	0.910			
	AW 3	0.839			
	AW 4	0.519			
Security (SE)	SC 1	0.773	0.807	0.868	0.517
	SC 2	0.551			
	SC 3	0.816			
	SC 4	0.708			
Perceived usefulness (PU)	PU 1	0.840	0.926	0.890	0.758
	PU 2	0.909			
	PU 3	0.858			
	PU 4	0.875			
Perceived Ease of use (PEOU)	PEOU1	0.818	0.914	0.882	0.681
	PEOU 2	0.869			
	PEOU 3	0.851			
	PEOU 4	0.782			
	PEOU 5	0.805			
Attitude towards use (ATT)	ATT 1	0.831	0.874	0.852	0.637
	ATT 2	0.882			
	ATT 3	0.638			
	ATT 4	0.822			
Behavioural Intention to use (AI)	AI 1	0.919	0.927	0.857	0.809
	AI 2	0.925			
	AI 3	0.853			
Trust (TR)	TR1	0.773	0.848	0.858	0.533
	TR 2	0.551			
	TR3	0.816			
	TR 4	0.708			
	TR 5	0.773			

**Table 3**

**Discriminant Validity of Constructs \***

Construct	QI	Aw	PU	PEOU	ATT	AI	SE	TR
<b>QI</b>	<b>0.815</b>							
<b>Aw</b>	0.510	<b>0.811</b>						
<b>PU</b>	0.573	0.403	<b>0.870</b>					
<b>PEOU</b>	0.467	0.467	0.765	<b>0.825</b>				
<b>ATT</b>	0.552	0.429	0.797	0.724	<b>0.798</b>			
<b>AI</b>	0.525	0.391	0.778	0.727	0.779	<b>0.899</b>		
<b>SE</b>	0.564	0.504	0.560	0.558	0.569	0.582	<b>0.719</b>	
<b>TR</b>	0.619	0.474	0.625	0.687	0.642	0.666	0.661	<b>0.799</b>

\* Diagonal elements (in bold) are the square root of average variance extracted (AVE).

## 4.2 Measurement model analysis

Both, the  $R^2$  and the path coefficients indicate how well the model is performing.  $R^2$  shows the predictive power of the model, and the values should be interpreted in the same way as  $R^2$  in a regression analysis. The path coefficients should be significant and consistent with expectations (Chwelos et. al., 2001). The PLS results are illustrated in figure 2 and summarised results for the hypothesis tests are shown in table 4.

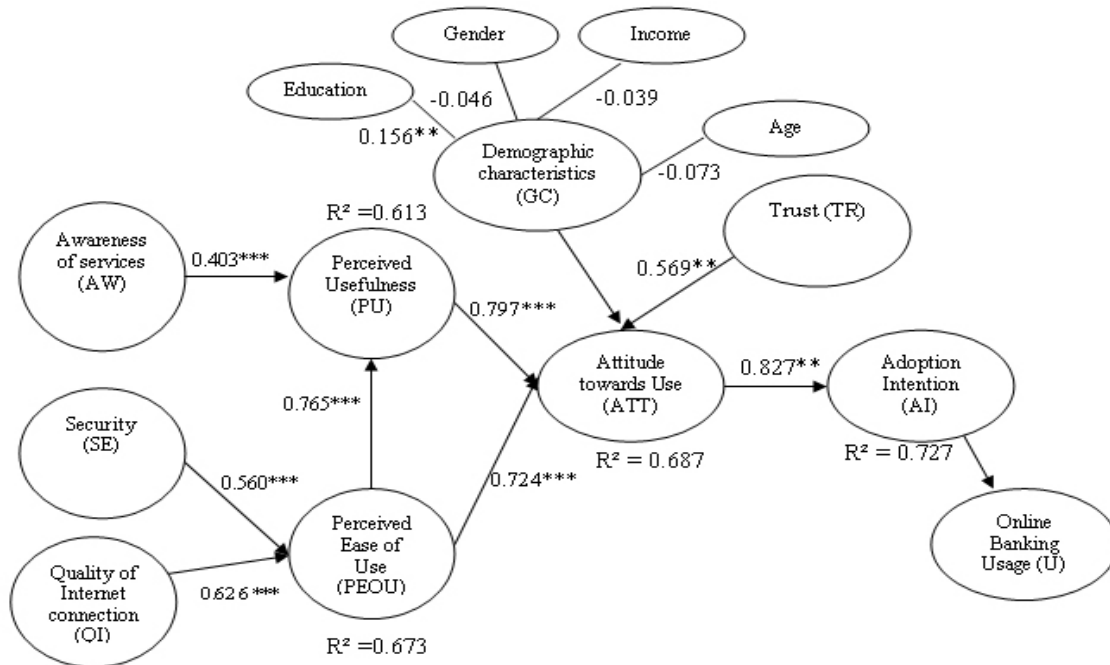


Figure 2. Results of the structural model

**Table 4**

Summarized results for the research path tests

Research path	$R^2$	Path coefficient ( $\beta$ )	P-Value
AW → PU	0.163	0.403	0.000 ***
SE → PEOU	0.314	0.560	0.000 ***
QI → PEOU	0.391	0.626	0.000 ***
Education → ATT	0.024	0.156	0.02 **
Gender → ATT	0.002	-0.046	0.518
Income → ATT	0.002	-0.039	0.578
Age → ATT	0.005	-0.073	0.298
TR → ATT	0.324	0.569	0.000 ***
PEOU → PU	0.585	0.765	0.000 ***
PU → ATT	0.636	0.797	0.000 ***
PEOU → ATT	0.524	0.724	0.000 ***
ATT → AI	0.684	0.827	0.000 ***

\*\*\*  $p < 0.0001$

\*\*  $p < 0.05$

It was found that awareness of Internet banking services and its benefits explains 61% of the variance in perceived usefulness (PU). The paths had positive effect, with path coefficient of 0.403. Meaning, *hypotheses 1* was supported. Security and quality of Internet connection did have significant effects on Perceived Ease of Use (PEOU) and together explain 67% of the variance. These two factors had positive path coefficients of 0.560 and 0.626 meaning that *hypotheses 2* and *3* were also supported.

Perceived ease of use (PEOU) and perceived usefulness (PU) influenced customer attitudes towards using Internet banking, supporting *hypotheses 10* and *11*. These factors had positive path coefficients 0.724 and 0.797 respectively and along with trust, age, gender, education and income, explained 69% of the variance for the Attitude towards Internet banking use. As suggested by *hypotheses 4* and *8* trust and education contributed to influencing customer attitudes towards using Internet banking, with positive path coefficients 0.569 and 0.156 respectively.

Surprisingly, gender, income and age had no effect on attitudes towards use, as shown by the three non-significant and negative paths meaning that *Hypotheses 5, 6* and *7* were not supported. Moreover, the study results provide strong support for hypothesis 9, which posited that perceived ease of use has a positive impact on perceived usefulness. Attitudes towards (ATT) use explain 73% of the variance in adoption intention (AI) with path coefficients of 0.827. As a result, hypothesis 12 was also supported.

## **5. Discussion of findings**

The study has attempted to describe the Internet banking phenomenon primarily by analysing the attitudes and behaviour of Saudi consumers in the context of TAM. The security, quality of the Internet connection, awareness about Internet banking and its benefits, trust, attitudinal, and behavioral characteristics of Internet banking users and non-users were investigated. Moreover, descriptive statistics on demographic variables were calculated for all participants in this study. The relationship of customer's demographic characteristics (such as age, gender and income) was not confirmed but significant influences have been found relating to level of education. Moreover, perceived ease of use and perceived usefulness which are the internal components of the TAM model were confirmed as critical and highly significant factors to encourage customers to accept and adopt such a technology.

Over half of the sample had advanced computer literacy and only 3 percent of the respondents did not use Internet. The implication of such findings is, nearly all respondents indicated Internet usage in various settings, suggesting a population mostly versed and ready to engaging in Internet banking. We also found that most of the respondents never received information about Internet banking from the bank and the item loading for this particular construct scored the lowest loading (0.519) among other items (see *Table 2*). The implication is that low awareness of Internet banking is a critical factor in causing customers not to adopt or use Internet banking and Saudi commercial banks willing to increase Internet banking utilisation should emphasise the benefits and advantages afforded by internet banking (reliability, convenience, unrestricted by traditional time and space) to increase perceived usefulness of this

additional services. Moreover, this will result in the widespread promotion of the services to a wider audience and educate potential customers about the benefits of Internet banking.

If Internet banking in Saudi Arabia is to become an increasing feature available to customers, the findings demonstrate a population mostly versed and ready for Internet banking.

## **6. Concluding Remarks**

As more and more banking and financial institutions implement Internet banking services, it is of paramount important for these institutions to identify factors that influence customer attitudes to adoption and use these services. The primary objective of the study was to study customer acceptance of Internet banking in Saudi Arabia in light of the technology acceptance model (TAM). Few additional important control variables developed on the base of Internet banking acceptance literature in one hand and derived from consultation with IS experts on the other hand.

The model used in this study proposed that Internet banking acceptance can be modelled in light of TAM variables (PU, PEOU, attitude towards Use ) and other controlling variables namely; the quality of Internet connection, awareness of Internet banking and its benefits, Security, trust and demographic characteristic. This study represents a contribution to the existing literature in which it makes a contribution to Internet banking literature towards highlighting on the factors that seem to affect Internet banking acceptance. Moreover, the study contributed in validating previous TAM results from different contexts and shows the applicability of a uniquely extended TAM in predicting the factors that influence the Saudi commercial banks' customers to accept Internet banking.

This is consistent with many banking studies conducted during the past years which find that TAM is a powerful, highly reliable, valid and robust predictive model that may be used in a variety of contexts (Alagheband, 2006; King and He, 2006; Pituch and Lee, 2006; AlSukkar and Hassan,2005; AlSukkar,2005; Lai and Li ,2005; Pikkarainen et al., 2004; Wang et al.,2003; Yousafzai et al.,2003; Eastin, 2002; Agarwal and Karahanna, 2000; Venkatesh and Davis, 2000; Sathye,1999).

As Saudi Arabia is now a member of the WTO, this will open the window to further research opportunities. One is to discuss the drivers, development challenges, and expectations of Internet banking from the perspectives of general and IT managers in the Saudi commercial banks. Also the study on acceptance of Internet banking in Saudi Arabia can be expanded to business or corporate customers. Comparisons can then be drawn between individual customers (personal Internet banking) and corporate or business customers (online business baking) in terms of the factors influencing their adoption decision, the criteria for selecting an Internet banking service and the types of products and services perceived to be useful.

Last but not least, further research can expand TAM model to include other variables such as customer loyalty to Internet banking and perceived risk to test the applicability of these factors in similar or

different disciplines such as mobile banking at various financial institutions in Gulf countries (GCC) and other developing countries, to determine if comparable results are achieved.

Finally a possible limitation of this study concerns that information about Internet banking and its use in Saudi Arabia is still in its infancy stage at the time of the study. Therefore, information and literature available on the subject came mainly from other countries such as US, UK, Europe and Asian countries and such literature may not accurately describe the situation in Saudi Arabia with regards to cultural infrastructure differences.

## **Appendix A: Survey questionnaire**

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### **Security (SE)**

- SC 1 The security policies of Internet banking are available to customers
- SC 2 The security of Internet banking is important.
- SC 3 I would feel secure sending sensitive information over the internet
- SC 4 Using internet to do money transaction is secure

### **Awareness of services and its benefits (AW)**

- Aw 1 I receive enough information about Internet banking services.
- Aw 2 I receive enough information about the benefits of Internet banking.
- Aw 3 I receive enough information of using Internet banking.
- Aw 4 I never received information about Internet banking from the bank.

### **Quality of Internet Connection (QI)**

- QI 1 My access to the Internet is easy.
- QI 2 The Internet enables to handle my online financial transactions accurately.
- QI 3 Using the Internet for handling online financial transactions is efficient.
- QI 4 The Internet enables customers to access the bank's website 7/24.
- QI 5 The Internet guarantees that all transactions to the bank have been completed.

### **Trust (TR)**

- TR1 The Internet banking site is trustworthy.
- TR 2 I trust in the benefits of the decisions of the Internet banking site
- TR 3 The Internet banking site keeps its promises and commitments.
- TR 4 The Internet banking site keeps customers' best interest in mind
- TR 5 I trust my bank's Internet banking site

### **Perceived usefulness (PU)**

- PU 1 Internet banking enables me to accomplish banking activities more quickly
- PU 2 Internet banking enables me to improve performance of utilising banking services
- PU 3 Internet banking enables me to accomplish more banking activities
- PU 4 Internet banking gives me greater control over financial banking activities

### **Perceived Ease of use (PEOU)**

- PEOU 1 Interaction with Internet banking site is clear and understandable.
- PEOU 2 It is easy to do what I want to do using Internet banking.
- PEOU 3 Learning to use Internet banking will be or has been easy.
- PEOU 4 I expect to become or I am already skilled at using Internet banking.
- PEOU 5 Overall, I expect Internet banking will be easy for me to use.

### **Behavioural Intention to use (AI)**

- AI 1 I will use Internet banking on regular basis in the future.
- AI 2 I expect my use of Internet banking for handling my financial transactions to continue in the future
- AI 3 I will strongly recommend others to use Internet banking

### **Attitude towards using (ATT)**

- ATT 1 Internet banking development will support customers
- ATT 2 I will encourage the use of Internet banking among my colleagues
- ATT 3 I am not satisfied with using traditional banking services when carrying out financial activities.
- ATT 4 Overall, the attitude towards Internet banking usage is positive

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