The Influence of Usage Intention and Performance towards the Future of Online Banking

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Abstract
Measuring online banking (O-banking) quality provides banks with a better understanding of what enhancements must be performed to increase usage intention and firm performance. O-banking has contained any electronic payment system that allows clients of the banks to perform financial transactions by the bank's website as it can be proportioned to the client's usage intention and eventually to increase use. The objective of this paper is to examine the mediating role of intention to use on the relationship between O-banking quality and performance. This study model surveyed 384 customers in Jordanian commercial banks to measure their understanding of O-banking quality. The findings indicate that O-banking quality (information, system, and e-service quality) have a positive significant impact on usage intention. This research also shows that usage intention has a positive significant impact on bank performance. The mediating effect, the results reveal that intention to use O-banking mediates the positive relationship between (e-service quality, system quality) and bank performance. On the contrary, the intention to use O-banking mediates the negative relationship between information quality and bank performance. The results have contributed to an understanding and increased perception of the importance of various components that O-banking quality includes and how it impacts on intention to use and performance. The research lays a basis to future studies which should not be restricted to one geographical place of Jordan but must take into the research the other places which online banking systems are widely adopted under the new economic scenario of Jordan. This paper will assist decision makers of the banks to focus on these variables that lead to having a dominating influence on usage intention and performance. This will result in an improved O-banking quality offered by the commercial banks in Jordan and that, in turn, will help to attract new clients and also avoid losing the existing clients.

Keywords: Quality, O-Banking System, Usage Intention, Bank Performance

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THE INFLUENCE OF USAGE INTENTION AND PERFORMANCE TOWARDS THE FUTURE OF ONLINE BANKING

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1. Introduction

As online banking services have become one of the most beneficial services providing in the finance area due to the technological progress in the digital environment (Mohamed, 2017), the advances in Information Technology (IT) has led to follow an offensive method towards electronic services led marketing, and this the main reason for conversion of traditional banking to O-Banking

(Rotchanakitumnuai & Speece, 2003). The electronic services are confirming to have a vital role part in the competitive stage of the economic industry. The service context and the service concept has been entirely been renovated by the recent developments in IT relevant to services and procedures of any industry, containing banking and has also altered the system of buying and selling for each of the services and products (Mohamed, 2017).

The substantial change that the banking sector has continuously worked for is the conversion of financial transactions from traditional written system to more of a digitized and automated system (Williams et al., 2009). Accordingly, O-banking such as internet, mobile phones, and smartphones have become a very expected possibility in the banking area for financial issues. Nevertheless, it is no guarantee that clients might adopt this service, and extent of acceptance is acquired by the banks while beginning adoption of a new technological procedure in their strategy (Dominic et al., 2010).

O-banking has confirmed to simplify procedures so that the clients do not need to visit the bank to perform simple jobs for instance opening of accounts, transfer of money, and creation of fixed deposits and so on. These procedures, and more, can now be easily carried out by Personal Computer (PC) at work or home (Mohamed, 2017). A simple internet connection addresses many issues for the client such as transactions and queries, affording them a range of services they can utilize, without any extra cost on the service (Al-Somali et al., 2009). The added layer of service improves quality, and clients become more trusted as online banking addresses many financial issues of clients (Mohamed, 2017). These financial objectives lead to many advantages associated with O-banking.

Thus, the online services are essential in banking life and even a matter of survival and continuity for the banks in maintaining customers trust to take a safe and convenient way to conduct O-banking transactions. Furthermore, O-banking is a competitive advantage and the system used by bankers efficiently and effectively to develop their business in a wider geographical environment. As a best way, decisions makers in the banks can benefit on this trend by the designing of targeted distribution channels to grow market share and drive revenue by overall client satisfaction. In prior studies, evidence increasingly shows that banks use O-banking to maintain the advantage of competition whence the opportunities of new business in the marketplace.

As with banking systems, all optimized websites are not designed equal. Some are difficult to use, and some easy, whilst others provide more valuable features with reliability and security. Hence, measuring O-banking system quality provides commercial banks with a better perception of what improvements should be performed to increase client satisfaction and firm performance. Currently, relatively little studies are focused toward explaining the links between O-banking system quality abilities toward the bank's overall performance through the intention to use O-banking. Accordingly, this research aims to examine the link between the O-banking quality and bank performance by usage intention as a mediator.

2. Literature Review

2.1. O-Banking System Quality and Intention to Use

The last few years have shown the evolution of O-banking in all over the world, as well it has become is one of the most popular ways for the population to manage their money (Sarreal, 2016). Any financial institutions have adapted and taken this opportunity to take advantage of this new business paradigm. To increase profits and attain strategic sustainability in a quickly growing competitive circumference, banks assure O-banking protection for clients by applying encryption technology, for instance, checking O-banking account activity, secure sockets layer (standard security technology), combining account security advantages, and warning clients permanently regarding avoid threats such as identity theft (Chircu et al., 2000; Sarreal, 2016). Such information is fundamental to client relationship officials, which has been recognized as an efficient business politics to attain success in the online service (Zhou et al., 2007).

This term (Quality) obtained fame because of its effect on external clients (service recipient), particularly on their behavioral aspects (Apostolou et al., 2017; Li et al., 2018). Quality is a definition utilized to refer excellence and superiority of products/services and it includes the characteristics that meet the clients' needs by the harmony of all efforts related to processes, marketing, manufacturing, and maintenance (Charles et al., 2016). Furthermore, the quality definition refers the availability of all features and characteristics in the products/services on time and with reducing cost, which contributes in attaining the needs and expectations of the client whether it is stated or involved (Makanyeza et al., 2016).

Unlike the service quality literature, the number of studies related to the electronic quality system is still in its first stage both from practical and theoretical viewpoints (Akinci et al., 2010; Alwan & Al-Zubi, 2016). Exactly, electronic quality is a modern idea and the method it is imagined differs considerably. Electronic quality is increasingly significant in impacting client appraisals and judgments concerning electronic quality performance in a virtual marketplace (Santos, 2003). The electronic quality is highly worried as a result of it highly related to the failure or success of the Internet-based organization such as O-banking in B2C (Zavareh et al., 2012). O-banking in B2B includes online users accessing the websites to conduct banking transaction; hence the extent to which their desires are met is necessary.

Despite the fact that the level of O-banking adoption in Jordan is low (Alnsour & Al-Hyari, 2011; Abu-Assi et al., 2014; Al-smadi, 2012; Irvine, 2016; Rawashdeh, 2015), these banks should encourage customers to use their electronic services and to improve the level of O-banking adoption, and since one of the reasons clients are avoiding using O-banking is the risk and distrust in terms of ability to protect (Shannak, 2013). Accordingly, having standard security technology (high-level quality) may encourage external clients to the adoption of O-banking. As a result, it is also recommended that the Jordanian commercial banks should encourage improving their electronic quality to increase the level of O-banking adoption. In addition, commercial banks should be encouraged to reduce constraints related to low level of O-banking use so as to encourage customers to apply for O-banking.

2.2. Firm Performance

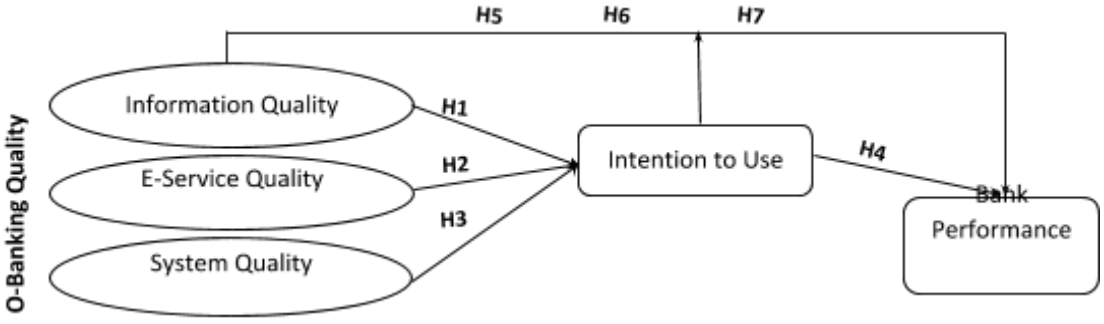
Institutional performance is expanded end outcomes of all the institution's activities and work processes (Al-mamary et al., 2014). The common criteria for institutional performance are institutional effectiveness and institutional productivity. Institutional effectiveness is a criterion of how suitable Institutional aims are and how considerably an institution is realizing those aims. Institutional productivity is a criterion of how the employees of efficiently do their tasks (Robbins & Coulter, 2012). There are many criteria for institutional influence and these criteria vary according to the researcher.

In another meaning, and in view of the above, it can be concluded that the institutional performance evaluation is an on-going process with common interest among the customer and the institution, where both achieve their goals. It is also the continuous process to find out the current performance for the institution to identify the possibility of attaining the desired goals and drawing future plans for growth and performance improvement.

3. Research Methodology

Conducting study in the online banking field, the main goal of this research is to examine the mediating role of intention to use on the relationship between O-banking quality and bank performance by analyzing clients' perception regarding the O-banking. Hence, this research examined hypothesized relationships installed within the conceptual framework to predict customers' usage intention and bank performance by the adopting of O-banking in Jordan. The study model is presented in Figure 1.

Figure 1: The study model



3.1. Study Variables

As a system of O-banking requires that includes a web browser, it technically includes software system integration further customer-driven service. Hence, the three components of O-banking quality (information, e-service, and system) perform to have the possibility to directly influence intention to

use (Apostolou et al., 2017; Chen, 2013; Li et al., 2018; Natalia et al., 2016; Rahmayanti & Wandebori, 2016; Suryanto et al., 2016).

Even though O-banking is a global phenomenon, and understanding the behavioral intention aspects of performance improvement is inevitably crucial for its success, few studies have been done on an intention to use and performance (Sanami & Shojaei, 2016). Furthermore, there is no work has examined performance and intention to use at the individual level in an O-banking context (Rahayuningsih, 2016). Various empirical studies have indicated that the role of behavioral intention is significant in explaining performance (Narimawati, 2007; Rahayuningsih, 2016; Sanami & Shojaei, 2016).

In addition, the behavioral intention has also been investigated as a mediator variable by past studies, such as (Al Tabib et al., 2016; Dhaha & Ali, 2014). A prior study showed that the relationship starts from one's evaluation of customers regarding the quality of service. If the evaluation of service quality provided rated high from the customers perspective, behavioral intentions may be likely to be positive for the company, which demands to strengthen relations with the firm, indicating positive opinions about the firm performance (Zeithaml et al., 1996). This means that there exists a significant relationship between the quality of services and performance, namely, in the form of behavioral intentions, which describes whether a customer wants to stay or move to another firm. According to Chen (2013) mentioned that behavioral intention played a vital role as a mediator variable between quality dimensions and performance. This study will investigate the likely influence of O-banking quality components (INQ, E-SQ, and SYQ) on bank performance by behavioral intention to use as a mediator variable. Therefore, hypotheses can be formed as follows:

H1: There is a positive relationship between information quality and intention to use O-banking.
H2: There is a positive relationship between e-service quality and intention to use O-banking.
H3: There is a positive relationship between system quality and intention to use O-banking.
H4: There is a positive relationship between intention to use O-banking and bank performance.
H5: Intention to use O-banking mediates the positive relationship between E-SQ and bank performance.
H6: Intention to use O-banking mediates the positive relationship between SYQ and bank performance.
H7: Intention to use O-banking mediates the positive relationship between INQ and bank performance.

3.2. Criteria and Data Collection

The current study uses the survey method to collect data in order to validate the hypothesis. Each variable is measured by multiple criteria which are adapted from prior studies. For each construct, respondents were required to evaluate their level of agreement by means of a 5-points Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The sources and definitions of the key terms of each variable for this research are presented in table 1.

Table 1: The source and definitions of key terms of each variable

Variables	Definition	Source
Information quality	Described as a level of fulfillment related to needs and expectations by providers of information when doing their works.	(Aziz & Idris, 2012; Petter & Mclean, 2009)
E-Service Quality	The degree of ease using the website for purchases, storage, and delivery of the goods/ service.	(Zeithaml, 2002; Ariff et al, 2012)

Table 1 (Continued)

Variables	Definition	Source
System Quality	Described as tasks and procedures to evaluate an information system from a technical and design viewpoints.	(Kim et al., 2010; Chen, 2010)
Usage Intention	The consumer's perception of the product's purchase and enjoyment, the desire to stay and the existence of the intention to persuade others to do it.	(Ajzen, 1991; Oliver, 1999: Ladhari, 2009; Ahn et al., 2007)
Firm Performance	An ongoing process with common interest among the customer and the company and both of them will attain aims and also is the continuous process to find out the current performance for the company to identify the possibility of attaining the desired goals, and drawing future plans for growth and performance improvement.	(Santos & Brito, 2012; Venkatraman & Ramanujam, 1986; Lebas & Euske, 2007)

4. Discussion of Findings

The survey has been pre-tested on thirteen Jordanian commercial banks to evaluate the questionnaire validity. Next, a quantitative descriptive examines ensued that measures the customers' perception who are included in the process of adopting O-banking. In this research, a total of 384 questionnaires delivered by hand to customers of commercial banks in Amman, which in turn sent it to their branches, only 372 questionnaires were used for further analysis making a valid response rate of 96.88% (Baruch, 1999). This section consists of the respondents' profile in terms of gender, age, education level, experience, and O-banking usage. Referring to Table 2, demographics indicated that (51.1%) were male and (48.9%) female. The largest percent occurred among respondents aged category 18-24 years (48.9%) while the lowest percentage among those aged more than 52 years (2.7%). In terms of education level, (69.9%) had bachelor degrees, and (14.8%) of had master degrees. Most respondents had among 1-4 years in terms of experience, (34.9%), and only (3%) had 20 years and more. Many respondents (64.8%) were users of online banking and non-users made up the rest (35.2%).

Table 2: Descriptive Statistics

Item		Frequency	Percent
Gender	Male	182	48.9
	Female	190	51.1
Age	18-24	184	49.5
	25-31	89	23.9
	32-38	43	11.6
	39-45	29	7.8
	46-52	17	4.6
	>52	10	2.7
Education Level	High school or less	11	3.0
	Diploma	26	7.0
	Bachelor	260	69.9

	Master	55	14.8
	Ph.D.	20	5.4
Experience	Less than 1 year	105	28.2
	1-4 years	130	34.9
	5-9 years	74	19.9
	10-14 years	33	8.9
	15-19 years	19	5.1
	20 years and more	11	3.0
O-Banking System	User	241	64.8
	Non User	131	35.2

The current research used SPSS version 20.0 software and the PLS-SEM to analyze the data collected. The statistical analysis involved descriptive statistic, Cronbach's alpha, and multicollinearity to test the hypotheses and to verify the relationship among variables. One of the determination criteria of prior instruments was the internal consistency of the measures using Cronbach's alpha reliability coefficients. Table 3 shows the findings on measures of the pilot study. The reliability estimates ranged from 0.936 to 0.970, which is generally considered sufficient for research purposes (Nunnally, 1978). This means that the criteria can be regarded as relatively reliable.

Table 3: Reliability Coefficient for Multiple Items

Variable	No. of items	Cronbach's alpha Coefficient
Online Banking Quality	26	0.970
INQ	13	0.959
SYQ	6	0.925
E-SQ	7	0.940
BIU	8	0.936
PER	16	0.953
Questionnaire	50	0.954

Note: INQ= Information quality, SYQ=System Quality, Electronic Service Quality=E-SQ, BIU=Behavior Intention to Use, PER= Performance.

In this study, multicollinearity was tested by examining the correlation matrix and by tolerance and VIF level for the independent variables. Multicollinearity exists when the correlation between independent variables is higher than 0.90 (Hair et al., 2010). However, Pallant (2010) suggests a correlation value above 0.7 as a threshold for multicollinearity among independent variables. The result showed that none of the exogenous variables is highly correlated with any other exogenous variable. Table 4 shows that the correlation values are well below the threshold of 0.7. Therefore, it is concluded that there is no problem of multicollinearity.

Table 4: Correlations among the Exogenous Variables

Variables	INQ	BIU	E-SQ	SYQ
INQ	**1**			
BIU	.361	**1**		
E-SQ	.603	.378	**1**	
SYQ	.659	.356	.599	**1**

Note: INQ: Information Quality; BIU; Behavioral Intention to Use; E-SQ: E-Service Quality; SYQ: System Quality

Multicollinearity also tested through an examination of tolerance and Variance Inflation Factor (VIF) as one of the most important and reliable tests of multicollinearity (Hair et al., 2010). Table 5 indicates that the tolerance ranges between 0.492 and 0.820 substantially greater than 0.1 and VIF ranges from 1.219 and 2.034 considerably less than 10. In line with Hair et al. (2010), that the tolerance values below 0.10 and VIF values above 10 indicate high collinearity, this result shows that multicollinearity does not exist in this study.

Table 5: Multicollinearity Test based on Tolerance and VIF Values

	Collinearity Statistics	
Variables	Tolerance	VIF
INQ	.492	2.034
BIU	.820	1.219
E-SQ	.548	1.824
SYQ	.496	2.016

Note: INQ: Information Quality; BIU; Behavioral Intention to Use; E-SQ: E-Service Quality; SYQ: System Quality

Depending on the PLS-SEM algorithm method, figure 2 reveals the path coefficient of the independent variables and the dependent variable. The finding shows that all the exogenous variables have a positive coefficient with the endogenous variable. Table 6 presents path coefficients, t-statistics, and p-values. The findings indicate that information quality (β =0.103; t=2.3467; p<0.05) has a positive direct effect on customers' usage intention for O-banking. The results links well with the vision of previous studies have stated that INQ positively influences the intention to use O-banking (Apostolou et al., 2017; Chen, 2013; Suryanto et al., 2016; Yahya et al., 2012), this hypothesis is supported. With regard to hypothesis 2, the findings showed that e-service quality (β =0.220; t=4.4718; p<0.001) has a positive direct effect on customers' usage intention for O-banking. This result is similar to the understanding of prior results that the drivers of intention to use O-banking are high-level E-service quality, such as system availability, efficiency, privacy, contact, responsiveness, fulfillment, and compensation (Li et al., 2018; Natalia et al., 2016), hypothesis 2 is supported. In addition, system quality (β =0.176; t=3.4737; p<0.01) has a positive direct effect on customers' usage intention for O-banking. This result also agrees with the perspective of prior studies (Apostolou et al., 2017; Namahoot & Laohavichien, 2015; Phung et al., 2009; Suryanto et al., 2016), have mentioned that SYQ positively influences the intention of customers to use O-banking, hypothesis 3 is supported.

Table 6: Direct Relationship Among Variables

Hypothesis	Path	Path Coefficient	Standard Error	T-Statistics	P-Value	Decision
H1	INQ -> BIU	0.103*	0.044	2.3467	0.020	Supported
H2	E-SQ -> BIU	0.220***	0.049	4.4718	0.000	Supported
H3	SYQ -> BIU	0.176**	0.051	3.4737	0.001	Supported

**: p<0.05; **: p<0.01; ***: p<0.001*

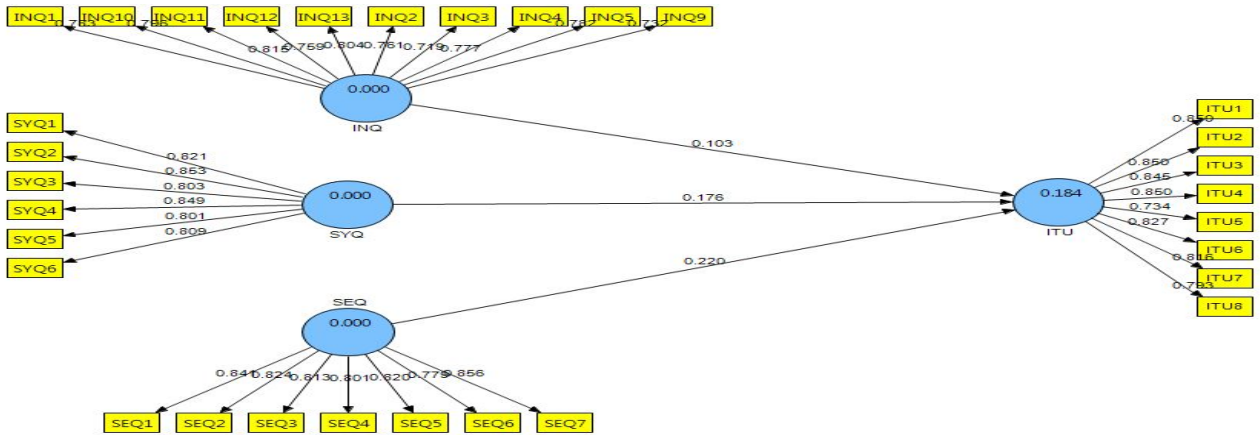


Figure 2: PLS Algorithm Direct Relationship Among Variables

The final direct relationship in the inner model among the mediating variable (BIU) and the dependent variable (PER) which described by hypothesis (H4). Figure 3 and Table 7 shows the path coefficient, t-statistics and p-value findings of testing this hypothesis. The findings indicate that customers' usage intention for O-banking (β =0.397; t=10.9718; p<0.001) has a positive direct effect on bank performance. This finding matches with the results of past studies that show the intention to use positively impacts performance (Chen, 2013; Sanami & Shojaei, 2016), this hypothesis is supported.

Table 7: Direct Relationship Intention to Use and Performance

Hypothesis	Path	Path Coefficient	Standard Error	T-Statistics	P-Value	Decision
H4	BIU -> PER	0.397***	0.036	10.9718	0.000	Supported

**: p<0.05; **: p<0.01; ***: p<0.001*

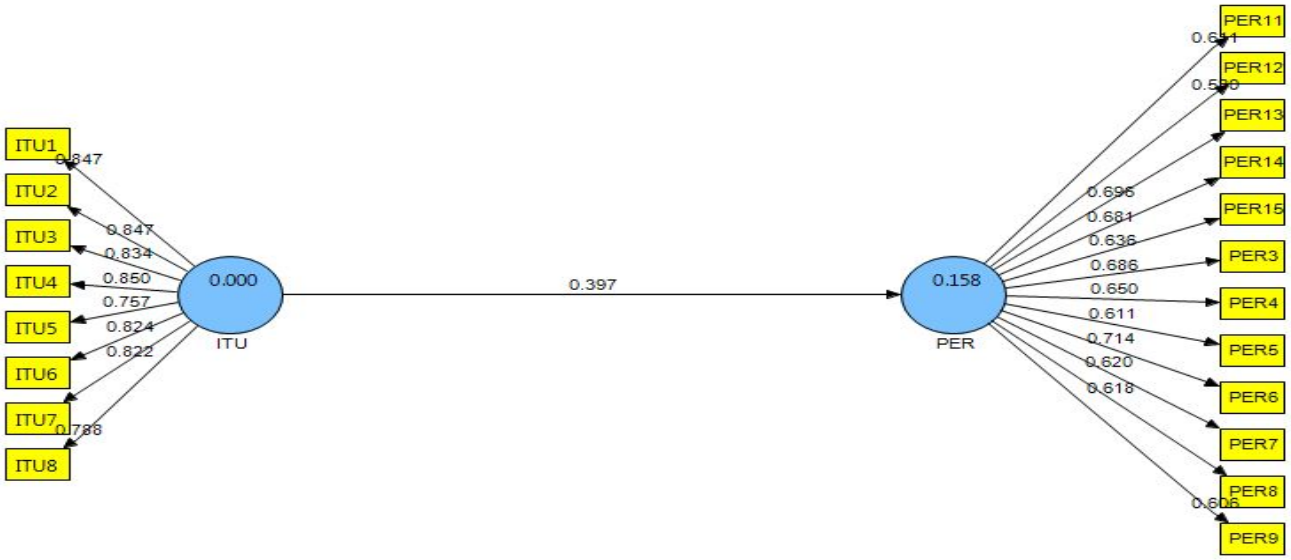


Figure 3: PLS Algorithm Direct Relationship Intention to Use with Performance

Mediation analysis evaluates the indirect impact between independent variables and a dependent variable by the intervening variable described by hypotheses (H5 to H7). It is thus clear from Figure 4 and table 8 that intention to use O-banking mediates the positive relationship between E-SQ and bank performance (β =0.046; t=2.718; p<0.01). The result agrees with the prior studies (Chen, 2013; Mohmoodi & Asetmal, 2014), hypothesis 5 is supported. With regard to hypothesis 6, the findings revealed that intention to use O-banking mediates the positive relationship between SYQ and bank performance (β =0.035; t=2.492; p<0.001). The present result is supported by Chen (2013), hypothesis 6 is supported. Nevertheless, table 8 reveals that intention to use O-banking mediates the negative relationship between INQ and bank performance (β =0.017; t=1.844; p>0.05). This finding, however, is surprising given the fact that the path from INQ to intention to use O-banking was positively significant in the direct relationship as stated earlier. Therefore, hypothesis 7 is not supported.

Table 8: Results of Mediation Test

Hypothesis	Path	Path Coefficient	Standard Error	T-Statistics	P-Value	Decision
H5	E-SQ->BIU->PER	0.046**	0.029	2.718	0.013	Supported
H6	SYQ->BIU->PER	0.035***	0.03	2.492	0.007	Supported
H7	INQ ->BIU->PER	0.017	0.019	1.844	0.065	Not Supported

**: p<0.05; **: p<0.01; ***: p<0.001*

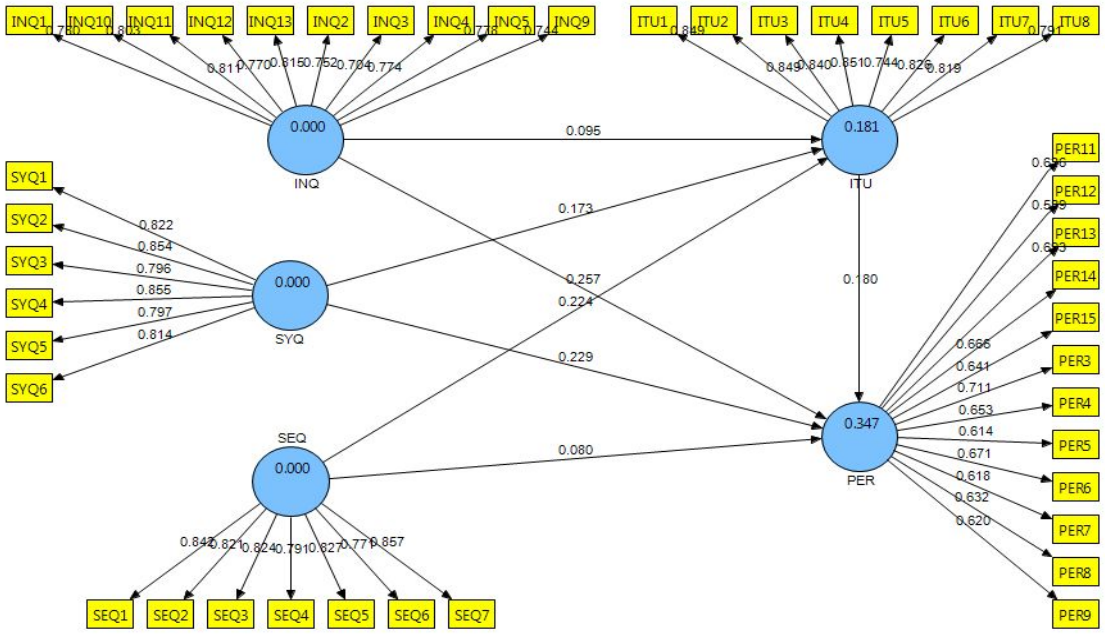


Figure 4: PLS Algorithm Indirect Relationship

Conclusion

The goal of this study endeavor was to investigate the mediating role of behavioral intention to use on the relationship between INQ, E-SQ, SYQ, and performance of Jordanian commercial banks. Findings show that, overall, O-banking quality components have a positive with significant impact on usage intention and also usage intention towards bank performance. Besides, the results reveal also that the intention to use O-banking mediates the positive relationship between E-SQ, SYQ, and bank performance, while INQ has a negative influence.

Moreover, the results contributed to an improved and enhanced understanding of the adoption of O-banking services. It suggested that the O-banking quality components (E-SQ, SYQ, and INQ) are an important precedent for measuring the success of the O-banking system. The rationale of this finding refers that banks can benefit from electronic services as O-banking services to increase customers' usage intention and also increase profit by providing an innovative and comprehensive service. It further showed that O-banking quality plays a vital role in impacting usage intention which in turn impact bank performance. Hence, banks should develop the interfaces and operations are easy to use for the O-banking in order to improve the reliability of electronic services. Likewise, the results show that the intention to use O-banking plays a meditational role between E-SQ, SYQ, and bank performance, while INQ has a negative influence. This result, however, is surprising given the fact that the path from INQ to intention to use O-banking was positively significant in the direct relationship as stated earlier. A plausible reason for this is that the more Jordanian commercial banks perceive high environmental risk. Hence, the role of intention to use O-banking in illustrating the relationship may not be noteworthy.

Lastly, the study presents practical, theoretical and methodological contributions regarding the impact of these O-banking quality components on Jordanian commercial banks' performance. According to the limitations of the research, numerous directions for future studies are outlined. Conclusively, this study has added valuable inclusion, both theoretically, practically, and methodologically in the Jordanian commercial banks' performance and O-banking quality literature.

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