

The Relationship between E-banking Services Quality and Customers' Satisfaction: A Field Study on the Arab Bank

Ali Ahmad Alawneh

Abstract—In today's volatile and turbulent business environments, many Jordanian banks have invested heavily for utilizing the capabilities of Information and Communication technologies (ICTs). This investment intended to deliver superior banking products and services in order to get their customers satisfied. This paper seeks to present empirical evidence on the customers' satisfaction with e-banking services in Jordanian banks in order to achieve fully understanding of this contended issue and to provide feedback to management of the banking sector in Jordan. Based on the Alawneh et al. (2013) framework for measuring e-banking service quality in Jordan, this paper tested the casual relationships among the five constructs (reliability, efficiency, security/privacy, responsiveness and communication) and the satisfaction construct. Primary survey data based on the adopted conceptual framework were gathered from (200) employee who has conducted the e-banking service via the Arabi Online portal at the Arab bank website. The results of measurements and simple and multiple linear regressions have been presented. Finally, recommendations of these results to business managers and decision makers and suggested future works to researchers were discussed.

Keywords: *banking, Service quality, Satisfaction Empirical Measurement, Jordan.*

I. Introduction

Information and communication technologies (ICTs) are among the most important forces that have affected the banks' business transactions worldwide. As a result, the quality level of banking services and the customers' satisfaction level have been changing in most banks due to the burst of Internet technologies.

E-banking has emerged as a new channel for marketing and delivering banking products and services to customers, it offers more value to customers such as convenience and ease of access to their banking accounts anytime anyplace.

Alawneh et al. (2012) defined e-banking as "delivery of bank's services, information, products and payments to a customer at his office or home by using electronic technologies". Whereas Chandio et al. (2013) focused on Internet banking as he stated that "by using the Internet as a communication and delivery channel by banks, customers can receive financial services and perform transactions through the website of a bank from anywhere any time where Internet access is available.

The fierce competition in the financial and banking industry has led many banks to directing their management and marketing strategies toward having satisfied customers. This is can be achieved if and only if the banks can deliver services with superior quality.

Rocha (2012) stated that "websites quality is strategically important for organizations and for the satisfaction of their clients". Zeithaml et al. (2006) have defined e-service quality as "The extent to which a website facilitates efficient and effective shopping, purchasing, and delivery of products and services".

The service quality received considerable attention in the literature from marketing and business researchers. Several studies have confirmed that the quality of service is very important on satisfaction, productivity, profitability and loyalty (Hume & Mort 2008; Lovelock & Wirtz 2007; Cristbal et al. 2007; Yen 2005; Yang and Jun 2002). Alawneh et al. (2013) have referred to e-banking service quality as "the degree to which an e-banking web site facilitates the competent delivery of efficient e-services to help customers, businesses and financial institutions in achieving their financial, commercial and banking transactions".

Due to the high power of customers' negotiation in the Internet market, along with the low prices, surplus of alternatives and mass of suppliers, then getting customers satisfied may be largely determined by the quality of the service delivered. Thereby, a good measurement of service quality dimensions and their effects on satisfaction level might have appropriate implications to the banks' strategies and plans regarding the delivery of electronic services.

This study aims to empirically measure the dimensions of the e-banking service quality and their effect on customers' satisfaction, and then pay attention on the performance of these dimensions. This could be helpful in the distribution of resources and in customers' segmentations.

Ali Ahmad Alawneh
Philadelphia University
Jordan

The organization of the paper proceeds as follows: section two presents Alawneh et al. conceptual framework for measuring e-banking service quality in Jordan. Section three postulates the five hypotheses of the study based upon the conceptual framework. This is followed by the research methodology, data analysis, hypotheses testing, results, conclusions and future works.

II. Alawneh et al. conceptual framework for measuring e-Banking service quality

In an emerging economy of Jordan e-banking sector, Alawneh et al. (2013) developed, validated and tested five dimensions of e-banking service quality with 29-items measurement scale. This scale was based on five constructs which are: reliability, efficiency, security/privacy, responsiveness and communications.

As a result, Figure 1 postulates the conceptual research framework as it depicts the casual relationships among the five dimensions of e-banking service quality and their expected effect on satisfaction level.

III. Satisfaction

Recently the marketing researchers have addressed heavily on studying the concept of customers' satisfaction. This is due to the fact that satisfaction has strong influences on productivity, profitability and loyalty. The satisfied customers inevitably will be coming back to repeat their purchases and transactions. Kotler and Keller (2006) said that "customer satisfaction is considered an important element that drives customer retention, loyalty and post-purchase behavior of customers.

Lovelock and Wirtz (2007) defined customer satisfaction as "the judgment that following the consumption and consuming the product and/or service". Whereas Kotler and Keller (2006) defined satisfaction as "the feeling of satisfied and happy or dissatisfied and disappointment from the service/product quality".

Lam et al. (2004) mentioned that "satisfaction is very likely to result in desirable outcomes such as cooperation, positive words of mouth, long-term orientation, loyalty, and relationship commitment".

In the context of this study, the satisfaction is measured by comparing the quality of the product/service with the customer expectations. If the actual e-service customers receive equal or greater than the expectations, this will mean having a satisfied customer; while if it less than the expectations of the customer, then the customer will be dissatisfied.

There has been a clear evidence for the contention that customer satisfaction is an important factor in banks' management and their products/services marketing. The role of quality in delivering banking services and products has also been addressed. It should be clear that satisfaction is considered as a driver for the customer to take action to engage in the process of products/services delivery. Thus, it is rational to guess that e-banking service quality is an antecedent to customers' satisfaction. In this study, e-banking service quality has been conceived to be a critical input to customer satisfaction.

IV. The Research Hypotheses

To investigate the previously discussed points and address the issues raised, five hypotheses have been formulated based on Figure 1.

H1: There is a significantly positive relationship between the e-banking service quality in terms of efficiency and e-banking customer satisfaction.

H2: There is a significantly positive relationship between the e-banking service quality in terms of reliability and e-banking customer satisfaction..

H3: There is a significantly positive relationship between the e-banking service quality in terms of responsiveness and e-banking customer satisfaction..

H4: There is a significantly positive relationship between the e-banking service quality in terms of privacy/security and e-banking customer satisfaction.

H5: There is a significantly positive relationship between the e-banking service quality in terms of communication and e-banking customer satisfaction.

V. The Research Methodology

Grounded on the Alawneh et al. (2013) framework, a (29) items survey was used to gather the primary data of the dimensions of e-banking service quality. This is combined with (3) items to measure customer satisfaction on a seven-point Likert scale. A self-administered structured questionnaire with (32) items delivered to a purposive sample of customers from the Arab bank who had been using e-banking channels during the first nine months of the year 2015. The population of the study was chosen to be (200) respondents, the valid responses was (165) and they are considered eligible to proceed to the analysis phase using SPSS 16.0.

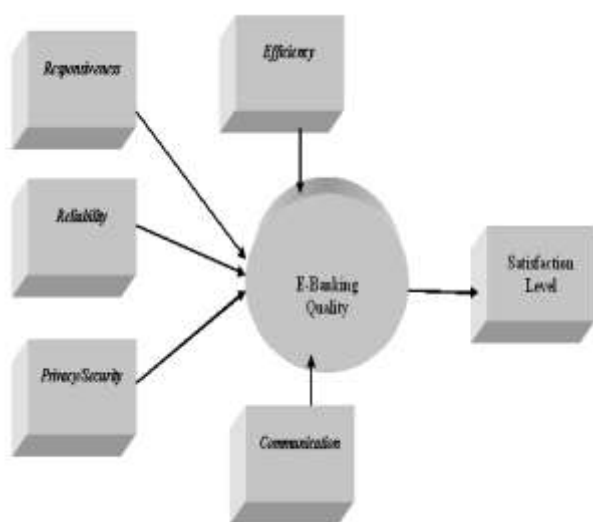


Figure 1. A Proposed Conceptual Framework for Measuring E-banking Service Quality (Alawneh et al. 2013)

VI. Research Findings: Testing the Theoretical Hypotheses

Table 2 presents the results of multiple linear regressions for hypothesis H1-H5. The table shows the standardized regression coefficient of each predictor, R^2 and F, for all the predictors in linear regression analysis. The standardized regression coefficient represents the correlation coefficient between the independent variables and the dependent variable (i.e., satisfaction level).

TABLE2. Results of Multiple Regression Analysis for satisfaction level vs. e-banking quality dimensions

Independent	Satisfaction level(Dependent)
e-banking quality	$R^2 = .673$ $F=35.836^{**}$
Efficiency (H1)	$\beta=0.375$ $t=4.924^{**}$
Reliability (H2)	$\beta=0.467$ $t=6.357^{**}$
Responsiveness (H3)	$\beta=0.261$ $t=3.169^{**}$
Privacy/Security (H4)	$\beta=0.129$ $t=1.851^*$
Communication (H5)	$\beta=0.081$ $t=1.069$

** $p < .01$ * $p < .05$ ~ dependent variable: satisfaction level

The entire model has a significant effect on satisfaction level ($p < 0.01$). R^2 In the entire model of the e-banking quality explains 67.3% of the variance related to satisfaction

level. As shown in Table 2, the standardized coefficient (beta) value for the efficiency dimension is positive and significant ($p < .01$), and thus supports hypothesis H1. The standardized coefficient (beta) value for the reliability dimension is positive and significant ($p < .01$) and thus, the result supports hypothesis H2. The standardized coefficient (beta) value for the responsiveness dimension is positive and significant ($p < .01$), and thus supports hypothesis H3. The standardized coefficient (beta) value for the privacy/security dimension is positive and significant ($p < .05$) and thus, the result supports hypothesis H4. The standardized coefficient (beta) value for the communication dimension is positive but not significant, and thus does not support hypothesis H5.

Specifically, reliability dimension has been found that has the highest contribution to satisfaction level than the other dimensions. It accounts 46.7% of change in satisfaction level; this can be interpreted that the degree of delivering promised service in promised time by the bank as well as providing the confidence of delivering the right products and accurate information will lead to exceeding the customers' expectations and hence getting them satisfied.

Efficiency dimension has been found that has the next highest contribution to satisfaction level than the other dimensions. It accounts 37.5% of change in satisfaction level; this can be interpreted that the ease and speed of accessing and using e-banking services on the bank's website will lead to exceeding the customers' expectations and hence getting them satisfied.

Responsiveness dimension has been found that has the third highest contribution to satisfaction level than the other dimensions. It accounts 26.1% of change in satisfaction level; this can be interpreted that the degree to which e-banking services provided the bank is helpful, in handling of problems and returns to customers without delay will lead to exceeding the customers' expectations and hence getting them satisfied.

Privacy/security dimension has been found that low contribution to satisfaction level. It accounts 12.9% of change in satisfaction level; this can be interpreted that the level of safety in protection of customer's personal information will lead to exceeding the customers' expectations and hence getting them satisfied.

Finally, communication dimension has been found that has the lowest contribution to satisfaction level. It accounts 8.1% of change in satisfaction level; this can be interpreted that the availability of assistance through keeping customers in contact with the bank's website will not necessarily lead to meeting or exceeding the customers' expectations and hence can't guarantee getting them satisfied. This result revealed the need of the Arab bank to enhance its communication channels with the customers.

VII. Conclusions and Future Works

With the rapid growth of Internet applications and technologies, banks' customers can access wide range of products and services with high power in choosing alternatives, negotiating on prices and selecting the providers.

Therefore, the e-banking service quality has increasingly become critical motivator for enhancing customers' satisfaction; and in turn enhances the banks' competitiveness, profitability and productivity.

By understanding the dimensions that customers use to assess e-banking service quality, the banks can make proper decisions and then take applicable actions to focus their performance on these dimensions. In this study, e-banking service quality has been found to be a critical input to customer satisfaction. This is in line with the results of Pikkarainen et al. (2006) study which found that there is a positively causal relationship between e-banking service quality and satisfaction. Godwin et al. (2010) supports this result in their study that examined the dimensions of web service quality based on e-customer, satisfaction and intentions. They found that web service quality has both a direct positive and significant effect on customer satisfaction and behavioral intention. Finn (2011) also proved the effects of e-service quality dimensions on customer satisfaction.

On the other hand, Zavareh et al. (2012) found the impact of e-Service Quality of the internet banking services on e-Customer Satisfaction can be considered as low. The results of their study indicated that three dimensions statistically significant which were Security/Trust, Site Aesthetics and Ease of Use, but the dimensions of efficient and reliable services, fulfillment, and responsiveness/contact were found statistically insignificant.

The main results of this study proved that the reliability dimension of e-banking service quality has been found the strongest effect on the level of customers' satisfaction. This is followed by the efficiency dimension, the responsiveness dimensions, privacy/security dimension and finally the communication dimension. These results conform to the Cheolho Yoon (2010) study which found that design, speed, security, information content, and customer support service have a significant influence on customer satisfaction. Further, the results of Subramanian et al. (2014) study support the results of this study where they found that reliability in service quality and purchasing experience in e-service quality are dominant customer satisfaction factors. Agarwal et al. (2009) identified that security & trust are most important dimensions in e-banking services in affecting the satisfaction level; this result supports the findings of the current study. The results of Ariff et al. (2013) were consistent with the results of current study where they identified that Website aesthetics and Guide, Efficiency-System availability and Contact-Responsiveness

of the internet banking e-Service Quality were positively affected e-Satisfaction.

This study is limited in its sample size as it's based on the perspectives of customers from one bank; the Arab bank. Therefore, to increase of the study findings future works should include a larger sample size from more banks in Jordan. Further, there is a need to study the mediating role of satisfaction in the link between service quality on one hand and both of loyalty and trust on the other hand.

References

- [1] Alawneh, A. Al-Taani, F. Al-Azzam, A. and Al-Radaideh, R. (2013). A Study and a Modified Instrument for Investigating E-Banking Quality Dimensions. *Journal of E-Technology*, Vol. 4, No. 1, 2013, pp. 15-27.
- [2] Alawneh, Ali., and Hattab, Ezz. (2009). E-Banking Diffusion in the Jordanian Banking Services Sector: An Empirical Analysis of Key Factors. *International Journal of Actor-Network Theory and Technological Innovation*, 1(2), 50-65.
- [3] Alawneh, Ali. (2012). Assessing the Dimensions of Relationship Quality in B2C E-Banking Services: An Empirical Comparative Study. *International Journal of Computer Science Issues*, 9 (6) 290-302, November.
- [4] Alawneh, Ali., & Hattab, Ezz. (2009). An Empirical Study of the Sources Affecting E-Business Value Creation in Jordanian Banking Services Sector. *The International Arab Journal of e-Technology (IAJeT)*. 1(2).
- [5] Lam, Y., Venkatesh, M. Krishna, E. and Bvsan, M. (2004). Customer value, satisfaction, loyalty and switching costs: an illustration from a business-to-business service context. *Journal of the academy of marketing science*, 32 (3): 293-311.
- [6] Pikkarainen, K. T. Pikkarainen, H. Karjaluo and S. Pahlila (2006). The measurement of end-user computing satisfaction of online banking services: empirical evidence from Finland. *International Journal of bank marketing*, 24 (3), 158-172.
- [7] Zeithaml, V. A., Parasuraman, A., Malhotra, A. (2002). Service quality delivery through websites: a critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30 (4) 362-375.
- [8] Zeithaml, V.A., Parasuraman, A., Malhotra, A., 2000. E-service quality: definition, dimensions and conceptual model. Working Paper, Marketing Science Institute, Cambridge, MA.
- [9] Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1988. SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing* 64, 12-40.
- [10] Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1991. Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing* 67(4), 420-450.
- [11] Parasuraman, A., Grewal, D., 2000. The impact of technology on the quality-value-loyalty chain: are search agenda. *Journal of the Academy of Marketing Science* 28 (1), 168-174.
- [12] Parasuraman, A., Zeithaml, V.A., Malhotra, A., 2005. E-S-Qual: a multiple-item scale for assessing electronic service quality. *Journal of Service Research* 7(3), 213-233.
- [13] Zeithaml, V. A., Bitner, M. and Gremler, D. D. (2006), "Services Marketing", 4th Edition, McGraw Hill.
- [14] Carlson, J., O'Cass, A. (2010). Exploring the relationship between e-service quality, satisfaction, attitudes and behaviours in content-driven e-service web sites. *Journal of services marketing*, vol. 24, No. 2, pp. 112-127.

[15] Zavareh, F. B., Ariff, M. S., Jusoh, A., Zakuan, N., Bahari, Z. and Ashourian, M. E-Service quality dimensions and their effects on E-customer Satisfaction in Internet Banking Services, *Procedia – social and behavioral sciences* 40 9(2012) 441-445.

[16] Lee, F. H., and Wu, W. Y. (2011). Moderating effects of technology acceptance perspectives on e-service quality formation: Evidence from airline websites in Taiwan. *Expert Systems with Applications* 38 (2011) 7766-7773.

[17] Rejikumar, G. and Ravindran, D. S. (2012). An Empirical study on service quality perceptions and continuance intention in mobile banking context in India. *Journal of Internet Banking and Commerce*, Vol. 17, No. 1 , April 2012, pp. 1-22.

[18] Dominic P.D.D, Kim Nee Goh, Diana Wong, Yoke Yie Chen. (2010b). The importance of service quality for competitive advantage – with special reference to industrial product. *International Journal of Business Information Systems*, 2010 Vol.6, No.3, pp. 378 - 397.

[19] Thaw Yi Yi; P.D.D. Dominic; Ahmad Kamil Mahmood (2012). A structural equation modeling approach for Malaysian consumers' perspectives on e-commerce B2C transactions. *International Journal of Business Information Systems*, 2012 Vol.10, No.2, pp.178 – 196.

[20] Rocha, A. (2012). Three-dimensional model for the global quality of a website. *International Journal of Business Information Systems*, 2012. Vol.10, No.4, pp.436 – 446.

[21] Chandio, F. H., Muhammad Sharif Abbasi; Hyder Ali Nizamani; Qurat Ul Ain Nizamani (2013). Online banking information systems acceptance: a structural equation modeling analysis. *International Journal of Business Information Systems* 2013 Vol.12, No.2, pp.177 – 193.

[22] Shahin A., Javad Khazaei Pool; Mehdi Poormostafa. (2014). Evaluating and ranking hotels offering e-service by integrated approach of Webqual and fuzzy AHP. *International Journal of Business Information Systems* 2014 Vol.15, No.1, pp.84 – 104.

[23] Godwin J. Udo* , Kallol K. Bagchi1, Peeter J. Kirs. (2010). An assessment of customers' e-service quality perception, satisfaction and Intention. *International Journal of Information Management* 30 (2010) 481–492.

[24] Cheolho Yoon (2010). Antecedents of customer satisfaction with online banking in China: The effects of experience. *Computers in Human Behavior* 26 (2010) 1296–1304.

[25] Subramanian, Nachiappan, Angappa Gunasekaran b, Jie Yu a,1, Jiang Cheng a, Kun Ning (2014). Customer satisfaction and competitiveness in the Chinese E-retailing: Structural equation modeling (SEM) approach to identify the role of quality factors. *Expert Systems with Applications* 41 (2014) 69–80.

[26] Agarwal, Reeti, SanjayRastogi b, AnkitMehrotra. (2009). Customers' perspectives regarding e-banking in an emerging economy. *Journal of Retailing and Consumer Services* 16 (2009) 340–351.

[27] Finn Adam (2011). Investigating the non-linear effects of e-service quality dimensions on customer satisfaction. *Journal of Retailing and Consumer Services* 18 (2011) 27–37.

[28] Zavareha Farnaz Beheshti, Mohd Shoki Md Ariffa, Ahmad Jusoha, Norhayati Zakuana, and Ahamad Zaidi Baharia Mohsen Ashourianb (2012). E-Service Quality Dimensions and Their Effects on ECustomer Satisfaction in Internet Banking Services. *Procedia - Social and Behavioral Sciences* 40 (2012) 441 – 445.

[29] Ariff Mohd Shoki Md a, Leong Ooi Yun , Norhayati Zakuan , Khalid Ismailb (2013). The Impacts of Service Quality and Customer Satisfaction on Customer Loyalty in Internet Banking. *Procedia - Social and Behavioral Sciences* 81 (2013) 469 – 473.

About Author:



Dr. Ali Alawneh is an associate professor of Management Information Systems at Philadelphia University, Jordan. He got his PhD from Arab Academy for Banking and Financial Sciences, 2008. His PhD involved a study in e-business in which he investigated e-business value creation at Jordanian Banking Sector through developing a model named e-TOEECLN. His research interests include technology diffusion, e-business models and management, e-commerce, e-banking, e-learning and knowledge management. Dr. Alawneh has more than 30 publications in Conferences and Journals in the above research areas. He is a member of the technical, steering, organizing committees and Editorial board of many conferences and journals worldwide.