

Investigating important factors influencing electronic banking for export development

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ABSTRACT

Export is one of the most important indicators of a growing economy and it is the primary source of reaching sustainable growth on the market. This paper presents an empirical study to determine important factors influencing electronic banking in export development of Iranian organizations. The proposed study designs a questionnaire and distributes it among some regular customers who do internet banking with Parsian bank in city of Tehran, Iran. Cronbach alpha is calculated as 0.82, which is well above the minimum desirable limit of 0.70. In addition, Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Approx. Chi-Square are 0.71 and 1955 with Sig. = 0.000, respectively. Using principal component analysis, the study has detected six factors including customer's information, building trust, secure internet access, having good internet infrastructure and internet users.

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1. Introduction

Online banking is one of the advanced delivery channels for retail banking services. Aladwani (2001) performed an investigation the perceptions of banks' executives, IT managers and potential customers in terms of drivers, development challenges, and expectations of online banking. Naceur and Goaid, (2001) investigated the determinants of the Tunisian banks' performances over the period 1980–1995. They reported that labor productivity is the most important principal determinants of a bank's performance followed by bank portfolio composition, capital productivity and bank capitalization. Any development on e-banking normally needs the availability of various factors such as internet infrastructure, necessary hardware, software packages, etc. (Eriksson et al., 2005; Mattila et al., 2003) According to James (2002), developing countries differ in the extent to which, via reductions in transactions expenses, they gain from increased trade and foreign investment as ratios to total output.

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Personalized security in e-banking is an important issue among many individuals and firms who are looking to reach proper level of security and the cloud environment is a alternative infrastructure to implement personalized security mechanisms for most big corporations such as banks. Employing mandatory access controls normally boosts the security of e-banking to a higher level. Flask architecture is the security architecture, which enforces mandatory access control to provide a clean separation of security policies and enforcements. Hamidi et al. (2013) introduced a model for implementing personalized security in e-banking over a cloud environment. The provision of banking services on e-banking is steadily growing and we need to do some research associated with the organizational issues involved in its adoption. Shah and Siddiqui (2006), for instance, investigated on organizational critical success factors in adoption of e-banking at the Woolwich bank and concluded that banks require to implement considerable organizational changes to web-enable themselves. Determining factors influencing customer perception and behavior towards and satisfaction with e-banking is an important part of a bank's strategy formulation process in an emerging economy like India.

Agarwal et al. (2009) performed an investigation among some respondents taken from the northern part of India. They reported that customers were influenced in their usage of e-banking services by the type of account they hold, their age and profession, attach highest degree of usefulness to balance enquiry service among e-banking services, consider security & trust most important in influencing their satisfaction level and reported slow transaction speed the most frequently faced problem while using e-banking. Yoon and Barker Steege (2013) investigated the development of a quantitative model of the effect of customers' personality and perceptions on Internet banking use. They reported that openness, website usability, and perceived security concern significantly could impact customers' Internet banking use. In terms of moderating impacts, all dimensions played an essential role as a moderator on the relation between other dimensions and Internet banking use. Export is one of the most important indicators of a growing economy and it is the primary source of reaching sustainable growth on the market. Burton and Schlegelmilch (1987) performed an investigation on profile analyses of non-exporters versus exporters grouped by export involvement.

2. The proposed model

This paper presents an empirical study to determine important factors influencing electronic banking in export development of Iranian organizations. The proposed study designs a questionnaire and distributes it among some regular customers who do internet banking with Parsian bank in city of Tehran, Iran. The sample size is calculated 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 ε is the error term. For our study we assume $p=0.5, z_{\alpha/2}=1.96$ and $e=0.05$, the number of sample size is calculated as $N=279$. The proposed study distributed a the questionnaire among 280 customer, randomly from different parts of the city. Cronbach alpha is calculated as 0.82, which is well above the minimum desirable limit of 0.70. In addition, Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Approx. Chi-Square are 0.71 and 1955 with Sig. = 0.000, respectively. Using principal component analysis, the study has detected six factors including customer's information, building trust, secure internet access, having good internet infrastructure and internet users. Next, we present details of our findings.

3. The results

In this section, we present details of our findings on the implementation of factor analysis. Table 1 demonstrates the results of the components. In addition, Fig. 1 demonstrates the results of Scree plot.

Table 1
The summary of factor analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.259	20.226	20.226	5.259	20.226	20.226	2.228	8.571	8.571
2	2.186	8.407	28.633	2.186	8.407	28.633	2.217	8.529	17.100
3	1.738	6.684	35.317	1.738	6.684	35.317	2.146	8.252	25.352
4	1.473	5.667	40.984	1.473	5.667	40.984	2.020	7.769	33.120
5	1.422	5.471	46.454	1.422	5.471	46.454	1.771	6.813	39.933
6	1.314	5.054	51.509	1.314	5.054	51.509	1.734	6.669	46.603
7	1.163	4.473	55.981	1.163	4.473	55.981	1.571	6.043	52.645
8	1.087	4.182	60.163	1.087	4.182	60.163	1.550	5.963	58.609
9	1.001	3.852	64.014	1.001	3.852	64.014	1.406	5.406	64.014
10	.886	3.409	67.424						
11	.869	3.341	70.765						
12	.813	3.126	73.891						
13	.783	3.010	76.901						
14	.723	2.779	79.680						
15	.688	2.644	82.324						
16	.597	2.296	84.620						
17	.574	2.208	86.828						
18	.539	2.074	88.902						
19	.503	1.936	90.838						
20	.461	1.773	92.611						
21	.394	1.517	94.128						
22	.374	1.438	95.567						
23	.349	1.342	96.908						
24	.295	1.135	98.044						
25	.281	1.080	99.124						
26	.228	.876	100.000						

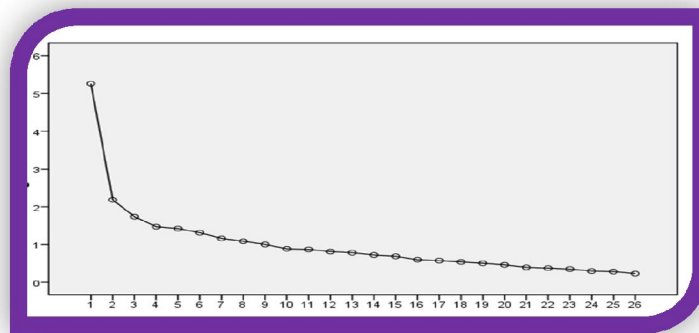


Fig. 1. The summary of Scree plot

Based on the results of Fig. 1 and Table 1 we can extract six factors including customer's information ($\beta=0.568$, $P\text{-value}=0.001$), building trust ($\beta=1.051$, $P\text{-value}=0.001$), secure internet access ($\beta=0.878$, $P\text{-value}=0.001$), having good internet infrastructure ($\beta=1.000$, $P\text{-value}=0.001$) and internet users ($\beta=0.698$, $P\text{-value}=0.001$). In our survey, there are some other sub-hypotheses associated with the proposed study of this paper and Table 2 summarizes the results of our survey.

Table 2
The summary of testing sub-hypotheses

Sub-hypothesis	β	P-value	Res.	Sub-hypothesis	β	P-value	Res.
Government support on rules and regulations	1.000	0.001	√	Electronic banking transactions	1.955	0.001	√
Creativity and innovation in financial plans	0.702	0.001	√	Customer demand	1.466	0.001	√
New internet based products	0.665	0.001	√	Culture of internet banking	1.000	0.001	√
Consistent with business objectives	1.000	0.001	√	Access to internet	1.410	0.001	√
Ease of access to internet	0.756	0.001	√	Top management Knowledge and commitment	1.298	0.001	√
Infrastructures of communication	1.760	0.001	√	General internet knowledge in society	1.000	0.001	√
Infrastructures for secure investment	1.000	0.001	√	Availability of internet stores	0.393	0.001	√
Easy internet banking	1.162	0.001	√	Long term technology planning	0.533	0.001	√
Security of electronic services	0.953	0.001	√	Acceptance of innovation in technology	-0.11	0.684	×
Quality of electronic services	1.065	0.001	√	Customer trust	-0.05	0.860	×
Level of customer awareness	1.000	0.001	√	Government support from private sector	0.248	0.283	×

As we can observe from the results of Table 2, only three sub-hypotheses are rejected and the rest of hypotheses are confirmed.

4. Conclusion

In this paper, we have presented an empirical investigation to find out more about the important factors influencing Iranian exports through internet banking. The study has implemented factor analysis and the results have indicated that customer's information, building trust, secure internet access, having good internet infrastructure and internet users could significantly influence internet banking. In our survey, experts believed within the long term it is possible to internet banking by proving better services in terms of security and integrity through better infrastructures.

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