The Impact of Jordanian Banks Websites' Quality on Customers' Satisfaction

Manar R. Maraga¹, Amaal M. Al-Amawi² & Tareq Hashem³

Correspondence: Manar R. Maraqa, Management Information Systems Department, Al-Balqa' Applied University, Amman, Jordan. E-mail: manar.maraqa@bau.edu.jo

Received: May 22, 2017 Accepted: June 25, 2018 Online Published: July 10, 2018

Abstract

This paper focuses on customers' perceptions regarding three key aspects in Jordanian e-banking services: service quality, system quality, and information quality. The importance of these topics is likely to keep on growing in the near future, as customers become more demanding. Descriptive, analytical approach was used in this study; data were collected through questionnaires that were physically distributed to a random sample of 295 banks' customers in Jordan. The model achieves an acceptable fit and explains 79.6% of its variance. Multiple regression analysis was used to examine the research hypotheses by using SPSS. The results of the study indicate that service quality has the highest impact on customer satisfaction followed by system quality and information quality. However and in order to meet current and future customers demands, banks in Jordan should strive to exceed their customers' expectations, because of the ongoing growth in use of smart phones, mobile banking, and e-commerce further fuels the market growth. Therefore, banks as service providers should strive for excellence.

Keywords: e-banking, websites' quality factors, customer satisfaction, DeLone and McLean model, information quality, service quality, system quality

1. Introduction

According to (Pikkarainen, Pikkarainen, Karjaluoto, & Pahnila, 2004), e-banking is an online portal that allows customers to carry out various banking transactions from as big as making investments to as small as paying bills.(Kumar, Ariharan, & Immanuvel, 2016), on the other hand, define E-banking as the process of using electronic channels to deliver banking services. There are forms of E-banking that have been applied for a long time now such as the teller machine (ATM) and telephone transactions. Recently, the Internet was added as a new channel for delivering banking services making the process much easier for banks and customers. E-banking also allows customers to conduct many sophisticated services and is expanding quickly in a way that many experts predict that future will be a mixture of e-banking and branches (Shah & Clarke, 2009).

One of the main pillars of the Jordanian economy is undoubtedly the banking sector. In the second quarter of 2015, official numbers, taken from the monthly bulletin of Jordan's Central Bank, have shown that this sector, together with the real-estate and insurance sectors, contributed 18.82% of the GDP. Equally important is the fact that the banking sector in Jordan is a top private sector employer not to mention that it has the largest market capitalization in Amman Stock Exchange (Awraq, 2018).

In June 2014, The Central Bank of Jordan (CBJ) officially launched the eFAWATEERcom portal (www.eFAWATEERcom.jo) that enabled customers inquire about, review and settle their bills online via different paying outlets which has led to an expansion in the use of Internet banking services by organizations and individuals as well (The Central Bank of Jordan, 2018). Jordan government is keen on improving e-government services and aiming to automate procedures to reach an e-government by 2020. As of January 1, 2018, a number of ministries and other public institutions began providing 10 e-services to Jordanian citizens and businesses (The Jordanian E-Government, 2018). E-banking users in Jordan enjoy the convenience of

¹ Management Information Systems Department, Al-Balqa' Applied University, Amman, Jordan

² Management Information Systems Department, Isra' University, Amman, Jordan

³ Marketing Department, Isra' University, Amman, Jordan

carrying out their transactions online anytime and anywhere. The service is available to them 24/7 free of charge so they can complete their day-to-day transaction without having to visit the bank. Checking balance and account information, viewing online account statements, transferring money, paying for mobile top-up cards, and checking currency exchange rates are some of the services provided by online banking.

The past decade witnessed a substantial boom in the field of web-based applications and platforms used in various sectors, including banking. However, only a few studies were conducted to assess the level of customer satisfaction with online services. Without customer satisfaction, the services provided by online banking portals will be of insignificant importance. Studying the level of customer satisfaction undoubtedly requires receiving service users' feedback. Feedback constitutes the main reference with which relevant stakeholders can better develop and invest in the service. Therefore this study looks into the elements that gain the satisfaction of online banking users in Jordan.

Based on the above and given the importance and novelty of utilizing online banking in the Jordanian banking sector, researchers present this study to investigate the impact of the bank's website quality, in terms of three dimensions (information quality, service quality and system quality), on customer satisfaction. They also look into the criteria used for each of these dimensions. This study presents, in its outcomes section, the dimension with the highest influence on customer satisfaction towards e-banking. This study done in Jordan complements with the previous studies done in this field. It is also expected that the outcomes of this study benefit decision makers in e-banking services sector if taken into consideration.

2. Literature Review

Most banks attempt to tailor the services and information on their websites in a way that meets clients' needs. And in order to assess the level of customer satisfaction towards such websites, many researchers have used classic theories or information systems acceptance models.

For example, (Khrais, 2012) studied the use of online banking services in Jordan and the study found that quality, availability, accessibility, interactivity and friendliness of online banking system are crucial to raise the level of customer satisfaction. To discover the elements that trigger the satisfaction of online-banking users, (Ling, Ferna, Boona, & Huata, 2015) looked into five factors: quality of service, web design and content, security and privacy, service convenience and service speed. According to this research, web design and content, service convenience and speed are the three elements that determine the level of satisfaction among customers towards Internet banking. A study carried out by (Al-Hawary & Al-Smeran, 2017) from Jordan that sought to examine the influence of electronic service quality on the level of satisfaction of Islamic banks clients. Electronic service quality was measured by reliability, ease of use, effectiveness, web design, privacy, and responsiveness. Statistical analysis found that customers' satisfaction is highly influenced by the ease of use, website design, privacy, and responsiveness of e-services. Ayyash (2017) studied the elements that influence customer satisfaction of e-banking users in Palestine, specifically elements of information quality of e-banking (i.e. information accuracy, completeness, timeliness and relevancy) and how they affect user satisfaction. As part of survey outcomes, a positive relation was found between customer satisfaction and the four dimensions of e-banking information quality. Finally (Sakhaei, Afshari, & Esmaili, 2014) explored the relationship between the satisfaction of Internet banking users in Iran and the quality of the used services. The literature review identified six service quality dimensions; they are: reliability, efficiency, responsiveness, fulfillment, security/privacy and website design. Among the results, the research showed meaningful relationships between all six dimensions and customer satisfaction. In particular, reliability was found to have the highest impact on customer satisfaction while website design has the lowest impact.

3. The DeLone and McLean Model

A famous Information System success model is one called the DeLone and McLean model (DeLone & McLean, 1992). This model constituted, for researchers, a base to determine the level of success of information systems. The 1992 model defines six information systems success factors; they are: system quality, information quality (IQ), use, user satisfaction, individual impacts, and organizational impacts. A new factor, the service quality factor, was later added to the model (DeLone & McLean, 2003).

Three factors of the above mentioned model will be used to assess the impact of quality of Jordanian banks websites on the level of their customer satisfaction. These factors are system quality, information quality and service quality, and they will be used as independent variables. Below is the definition of the said variables:

3.1 Information Quality

DeLone & McLean (1992) define information quality as "the measure of information system output".

Information quality (IQ) is also defined as the "Desirable characteristics of the system outputs" (Petter, DeLone, & McLean, 2013). In other words, IQ is a system's deliverables in the form of reports or user interface that seek to fulfill customer needs (Jaafreh, 2017). Given the fact that there are numerous ways to measure IQ, eight measures were chosen by this study based on literature review. They are: understandability, relevance, currency, precision, accuracy, usefulness, format, and security. Below is a brief clarification of each.

- 1) Understandability: a factor measuring the extent to which the system data is clear for customers without ambiguity and easily comprehended (Knight & Burn, 2005).
- 2) Relevance: the applicability and pertinence of the system and its information to achieve the purpose it was designed for (Pipino, Lee, & Wang, 2002).
- 3) Currency: how well the information is kept up-to-date.
- 4) Precision: the level of details provided by the system (Veregin, 1999).
- 5) Accuracy: the extent to which the system's data is certified error free (Wang & Strong, 1996).
- 6) Usefulness: the degree with which customers can complete their transactions successfully using the system (Schaupp, 2010).
- 7) Format: refers to how well the system's information is displayed to users. This is related to system's design and the extent to which it is considered user-friendly (Knight & Burn, 2005).
- 8) Security: the level of precautions provided to protect customer and transaction data against criminal activities (Sanayei, Ranjbarian, Shaemi, & Ansari, 2011).

3.2 System Quality

System quality refers to the soundness of the information processes in the system itself (DeLone & McLean, 2003). There are a number of elements that are used to determine the level of system quality, according to literature. This research, however, will be looking at five of them. They are: response time, user friendliness, availability, integration and ease of use (Koo, Wati, & Chung, 2013).

- 1) Response time: the time needed for a consumer to complete a transaction or activity from beginning to end (Shneiderman, 1998).
- 2) User friendliness: refers to how easy users can use and understand the system.
- 3) Availability: the readiness of the system and a measure of how often the system is alive and well (The International Organization for Standardization, 2018).
- 4) Integration: refers to the level of synchronization and totality of all information in the system and how well-displayed they are on user screens (portals) (Al-Debei, Jalal, & Al-Lozi, 2013).
- 5) Ease-of-use: the level of effort needed to use the system's services (Davis, 1989).

3.3 Service Quality

Service quality is measured by looking at its capacity to solve technical problems when they occur for users and how well workers can learn and solve such problems (Skok, Kophamel, & Richardson, 2001). Others define service quality as the level of technical support provided to users by the IS organization (Petter et al., 2013). For this study, researchers chose the following service quality measuring factors: assurance, reliability, responsiveness, and competence.

- 1) Assurance: the level of trust the system can build with its users (Cheserek, Kimwolo, & Cherop, 2015).
- 2) Reliability: the number of errors/faults that might occur when customers use the service (Barringer, 1997).
- 3) Responsiveness: the system's ability to perform tasks within specific time (Weik, 2000).
- 4) Competence: the ability of the system/bank website to complete transactions successfully or efficiently (Oxford English Dictionary, 2018).

3.4 Customer Satisfaction

According to (Johnson, 2008), user satisfaction is achieved when a customer describes or believes that a product or a service fulfills his or her needs in a gratifying manner. This element is considered a highly important factor that directly contributes to a company's competitiveness and success (Hennig-Thurau & Klee, 1997). In the world of business, customer satisfaction is essential. (Deng, Lu, Wei, & Zhang, 2009); noted that a company's ability to reach high levels of customer satisfaction is a decisive element for product differentiation and building robust relationships with consumers (Hanif, Hafeez, & Riaz, 2010).

Accordingly, customer satisfaction is measured by assessing consumer experience with a product or service. In this context, what may be called e-satisfaction can be defined as the level of fulfillment perceived by customers when using e-banking services (Gong & Yoo, 2013).

Based on the literature above, the following hypothesis was made:

There is no significant impact of the quality of the websites of Jordanian banks on customer satisfaction.

4. Methodology

This study uses a descriptive, analytical approach. Periodicals, books, and electronic articles were the references adopted for the theoretical framework of this study, on the one hand. For field work, on the other hand, a questionnaire was to collect the required data.

4.1 Reliability Test

To determine instrument reliability, a Cronbach Alpha was used (α = 0.939 for the questionnaire). All values are accepted since they are more than 0.60 (Malhotra, 2010).

4.2 Questionnaire Design

The research questionnaire was divided into two parts. The first collected users' demographic data (education, experience, age), while the other asked questions concerning the recognition of variables. A 5-degrees Likert scare was used: (5) points strongly agree, (4) points agree, (3) points neutral, (2) points disagree, (1) point strongly disagrees.

4.3 Statistical Treatment Methods

SPSSv21 was the tool used for questionnaire data analysis. Statistical methods used were: frequencies and percentages, means and standard deviations and the multiple regression analysis.

5. Analysis and Discussion

Frequency and percentages have been computed for the sample's characteristics.

Table 1. Sample's distribution according to demographic information

Category	Frequency	Percentage%
Education		
Diploma	32	10.8
Bachelor	199	67.5
Master	31	10.5
PHD	33	11.2
Total	295	100%
Experience		
Less than 5 years	134	45.4
5-10 years	75	25.4
10-15 years	40	13.6
Above 15 years	46	15.6
Total	295	100.0%
Age		
Less than 30 years	149	50.5
30-40 years	83	28.1
41-50 years	39	13.2
More than 50 years	24	8.1
Total	295	100%

From the above table, it is illustrated that 10.8% of the sample has a diploma, 83.3% of the sample has bachelor degree, and the rest have higher studies. Also, it shows that less than 5 years is (45.4%). (5-10 years) is (%25.4), (10-15 years) is (13.6%) and above 15 years is (15.6%) percent. Finally, it is found that the highest percent of the sample (50.5%) is less than 30 years old.

Table 2. Attitudes toward the study variables

N0.	Variable	Mean	S. Deviation	
1.	Information quality	3.9869	.63246	
2.	System quality	4.0383	.60252	
3.	Service quality	3.9939	.69524	
4.	Customer satisfaction	4.0144	.73106	

The previous table indicates that there are positive attitudes toward the above variables because their means are above the mean of the scale (3).

It is found that system quality has the highest positive attitudes followed by customer satisfaction.

5.1 Collinearity Statistics Test

Table 3. Collinearity Statistics Test

Model	Collinearity Statistics			
	Tolerance	VIF		
Information quality	.521	1.920		
System quality	.420	2.378		
Service quality	.370	2.705		

Table 3 shows that VIF values of each independent variable measured less than 10. Tolerance ranged between (0.37-0.521). Accordingly, no multi-collinearity problems were found between these variables.

5.2 Hypotheses Testing

Main hypothesis: There is no significant impact at (0.05) level of the quality of the websites of Jordanian banks on customer satisfaction. Multiple regression is used to test this hypothesis, Table 4, shows that R (0.796) is the correlation of the quality of the websites and customer satisfaction.

Also it is found that R Square (0.633), which is the explained variance, is actually the square of the multiple R (0.796)². What the results mean is that (79.6%) of the variance (R-Square) in the customer satisfaction has been significantly explained by the quality of the banks' websites.

Table 4. Test of H_o- Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796	.633	.629	.44517

Table 5, the ANOVA table shows that the F value of (167.289) is significant at (0.05) level. Thus, hypothesis is rejected. So; there is significant impact at (0.05) level of the quality of the websites of Jordanian banks on customer satisfaction.

Table 5. ANOVAB table for H_o

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.458	3	33.153	167.289	.000
	Residual	57.669	291	.198		
	Total	157.126	294			

The coefficient table further indicates that t_value for each independent variable is significant at 0.05. Accordingly, each variable has a significant effect on the dependent variable.

Also it is found that service quality has the highest impact on customer satisfaction since B=0.499, followed by system quality and information quality.

Table 6. Coefficients table for H_o

	Standardized Unstandardized Coefficients Coefficients					Collinearity	Collinearity Statistics	
	Model	В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.101	.190		.530	.596		
	Information quality	.135	.057	.117	2.377	.018	.521	1.920
	System quality	.342	.066	.282	5.152	.000	.420	2.378
	Service quality	.499	.061	.474	8.121	.000	.370	2.705

6. Results and Conclusions

According to the analysis made with the help of statistical tool SPSSv21, the factors that make it preferable for Jordanians to use online services are the convenience and reliability of online banking. Factor analysis results indicate that system quality, information quality and service quality are crucial to raise the level of customer satisfaction. The study concluded that nearly 80% of sample participants were satisfied with the service. This percentage reflects positive attitudes towards e-banking, but it also says that there is room for improvement. The likeliness that customers will expect more of the service with time confirms the importance of future improvement. The study also asked users which service dimension they found of most importance. Outcomes revealed that service quality is of highest impact, and then comes system quality and information quality.

Meeting customers' expectations in terms of service quality, system quality, and information quality is essential. However, to meet customers' demands in the future, banks should strive to exceed customer's expectations. Similarly, all elements connected to service quality, system quality, and information quality should also be improved in the manner that exceeds expectations.

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Appendix A
Study Model Survey Questions

Item	Item	Strongly	Адмоо	Neutral	Disagree	Strongly
Number	Item	agree	Agree	Neutrai	Disagree	disagree
	Information	Quality				
1	Information available on the bank's website are easily					
	understandable					
2	Bank provides information on clients' needs					
3	Bank provides updated information					
4	Bank provides accurate information					
5	Bank provides precise information					
6	Information provided by bank is useful to clients					
7	Information is categorized in a simple and organized					
	manner					
8	Bank's website is secured					
	System Q	uality				
1	Bank's website design is attractive (in terms of color					
	and font)					
2	All available services function without issues					
3	Personal information provided by client are available					
	on client's webpage					
4	Bank's website pages load quickly					
5	Bank's website is always accessible					
6	Bank's website is easy to use					
	Service Q	uality				
1	Bank's website has quality					
2	Bank's website is trustworthy					
3	Bank's website is reliable					
4	Services provided on the website are efficient					
5	Receiving bank's e-services is done quickly					
	Customer Sa	tisfaction				
1	I am satisfied with the information provided on the					
	bank's website					
2	I am satisfied with the bank's quality in general					
3	I am satisfied with the bank's banking services					
4	I recommend using the bank's website regularly to my					
	colleagues					

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