



E-ISSN: 2706-8927
P-ISSN: 2706-8919
www.allstudyjournal.com
IJAAS 2022; 4(1): 312-318
Received: 04-01-2022
Accepted: 17-02-2022

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The effect of applying the electronic services system in the work of electronic banking (Applied research in a sample of Iraqi banks)

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Abstract

This article aimed to focus on the consequences of using the electronic services system (ESS) on the activities of electronic banking services (EBS), the study was on examples of Iraqi banks, as investment in technology which is the main important aspect for the accomplishment and future expansion of managerial company divisions in general, particularly, in banking, as a worldwide economic growth in the technology field that have guide to the most banking divisions in the world to essential changes and deep improvements in the system structure and methods to fight competitions and maintain a certain root with the changes in economy, taking in the consideration the diversity and the changes in the services of the bank. Particularly ever since the traditional approach does not gives the expected results, which enable the EBS to be a realistic application in different banking divisions. To accomplish this, the current study depends on the analysis of the questionnaire as a major means for information and data collection. The results show a noteworthy and optimistic effect of applying ESS in EBS.

Keywords: Electronic banking, electronic service system

1. Introductions

In recent years, the world is witnessing major changes and developments in the information and communication market and its technologies rapidly; these technologies have correlated with various economic activities and fields. Most of the sectors are now carrying out their activities through electronic services and transactions in order to achieve better practices and to achieve the objectives of the sector. The banking sector was among the most prominent sectors affected by the information and communication revolution. As the use of modern technology has become an integral component of it because of the efficiency it provides in the work and the speed of delivery and the abundance of information about customers and markets in order to create electronic service products with a high degree of technological development because the level of banking service depends mainly on the extent of its quality and its achievement for the largest possible followers of its recipients and the highest level of satisfaction, and on the other hand, the extent to which these electronic banking services contribute to the improvement and development of electronic banking activities. (Ease of use, availability and comprehensiveness information, speed response, privacy and secure) in electronic banking activities for the research sample. Therefore, the significance of the topic of the current study was represented by (ease of use, availability and comprehensiveness information, speed response, privacy and secure) which can be used to improve electronic banking activities, study and analyze the association between the impact of the ESS on EBS in Iraqi banks that were used as a research sample. The study (Yas, Jamil, 2014) ^[11], indicates an identification of the quality and nature of electronic banking services provided by Iraqi banks and an analysis of the most important advantages, obstacles, danger and the elements for the success of using electronic banking in Iraq, and to achieve the objective of the research, he used a tool to collect data, which is a questionnaire form directed to managers and employees specialized in the electronic banking service for a selected sample of Iraqi commercial banks. After analyzing the results using the SPSS program for statistical analysis, the research resulted with many obstacles and risks such as the clients' lack of knowledge of the electronic service, the lack of a technical infrastructure, the absence of laws to protect dealers that limit the use of electronic banking.

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As for the study (Gregory Bressolles, 2006) entitled "Developing a Model for Measuring the Quality of Electronic Services", where a model was developed that contains six dimensions: They are (quality and volume of information, ease of use, graphic design, trust and reliable information, privacy and security, offers and interactivity). Through it, the quality of electronic services was measured, and the study was conducted on 1269 customers of five electronic commerce sites. As it came after the graphic design of the website in the first place in terms of importance, then ease of use and reliability in second place, and then privacy and security in the third place, to come next after the information, and in the last after the offers and interactivity. The study (Faiza, 2018) ^[5] indicates identifying the quality of electronic services in its dimensions (ease of use, availability and comprehensiveness of information, speed response, compensation, private and secure) and its role in achieving the competitive advantage of telecommunications institutions in Algeria, and in order to accomplish the goal of the study, a questionnaire form was considered and distributed to 323 mobile phone customers in Algeria. The study come out with a most significant is the existence of an average correlation of (64.4%) between the availability of quality electronic services in its dimensions and the competitive advantage of the companies under study, the presence of a medium level of quality in electronic services in the companies under study, and there is no difference or discrepancy between the companies researched regarding the quality of their electronic services.

2. Methodology

2.1 Research problem

The problem of the research can be summarized in the below questions:

- 1 What are the roles of applying the electronic services system in electronic banking activities in Iraqi banks that were used as research sample?
- 2 What is the range of application of the ESS in providing banking services in Iraqi banks that were used as research sample?
- 3 Is there a clear perception among the studied banks about the importance of using electronic banking?
- 4 What is the effect of the electronic services system dimensions (ease of use, availability and depth of information, speed response, privacy and security) on electronic banking activities for the research sample?

2.2 The importance of the research

The importance of the research has derived its significance from the below:

- Study novel changeable for the ESS aspects represented by (ease of use, availability and comprehensiveness of information, speed of response, privacy and security) that can be used to improve the work of electronic banking.
- Studying and analyzing the connection among the aspects of ESS and the level of its impact on the work of electronic banking in Iraqi banks, the research sample.

2.3 Objectives of the researches

The research try to achieve the below objectives:

- Shedding light on the transformation of Iraqi banks from the traditional mode of banking to the modern one based on the use of electronic banking tools.
- Identify the relationship among the existence of ESS within Iraqi banks and electronic banking activities from through research sample.
- Determine the interest of Iraqi banks in EBS and the extent of expansion in modernizing them and keeping rapidity with global development.

2.4 The hypothesis of the research

The hypotheses were based on below:

- There is an important association between the ESS and the electronic banking business.
- There is an important impact of the ESS on electronic banking work.
- There is a multiple effect of statistical significance for the combined aspects of the electronic services system in the work of electronic banking.

2.5 Domain and research data

2.5.1 Temporal boundaries: The study was carried out in 2021.

2.5.2 Location and places: Iraqi banks.

2.6 Methodology of the study

The study was depend on analyzing the experimental method via gathering and analyze the essential data, focusing on reviewing the belief and orientation of the research sample, using the expressive technique to depict the actuality of variables under study, while in the analytical approach, it statistical treatments to variables was used in analyzing the outcomes data, set conclusions and suggestions were adopted.

2.7 Analyzing approach

The questionnaire form was the major tool for gathering the information that related to the study, it was distributed from (2/1/2021) to (1/23/2021). The form has 2 main divisions, general information and (30) subsection that were classified to 2 groups: The first group has 20 sections related to compute the ESS while the second has 10 paragraphs has relation with electronic banking work.

2.8 Research difficulties and problems

- 1 The complexity of movement because of pandemic (COVID-19).
- 2 The complexity in gathering data from the Iraqi banks.
- 3 The unsteady security condition in Iraq.

2.9 Research model

Referring to the earlier studies regarding the (IV) independent variable (the ESS), which is defined in four aspects (ease of use, availability and comprehensiveness of information, speed response, privacy and security), and its consequence on the (DV) dependent variable (electronic banking work), figure 1.

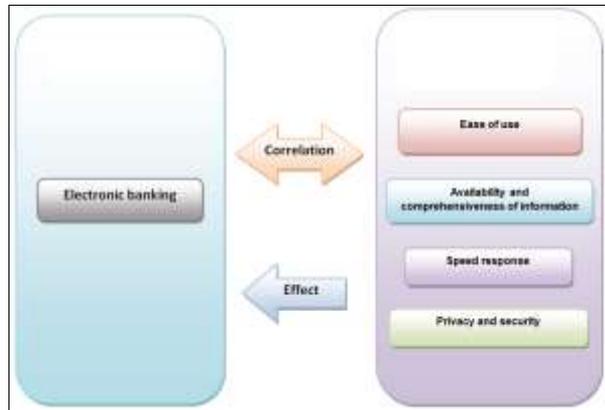


Fig 1: The hypothesis sketch

2.10 Sample Research and the community

Table 1 indicates the size of the sample to the population.

Table 1: Determination of sample size from a given population

S	N	S	N	S	N	S	N	S	N
338	2800	260	800	162	280	80	100	10	10
341	3000	265	850	165	290	86	110	14	15
246	3500	269	900	169	300	92	120	19	20
351	4000	274	950	175	320	97	130	24	25
351	4500	278	1000	181	340	103	140	28	30
357	5000	285	1100	186	360	108	150	32	35
361	6000	291	1200	181	380	113	160	36	40
364	7000	297	1300	196	400	118	180	40	45
367	8000	302	1400	201	420	123	190	44	50
368	9000	306	1500	205	440	127	200	48	55
370	10000	310	1600	210	460	132	210	52	60
375	15000	313	1700	214	480	136	220	56	65
377	20000	317	1800	217	500	140	230	59	70
379	30000	320	1900	225	550	144	240	63	75
380	40000	322	2000	234	600	148	250	66	80
381	50000	327	2200	242	650	152	260	70	85
382	75000	331	2400	248	700	155	270	73	90
384	100000	335	2600	256	750	159	270	76	95

N: size of population S: of the sample

92 Questionnaire forms were distributed to the individuals, and in return 92 were answered (all of them were answered), the recovery rate was 100%

2.11 Measuring honesty and constancy

2.11.1 Sincerity test: The questionnaire form was distributed to the individuals, the researcher react to the suggestions of the individuals and made the essential changes and twisted the questionnaire form.

2.11.2 Firmness test: the constancy and firmness of the test was according to Cronbach Alpha formula and Likert scale, (Al-Jadiri and Abu Helou, 2009: 171). Table 2 demonstrates the constancy test variables in the study.

Table 2: Constancy using the Cronbach alpha coefficient

Variables	The Cronbach alpha coefficient
1. Electronic services system (ESS)	0.910
2. Electronic banking	0.922
3. Total	0.908

The total value of variables was (0.908), which indicates a high value stability of the hypotheses.

2.12 Statistical tools

For data analysis the researcher use the following tools:

- The Spss-Ver-19.
- Microsoft Excel 2010.

3. Literature review

3.1 The ESS concept

The electronic services system (ESS) represents the starting point for changing the business image in the twenty-first century, as the beginning of this century witnessed the transformation and transition of the economy from tangible goods to intangible services and the expansion of the information economy and electronic networks tremendously, which led to clearing the way for the emergence of the era of electronic services, and the electronic services are known in their broad framework as involving the provision of a service through electronic means and networks such as the Internet. (Fayza, 2018: 17) [5]. Electronic services are also known as “those services that are provided through electronic communication between the service provider and the beneficiary of it” (Al-Hazani, 2008: 47) [10]. It was also defined as “a group of activities and efforts in providing knowledge services based on technology and the desire for modern methods aimed at achieving quality and efficiency” (Ezz El-Din and Lotfi, 2018: 3) [4].

4. Dimensions of the electronic services system

1. Ease of use: It is the ease of navigation through websites, ease of access to the required information, and flexibility in using electronic services, through clarity of language and index arrangement, and ease of use of links on websites. It can also be defined as "The ability to interact with the website, the ease of navigation on the website, and the ease with which customers can accomplish their tasks". The complex electronic services are of less use because they require great effort on the part of the user (Faiza, 2018: 85) [5].

2. Availability and comprehensiveness of information

The high-quality uses of collected data and the communication technology in the service sector enables us to provide a diversified and integrated package of services to customers, which is reflected in the speed of service provision, completion of work, payment of payments, and

the implementation of financial transfers, since the content and information displayed on the website should be sufficient for the customer to be able to purchase through the site, as the website should have visual texts related to the company's offers in a sufficient, clear and accurate manner so that the customer can understand and use (Mahmoud and others, 2013: 269).

3. Response speed

The response represents the proposal in providing devices and services by the employees, and the degree of response, any more progress than expected with a higher score. (Zeithaml & others, 2006: 117)^[6].

4. Privacy and security

It means freedom from danger, risk and suspicion, and this dimension includes the following: (Jinan, 2013: 54)

- A. Physical security.
- B. Financial security.
- C. Confidentiality.

5. The concept of electronic banking activities

With the remarkable development in information and communication technology and the era of speed, traditional banking has become insufficient to satisfy the parties to commercial transactions, so the trend towards electronic banking activities has become the best solution. The activities of the electronic banking activities is "all activities or operations that were carried out, or promoted by optical means or electronic such as computer, digital television, telephone, internet, ATM, and internet" (Mustafa and Badran, 2013: 281; Diab, 2014: 23)^[9, 3]. And in light of this type of banking, the customer does not need to go to the bank, as he can perform some of his operations at his home, which means exceeding the dimensions of time and place, and he sees (Saleh & Andrea, 2002: 39)^[13]. Electronic banking can also define as "a channel to provide banking services via the Internet to provide interest to the bank's customers. This results in new challenges for the country's authorities in organizing and supervising the financial system and in designing and implementing macroeconomic policies". (Amna, 2015: 7)^[1]. It was also known as "an application of the theory of electronic delivery of banking products and services through electronic delivery channels, as electronic banks have transferred their forms of dealings to automatic teller machines and telephone deals, and the reason for the rapid entry of this technology is that it is more accurate and effective around the clock regardless of the customer's location" Charan, 2013: 19-20)^[12]. Among the previous definitions, electronic banking is "the provision of banking services using information and communication technology, that is, through the Internet, automated distributors, and private networks. It allows remote banking services at high speed and at lower costs". Electronic banking includes: (Mayada, 2015: 25-26)^[6].

1. Ability to reach a wide client base with no restrictions to a certain time and place.
2. Providing integrated, new and more sophisticated banking services throughout a modern ways that differentiate it from usual performance.
3. Reducing the cost, as it is an alternative to reducing a large part of the capital to establish continuous relationships between the bank and the customer.
4. The speedy completion of banking business as a result

of the expansion of modern technical means and the speed they have brought about in the completion of banking work and the implementation of procedures that end with correct performance and high efficiency.

5. Card services through the provision of distinguished services.
6. The presence of an electronic medium such as a computer connected to the international information network.
7. Distinguishing, by offering a large range of diverse products and banking services.

The electronic banking tools can be divided into: (Al-Mousawi and Jawad, 2011: 176-178).

A- Electronic banking channels: the channels throughout banking services that were provided completely as follows: (Yas and Jameel, 2014: 39-42)^[11], (Rose & Hudgins, 2008: 114)^[15].

1. Automated teller machine (ATM).
2. Electronic Point of Sale (P.O.S).
3. Home banking (personal computer).
4. Mobile banking (mobile device).
5. Telephone banking.
6. Digital T.V.
7. Internet banks.

B- Electronic Cards: Including the following:

1. Credit Cards.
2. Protective Cards.
3. Civil Cards.
4. Smart Cards (Master Cards).

C- Electronic cheques

5. Empirical tests and analysis

5.1 Empirical analysis

This topic search is to clarify the mainly significant individuality of the research sample of employees in Iraqi banks, via the information in the questionnaire form, followed by a brief depiction of the sample individuals.

1. **Distribution according to gender:** Table (3) demonstrate that the gender were males (54.3%) and females (45.7%).
2. **Distribution according to age:** Table (3) illustrate that (9.8%) ranged from 21 to 30 years, and 29.3% were from 31 to 40 years, and 28.3%, from 41 to 50, and finally (32.6%) were 51 years and over.
3. **Distribution according to academic qualification:** Table (3) demonstrates that (71.7%) have a bachelor's degree, 5.4% have a higher diploma, (13.0%) have a master's degree, and lastly (9.8%) have a PhD.
4. **Distribution according to the bank:** Table (3) illustrate that Rafidain Bank achieved the highest percentage of the sample, as the percent reached (16.3%), followed by each of the (National Iraqi Bank, Agricultural Bank, Babylon Bank, Sumer Commercial Bank), as their percentage reached (10.9%), while the percentage of Gulf Commercial Bank reached (9.8%), followed by (Ashur Bank and North Bank), as their percentage reached (8.7%), followed by the Industrial Bank, which reached (7.6%), and finally The proportion of the Iraqi Middle East Investment Bank (5.4%), out of the total.

Table 3: Sample Characteristics

No.	Variables	Categories	Repetition	Percent %
1	Gender	Male	50	54.3
		Female	42	45.7
		Total	92	100.0
2	Age	21-30 years	9	9.8
		31-40 years	27	29.3
		41-50 years	26	28.3
		51 years and over	30	32.6
		Total	92	100.0
3	Educational Degree	Bachelor	66	71.7
		Post Graduate Diploma	5	5.4
		Master	12	13.0
		Doctorate	9	9.8
Total	92	100.0		
4	Banks	The National Bank of Iraq	10	10.9
		Agricultural Bank	10	10.9
		Industrial bank	7	7.6
		Ashur International Bank	8	8.7
		Gulf Commercial Bank	9	9.8
		Rafidain Bank	15	16.3
		Iraqi Middle East Investment Bank	5	5.4
		North Bank	8	8.7
		Babylon Bank	10	10.9
		Sumer Commercial Bank	10	10.9
		Total	92	100.0

5.2 Hypotheses test

The research hypotheses were developed, according to the variables of the study, the dependent and the independent variables.

5.2.1 Correlation test of the hypothesis

The topic discuss and determinate the association between the variables, to discover the extent of rejecting or accepting main hypothesis, that is: There is a positive significance correlation between the ESS with the electronic banking work, by means of Pearson Correlation Coefficient. Figure 2 and Table 4 and Figure (2) which demonstrates the positive relationship with direct moral significance. Among the ESS

and the electronic banking work, the correlation value is (0.765**), at a level of significance (0.01), and the moral relationships is (5), constituting (100%), while the maximum sub-value of the correlation coefficients was between the electronic banking and the response speed, the value get to (0.811**), at the significance level (0.01), which indicates a significant relationship and make clear a strong relationship among the electronic banking work and the speed of response which conclude the main hypothesis which is: “There is a statistical relationship with encouraging significance moral to the ESS in the work of electronic banking banks of Iraq”. Table 4 and figure 2.

Table 4: The correlation between ESS and the electronic banking work

Electronic services system X The Performance Y		Ease of use	Availability and comprehensiveness of information	Speed of Response	Privacy and security	Electronic services system	Moral relations	
							Number	Percent %
Tax performance Y	Coefficient of correlation	0.784**	0.711**	0.811**	0.763**	0.765**	5	100%
	Moral level	0.000	0.000	0.000	0.000	0.000		
	The decision	Function	Function	Function	Function	Function		

**Strength of Relationship and Morality (1%)
*The strength of the moral relationship (5%)

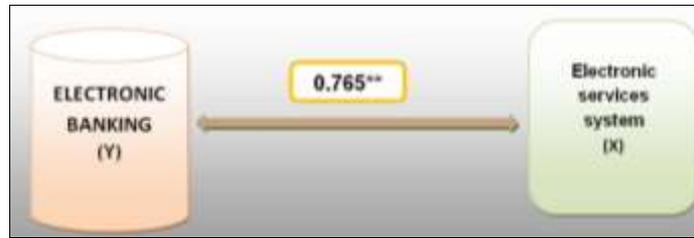


Fig 2: The relationship of the link between the electronic services system and the work of electronic banking

5.2.2: Test the influence of the hypotheses

It consist of Simple and Multi Regression Analysis

1. Simple Regression Analysis

As shown in table 5, the calculated F value reached 13.81, it is larger than tabular F value (7.91) at significance level (1%), and the significance was (0.000) at degree of freedom (1.90), which indicates a significant effect of ESS on the

dependent variable (the work of electronic banking). The value R2 was (0.520), indicating that the ESS (52%) in (electronic banking work), and the variance was (48%) which explained by factors that were not enter in the model of regression. Therefore, these outcomes provide adequate support to agree to the hypothesis impact of the 2nd main research.

Table 5: The impact of ESS on the work of electronic banking

Dependent variable Independent variable	Tax performance							
	Fixed Limit a	Calculated Value of T	Marginal inclination b	Calculated Value of t	Selection coefficient R ²	Calculated Value of F	Morality	Decision
Electronic services system	0.453	3.532	1.130	7.620	0.520	13.81	0.000	There is an effect

*The value 0 of the table at a significant Int 5% and the degrees of freedom (1.90) = (3.94),

** The value 0 of the table at a significant level 1% and the degrees offreedom (1,2) = (7.91)

* Value (t) tabular at a significant level 5% and degrees of freedom (90) = (1.67)

** Value (t) tabular at a sirificant level 1% an d tun Jinn freedom (90) = (2.35)

2. Multi Regression Analysis

In methodology of the current study, the third major hypothesis was developed that the ESS dimensions (ease of use, availability and comprehensiveness of information, speed of response, privacy and security) collectively affect the work of electronic banking in a positive and moral way. From table 6 the calculated F value was (13.73), it is greater

than tabular F value (3.57) at the significance level (0.01), with (0.000) significance, with (4.87) degree of freedom, this outcomes mean an important impact of the X on Y. this states the following:

(There is an important effect of variables (X), the ESS, on the work of electronic banking).

Table 6 indicates the same outcomes of table 5.

Table 6: The multiple effects of the X variables ESS in electronic banking work in Iraqi banks

Electronic services system	Tx performance						
	Regression coefficients	Calculated T	Morality	Determination Coefficient R ²	Calculated F	Morality	Decision
Fixed Limit	0.831	3.178	0.002	0.724	13.73	0.000	There is Effect
Ease of use	0.625	3.165	0.003				
Availability and comprehensiveness of information	0.346	5.182	0.000				
Speed of response	0.457	2.732	0.004				
Privacy and Security	0.694	9.977	0.000				

*The value (0 of the table at a significant level 5% and the degrees of freedom (4.87) (2.47)

**The value (0 of the table at a significant level 1% and the degrees of freedom (4.87) (3.57)

*Value (0 tabular at a significant lad 5% and degrees of freedom (87) (1.67)

**Value (t) tabular at the (awl of 1% and degrees of frgedoni (87)e (2.35).

6. Conclusions and Recommendations

6.1 Conclusions

1. A positive correlation between ESS in the work of electronic banking, due to the vital role of the electronic services system in developing and embodying modern administrative which raises the level of bank performance.
2. A significant effect of ESS on the work of electronic banking.
3. The electronic services system has a multiple impact (ease of use, availability and comprehensiveness of information, speed of response, privacy and security), both morally and positively in the work of electronic banking.
4. There are subsidiary problems in applying the electronic services system at work.
5. Lack of experience working on the electronic services system.
6. There is a difficulty in using modern technology at work.
7. Weakness of the relationship between individuals and bank administrations.

6.2 Recommendations

1. Settling the association between employees and bank administrations and do not ignore it.
2. Continuous updating and development to the elements to exclude the electronic services system (ease of use, availability and comprehensiveness of information, speed of response, privacy and security) and work to enhance them.
3. Overcoming the secondary problems in applying the electronic services system at work.
4. Training workers at work on the electronic services system.
5. Qualifying workers and introducing them to training courses on the use of modern technology at work.

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