

العنوان:	THE USE OF INTERNET BAKING AN EMPIRICAL INVESTIGATION OF JORDAN
المصدر:	مجلة البحوث التجارية
الناشر:	جامعة الزقازيق - كلية التجارة
المؤلف الرئيسي:	Al-Shaikh, Mustafa S.
المجلد/العدد:	مج 28, ع 1
محكمة:	نعم
التاريخ الميلادي:	2006
الصفحات:	3 - 26
رقم MD:	665241
نوع المحتوى:	بحوث ومقالات
قواعد المعلومات:	EcoLink
مواضيع:	البنوك، خدمات البنوك، الخدمات الإلكترونية، شبكات المعلومات، الأردن
رابط:	http://search.mandumah.com/Record/665241

**The use of internet banking an empirical
investigation of Jordan**

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**JOURNAL OF
COMMERICAL RESEARCH**

**A Journal Of Academic Research
Published By:
Faculty Of Commerce
University OF Zagazig
EGYPT**

January2006

Vol.28

No.1

Abstract

The purpose of the study was to understand the Electronic Banks' services as viewed by banks managers in commercial banks in Jordan.

It investigates and analyses the situation of internet banking in Jordan, and the appropriate strategies for the successful implementation and development of internet banking services in the Jordanian context.

The main research instrument employed was questionnaire. Data were collected via mail surveys for bank managers

The data were analyzed using SPSS package. Descriptive statistics, t-Test and one-way analysis of variance were used to analyze the data.

The results indicate that there is a significant difference between the academic qualification, marital status, gender, years of experience in the bank and training courses related to electronic banks services that the branch manager joins and the use of electronic bank's services as viewed by the managers

Introduction

The internet has made significant changes to the ways companies are managed and operated and has also diminished entry barriers in many industries, which were mainly due to constraints in time, space, and information access. The financial services industry is currently in the process of a radical deconstruction. New technological forces created and fueled by the internet and new wireless communications, such as the wireless access protocol (WAP), have been exploited to reduce time-to-market and distances between buyers and sellers of goods and services.

In the early 1980s, automated teller machines (ATMs) were introduced to the local banking scene to help customers carry out simple transactions like

depositing and withdrawing money. The ATMs, to a large extent, released banks from the constraints of time and geographical location and the revolution brought by this technology was banking hours that extended beyond office hours. Besides, it provided banks with a more economical substitute for normal brick and mortar branches.

Internet banking involves consumers using the internet to access their bank account and to undertake banking transactions. At the basic level, internet banking can mean the setting up of a Web page by a bank to give information about its product and services. At an advance level, it involves provision of facilities such as accessing accounts, funds transfer, and buying financial products or services online. This is called transactional online banking (Sathye, 1999), improve customer experience at service encounters (Keeney, 1999). E-banking requires focus not only on the acquisition of new customers but also on the retention of existing customers (Reichheld & schefter2003, Reibstein, 2003).

For the success of most banks, it has become paramount to entice existing bank customers to adopt the options of internet banking. This creates huge cost saving by means of scale effects in bank operations.

Given the fact that banks invest billion in the internet infrastructure, customer satisfaction and customer retention are increasingly developing into key success factors in e-banking (H. H. Bauer et al, 2005).

Most of the banks providing internet banking products and services offer, to a large extent, an identical and standard package of banking services and

transactional capabilities. In general, internet banking products are offered in a two-tiered structure.

Internet banking is expected to increase consumer convenience, since consumers do not have to travel far to perform basic banking transactions like applying for loans, transferring funds, and paying bills. Most of all, customers do not have to worry about getting caught in queues. With internet banking, it is expected that the number of service branches would be reduced in the future. Thus, banks would be able to minimize their overhead expenses.

Online banking allows customers to do financial transactions from their PCs at home via internet. For the last two years the Jordanian web sites are built to keep the customers informed of what is going on in the bank and market. Very recently, banks have come forward in providing internet banking services.

According to (Keeney 1999), although Arab owned banks appeared in the Middle East in the 1920's, the first bank to follow the Islamic principles appeared in Egypt in 1963 with the establishment of the Misr Ghams Savings Bank. At a lesser formal note, a Pilgrimage Fund was established in Malaysia in the late 1950's to facilitate savings for Muslims to accumulate their savings for a pilgrimage to Mecca. The Fund was later transformed into a full-fledged interest free investment bank in 1962. However, the first commercial Islamic bank namely the Dubai Islamic Bank was formed in the United Arab Emirates in 1974. Today there are more than 250 Islamic banks around the world managing funds of about

US \$200 billion. This is equivalent to an average growth rate of 8.6 banks per annum over the last 29 years.

Despite the trends in the growth of Islamic banks around the world, (Keeney, 1999) reported that these banks represent a small fraction of the domestic markets even in most Muslim countries. However, in some countries such as Pakistan, Iran and Sudan the entire banking system has been transformed into the Islamic version based on the Sharia' principles. In most other Muslim countries, the Islamic banks co-exist with conventional banks. To this extent it is worth noting that Malaysia is probably the only country in the world to have developed a dual banking system with the establishment of the Islamic Banking Scheme in March 1993. This scheme allows the conventional financial institutions to offer Islamic banking services alongside their conventional banking services. In this context, it is worth noting that in addition to the locally owned Malaysian banks, some of the foreign owned commercial banks locally incorporated in Malaysia too are operating under the dual banking system.

Literature: a brief review

In Jordan not many studies have been conducted on the current status of internet banking. Thus almost no literature is available on this subject in Jordan. Therefore this paper reflects the current status of internet banking by Jordanian private, public and foreign banks operating in Jordan.

Compared to traditional banking transactions (face to face) self –service transaction on the web cost next to nothing. As web technology is rather recent, the challenge becomes one of overcoming the resistance of existing

bank customer to adopt the new technology in handling their money transactions.

Results from previous research revealed that the success of internet banking is determined not only by banks or government support but also by customers' acceptance of it. The latter has had great influence on the adoption of internet banking (Sathye1999,Mols ,2000;Pikkarrainen et al,2003).There are differences between the demographic profiles and attitudes of users and non-users. (IN) users were further investigated, and three sub-segments were defined according to a set of bank selection criteria (Serkan. A, Safak. A & Eda.A, 2004).

Industrial and service sectors have witnessed a rapid shift particularly in the test decade under the pressure of some forces affecting the marketing environment . One of the major forces behind these developments is technology, which is breaching geographical ,industrial ,and regulatory barriers , creating new products , services , market opportunities and system – oriented business and management processes .

There is clear evidence that Internet Banking is gaining momentum in Islamic countries around the world. (S. Akinci , S. Aksoy & E.Atilgan,2004) reported that fourteen percent of the internet users in Arab countries where e-banking is available have registered for it. Furthermore it is encouraging to know that the adoption rate of internet banking in three Arab countries namely Bahrain, the United Arab Emirates and Kuwait matched or exceeded the US adoption rate of 17%. This has spurred Western banks to turn their attention to the Middle East. The Islamic law that prohibits interest is not a major disincentive for these Western banks.

On the contrary the Western financial institutions have done well by collaborating with experts on Islamic law in the region to develop services tailored to a devout clientele.

On the other hand, since the wide distribution of World Wide Web browsers, the Web was estimated to be more than 800 million pages and 1 billion users on 2005 (Bitner, 2005). The growth of electronic commerce as a whole speaks volumes about the potential growth for Internet banking in particular.

Banking sector will be a leading player in electronic commerce. In 1999 nearly 60% of e-commerce in the UK was concentrated in the financial services sector, and with the expected 10-fold increase of the British e-commerce by 2004, the share of the finance will even increase. Around one fifth of French and Swedish bank customers are actually online, while in the USA online banking is growing at an annual rate of 60% and the number of online accounts might attain 15 million by 2003.

Banks have established an internet presence with various objectives. Most of them are using the Internet as a new distribution channel. Financial services with the use of internet may be offered in an equivalent quantity with lower costs to more potential customers. There may be contacts from each corner of the world at any time of day or night. This means that banks may enlarge their market without opening new branches. American banks are using the Web to reach opportunities in three different categories: to market information, to deliver banking products and services, and to improve customer relationship (Mols, 2000).

Internet banking would free both bankers and customers of the need for proprietary software to carry on with their online banking transactions. To this extent, it was pointed out that banks in Jordan have invested millions of Dinars in internet ready technology but these banks are still operating as dial up intranet facilities. In this context, an interview with a Jordanian banker, revealed that all home or PC-banking based on proprietary software which are browser based and conform to internet requirements can also be used to provide internet banking services. However, this delivery channel is still not available to Jordanian bank customers at present due to lack of adequate legal framework and security concerns.

Banks and financial institutions, in general, have established an internet presence with various objectives. "E-banking will soon mature into an offensive business strategy rather than a passive 'must-have'" (Hans, 2005). Some banks are there because their competitors have been. Some others prefer a 'wait-and-see' practice. Some are using it as a banking channel, being part of their distribution /delivery management. Very few, however, have set a strategy for exploiting the opportunities offered by internet. To do this, they need some sort of e-business activities chart, showing the structure of the Internet market in order to decide which business is relevant to theirs and where to invest on. Moreover, decision-makers would like to know what are the internet business activities in which other banks have been engaged in.

Methodology and scope of the study:

Sample

In this study, the sample of 166 bank managers who have been drawn randomly from the commercial banks in Jordan, 130 of them were accepted. In the sample, 65.4 percent of the respondents having a Bachelor degree, 52.3 percent were married, 62.3 percent were male, and 41.5 percent were 45 years old and above. About 30.8 percent of the respondents having experience (from 5-less than 10 years), 33.3 percent had no training courses related to Electronic Banks Services.

Questionnaire

Questionnaire was developed based on past studies. A total of 19 statements were asked on a five-point Likert-type scale ranging from 5 (strongly agree) to 1 (strongly disagree).

The researchers in various commercial banks in Amman City randomly distributed the questionnaire. A total of 130 responses were used for analysis in this study.

The reliability of scale was assessed by Cronbach's coefficient alpha (0.78). Reliability is an assessment of the internal consistency of the construct indicators. The Cronbach alpha values of 0.60 or higher are generally considered to be acceptable.

Data collection and analysis

The main research instrument employed was a questionnaire. Data were collected via mail surveys for bank managers. A personalized cover letter

that explained the aims and objectives of the research and provided assurances regarding the confidentiality of data accompanied the questionnaire. Managing directors were urged to personally participate in the survey. To minimize response bias, the participants were also provided with pre-addressed envelopes to enable them to return the completed questionnaires directly to the researchers. Both qualitative and quantitative research methodologies were applied and consequently a comprehensive range of data was collected. Attention was paid to the purpose, the existence and contents of the mission statements. The banks managers were asked to indicate the use of electronic banks services. The data were analyzed using SPSSx package. Descriptive statistics, t-Test and one-way analysis of variance were used to analyze the data.

Research limitations

There are several limitations of this research: First, this research is dependent on data collected by questionnaire. Second, only services of internet banking are studied. Third the sample taken for the purpose of study comprises only commercial banks operating in Jordan.

Findings and discussion

The purpose of the study was to understand the Electronic Bank's services as viewed by banks managers in commercial banks in Jordan.

In order to analyze the data and consequently discuss the results, the collected data were summarized using descriptive statistics. Of the 166 who were canvassed 130 personally completed and returned the questionnaires: a response rate of 7

Table 1
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Valid N (list wise)	130				
VAR00004	130	4.00	5.00	4.1462	.3546
VAR00005	130	4.00	5.00	4.1462	.3546
VAR00002	130	3.00	5.00	4.4077	.7228
VAR00008	130	2.00	5.00	4.4923	.9000
VAR00009	130	2.00	5.00	4.5000	.8559
VAR00001	130	3.00	5.00	4.5615	.6349
VAR00017	130	1.00	5.00	4.6154	.9756
VAR00019	130	1.00	5.00	4.7077	.9437
VAR00010	130	4.00	5.00	4.7538	.4324
VAR00016	130	3.00	5.00	4.7923	.5665
VAR00006	130	4.00	5.00	4.8154	.3895
VAR00014	130	1.00	5.00	4.8154	.7854
VAR00007	130	3.00	5.00	4.8308	.4682
VAR00012	130	3.00	5.00	4.8308	.4682
VAR00015	130	3.00	5.00	4.8385	.5399
VAR00018	130	3.00	5.00	4.8462	.4568
VAR00003	130	4.00	5.00	4.8615	.3467
VAR00011	130	1.00	5.00	4.8692	.5759
VAR00013	130	4.00	5.00	4.9231	.2675

Table 1 shows the results of the survey. Out of the 19 statements posed, all statements agreed by the respondents in the study. The respondents, agreed with the statement that "Improving the quality of Bank's services" (mean=4.9231), and also agreed with the statement that "Communicating with the customer easily" (mean=4.8692) and the respondents also agreed that "Saving time and efforts of the customers "(mean= 4.8615).

There was also high agreement on the statements related to "Changing in customer behavior " (mean=4.8462), that "Joining in alliance with organizations and corporations from out side banking sector ", and that "Preserving with the current customers ".

On the other hand, the results also showed that the respondents agreed that "Increasing competition" but in a weak bases (mean=4.1462).

The above results show that the managers had a positive attitude towards using electronic banking. These findings were consistent with the results by (Serkan, 2004) although the percentages of agreement and disagreement were higher in the former studies. In relation to the Sathye (1998) study the present finding is different and the conclusion was quite unclear on the attitude of banks managers.

Table2
ANOVA Test for the Academic Qualification

		Sum of Squares	df	Mean Square	F	Sig.
VAR00008	Between Groups	7.367	3	2.456	3.186	.026
	Within Groups	97.125	126	.771		
	Total	104.492	129			
VAR00010	Between Groups	1.594	3	.531	2.971	.034
	Within Groups	22.529	126	.179		
	Total	24.123	129			
VAR00014	Between Groups	10.222	3	3.407	6.191	.001
	Within Groups	69.347	126	.550		
	Total	79.569	129			
VAR00019	Between Groups	15.104	3	5.035	6.357	.000
	Within Groups	99.788	126	.792		
	Total	114.892	129			

The results in Table 2 indicate that there is a significant difference between the academic qualification and the use of electronic bank's services as viewed by the managers in the following statements: 8, 10, 14 and 19.

Tukey test has been used to identify which academic qualification is more significant than the other and the result showed that the manager who holds PhD degree has felt more strongly than those who have a Diploma in these statements. It is important to note that PhD managers in commercial banks

are more used to internet and technology than those who have a diploma. They indicated that they could fulfill their conducting personal data easier, preserving the privacy of information, reaching new sectors of customers irrespective of nationality, and increasing loyalty towards bank.

Table 3
ANOVA Test for the Marital Status

		Sum of Squares	df	Mean Square	F	Sig.
VAR00009	Between Groups	5.699	2	2.849	4.075	.019
	Within Groups	88.801	127	.699		
	Total	94.500	129			
VAR00018	Between Groups	3.397	2	1.698	9.169	.000
	Within Groups	23.526	127	.185		
	Total	26.923	129			

The results in Table 3 indicate that there is a significant difference between the marital status and the use of electronic bank's services as viewed by the managers in the following statements: 9 and 18.

Tukey test has been used to identify which status is more significant than the other and the result showed that the married manager have felt stronger than those who have a single in statement 18 while the single felt stronger than the others and the married managers in statement 9 it could be argued that the online internet banking allows customers to absorbing new bank activities without increasing recruitment and the ability to change the customer behavior.

Table 4
T- Test for the Gender

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	81	4.4568	.6717	7.464E-02
	2.00	49	4.7347	.5313	7.590E-02
VAR00003	1.00	81	4.9136	.2827	3.141E-02
	2.00	49	4.7755	.4216	6.022E-02
VAR00009	1.00	81	4.4321	.9346	.1038
	2.00	49	4.6122	.7017	.1002
VAR00011	1.00	81	4.7901	.7197	7.996E-02
	2.00	49	5.0000	.0000	.0000

The results in Table 4 indicate that there is a significant difference between the gender and the use of electronic bank's services as viewed by the managers in the following statements: 1, 3, 9 and 11.

t-Test has been used to identify which gender is more significant than the other and the result showed that the male managers have felt stronger than female managers in statement 3 while the female managers felt stronger than the others and the male managers in statements 1,9 and 11 strongly agree with the reasons refer to the use of electronic banks services help in reducing costs of banks expenses, absorbing new banking activities without increasing recruitment , and also they can communicate with the customer easily .

It is noticeable that female managers felt that the electronic banks reduce costs, absorbing new activities and they can communicate with customers easily.

The results indicate that there is no significant difference between the managers' age and the use of electronic bank's services as viewed by the managers that is a province of confident in using electronic banking services.

Table 5

ANOVA Test for the Years of Experience

		Sum of Squares	df	Mean Square	F	Sig.
VAR00010	Between Groups	2.270	3	.757	4.364	.006
	Within Groups	21.853	126	.173		
	Total	24.123	129			
VAR00014	Between Groups	8.844	3	2.948	5.252	.002
	Within Groups	70.725	126	.561		
	Total	79.569	129			
VAR00019	Between Groups	10.869	3	3.623	4.388	.006
	Within Groups	104.024	126	.826		
	Total	114.892	129			

The results in Table 4 indicate that there is a significant difference between the years of experience and the use of electronic bank's services as viewed by the managers in the following statements: 10,14 and 19.

Tukey test has been used to identify which years of experience are more significant than the other and the result showed that the manager who has less than 5 years experience in the bank feels stronger than those who have 15 years and above in statement 14 and 19 while the managers who have experience from 10 to less than 15 years feel stronger than the one who has

experience less than 5 years in statement 10 respondents perceived that the use of electronic banks services will lead to preserving the privacy of information.

Table 6
ANOVA Test for the Number of Training Courses

		Sum of Squares	df	Mean Square	F	Sig.
VAR00004	Between Groups	1.759	3	.586	5.106	.002
	Within Groups	14.464	126	.115		
	Total	16.223	129			
VAR00005	Between Groups	1.759	3	.586	5.106	.002
	Within Groups	14.464	126	.115		
	Total	16.223	129			
VAR00015	Between Groups	5.943	3	1.981	7.883	.000
	Within Groups	31.664	126	.251		
	Total	37.608	129			
VAR00016	Between Groups	5.096	3	1.699	5.897	.001
	Within Groups	36.296	126	.288		
	Total	41.392	129			

The study has also revealed that (Table 6) there is a significant difference between the number of training courses related to electronic banks that the manager attendance and the use of electronic bank's services as viewed by the managers in the following statements: 4,5,15 and 16.

Tukey test has been used to identify which number of training courses is more significant than the other and the result showed that the manager who has not attended any training courses feels weaker than the others in statement 15 and 16 while the managers who attend one training course or more feel stronger than the one who did not attend any training courses in statement 4 and 5 the results highlight that the use of electronic banks services will increase the level of competition and will develop banks services to the clients.

Conclusions and Recommendations

This exploratory study sought to trace the use of the internet banking. Advances in information technology and telecommunications have certainly introduced new delivery channels for Jordan commercial banks products and services .Only a systematic and permanent monitoring of the customer requirements incorporated in all bank processes and a system of their prioritization will guarantee future benefits and will lead all business efforts to correspond to the real structure of the customers demands and needs. The importance of correctly assessing customer requirements and integrating them into every single business process is well known. According to our study we fed strongly to recommend the following:

- 1) Awareness of internet banking services is essential to facilitate encouragement for female employees.
- 2) To access more potential adopters, information about internet banking should be provided to all employees particularly over age.
- 3) To build confidence for all levels of employees at all branches as a function of their work experiences.

- 4) The results suggest that, single employees need to continue to emphasize the advantages of internet banking services.
- 5) The results suggest that employees should perceive very concerned about accessibility and confidentiality as they relate to internet banking.
- 6) Banks need to continue emphasize that their systems should develop internet diffusion strategies.

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The Use of Internet Banking: An Empirical Investigation of Jordan

First Section:

Mark the appropriate answer with (X):

1. Academic Qualification of th Branch manager:

- Diploma
- Bachelor
- Master
- PH.D

2. Marital Status:

- Married
- Single
- Others

3. Gender:

- Male
- Female

4. Age:

- From 30-Less than 35 years old
- From 35-Less than 45 years old
- 45 years old and above

5. Years of experience in the Bank

- Less than 5 years
- From 5-Less than 10 years
- From 10 –Less than 15 years
- 15 years and ubove

6. Training courses related to Electronic Banks Services that the Branch

Manager join :

- Non
- One
- Two • More than two

• **Second Section:**

No.	The Use of Electronic Bank's Services Help in:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Reducing Costs of Bank's Expences.					
2	Saving Time and Efforts of the Employee.					
3	Saving Time and Efforts of the Customers.					
4	Increasing Comptition.					
5	Developing Bank's Services.					
6	Achieving Unvisual Bank's Goals.					
7	Increasing the Capacity of Bank's Operations.					
8	Conducting Personal Data Easier.					
9	Absorb New Banking Activities Without Increasing Ricriutmenr.					
10	Preserving the privacy of information.					
11	Communicate With the Customer Easily.					
12	Preserving with the Current Customers.					
13	Improving the Quality of Bank's Services.					
14	Reaching New Sectors of Customers Irrespective of Nationality and Locations.					
15	Joining in Alliance With Organizations and Corporations from out side Banking Sector.					
16	Promoting Marketing Opportunities.					
17	Providing Accuracy in Bank Transactions.					
18	Changing in Customer Behavior.					
19	Increasing Loyalty towards Bank.					