Factors Affecting Continued Usage of Internet Banking Among Egyptian Customers

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Abstract

This research aims to understand and explain customers continued intention to use internet banking in Egypt. The research starts with reviewing well-known theories of behavioural intentions such as the theory of reasoned action, the theory of planned behaviour, the theory of decomposed planned behaviour, the technology acceptance model ,and the diffusion of innovations theory as well as the use of these theories in self service technologies such as internet banking . By using a sample of users of internet banking services, perceived ease-of-use was found to be the strongest predictor of intentions to continued usage of internet banking services. Demographic variables had no significant effect on continued usage of internet banking services. Finally, perceived risk had no relationship with customer continued intention to use the service. The research concludes with study limitations and suggestions for future research.

Keywords: Technology acceptance model, Diffusion of innovations, Self service technology, Internet banking

1. Introduction

Traditionally, consumer behaviour was concerned with examining the different phases of consumer decision making starting from need recognition to information search to evaluation of alternatives, purchase and finally post consumption behaviour (Zeithmal and Bitner, 2003). Many theories have examined post consumption behaviour since consumer evaluation after consumption will determine his intentions to buy the product in the future .Two main perspectives appear in this respect .The diffusion of Innovations (DOI) perspective(Rogers,1995)investigated determinants of information system adoption and usage, such as: innovation characteristics, individual adopter characteristics, and information sources and communication. The second perspective includes other theories that examined the behavioural intentions as consequences of consumer psychological processes such as attitudes, social norms and perceived behavioural control. These theories include the theory of reasoned action (Fishbein and Ajzen, 1975; 1980), the theory of planned behaviour (Ajzen, 1991), the decomposed theory of planned behaviour (Taylor and Todd,

1995), and finally, the technology acceptance model (Davis, 1989; Davis, Bagozzi and Warshaw, 1989; Mathieson, 1991).

Recently, the applicability of these models to self service technologies was examined. Self -service technologies (SST) allow customers to perform entire services on their own, without assistance from service firm employees (Meuter and Bitner, 1998).Most of transactions performed over the internet represent a form of SST. Using SST provides firms with an alternative channel of distribution that is less costly and more flexible .It allows firms more customization, recovery from service failure, and spontaneously delighting customers (Bitner, Brown and Meuter, 2000) .With the tremendous investment in both time and money to design, implement, and manage these SSTs, it is critical for firms to understand the consumer decision of whether or not to use an SST (Curran, Meuter and Suprenant, 2003). Such decision involves many complexities that do not exist in traditional consumer decision making processes.

The purpose of this research is to examine the effect of, attitudinal, social and demographic factors on the continued usage of one type of self service technologies which is internet banking. The next sections will cover behavioural intentions theories, an assessment of behavioural intentions theories, the applicability of these theories to SSTs, the research methodology, research findings and finally academic and managerial implications and suggestions for future research.

2. Behavioural Intention Theories:

Two streams appear in the literature when studying behavioural intentions. The diffusion of innovations perspective and models examining the determinants of intention.

The diffusion of Innovations (DOI) perspective: This perspective introduced by Rogers (1995)who investigated a variety of factors which are considered to be determinants of information system adoption and usage, such as: innovation characteristics, individual adopter characteristics, and information sources and communication. According to Diffusion of Innovation Theory (DOI) potential adopters evaluate an innovation based on innovation attributes such as relative advantage, compatibility, complexity (ease of use), trialability, and observability. All the attributes were found to be positively related to its rate of adoption, while the perceived complexity of

an innovation was negatively related to its rate of adoption (Rogers, 1995, p. 16).

Diffusion of innovation theory was supported by many empirical studies (e.g., Alagheband, 2006; Black, Lockett, Winklhofer and Ennew, 2001; Howcroft, Hamilton and Hewer, 2002; Kolodinsky and Hogarth, 2001; and Kolodinsky, Hogarth and Hilgert, 2004).

The second stream concentrates on the identification of the determinants of intention such as: Attitudes (A), Social Norms (SN), and Perceived behavior control (PBC) .That stream included the theory of reasoned action, the theory of planned behavior, the decomposed theory of planned behavior and technology acceptance model.

The theory of reasoned action (TRA): This theory was proposed by Fishbein and Ajzen (1975; 1980). According to the theory, a person's intention is a function of two basic determinants, one is personal in nature (attitudes) and the other reflecting social influence (social or subjective norms). Many researchers supported the Fishbone and Ajzen behavioural intention model (e.g., Bagozzi, Baumgartner and Yi, 1989; and Davis et al., 1989). Others also supported the attitudinal dependence on social influence (Oliver and Bearden, 1983). The model was also applicable across cultures (e.g., Malhotra and McCort, 2001).

The theory of planned behaviour (TPB): This theory added perceived behavioural control to the antecedents identified by the theory of reasoned action (Ajzen, 1991). Thus, behavioural intention is formed by one's attitude, subjective norm, and perceived behavioural control (PBC), which reflects perceptions of internal and external constraints on behaviour. By including PBC, the theory model accounted for more variance in intention (44.50%) than TRA model (37.27%) (Ajzen and Madden, 1986; and Hagger, Chatzisarantis and Biddle, 2002). Empirically, the effect of behavioural control was supported (Liao, Shao, Wang and Chen, 1999).

The exact nature of the relationships between attitudes, subjective norms, and perceived behavioural control were still uncertain however. Also, the conceptualization of PBC has been controversial (Kraft, Rise, Sutton and Roysamb, 2005) and measurement of salient beliefs underlying the model remained a problem making it difficult to operationalize the TPB.

The decomposed theory of planned behaviour: Taylor and Todd (1995)addressed these limitations of the TPB by recommending a set of stable, decomposed beliefs structures for the TPB model and proposed the decomposed theory of planned behaviour. The Decomposed TPB is an alternative version of the TPB model with decomposed belief structures. In this model, attitudinal, normative, and control beliefs are decomposed into multi-dimensional belief constructs. It provided better diagnostic value and more understanding of the

usage than the original TPB model. It was still more complex because it introduced a large number of factors that may influence usage (Hsu and Chiu, 2004).The theory was supported by a number of researchers however (Jaruwachirathanakul and Fink, 2005; and Ok and Shon, 2006).

The Technology acceptance model (TAM): According to TAM, perceived usefulness (PU), and perceived ease of use (PEOU) influence one's attitude toward system usage (Davis, 1989; Davis et al., 1989; Mathieson, 1991). These two beliefs determine one's intention to use technology. TAM does not include social norms (SN) as a determinant of behavioural intention.

TAM compares favourably to TRA and TPB (Taylor and Todd, 1995). Higher convergent and discriminant validity were reported (Adams, Nelson and Todd, 1992). It allowed other factors to be incorporated easily into its basic framework, if desired, to better explain user adoption intention (Hong, Thong and Tam, 2006). McKechnie, Winklhofer and Ennew (2006) reported that TAM is helpful in obtaining a better understanding of factors influencing the extent of use of the internet in financial services.

In spite of its popularity, TAM was criticized by a number of researchers .It was not found to be applicable to the large group of users where technology use is compulsory. It ignored external and situational influence particular to a given circumstance or culture (Al-Sukkar and Hasan, 2005 and McCoy, Galletta and King, 2007). The original TAM may easily lead to a misunderstanding of the actual processes involved in continued use (Kim and Malhotra, 2005). Bagozzi(2007) noted that no research has deepened TAM in the sense of explaining PU and PEOU, reconceptualizing existing variables in the model, or introducing new variables explaining how the existing variables produce the effects they do .

3. Assessment of Behavioural Intentions Theories:
Behavioural intentions theories represent attempts to examine post purchase consumer decision making processes. Taken together, these theories provide a better explanation of consumer decision making processes than the explanation provided by each theory alone .All theories emphasize the importance of consumer perception of the innovation characteristics as a determinant of behavioural intentions. These characteristics were named perceived usefulness and perceived ease of use in TAM, the relative advantage, complexity, observability, trialability and compatibility in DOI and decomposed TPB .DOI and PBC added the characteristics of the individual to these theories. Social norms were included in the DOI, TRA and decomposed TPB.

Nevertheless, many authors perceive these theories as incomplete. Bagozzi (2007) noted that TAM, TPB and TRA all neglect group, social, and cultural aspects of decision making. Social norms used apply to a limited sense of social behaviour, i.e., that

related to interpersonal influence and all too often treated in a largely unidirectional sense. The three models rely on naïve and over-simplified notions of affect or emotions. Finally, all models depend on a purely deterministic framework without consideration of self-regulation processes.

Other researchers noted that there are some variables that have been found to exert influence on adoption and were not addressed in previous models. These two variables are perceived risk and demographic variables.

Perceived Risk: Perceived risk is a major factor affecting intentions to adopt or to continue using a good or a service . The use of electronic banking involves many types of risk. These include financial risk, performance risk, physical risk, social risk, psychological risk, and time risk (Ho and Ng, 1994; and Gan, Clemes, Limsombunchai and Weng, 2006).

Demographics: The theory of reasoned action (TRA) allowed the addition of external variables such as demographics to be included in the model. They were not the focus of the theory however .Demographic variables play an important role in customer's adoption of SST. In retail banking, adoption was more likely among :young people (Akinci, Aksoy and Atilgan, 2004; Kolodinsky, Hogarth and Shue, 2000 ; and Kolodinsky et al., 2004) males (e.g., Akinci et al., 2004; Howcroft et al., 2002; Jaruwachirathanakul and Fink, 2005; Kolodinsky et al., 2004; and Wan, Luk and Chow, 2005) , married people (Kolodinsky et al., 2004) highly educated customers (Kolodinsky et al.,2004; and Wan et al. ,2005) and affluent customers (Al-Ashban and Burney , 2001; Kolodinsky et al., 2000; and Kolodinsky et al., 2004).

4. Behavioural Intentions Theories in Self Service Technologies:

Examining behavioural intentions in the context of SSTs such as internet banking may be more complex than examining behavioural intentions of other products .Curran et al., (2003) reported the important role of additional attitudes related to the situation in which the SST is used. Global attitudes based on experiences with a wide range of related technologies, attitudes towards employees and global attitudes towards the service firm may be additional relevant attitudes complementing direct knowledge of a specific SST. Furthermore, customers may have to abandon their current behaviours and adopt new ones (Falk, Schepers, Hammerschmidt and Grossenbacher, 2005). Thus using the SST depends to a great extent on the individual sense of personal capacity or capability to engage with these service systems (Walker and Johnson, 2006), individual innovativeness (Yi Fiedler and Park, 2006) and updating mechanisms regarding the use of technology (Kim and Malhotra, 2005).

Such complexities would require some strategies on the part of the companies using SST. To deliver services effectively to customers, managers must not only focus on employee-customer interaction issues, but on technology-customer interactions. This raises questions of customer education, training, and service interface design (Meuter and Bitner , 1998).Furthermore , if customer attitudes towards SST is driven by attitudes towards traditional channels ,then firms should consider interconnectedness of all service delivery channels offered by a firm(Curran et al., 2003) since positive attitudes towards existing channels may negatively affect attitudes towards SSTs as a new channel of distribution .

5. Research Model:

The researchers conducted a pilot study using in-depth interviews to examine factors underlying customers' continued usage of internet banking. Based on the literature review and the findings of the pilot study, the research framework was formulated. The framework include the following variables: perceived usefulness, perceived ease of use, perceived risk, social norms, and the demographic variables. The continued intention to use the retail banking services is considered as a dependent variable in its relation to the above mentioned variables.

Perceived Usefulness : Perceived usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance"(Davis, 1989; Davis et al., 1989; and Mathieson, 1991).The perceived usefulness was found to affect adoption of and intention to continue using retail banking services in a number of studies (e.g., Al-Sukkar and Hasan, 2005; Cheung, 2001; Kamel and Hassan, 2003; Kolodinsky and Hogarth, 2001; Kolodinsky, et al., 2004; Ravi, Carr and Sagar, 2007; and Vatanasombut, Lgbaria, Stylianou and Rodger, 2008).   Thus, the first hypothesis will be formulated as follows:

H1: There is a positive relationship between customers' perceived benefits of using internet banking services and their continued intention to use them.

Perceived ease of use: Perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort"(Davis, 1989; Davis et al., 1989; Mathieson, 1991). The effect of perceived ease of use on   adoption of and intention to continue using retail banking services was supported in a number of studies (e.g., Al-Sukkar and Hasan, 2005; Cheung, 2001; Kamel and Hassan, 2003; Kolodinsky and Hogarth, 2001; Kolodinsky et al., 2004; Ravi et al., 2007;   and Vatanasombut et al., 2008). Thus, the second hypothesis will be formulated as follows:

H2: There is a positive relationship between customers' perceived ease of use and their continued intention to use the internet banking services.

Perceived Risk: Using retail banking services such as the internet entails some risks. Perceived risk in the field of e-banking can be defined as: "the potential for loss in the pursuit of a desired outcome of using e- banking services" (Featherman and Pavlou, 2002). The perception of the relatively high risk associated with performing financial transactions over the internet may actually hinder internet banking adoption (Kamel and Hassan, 2003).The effect of perceived risk on adoption and post adoption processes in the context of retail banking was highly supported (e.g., Alagheband, 2006; Eriksson, Kerem and Nilsson, 2008; Jaruwachirathanakul and Fink, 2005; Kolodinsky et al., 2004; Lin, 2008; Vatanasombut et al., 2008). Thus, the third hypothesis will be formulated as follows:

H3: There is a positive relationship between customers' perceived risk and their continued intention to use the internet banking services.

Subjective /Social Norms : Subjective/Social norms refer to a person's perception of the social pressures put on him to perform or not perform the behaviour in question" (Ajzen and Fishbein, 1980).The effect of social norms on adoption and intention to continue using retail banking services was supported by some studies (e.g., Ravi et al., 2007) and rejected by others (e.g*,* Ok and Shon, 2006;Shih and Fang, 2006;and Wan et al., 2005).Based on the above , the fourth hypothesis will be formulated as follows :

H4: There is a positive relationship between subjective/social norms and customers' continued intention to use the internet banking services.

Demographic Variables: The effect of demographic variables on adoption and continued use of internet banking services was strongly supported in a number of studies. Specifically , age and gender were found to affect adoption and continued use of retail banking services in a number of studies (e.g., Akinci et al, 2004; Howcroft et al., 2002;and Kolodinsky et al., 2004) .Conversely , a number of studies reported no such effect (e.g., Gan et al., 2006). The effect of education was supported by a number of studies (e.g., Al- Ashban and Burney, 2001;Howcroft et al., 2002;Kolodinsky et al., 2004; and Wan et al., 2005) .The effect of income was also supported (e.g., Al-Ashban and Burney, 2001; Kolodinsky et al., 2000; Kolodinsky et al., 2004; and Wan et al., 2005).Finally , marital status was found to be one factor affecting retail banking adoption and continued usage (e.g., Kolodinsky et al., 2000 and Kolodinsky et al., 2004).Based on the above , the fifth hypothesis will be formulated as follows :

H5: The differences in the demographic characteristics of the customers can affect their continued intention to use internet banking.

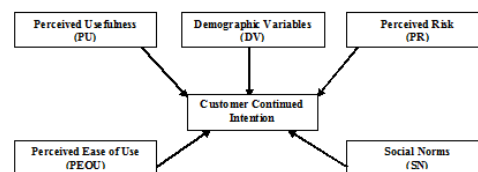The following figure depicts the research model.

Figure (1) Research Model

6. Operationalization of Research Variables:
To measure research variables, the researchers used existing scales with proven validity and reliability. Table (1) summarizes the conceptual and operational definitions of research variables.

Table (1): The Conceptual and Operational Definitions of the Research Variables

Research Variables	Conceptual Definition	Operational Definition
Perceived Usefulness (PU)	"The degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989).	**PU1:** Using internet banking service saves time. **PU2:** I find internet banking service useful. **PU3:** I find internet banking a convenient service. **PU4:** Using internet banking service enables me to accomplish my banking activities more quickly.
Perceived Ease of Use (PEOU)	"The degree to which a person believes that using a particular system would be free of effort" (Davis, 1989).	**PEOU1:** Using internet banking service is easy and clear. **PEOU2:** It is easy for me to learn how to utilize the internet banking service. **PEOU3:** I find internet banking service the easiest channel to use compared with other electronic payment systems (such as phone banking, ATM, Credit cards).

Perceived Risk (PR)	"The potential for loss in the pursuit of a desired outcome of using electronic services" (Featherman and Pavlou, 2002).	**PR1:** Accessing my financial information over the internet is secure. **PR2:** I have my own privacy during using internet banking service. **PR3:** There is a possibility that I would face problems while making transactions through the internet. **PR4:** There is a high uncertainty about bank's action with errors occurring during online transactions.
Subjective or Social Norms (SN)	"A person's perception of the social pressures put on him to perform or not to perform the behaviour in question" (Ajzen and Fishbein, 1980).	**SN1:** My reference group influences my decision to use internet banking. **SN2:** I completely agree with my referent's opinions that I should use internet banking service continuously.
Behavioural Intention (BI)	"A person's subjective probability that he will perform some behaviour" (Fishbein and Ajzen, 1975).	**CI1:** I expect my use of internet banking to continue in the future. **CI2:** I intend to continue using internet banking in the future. **CI3:** I will strongly recommend others to use internet banking service.

7. Research Population and Sampling

The research population includes bank customers who are using internet banking in Alexandria city. A convenient sample was selected. Only 65 complete questionnaires were returned from 384 questionnaire distributed .Thus the response rate reached 17 %

The mall- intercept technique was employed for gathering data. The strategic advantages of consumer intercept survey are the speed in which they can be conducted, their low cost, and the ability to poll a large number of consumers (Orient Pacific, 2007).

8. The Measurement Model

Reliability is an assessment of the degree of consistency between multiple measurements of a variable (Hair, Anderson and Tatham, 1998, p.117). Cronbach's alpha was used to assess the consistency of the entire scale .Reliability scores greater than 0.70 are considered acceptable (Hair et al., 1998, p. 118). All reliability coefficients were acceptable.

Discriminant validity refers to the degree to which two conceptually similar concepts are distinct (Hair et al., 1998, p. 118). To do so, Cronbach alpha coefficient for each variable is compared with its correlation with other variables (Sharma and Patterson, 1999). The correlation matrix of all research variables together with alpha coefficients for each variable is presented in table (2).

Although significant correlations do exist between some variables, yet all of these correlations are lower than alpha coefficients. For example,

perceived ease of use and perceived usefulness are correlated ($r = 0.387$). At the same time, alpha coefficients for both variables are 0.84 and 0.918 respectively. This means that respondents can discriminate between the two variables although they are correlated. Thus, we can say that for all research variables, respondents can discriminate between different variables.

Convergent validity assesses the degree to which two measures of the same concept are correlated (Hair et al., 1998, p. 118).

Factor Analysis will be used to examine convergent validity .Two tests or measures should be done first to quantify the appropriateness of factor analysis. One such measure is "The Bartlett test of Sphericity", which is a statistical test used to examine the presence of correlations among the variables. Another measure is "Measure of Sampling Adequacy (MSA)". This index ranges from zero to one, reaching one when each variable is perfectly predicted without error by the other variables. MSA value was above 0.5. Also, Bartlett test was highly significant ($p<0.001$), and therefore factor analysis is appropriate.

Five factors in the factor analysis results. All loadings were high and no one item loaded on two factors. These factors include perceived risk , perceived ease of use , perceived usefulness ,social norms and continued usage. Two items related to understandibility and internet banking being the easiest channel of distribution loaded on the third factor but they were excluded since their loadings were less than .7 which is the minimum loading recommended by Hair et al., (1998) for samples of such size. Based on this hypotheses testing was

performed. Table (3) presents the results of Factor Analysis.

Table (2): The Discriminant Validity of Research Variables

Factors	Alpha	Perceived Risk	Perceived Usefulness	Perceived Ease of Use	Subjective Norms
Perceived Risk	0.809	1			
Perceived Usefulness	0.918	0.160	1		
Perceived Ease of Use	0.848	0.072	.387(**)	1	
Subjective Norms	0.704	-0.037	0.051	0.131	1
Intention Continuance	0.932	-0.169	.567(**)	.560(**)	0.035

**Correlation is significant at 0.01 level (2-tailed)

Table (3): Factor Analysis Results

	Component				
	1	2	3	4	5
Not Secure	0.842				
No Privacy	0.91				
Errors Occurring	0.781				
Difficult correcting errors	0.709				
Time Saving		0.856			
Useful		0.899			
Convenient to use		0.844			
Doing transaction quickly		0.882			
Easy to connect			0.834		
Easy to learn			0.756		
Understandable					
The Easiest service					
Others affect me				0.833	
I agree with others				0.894	
Probably use in future					0.815
I intent to use in future					0.864
I will recommend to others					0.817

9. Hypotheses Testing:

Multiple regression analysis was used to examine the first four hypotheses .ANOVA was used to test the fifth hypothesis. Stepwise estimation is the most popular sequential approach to variable selection (Hair et al., 1998, p.178). Table (4) summarizes the results of multiple step wise regression. Only perceived ease of use was found to be a significant predictor of intention to continue using internet banking services (F significant at .000). R Square reached 31.6 % .This result means that the second hypothesis was supported while the first , third and fourth hypotheses examining the effects of perceived usefulness, perceived risk and social norms respectively were not supported .With respect to the effect of demographic variables on intention of continued usage, ANOVA was performed . Table (5) shows the results of ANOVA. The above table shows that there were some differences in intention

to continue using internet banking services among different categories .Generally, people above fifty scored higher than other groups followed by those below the age of twenty, then those between the age of twenty and thirty, those between the age of thirty and forty and finally those between the age of forty and fifty. The differences among different age groups were not significant however .Males scored higher than females with respect to intention to continue use internet banking services, yet the difference was not also significant .With respect to education, people with post graduate education had the highest mean, followed by those with secondary education and finally university graduates. All differences were not significant .Finally , customers with income levels between 2000 and 3000 LE had the highest intentions followed by those below 1000 LE, then those above 3000 LE and finally those between 1000 and 2000LE . All differences were not significant however.

Table (4): Stepwise Multiple Regression Results

Model	R	R^2	Adjusted R^2	SE	Change Statistics				
					R^2 change	F Change	df1	df2	Sig.F change
1	.562	.316	.304	.686	.316	25.849	1	56	.000

a. Predictors: (Constant), IBnk-EOU

Table (5) Results of ANOVA for demographic variables.

Demographic Variable		S.D.±	Mean
Age	<20	0.22	3.93
	20-<30	0.83	3.36
	30-<40	0.99	3.29
	40-<50	1.013	2.9
	50+	0	4
	F value (p)	1.692 (0.165)	
Gender	Female	0.97	3.28
	Male	0.78	3.45
	t value (p)	0.763 (0.448)	
Marital Status	Single	0.79	3.27
	Married	0.92	3.5
	t value (p)	1.050 (0.298)	
Education Level	Secondary	0.83	3.55
	University	0.92	3.24
	Postgraduate	0.47	3.67
	F value (p)	1.052 (0.356)	
Income Level	<1,000	0.53	3.51
	1,000-<2,000	1.051	3.14
	2,000-<3,000	0.57	3.78
	3,000+	0.74	3.5
	F value (p)	0.132 (0.941)	

10. Discussion and Conclusion:

The study has attempted to describe and analyze the factors that can affect customers' intention to continue using internet banking services .The model was based on behavioural intentions models as well as demographic variables that were probable predictors of intention to continued use of internet banking. Perceived ease of use was the only significant predictor of intention to continue usage of internet banking services (p<.000) .This provides support for the second hypothesis. Conversely, perceived usefulness, perceived risk and social norms were not found to have any significant effect on intention to continued usage of internet banking services. Thus, the first, third and fourth hypotheses were not supported.

With respect to the insignificant effect of perceived usefulness, perceived risk and social norms, this finding can be explained by the process of customer learning that takes place overtime and by re-examining the use of adoption models to examine continued usage. Novice customers or those considering first time adoption of internet banking may be influenced by perceived usefulness, perceived ease of use and subjective norms. Once the customer uses the service, the effect of these variables may diminish and ease of use may become salient. Furthermore, Wu and Kuo (2008) noted that the respective predicting power of PU and PEOU on intention is considerably diluted by the addition of habitual usage or past usage. Finally, all demographic variables were insignificant in their relationships to intention to continue using internet banking. Dabholkar and Bagozzi (2002) argued that the variation in consumer differences arising from personality traits is of greater interest than demographic or psychographic factors because such variation is at the heart of consumer attitude formation and behavioural intentions.

Academic Implications : This study tried to examine the use of theories used to predict behavioural intentions to adopt internet banking in predicting intentions to continue using it. Although the effect of perceived ease of use on such intentions was relatively high (R2 reached 31.6%), yet the failure to support other hypothesized relationships requires some explanation. Bagozzi (2007) noted that failure to support hypothesized relationships in TAM, TPB, and most other models reflect a flow in such deterministic models which rest on cognitive laws of information processing and emotional and motivational laws of responding, where the regularity theory of causality is presumed to operate. These models should not be treated as deterministic theories however .He added that a person can recognize and even accept that PU or attitudes are favourable criteria for deciding to act, but have no

desire to act and even explicitly decide not to act in the face of these reasons. In other words, PU and attitudes need not contain or constitute motives to act for any particular decision maker or for any specific situation. Furthermore, multiple reasons for acting or not, which can be considerable in number, are reconciled and transformed into a decision or intention to act.

Thus, the finding that perceived ease of use is the only predictor of continued usage intentions and the fact that other variables suggested by behavioural intentions theories were not significant predictors opens the door for reconsideration of using these theories in examining continued intentions to use SSTs such as internet banking .

*Practical Implications:*The research findings have many implications for managers of SSTs in general and for banking managers in particular. First, the importance of ease of use means that to ensure effective service delivery, managers must not only focus on employee-customer interaction issues, but on technology-customer interactions too (Meuter and Bitner ,1998) . User friendly websites that do not require high expertise on the part of customers represent a major part of the service delivery process .Such websites should make it easy for customers to perform all the functions without asking for help. Banks should publicize the advantages of using websites compared to traditional banking services. Convenience, ease of use, clarity of instructions and accessibility should be highly stressed in such efforts. Second, bank managers are advised not to follow traditional segmentation techniques when segmenting bank customers. Differentiating bank customers by demographics provide an incomplete and inaccurate view of those customers for SSTs. What is needed, instead, is to segment bank customers in terms of the motivations that drive their banking behavior (Barczak, Ellen and Pilling, 1997 and Durkin, 2004). Third, bank managers should monitor customer attitudes towards websites on a regular basis. Web-based surveys would help managers understand customers' perception of the quality of web sites and to identify areas which need modifications. Such surveys are of pivotal importance since most of the transactions performed using internet banking does not involve bank employees. Fourth, managers should consider internet banking and other SSTs as part of multiple channels provided by the bank to better serve the customer (Hughes, 2003) .All banking channels should be managed strategically with the eventual goal of reaching high customer satisfaction and retention .Fifth, banks should closely monitor customer traffic and customer switching from traditional to web-based services. Internet banking allows firms to create customer databases that allow

such tracking of customer traffic. Sixth bank managers should reconsider the role of internet banking in marketing strategies . Internet banking is not merely a new channel of distribution that should be used alongside other channels. Internet banking provides banks with a rich experience in learning about their customers . Data collected about customer interactions provides the basis for a good customer data base that can be used to customize offers and to personalize massages to customers.

Limitations and Suggestions for Future Research:
 There were many limitations inherent in the study design. The sample was limited to customers in the city of Alexandria; different results may have been obtained from customers in other Egyptian cities. The small sample size also represents a limitation. The strategy of data collection also represents a major limitation. The use of Consumer intercept surveys might lead to omission of some customers who do not visit physical bank branches at all. Future research examining internet banking adoption and continued usage may overcome these limitations.
Another limitation relates to variables included in the model. The consumer behaviour literature points out to the fact that satisfaction and service quality may be important determinant of future behavioural intentions. Including these two variables represent a fruitful opportunity to understand the complexities of consumer behaviour in high-tech self-services such as internet banking. Longitudinal studies aiming at understanding the change in customer intentions over time may also help in understanding such complexities.

The proposed framework could be applied to service industries, such as hotels, and hospitals. Longitudinal studies could be also used to examine the changes in adopter's intentions over time.

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