

An empirical investigation on factors influencing on electronic banking for developing export

Naser Azad*, Vahid Abbaszadeh, Mohammad Rikhtegar and Hamed Asgari

Department of Management, Islamic Azad University, South Tehran Branch, Tehran, Iran

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ABSTRACT

Developing economy needs appropriate infrastructure in different areas including electronic banking. This paper presents an empirical investigation on important factors influencing electronic banking for developing exports in Iran. The proposed study of this paper designs a questionnaire and distributes it among 200 regular customers who use banking services of various banks in city of Tehran, Iran. Cronbach alpha has been calculated as 0.752 and there are five factors including internet infrastructure, advanced services, usability and information design. The most important sub-criteria include building required culture, customer awareness, the role of government, internet knowledge and compatibility with internet technology.

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1. Introduction

During the past few years, there have been tremendous changes on making banking transactions through internet activities. People use electronic transactions to make payments for different purposes such as ordering goods or paying bills (Jayawardhena & Foley, 2000; Tambouris et al., 2001). Electronic banking is also a good method for buying/selling goods from other countries, which is a good method for developing exports (Humphrey et al., 2006). Akinci et al. (2004) investigated consumers' attitudes and adoption of Internet banking among sophisticated consumers. They examined internet banking (IB) based on a random sample of academicians, demographic, attitudinal, and behavioral characteristics of IB users and non-users. They reported substantial differences between the demographic profiles and users' behavior and non-users. They further examined IB users and three sub-segments were described based on a set of criteria. According to Giannakoudi (1999) extensive globalizing processes and technological innovation have transformed made tremendous change on IB. After choosing IB as the most revolutionary stage of the evolutionary process of banking, Giannakoudi (1999) tried to identify both its positive and negative implications. Giannakoudi (1999) first detected the technical vulnerabilities of the IB system and suggested

*Corresponding author.

E-mail addresses: dr.naserazad@yahoo.com (N. Azad)

security measures and controls, which could contribute significantly to the creation of a secure operational environment. Haghighi et al. (2010) performed an investigation on IB in Iranian banking system and reported that “industry e-readiness” was the most important attribute of the e-banking development in Iran. Karjaluoto et al. (2002) explored the impact of various factors influencing behavior formation towards IB in Finland. They determined the factors, which affect the formation of behavior towards IB on the one hand, and their associated with the implementation of online banking services, on the other. They provided both theoretical and practical contributions in the area of electronic retail banking and understanding of consumer behavior in the turbulent financial services industry.

Laforet and Li (2005) studied the market status for online/mobile banking in China. The results indicated that Chinese online and mobile bank users were mostly males, not necessarily young and highly educated, in contrast with the electronic bank users in the West. They reported some of the main barriers for online banking as the perception of risks, computer and technological skills and Chinese traditional cash-carry banking culture. The barriers to mobile banking adoption were insufficient awareness and understanding of the benefits provided by mobile banking. Nath et al. (2001) investigated bankers' views on providing banking services to customers based on the web. More specifically, they investigated different issues associated with the strategic need for IB, its impact on customer-bank relationships, and customers' experiences in IB. They collected the necessary data from 75 banks and after analyzing the data reported that most banks did not yet offer full-fledged IB.

Pikkarainen et al. (2004) developed a model indicating online-banking acceptance among private banking customers in Finland and reported that perceived usefulness and information on online banking on the Web site were the most important factors impacting online-banking acceptance. Pikkarainen et al. (2004), in another work, examined the End-User Computing Satisfaction (EUCS) model in order to study online banking users' satisfaction with the service. Rexha et al. (2003) investigated the impact of satisfaction, trust and the use of electronic banking on commitment towards current banks. They reported that trust was the most important factor influencing the adoption of electronic banking while perceived customer satisfaction with the bank only influenced indirectly on the adoption of electronic banking. The cumulative impacts of customer satisfaction were detected to have a positive effect on trust directed towards the bank, and this mostly influenced on the propensity to implement electronic banking. Customer satisfaction, trust, and the implementation of electronic banking were detected to have a positive influence on the corporate clients' commitment towards their bank. Sathye (1999) quantified the factors influencing the adoption of IB by Australian consumers. They reported that security concerns and lack of awareness about IB and its benefits stand out as being the barriers to the adoption of IB in Australia. They recommended some methods to address these impediments.

According to Tanna et al. (2005), “one of the fastest growing applications in the banking arena is Electronic Bill Presentation and Payment (EBPP), driven primarily by a desire to reduce costs associated with issuing and settling physical bills”. EBPP is a secure system for many firms to electronically present bills and other related data to their customers, and host the secure payment of these bills. Wan et al. (2005) investigated various factors influencing Hong Kong bank customers' adoption of four important banking channels, i.e. branch banking, ATM, telephone banking, and internet banking. They concentrated on the impacts of demographic variables and psychological beliefs about the positive attributes possessed by the channels. They reported that ATM was the most frequently adopted channel, followed by IB and branch banking, and telephone banking was the least frequently adopted channel. A major research implication was that the theory of reasoned action was less applicable when a behavior is habitual, such as the adoptions of branch banking and telephone banking. Yousafzai et al. (2005) proposed a conceptual model of trust in e-banking by considering two important antecedents, which influence customer's trust including perceived security and

perceived privacy. Darvish et al. (2013) investigated the effect of six factors on electronic banking including easy access, design, transaction speed, security, information content and customer support on customer satisfaction. They studied different branches of a particular Iranian bank using a sample of 200 customers by designing a questionnaire and collecting the necessary information. The results of the study indicated that all six components significantly impacted on customer satisfaction.

2. The proposed study

This paper presents a study to find important factors influencing on internet banking for developing exports. The study is performed among regular customers who do banking transactions from selected banks in city of Tehran Iran. The sample size for the questionnaire has been determined as follows,

$$N = Z_{\alpha/2}^2 \frac{p \times q}{e^2}, \quad (1)$$

where N is the sample size, $p = 1 - q$ represents the probability, $z_{\alpha/2}$ is CDF of normal distribution and finally e is the error term. For our study we assume $p = 0.5$, $z_{\alpha/2} = 1.96$ and $e = 0.09$, the number of sample size is calculated as $N = 200$. We have designed a questionnaire to verify the over performance of the questionnaire and Cronbach alpha was calculated as 0.752, which is well above the minimum acceptable limit. The questionnaire maintained 26 questions and since we plan to use factor analysis and this technique is sensitive to skewness we have decided to reduce the questions to 23.

3. The results

In this section, we present details of our factor analysis on various factors.

Table 1

The summary of factor analysis

Factor	Measured variable on brand	Wight	Eigenvalue	Variance	Accumulated
Infrastructure	Building required culture	.761	259.2	822.9	822.9
	Internet development	.629			
	Innovation acceptance	.622			
	Internet stores	.622			
	Good design for services	.590			
Advanced services	Customer awareness	.690	2.174	9.451	19.273
	Electronic systems	.566			
	Fast internet services	.513			
Methods for use	The role of government	.757	2.137	9.290	28.563
	Education in organizational levels	.754			
	Customers' interests in using IT	.569			
Information Knowledge	Internet knowledge	.754	1.804	7.842	36.404
	Presence in areas of cities	.651			
Design	Compatibility with internet technology	.695	1.625	7.064	43.468
	Customer trust	.557			

As we can observe from the results of Table 1, there are five factors associated with our investigation. The first factor, infrastructure, includes five sub-component including “building required culture”, “internet development”, “innovation acceptance”, “internet stores” and “good design for services”. In our survey, building required culture is considered as the most important issue followed by internet development and stores. The second factor, advanced services, consists of three options including “customer awareness”, “electronic systems” and “fast internet services”. In our survey, customer awareness is the most important issue followed by electronic systems and fast internet services come the last. The third option, methods for use, includes three options, which are “the role of government”, “education in organizational levels” and “customers’ interests in using information technology (IT)”. According to our survey, “the role of government” as well as “education in

organizational levels” are considered as the most important items in this survey. Finally, the last option, design, includes two options, which are “compatibility with internet technology” and “customer trust” where the first one seems to be more important.

4. Conclusions

In this paper, we have presented an empirical investigation to detect important factors influencing electronic banking among Iranian banks. The study has implemented factor analysis and determined five important factors including infrastructure, advanced services, methods, information knowledge and design. The most important sub-criteria include building required culture, customer awareness, the role of government, internet knowledge and compatibility with internet technology.

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