

An analysis of the rate of customer's adoption of Sinai bank's electronic services in Sistan and Baluchestan Province

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Abstract

During the 20th century, dramatic changes in telecommunications and computing have emerged as a result of major changes in banks and we have observed Electronic banking systems made it possible for the user to do all their bank affairs through landline, mobile phone (WAP), automated teller machines (ATM) or Internet quickly and easily. In order to be able to attract customers to e-banking, we must ensure them about it. Regarding the influence of multiple variables on the adoption of e-banking, it is necessary to examine their influence. The main objective of this study is to analyze the level of customers' adoption of electronic services of Sinai bank. Statistical population of this research were the costumers (those having credit cards) of Sinai bank. Research method is of the correlation type, which is analyzed by using questionnaires, statistical analysis of hypotheses and the correlation between variables under study. For data collection, the questionnaire used in similar studies was used after making necessary amendments to them. The alpha calculated for all variables in this study was 79%, which indicates the high reliability and validity of the questionnaire used. Among descriptive variables, using internet has the highest positive and meaningful correlation with the intention of using e-banking services in future and gender has the lowest positive and meaningful correlation with the intention of using e-banking services in future. Variables of relatives' influence, accessibility, reliability of e-banking services, compatibility, influence of family and colleagues and profitability, friends, social status, and readiness of e-banking services had positive and meaningful correlation with the adoption of e-banking services respectively. Also, in this research it was concluded that E-services system of Sinai Bank increased the level of customers'

adoption. Lack of accessible points and unfamiliarity with using e-banking services influences the level of customer adoption negatively. Results of data analysis shows that the main variable in justifying the purpose of using it is readiness and increasing accessible points; thus, banks are recommended to increase customers' access to e-banking services by increasing POS and ATMs. With regard to research results, banks and financial institutes should pay attention to the fact that if costumers have positive attitude to e-banking, they will use e-banking services. Thus, cultural infrastructure and making people familiar with the benefits of technology, training and facilitating the use of e-banking tools for everyone, further increase of system security and improving Internet connection quality can be effective in synchronizing country's banking system with modern global banking and growing use of it.

Keywords: e-banking, adopting e-banking services, Sinai bank

Introduction

One of the essential tools to develop and realize e-commerce is e-banking system which is considered as a new criterion for countries' development. Various definitions have been proposed for e-banking among which we can refer to the following definitions:

- Providing customers' access to banking services using secure intermediaries and without physical presence
- Customers' use of internet to organize, test and make changes in their bank accounts or investment and banks' use to provide banking services and operations;
- New and traditional banking opera-

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tions and services provided directly for customers through electronic interactive communication channels.

Electronic banking includes systems that enable financial institution customers to use bank services at the three levels of information, communication and transaction.

Lack of quantitative and qualitative development of ATMs and other electronic banking facilities and lack of informing and culture-building to use e-banking services accurately and systematically are the main barriers of electronic banking in the region.

Due to the numerous variables' influence on the adoption of e-banking, it is necessary to analyze the influence of these variables; therefore the main purpose in our study is how e-banking services of Sinai bank affect the level of customer adoption.

Conceptual model of research

Theoretical Foundations

Today, there is an undeniable fact that the pan of scale and market power of customers is heavier in favor of customers. Customers today have more opportunities to compare services and their financial management is more complicated.

So, creative relationships between customers and banks and a set of high-quality services and the nature of the services purchased as they purchase depends on the quality of interaction between customer and employee.

According to the research conducted at Forster Institute, 20 percent of Europeans use internet banking services, this amount is doubled in comparison to two years ago and by 2007 will reach to about 130 million.

Today, banking services are offered to customers in the shortest time; by clicking the mouse customers can also choose from different vendors to meet their financial needs in a way that electronic banking turned into a strategic weapon for banks.

Customer judgments about the bank are based on the bank's ability to help solve problems and develop his business. In our country and most of advanced countries in the world the final quest and objective is to do affairs quickly and not wasting time as the most important element of success in the current competition and customers as a determining factor highly value the technology and speed and technical expertise of the banks in the

second place.

What is of a determining and final value for customers is the ability of banks to provide their desired service. Therefore, to be effective, banks need to obtain enough information of customers, understand their interests, desires and develop their relations with them. Implementing a new customer-oriented and relation-oriented marketing provides the following benefits:

- Keeping current customers without fear of threatening competitors
- Making more profit and revenue from existing key customers and increasing the bank's share of each customer
- Substantial reduction in cost of deposits (resources) and the significant increase in cost efficiency
- Attracting key customers and other top banks
- Attracting customers of other banks through launching campaigns of current customers' positive word of mouth.
- Experience has proved that an old customer satisfied with bank services will be effective in promoting and profitability as much as ten new customers.

In banking industry, in the event of any failure or neglect on the part of bank's line forces to the general principles of marketing his line centered on the customer, its life will be in danger.

Some general rules and principles that banks are obliged to observe are:

- The most important principle of a bank is customer; his satisfaction and providing quick services and away from bureaucracy is the duty of any banker.
- A banker plays the role of depository and his monetary reserve and balance belongs to depositor.

Sinai Bank

Regarding the necessity to greater activity in monetary market and competition in providing services, Sinai bank decided to expand network of branches in other parts of the country besides developing its branches in Tehran. Respect to customer, creativity and innovation, honesty and developing branches day by day, are the strategic plans of Sinai Bank.

Sinai bank's activities under the Statute include the implementation of all monetary operations, finance and credit and activity in different economic sectors with natural and legal persons.

Sinai Bank services

Sinai Card: to provide continuous and 24-hour e-services to the owners of different accounts customers of this bank can use Sinai card.

Santa: using Santa system, the possibility of transferring customers' funds between branches of different banks electronically and needless to exchange encrypted checks, cash and Iran check will be provided.

Hambank: by using Sinai Hmbank services like funds transfer, balance taking, buying SIM card recharge, bill payment, banking operations between Satna and Paya, payment of facilities installments and management of checks can be done.

Hamrah Bank: access to many features of Internet bank without the need to use computers and the Internet. Using the services of "Hamrah Bank" customers of Sinai bank can access to their bank account information circadian using only a mobile phone, transfer money to another card or bank account and pay bills of municipal services such as water, electricity and telephone.

Nowadays, banking calls for effective marketing and customer-orientation, providing new technologies, services and customers' desired services that every bank works more successful in these cases will lead to attraction of aforementioned resources and the stability of resources and as a result consistency and permanent survival of that bank with high profitability.

Results and discussion

In order to analyze the relation between variable of age demography, income, education level and gender with the intention to use internet banking services, correlation test was used. As it is clear from table 1, among descriptive variables the level of using internet has the highest positive correlation with the intention to use e-banking services in the future (0.683) at the 1% probability level. And the lowest positive correlation is gender with the intention to use e-banking services in the future (0.435) at the 1% probability level. It can be said that men are more willing to use internet banking than women, unlike findings of Mughli (2007) who did not find a relationship between gender variable and the intention to use e-banking in future.

The age variable with the intention to use e-banking services in future had a negative and significant correlation (0.145) at the probability level of 5% which indicates that younger customers are

more inclined to use internet banking technology. With a little caution, it can be concluded that an increase in the customers' age, negative attitude also increases. There is a general feeling that older adults tend to have negative attitude to computer and several studies have confirmed this. For example, Matilla et al (2003) found that generally older adults are not among the first people who adopt a particular type of technology and try to be among the last people who choose a particular type of technology.

Table 1. Correlation between demographic variables and intention to use e-banking services in the future

r	P		
0.01	0.435	gender	intention to use e-banking services in the future
0.05	-0.145	age	
0.01	0.589	education	
Ns	0.112	income	
0.01	0.683	Internet usage	

Education variable with the intention to use e-banking services in the future had a significant positive correlation with 589/0 at the 1% probability level. In the research done by Rastegar and Aghamohammadi (2011) also there was a significant relationship between educational level and attitudes toward electronic banking. Shafei et al (2010) and Mughli (2007) also concluded that customer education as a demographic factor affects the rate of adopting e-banking. It can be said that people with higher education, because of their ability to use computers and internet, are more willing to use internet banking. And, it can be argued that with the increase in education level of customers their negative attitudes toward e-banking decreases.

Income variable was unrelated to the intention to use e-banking services in the future. Rastegar and Aghamohammadi (2011) and Mughli (2007) also did not find relationship between income and intention to use electronic banking service in the future.

Convenience of electronic banking services has a significant positive correlation of 0.430 at the 1% probability level with the adoption of electronic banking services. These results are consistent with the results of Rastegar and Aghamohammadi (2011) and Hanudin (2007) regarding the effect of ease of use on the adoption of electronic banking.

Inten- tion to use	relatives	Adoption	Accessability	Reliability	Colleagues effect	Fam- ily ef- fects	Friends' effect	readiness	Social status	Compatibility	Easiness	usefulness	
												1	Usefulness
											1	0.683	Easiness
										1	0.719	0.564	Compatibility
									1	0.395	0.402	0.340	Social status
								1	0.439	0.447	0.496	0.438	Readiness
							1	0.457	0.283	0.366	0.399	0.322	Friends' effect
						1	0.481	0.414	0.324	0.381	0.408	0.360	Family effects
					1	0.589	0.338	0.337	0.235	0.417	0.338	0.332	Colleagues effect
				1	0.535	0.321	0.140	0.227	0.226	0.321	0.288	0.211	Reliability
			1	0.582	0.508	0.428	0.161	0.245	0.186	0.402	0.335	0.272	Accessibility
		1	0.607	0.494	0.464	0.457	0.218	0.297	0.248	0.482	0.430	0.349	Adoption
	1	0.703	0.570	0.376	0.458	0.435	0.172	0.274	0.172	0.330	0.293	0.365	Relatives
1	0.707	0.970	0.704	0.573	0.497	0.472	0.218	0.304	0.242	0.479	0.407	0.337	Intention to use

However, it contrasts with research results of Hosseini et al (2012) and Sathye (1999) and Pikkarainen, et al. (2004) who showed that the variable of perception of ease does not have a significant relation with the customers' intention to use. It can be argued that the perception of ease of use through perceptions of usefulness affects the intention to use internet banking.

Ease of use as a personal belief shows that one's interaction with technology is separate from cognitive load and indicates one's convenience to interact with an artificial product and specific software (Agrawal & Karahana, 2000).

It seems that ease of use and adoption of electronic banking are interrelated and several studies have confirmed the effectiveness of ease of use on the adoption of electronic banking and found that the effect of ease of use on intention to use the technology was positive and of utmost importance. Davis (1989) states that it is so easy to use the system that it is understood by people without trying. The impact of ease of use in e-banking can be explained as the nature of e-banking includes analysis and response. On the organizational level, convenience is so important in credibility and reliability. If cus-

tomers understand that using e-banking services is easy, they come to believe that the institute is honest and reliable and do not hide anything. Therefore, they commit to interact with the bank (Gefen & Straub, 2000).

Usefulness also had the highest positive correlation with the ease of using e-banking services (0.683) at the probability level of 1%. The results of this study are consistent with the research results of Ericson et al. that perception of usefulness is identified as the most important effective variable to justify the intention to use e-banking. In researches by Salavati (2004) and Yazdani Far (2005) and Hossein et al (2012) a significant relationship between perceived usefulness and intention to use has been approved.

According to findings, the adoption of electronic banking services has the highest correlation with the intended future use ($970/0 = r$) at the 1% probability level. The lowest correlation exists between reliability of electronic banking service and friends' influence (0.140) at the 5% probability level.

Also convenience of using e-banking services has the highest positive significant correlation with 0.719 at the probability level of 1% and the lowest

correlation with reliability (0.288) at the probability level of 1%. Indeed, from the perspective of people if e-banking services are easy and simple to use, their attitudes towards electronic banking would be better. These findings are consistent with those of the researches by Rastegar and Aghamohammadi (2011) and Davis (1989) regarding the perceived convenience on the attitudes to using the system.

And compatibility also has the lowest positive significant correlation with the readiness of e-banking services (0.321) at the probability level of 1%.

Also social status has the highest positive significant correlation with readiness of e-banking services (0.439) at the probability level of 1%. And readiness of e-banking services has the highest positive significant correlation with convenience of using e-banking services (0.496) at the probability level of 1%.

The influence of relatives has a positive significant correlation with e-banking services (0.703) at the probability level of 1%.

Accessibility has a positive significant correlation with e-banking services (0.607) at the probability level of 1%. This result is consistent with findings of Elahi et al (2010) who found significant correlation between accessibility and adopting e-banking.

Reliability of e-banking services has a positive significant correlation with adopting e-banking services (0.494) at the probability level of 1%.

Reliability and security in transactions carried out electronically causes the convenience of using a specific technology. This result is not consistent with findings of researches by Rastegar and Aghamohammadi (2011) but is consistent with researches by Agarwal et al (1999) regarding reliability as an effective factor in customer satisfaction in using e-banking. Taghavi Fard et al (2012) also showed that reliability has high influence on the individual attitude in using internet banking.

The effect of family ($r=0.464$), colleagues ($r=0.457$) and friends ($r=0.218$) on using e-banking services has positive significant correlation with adopting e-banking services at the probability level of 1%.

Readiness of e-banking services has positive significant correlation with adopting e-banking services with ($r=0.297$) at the probability level of 1%. Which is consistent with Elahi et al (2010) findings who considered availability and accessibility of services as the most important factor in adopting e-banking in Iran.

Social status has positive significant correla-

tion (0.248) with adopting e-banking services at the probability level of 1%. Compatibility of e-banking services has a significant positive correlation with adopting e-banking (0.482) at 1% probability level. This result is consistent with findings of Mohamedpour et al (2010) who concluded that compatibility is effective in the adoption of electronic banking services.

Usefulness has positive significant correlation with adopting e-banking services (0.349) at the probability level of 1%. This result is consistent with findings of Mohamedpour et al (2010) who see usefulness as an effective factor on adopting e-banking services.

Hypotheses testing

First hypothesis: E-banking services of Sinai bank leads to the increase in the level of customer adoption.

Table 3. Independent sample t-test concerning the impact of e-services system on the level of customer adoption

Sig.	df	t	Standard error	Standard deviation	Mean	The effect of e-service system on the level of customer adoption
.000	299	83.48	.04347	.75289	3.629	

Main hypothesis: e-banking system of Sinai bank caused the increase in customers' adoption.

Null hypothesis: e-banking system of Sinai bank did not cause increase in customers' adoption.

Decision: Using a single-sample t-test concerning the approval or rejection of hypotheses, it is observed that considering the significance level of (0.000), it is smaller than error rate (0.05), as a result with 95% probability level it can be claimed that the main hypothesis regarding "the e-banking services system of Sinai bank caused the increase in the level of customer adoption" is verified. In fact using the information in the table, it can be seen that most of respondents consider e-banking services as effective in the level of customer adoption.

Second hypothesis: Lack of accessible locations and unfamiliarity with using e-services has negative effects on the level of customer adoption.

Table 4. Independent sample t-test concerning the effect of lack of accessible points and unfamiliarity with using e-services on the level of customers' adoption

Lack of accessible locations and unfamiliarity with using e-services	Mean	Standard deviation	Standard error	t	df	Sig.
	2.366	1.03074	.05951	39.76	299	.000

Main hypothesis: Lack of accessible points and unfamiliarity with using e-services has negative effects on the level of customers' adoption

Null hypothesis: Lack of accessible locations and unfamiliarity with using e-services does not have negative effects on the level of customers' adoption.

Decision: Using an independent sample t-test concerning the approval or rejection of hypotheses, it is observed that considering the significance level of (0.000), it is smaller than error rate (0.05), as a result with 95% probability level it can be claimed that the main hypothesis regarding, «lack of accessi-

ble locations and unfamiliarity with using e-services have a negative effect on the level of customers' adoption» is verified. In fact, using the information in the table, it can be seen that most of respondents consider lack of accessible locations and unfamiliarity with using e-services as effective in the level of customer adoption.

Third hypothesis: Increasing access points through POS and ATMs and mobile banking and Hambank and internet banking of Sinai bank causes customers' more adoption of Sinai e-banking services system.

Table 5. Independent sample t-test concerning the influence of Increasing access points and unfamiliarity with the use on the level of customer adoption

Increasing access points through POS and ATMs and mobile banking and Hambank and internet banking of Sinai bank	Mean	Standard deviation	Standard error	t	df	Sig.
	3.6867	1.15163	.06649	39.76	299	.000

Main hypothesis: Increasing access points through POS and ATMs and mobile banking and Hambank and internet banking of Sinai bank causes customers' more adoption of Sinai e-banking services system.

Null hypothesis: Increasing access points through POS and ATMs and mobile banking and Hambank and internet banking of Sinai bank does not lead to customers' more adoption of Sinai e-banking services system.

Using an independent sample t-test concerning the approval or rejection of hypotheses, it is observed that considering the significance level of (0,000), it is smaller than error rate (0.05), as a result with 95% probability level, it can be claimed that the main hypothesis regarding, "Increasing access points through POS and ATMs and mobile banking and Hambank and internet banking of Sinai bank causes customers' more adoption of Sinai e-banking services system." is verified. In fact, using the information in the table, it can be seen that most of respondents consider e-banking services as effective in the level

of customer adoption. In fact using the information in the table, it can be seen that most of respondents consider Increasing access points through POS and ATMs and mobile banking and Hambank and internet banking of Sinai bank as effective on the level of customer adoption.

Conclusion

Analysis of results shows that the variable of perception of usefulness is a very important factor in justifying customers' intention to use banking services. Thus, the more customers see internet banking services useful, the more their intention to use these services will be. In this regard, managers are recommended to train their customers about benefits and advantages of internet banking and inform them with proper advertisement and this way influence their customers' perception. Customers' use of this new channel leads to reducing the time of bank transaction, convenience of doing bank transactions and increase in bank performance. In

bank marketing these advantages can be explained and reminded to customers.

Another important variable in justifying the intention to use is the readiness, and increasing access points; it is recommended for banks to increase customers' access to electronic services by increasing access points such as POSes and ATMs.

In conclusion, this research shows that if customers acquire information about the services and benefits of electronic banking, be assured of the security of systems, do not face problems in bank affairs through internet connection and consider working with this technology as easy and useful, they turn to e-banking. With regard to research results, what banks and financial institutes should be careful about is that if customers have positive attitudes towards e-banking, they attempt to use electronic banking services. Therefore, cultural infrastructure and familiarizing people with the benefits of this technology, training and facilitating the use of electronic banking tools for everyone and increasing system security and promoting the quality of internet connection can be effective in synchronizing the banking system of the country with modern global banking and growing use of it.

References

- Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? [Electronic version]. *Decision Sciences*, 30(2), 361-394.
- Davis F. D. (1989). Perceived Usefulness, Perceive Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly*, 13,319- 339.
- Davis F.D., Bagozzi R.P., & Warshaw P.R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models, *Management Science*, 35(8), 982-1003.
- Elahi, Sh, & Heydari, B. (2008). *Customer Relationship Management*, Tehran, Commercial Publishing Company.
- Gefen, D., & Straub, D.W (2000). The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. [Electronic version]. *Journal of the Association for Information Systems*, 1(8), 1-19.
- Hanudin A. (2007). Internet Banking Adoption among Young Intellectuals, *Journal of Internet Banking and Commerce*, 12(3), 1-13.
- Hassanzadeh, A., & Sadeghi, T. (2003). The effects of electronic banking on the development of the banking system, *Economic Journal*, 25 and 26.
- Hussain, M. H., Ahmadi Nejad, M., & Farsi Zadeh M., H. (2012). A study of internet banking adoption by customers using a modified technology of adoption Model, *Business Management*, 4(12), 19- 36.
- Kohzad, N. (2001). e-banking: prerequisites, limitations, and methods of its implementation in Iran (Part I), *Peyk Tosehe*, 27.
- Kohzad, N., (2001). e-banking: prerequisites, limitations, and methods of its implementation in Iran (Part II), *Peyk Tosehe*, 28.
- Mohamedpour, M., Motmaen, Faal, Z., & Fasenghory, M. (2010). Investigating factors affecting adoption of mobile services using path analysis method, *Information Technology Management of management School of Tehran University*, 2(5), 111-128.
- Mughli, A. (2007). Adoption of e-banking among bank customers in the city of Shiraz, *Iran Journal of Management Sciences*, 7.
- Rastegar, A., & Aghamohammadi, Z. (2011). Investigating factors affecting the adoption of electronic banking (case study of the National Bank), *Business Management*, 3(10), 93-114.
- Salvati, M. (2004). *Evaluation of factors affecting technology adoption of e-banking at the National Bank of Iran*, Master's Thesis, University of Mazandaran.
- Shafei, R., Soltanpanah, H., & Mirani, V. (2010). Analysis of the level of adopting e-banking factors and effective factors on it among the bank customers case study of the branches of Melli Bank in the city of Sanandaj, presented at the Fourth International Conference on Marketing Management.
- Yazdani Dehnavi, M. (2005). Factors influencing success of banks and financial institutions in equipping monetary sources, *Modirsaz*, 17, 65-78.
- Mattila, M., Karjalouto, H., & Pento, T. (2003). Internet banking adoption among customers: Early majority or laggards? [Electronic version]. *The Journal of Services Marketing*, 17(4/5), 514-527.
- Pikkarainen, T., Pikkarainen, K., Karjalouto, H., & Pahnla, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model, *Internet Research*, 14(3), 224-235.
- Sahut, J.M., & Kucerova, Z. (2003). Enhance Banking Service Quality with Quality Function Deployment Approach.

Sathye M. (1999). Adoption of Internet banking by Australian consumers: an empirical investiga-

tion, *International Journal of Bank Marketing*, 17/7, 324-334.