

Online Banking in Emerging Markets: Lebanese Case.

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DOI: 10.29322/IJSRP.9.08.2019.p9202
<http://dx.doi.org/10.29322/IJSRP.9.08.2019.p9202>

Abstract- Now days E-banking has been a major concern for all developed and developing countries. Online banking became a major system in all banking transactions. And each day the online banking is being spread and new innovative ideas created that aims for facilitating and enhancing financial transactions of the customers in terms of speed, cost, transparency and comfort. Despite all its benefits still many societies' especially in developing countries unfamiliar and lack trust in dealing in online banking. This study aims to study the ability of Lebanese people as a case for emerging market to adapt and trust the online banking.

Index Terms- Online banking, Lebanon, challenges, customers, acceptance, gender, age, trust, technology

I. INTRODUCTION

E-banking or Internet banking is defined as the use of the Internet to deliver banking activities such as money transfer, paying bills, viewing current and savings account balance, paying mortgages and purchasing financial instruments and certificates of deposits (Chavan, 2013). E-payment is described as a means where business transactions are fulfilled electronic devices such as personal computers, telephones, and fax machines, Internet card payments and other electronic channels. The electronic communications used in e-banking includes Internet, e-mail, e-books, data base and mobile phones. Sarita Bahl (2012) stated that electronic banking or e-banking has existed for some time in the form of teller machines. It can be used to eliminate also any geographic distances between customer and bank branch. Electronic banking could also be considered as an opportunity for countries that are developing their financial systems to advance to the development stages. Customers in such countries might benefit from the banks' services and have a direct access on these services from banks abroad through wireless communication systems more rapidly than traditional wired communication network. The advanced computer and communication technologies as well as the accessibility of the internet helped to make it possible for everyone to do most of the banking transactions online without even stepping to any financial institute, in other words this leads to the emerging of e-banking. E-banking has been considered as a revolution in the banking industry. It was predicted previously that banks are like dinosaurs and should be replaced one day by microcomputers. This has pointed to the threats and challenges in the banking industry, letting bank to formulate the best strategic plans to win back their customers. Their main concern is the all technologies relating to computer and telecommunication. The industry realized that improving the customer service can be achieved through adopting new technologies. For instance, American banks have started their e-banking services in the early 1992. Banks realized that there were a significant number of customers who are willing to do e-banking. Hence, many banks that operated 24 hours/day have developed numerous e-banking applications that allow their customers to get benefits of these services such as transferring money among accounts, paying bills, checking account history, and downloading information about statements.

II. METHODOLOGY AND DATA

Our empirical test will detect how trust, privacy and security, perceived ease of use, and perceived usefulness impact the adoption of e-banking services by Lebanese bank's customers. To detect the impact of these variables, we will use multiple regressions. The descriptive statistics are used to detect the frequencies, means, medians, standard deviations, minimums, maximums, and correlation of regression variables. Multiple regressions will be performed to assess the strength of the research's empirical results.

1.1. Variables' Specifications and Expected Signs

Our research is based on a model called Technology Acceptance Model (TAM) which determines the factors that affect the users' acceptance of an information system. This model suggests that the acceptance of any new information system is determined by some beliefs drawn from the users' behaviors such as perceived ease of use (PEOU), perceived usefulness (PU), in addition to other variables that has impact on PU and PEOU such as trust and privacy and security. Therefore, the independent variables will be perceived ease of use, perceived usefulness, trust, and privacy and security, whereas the dependent variable will be the willingness of

Lebanese customers to use e-banking services. In our study, we will focus on how much perceived ease of use, perceived usefulness, trust, and privacy and security may affect the willingness of Lebanese customers to use e-banking services.

1.2. Data

The data was collected through a survey questionnaire shown in the Appendix distributed randomly to 140 respondents. Only 100 questionnaires were returned back.

1.3. Research Question

This study raises two questions:

- 1) What is the level of acceptance of the Lebanese customers to use e-banking services offered by the Lebanese banks?
- 2) What is the level of willingness of the Lebanese customers to share private information and credit card information through the internet?

III. FINDING AND RESULTS

a. Descriptive statistics

This section presents some summary statistics for the collected data

Table 1: Summary Statistics of Males and Females

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid F	41	41.0	41.0	41.0
M	59	59.0	59.0	100.0
Total	100	100.0	100.0	

Source: done by author

Table 1 presents that 59 out of 100 respondents are males while 41 out of 100 respondents are females. This means that 59 % of the respondents are 52 males while 41% of the respondents are females. So, the sample consists of more males than females.

Table 2: Summary statistics of age groups

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20-30	38	38.0	38.0	38.0
30-40	43	43.0	43.0	81.0
40-50	12	12.0	12.0	93.0
50-60	7	7.0	7.0	100.0
Total	100	100.0	100.0	

Source: done by author

Table 2 shows that the sample consists of four age groups: 20-30, 30-40, 40-50, and 50-60. The above bar chart presents that 38% of the sample falls in the age group 20-30, 43% falls in the age group 30-40, 12% falls in the age group 40-50, and only 7% of the sample falls in the age group 50-60. This means that the highest percentage is that of the age group 30-40, so most of the respondents are between the ages thirty and forty.

Table 3: Summary statistics of purchasing products through the web

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	68	68.0	68.0	68.0
1	32	32.0	32.0	100.0
Total	100	100.0	100.0	

Notes: product purchasing is a dummy variable where: No= 0 and Yes= 1

Source: author's own work

Table 3 demonstrates the behavior of purchasing products through the internet. The results showed that 68% of the respondents haven't bought any products through the internet and their answers are represented by the value zero. On the other hand, only 32% of the respondents bought products through the internet and their answers are represented by the value 1. This could explain that Lebanese customers are not willing to make online shopping because they don't have enough trust to do that for many reasons. First, the Lebanese laws and regulations don't provide customers with the safety and security systems to do online shopping. They don't also provide safe solutions in case any online financial problems happen with the users. Second, the Lebanese customers themselves lack the strong backgrounds of using the internet for commerce in contrary with other customers in Europe or the United States, for instance, who are highly involved in the business to consumer (B2C) transactions.

Table 4: Summary statistics of having an Internet Bank Account

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	48	48.0	48.0	48.0
1	52	52.0	52.0	100.0
Total	100	100.0	100.0	

Notes: having an internet bank account is a dummy variable where: No= 0 and Yes= 1

Source: author's own work

Table 4 presents the percentage of respondents who have an internet bank account and those who don't have an internet bank account. Results showed that 52% of the respondents do have an internet bank account and they are represented by the number 1(yes=1), while 48% of the respondents don't have an internet bank account and they are represented by the value zero (No=0). Many reasons were provided by respondents who don't have an internet bank account. Some of them mentioned that they concerned about privacy and security issues; some stated that they don't see any real value in having this type of account, and others claimed that they are not interested in using new systems and new technologies. Respondents who have internet bank accounts emphasized on the facilities provided by such online banking systems such as convenience (24 hours service, everywhere connectivity). The table below will explain more the reasons of choosing the internet bank accounts by Lebanese customers.

Table 5: Summary statistics of reasons for choosing e-banking services.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	25	25.0	48.1	48.1
1	2	2.0	3.8	51.9
2	2	2.0	3.8	55.8
3	22	22.0	42.3	98.1
4	1	1.0	1.9	100.0
Total	52	52.0	100.0	
Missing System	48	48.0		
Total	100	100.0		

Notes: 0= convenience (24 hours service, everywhere connectivity), 1= Curiosity, 2= low service charge, 3=easy to maintain my banking transaction activity, 4= other reasons. Source: done by the author

Source: author's own work

Table 5 presents the reasons for choosing e-banking services by Lebanese banks' customers. Out of 52 respondents who have internet bank accounts, 25 stated that they chose e-banking services for convenience issues that let users access their accounts wherever and whenever they are. Twenty two respondents chose e-banking services because they can easily maintain their banking transaction activities such as transferring funds between accounts, balance inquiry, paying bills and other services. In addition, two respondents chose e-banking services for curiosity reasons; two for the low service charge offered by these e-banking services, and only one respondent chose to use these services for unknown reasons. The above results show that the most important reasons for choosing online banking services is the ability of bank customers to access their accounts when and where they needed that saving their costs and time instead of waiting in question in banks for a long time.

Table 6: Summary statistics of online services adopted by Lebanese customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	12	12.0	23.1	23.1
	1	32	32.0	61.5	84.6
	2	7	7.0	13.5	98.1
	4	1	1.0	1.9	100.0
	Total	52	52.0	100.0	
Missing	System	48	48.0		
Total		100	100.0		

Notes: 0= pay bills, 1= balance inquiry, 2= transfer funds between accounts, 3=process payroll, 4=order check books.
Source: author’s own work

Table 6 shows the different online features (services) used by Lebanese customers. Results showed that 12 users which forms about 23.1% of those who have an internet bank account use online banking to pay their bills and save time instead of going to the required places to pay these bills. In addition, 32 users out of 52 who have an internet bank account use online banking services to inquire balance for their accounts. They form 61.5% of online banking users. Moreover, 7 users (13.5%) use e-banking services to transfer funds between accounts while only one user (1.9%) use e-banking services to order check books, noticing that process payroll is a service that is not practiced by Lebanese customers. We concluded from the above results that most of the Lebanese customers use online banking services for checking their accounts and getting a balance inquiry only, which proves that users in Lebanon lack the motivation , confidence, and background that encourage them to use the internet for more valuable and effective reasons.

Table 7: Summary statistics of customers' satisfaction of online banking services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	12	12.0	23.1	23.1
	3	26	26.0	50.0	73.1
	4	14	14.0	26.9	100.0
	Total	52	52.0	100.0	
Missing	System	48	48.0		
Total		100	100.0		

Notes: 0= very unsatisfied, 1= unsatisfied, 2= neutral, 3=satisfied, 4=very satisfied
Source: author’s own work

Table 7 presents the percentages of satisfaction of e-banking services among Lebanese customers. Results showed that 50% of Lebanese customers who has an internet bank account are satisfied with the e-banking services they are using, while 26.9% are very satisfied with these services. On the other hand, 23% of the customers are neutral with these services which mean that they are not finding any added value when using such online services. But as table 7 showed previously that 61.5% of the customers use e-banking services for balance inquiry reasons, so users who stated that they are very satisfied with the online banking services are not practicing real online financial transactions, they are just checking their accounts from time to time rather than doing a real business through the internet.

Table 8: Descriptive statistics of variables

	N	Minimum	Maximum	Mean	Std. Deviation
Dep Willingness	100	.0	.8	.418	.2686
V1= Trust	100	.00	1.00	.3654	.42911
V2=privacy and security	100	1	7	2.12	1.781
V3=ease	100	.00	4.00	2.3846	.69186
V4=usefulness	100	.00	3.00	1.4110	.73430
Valid N (listwise)	100				

Source: author’s own work

Table 8 presents the descriptive statistics of the dependent variable willingness of Lebanese customers to use online banking services as well as the descriptive statistics of the independent variables trust, privacy and security, perceived ease of use, and perceived usefulness. The dependent variable willingness shows a minimum value of zero and a maximum value of 0.8. The mean of the dependent variable is equal to 0.418 and the standard deviation is equal to 0.2686. As to the independent variable trust it shows a zero minimum value, a maximum value equal to 1, a mean equal to 0.3654, and a standard deviation equal to 0.42911.

The independent variable privacy and security shows a minimum value equal to 1, a maximum value equal to 7, a mean equal to 2.12, and a standard deviation equal to 1.781. The minimum value of the independent variable perceived ease of use is equal to zero, the maximum value is equal to 4, the mean is equal to 2.3846, and the standard deviation is equal to 0.69186. Finally, the minimum value of the independent variable perceived usefulness is equal to zero, the maximum value is equal to 3, the mean is equal to 1.4110 and the standard deviation is equal to 0.73430.

1.4. Correlation and Regression Analysis

Table 9: Correlations matrix of variables

		Dep. Willingness	V1= Trust	V2=privacy and security	V3=ease	V4=usefulness
Dep Willingness	Pearson Correlation	1	.178	-.037	-.072	.196
	Sig. (2-tailed)		.157	.767	.566	.117
	N	100	100	100	100	100
V1= Trust	Pearson Correlation	.178	1	-.078	.281*	.322**
	Sig. (2-tailed)	.057		.536	.023	.009
	N	100	100	100	100	100
V2=privacy and security	Pearson Correlation	-.037	-.078	1	.109	.053
	Sig. (2-tailed)	.767	.536		.388	.676
	N	100	100	100	100	100
V3=ease	Pearson Correlation	-.072	.281*	.109	1	.143
	Sig. (2-tailed)	.566	.023	.388		.255
	N	100	100	100	100	100
V4=usefulness	Pearson Correlation	.196	.322**	.053	.143	1
	Sig. (2-tailed)	.117	.009	.676	.255	
	N	100	100	190	100	100

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed)
 Source: author's own work.

Table 9 presents the correlation matrix of variables. Firstly, we will discuss the correlation between the dependent variable (willingness of Lebanese customers to use online banking) and all the independent variables. The correlation between the dependent variable (willingness) and the independent variable (trust) is equal to 0.178 so it's positive and statistically significant at 10% (0.057). The correlation between the dependent variable (willingness) and the independent variable (privacy and security) is equal to -0.037 so it's negative and also statistically insignificant (0.767). The correlation between the dependent variable (willingness) and the independent variable (perceived ease of use) is equal to -0.072 so it's negative and statistically insignificant (0.566). Finally, the correlation between the dependent variable (willingness) and the independent variable (perceived usefulness) is equal to 0.196, so it's positive but also statistically insignificant (0.117). On the other hand, we will discuss the correlation between the independent variables themselves. The correlation between trust and privacy and security is equal to -0.078 so it's negative and statistically

insignificant (0.536). This means that as trust increases, customers will be less private and secured to use internet banking. In addition, the correlation between trust and perceived ease of use is equal to 0.281 so it's positive and statistically significant at 5% (0.023), also the correlation between trust and perceived usefulness is equal to 0.322 so it's positive and statistically significant at 1% (0.009). Moreover, the correlation between privacy and security and perceived ease is equal to 0.109 so it's positive but statistically insignificant (0.388), whereas the correlation between privacy and security and perceived usefulness is equal to 0.053 but also statistically insignificant. And finally, the correlation between perceived ease of use and perceived usefulness is equal to 0.143 so it's positive but also statistically insignificant (0.255).

Regression Estimations

In this section we are going to study the impact of each of perceived ease of use, perceived usefulness, trust, and privacy and security on the willingness of Lebanese customers to adopt e-banking services. We will present four multiple regression models where each has different combination of variables.

Hypothesis 1 Null hypothesis H0: perceived ease of use has a positive impact on the willingness of Lebanese customers to adopt e-banking services.

Hypothesis 2 Null hypothesis H0: perceived usefulness has a positive impact on the willingness of Lebanese customers to adopt e-banking services.

Hypothesis 3 Null hypothesis H0: trust has a positive impact on the willingness of Lebanese customers to adopt e-banking services.

Hypothesis 4 Null hypothesis H0: privacy and security has a positive impact on the willingness of Lebanese customers to adopt e-banking services.

Table 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.269 ^a	.072	.010	.2672
2	.268 ^b	.072	.026	.2651
3	.231 ^c	.053	.023	.2655
4	.196 ^d	.039	.023	.2655

Source: Authors own work

Table 10 presents four models. Model 1 explains 1% of the variability of the dependent variable (willingness of Lebanese customers to use online banking services), while model 2 explains 2.6% of the variability of the dependent variable. As to model 3 and 4, they both explain 2.3% of the variability of the dependent variable.

Table 11: Coefficients' and independent variable

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.431	.133		3.252	.002
	V1= Trust	.102	.086	.163	1.188	.040
	V2=privacy and security	.003	.019	-.018	-.145	.085
	V3=ease	-.054	.051	-.140	-1.067	.290
	V4=usefulness	.060	.048	.165	1.252	.215
2	(Constant)	.428	.130		3.304	.002
	V1= Trust	.103	.084	.165	1.227	.025
	V3=ease	-.055	.050	-.142	-1.105	.273
	V4=usefulness	.060	.048	.164	1.255	.214

3	(Constant)	.309	.072		4.277	.000
	V1= Trust	.080	.082	.128	.980	.031
	V4=usefulness	.057	.048	.155	1.190	.238
4	(Constant)	.317	.072		4.418	.000
	V4=usefulness	.072	.045	.196	1.590	.117

Dependent variable: Dependent willingness

Source: done by author

Table 11 presents the regression estimates for willingness of Lebanese customers to adopt e-banking services. We present several models to test the impact of the independent variables in different combinations on the dependent variable. V1 (trust) shows to have a positive and significant impact on willingness in all models at 5%. This suggests that trust is an important variable in affecting the willingness of customers to use internet banking. V2 (privacy and security) shows to have a positive and significant impact on willingness in model one at 10%. This suggests that privacy and security is an important variable in affecting the willingness of customers to use internet banking. The independent variables perceived ease of use and perceived usefulness show to have no significant impact on the willingness which suggests that they are not important variables in affecting the willingness of customers to use internet banking.

The regression equation is as follows:

$$y = a + bx_1 + cx_2 + dx_3 + ex_4 + e$$

Model 1: $y = 0.431 + 0.102V1 + 0.003V2 - 0.0554V3 + 0.060V4 + e$

Model 2: $y = 0.428 + 0.103V1 - 0.055V3 + 0.060V4 + e$

Model 3: $y = 0.309 + 0.080V1 + 0.057V4 + e$

Model 4: $y = 0.317 + 0.072V4 + e$

IV. CONCLUSION

As a conclusion the online banking is being expanded in Lebanon, males tend to use online banking more than females this can be easily explained in an emerging market such as Lebanon since males are more useful to fund transfers, online trading requests, Internet accounts and other electronic business, this shows that Females should be more encouraged to using online banking.

Moreover the most people using online banking is under the age of 40 since they are more familiar via technological services than older people and this shows the importance to train older people for using such technology.

The statistics also showed that many people are still not encouraged to purchase products online while few of them are encouraged to purchase and pay online, this shows that the trust in such technology is still weak and that's what banks should focus on to support such technology.

Knowing that from the overall bank customers about half of them have an internet bank account and most of them choose to have an online banking account since they believe that it could be more easier to maintain banking transactions such as balancing inquiry in the first level then comes paying bills, transferring funds and ordering check books respectively.

APPENDIX

Questionnaire

Directions: Tick the box which corresponds to your choice

A- General Information:

1. Name: _____

2. Age:

- 20- 30
- 30-40
- 40-50
- 50-60

3. Gender:

- Male
- Female

4. Educational level:

- PHD
- Master Degree
- Bachelor
- High School
- Undergraduate
- Other

5. Are you employed?

- Yes
- No

If yes, how many years of experience do you have?

- 2 years
- 4 years
- 6 years
- More than 8 years

B- Internet and Banking Information: The following five questions will study the effect of perceived ease of use on the adoption of e-banking by banks' customers.

1. How long have you been using the World Wide Web (WWW)?

- 1 to 2 years
- 2 to 4 years
- 4 to 6 years
- 6 to 8 years
- More than 8 years

2. How many hours per week do you use your computer for work?

- Less than 1 hour
- 1 to 5 hours
- 5 to 10 hours
- 10 to 20 hours
- Over 20 hours

3. Which of the following methods do you use while using online services?

- DSL
- Dial-up
- Cable
- Broadband

4. How frequently do you use e-banking services per month?

- 1 to 3 times
- 3 to 8 times
- 8 to 12 times
- Over 12 times

5. How frequently do you use an Automated Teller Machine (ATM) per month?

- Less than 1time
- 1 to 3 times
- 3 to 8 times
- 8 to 12 times
- Over 12 times

The following three questions will study the effect of privacy and security on the adoption of e-banking by bank's customers.

1. Do you have an Internet bank account?

- Yes
- No

2. Do you use any of the following when you use e-banking? (choose the most frequent used ones)

- Security device
- SMS text password (SMS from your bank providing u with the password)
- E- certificate
- I never use these

3. If you don't have an internet bank account, what are the main reasons that you have not opened one yet? (check all that apply)

- Never heard of Internet banking
- Concerned about security and privacy
- Don't see any real value in having this type of account
- Not available through my bank
- The new system is not friendly used
- I am not skillful in the computer
- Others

The following two questions will study the effect of trust on the adoption of e-banking by bank's customers.

1. Have you purchased any product through WWW?

- Yes
- No

2. What is the percentage of your household monthly income you deposit to your internet bank account?

- 10%
- 20%
- 30%
- 40%
- 50%
- Don't know
- Not applicable

The following five questions will study the effect of perceived usefulness on the adoption of e-banking by bank's customers.

1. If you don't have an internet bank account, how likely is it that you will open one within the next 12 months?

- Very Unlikely
- Somewhat unlikely
- Somewhat likely
- Very likely

2. What is the reason for choosing e-banking services?

- Convenience (24 hours service, everywhere connectivity)
- Curiosity
- Low service charge
- Easy to maintain my banking transaction activity
- Others

3. Which online features (services) do you use regularly? Please select all that apply.

- Pay bills
- Balance inquiry

- Transfer funds between accounts
- Process payroll
- Order check books
- Others

4. How frequently do you visit your traditional bank since you started using online banking?

- Less than 1 time
- 1 to 2 times
- 2 to 4 times
- 4 to 6 times
- 6 to 8 times

5. How satisfied are you with online banking services?

- Very satisfied 77
- Satisfied
- Neutral
- Unsatisfied
- Very unsatisfied

REFERENCES

- Aabkhare, A., Alilo, B., Abedini, E., 2013, " Advantages and Disadvantages of E-Banking and Commerce ", Life Science Journal, Vol. 10, 458- 462
- Abbad, M., Abed, J., (2012), "The Development of E-Banking in Developing Countries in the Middle East", Journal of Finance, Accounting and Management, Vol. 3, Num. 2, July 2012, 107-123
- Ahmadpour, M., Meshkany, F., Jamishidinavid, B., 2014, "Considering EBanking Customers Satisfaction", Journal of Humanities and Social Science, Vol.19, Issue 5, May 2014, 66-68
- Akbari, P., 2012, "A Study on Factors Affecting Operational Electronic Banking Risks in Iran Banking Industry (Case Study: Kermanshah Melli Bank) ", International Journal of Management and Business Resources, Vol. 2, Issue 2, spring 2012, 123-135
- Agwu, E., Carter, A., 2014, " Mobile Phone Banking In Nigeria: Benefits, Problems, and Prospects", International Journal of Business and Commerce, Vol. 3, Num 6, Feb. 2014, 50-70
- Amit, R., and Zott, C., 2001, "Value Creation in E-business", Strategic Management Journal, 22:493-520(2001)
- Auta, E., 2010, " E-Banking in Developing Economy: Empirical Evidence from Nigeria", Journal of Applied Quantitative Methods, Vol.5, Num2, 212-222
- Bahl, S., 2012, " E-banking: Challenges and Policy Implications", International Journal of Computing and Business Research ISSN(Online),Proceedings of "I-Society 2012" at GKU, Talwandi Sabo Bathinda (Punjab)
- Chavan, J., 2013, " Internet Banking- Benefits and Challenges in an Emerging Economy", International Journal of Research in Business Management (IJRBM), Vol.1, Issue 1, June 2013, 19-26
- Chen, Y., Ruikar, K., Carillo, P., 2013, "Strategic E-Business Framework: A Holistic Approach for Organizations in the Construction Industry", Journal of Information Technology in Construction, ISSN 1874-4753, Vol. 18 (2013), 306-320.
- Havasi, F., Meshkany, F., Hashemi, R., 2013, "E-Banking: Status, Implementation, Challenges, Opportunities" IOSR Journal of Humanities and Social Science, Vol.12, Issue 6 (Jul. - Aug. 2013), 40-48

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