

# EFFECT OF THE IMPACT OF ELECTRONIC BANKING SERVICES ON CUSTOMER SATISFACTION DURING THE COVID-19 PANDEMIC: EVIDENCE FROM ARAB BANKS

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## ABSTRACT

*The aim of this study is to investigate the impact of the quality of electronic banking services on customer satisfaction during the COVID-19 pandemic using a field study on a sample of Arab banks. To reach a set of conclusions and recommendations through the field study conducted by the researcher on Arabic banks in order to optimize the use of electronic banking services. To achieve this goal, a questionnaire was designed. The form was distributed to a sample of customers of Arabic banks under study in order to measure the quality of electronic banking services during the Covid 19 Pandemic and its impact on customer satisfaction from the perspective of Arabic banks customers. The number of questionnaires distributed reached 253. The study concluded several results, the most important is the significant relationship between the Customer satisfaction and the quality dimensions of electronic banking services represented (Easy to use, save time, confidential, safety). Also, the demographic variables don't not affect their satisfaction with electronic banking services during the Covid 19 Pandemic in the Arab banks, while there is an impact of a variable (Bank name, number of years dealing with the Bank, profession) on customer satisfaction with electronic banking services.*

**Keywords:** The Quality, Field Study, Arabic Banks Customers.

## INTRODUCTION

The expansion in the use of computers, and the technology, such as the Internet, have pushed organizations to employ these developments in facilitating the various operations of their customers. Services are done electronically, and among these organizations is the banking system, which has strived to fully enhance the electronic services of its systems.

Banks are among the most important institutions that need this development, as they serve a large segment of their customers through electronic services (internet banking, ATMs), which facilitate customers' access to their accounts, reducing time and effort, and limiting long hours of waiting for deposits and withdrawals, in addition to that provide other services through mobile banking, which facilitates customers' access to their accounts through the mobile, such as payment through electronic cards, and payment to other companies through customers' accounts. With these integrated banking services, the level of competition has increased for banks to provide all services that lead to customers satisfaction.

The continuous growth in banking services and the high rates of customers' expectations about the quality of the service provided, obliges the bank's management to identify and keep abreast of the trends, perceptions, and expectations of customers for the levels of quality of services it provides. Private banks need to improve and provide high-quality services to maintain

the satisfaction and loyalty of their customers and to attract more new customers, and although banks in general have worked on contracts in stable environments, they are facing, in the present day, to a large extent, a competitive environment, because the quality of service is constantly evolving, it is an important issue to meet the expectations of customers and achieve their satisfaction.

Today's banking environment has become very competitive. For the bank to be able to survive and grow in the changing market environment, banks are forced to adopt strategies that enable them to survive and continue in the business world. Therefore, competition in improving the quality of services is a strategic and major issue for organizations operating in the service sector. At present, banks and financial institutions are making more effort to retain their customers and attract new customers, and more awareness and concern about the need to better manage electronic services, and work to understand the factors that affect the quality of electronic service and the level of customer satisfaction and commitment. And in light of the world's exposure to the Covid-19 pandemic at the beginning of the year 2020, the importance of various electronic services, which have become one of the main pillars of banks all over the world, and it is also an ideal way for all different transactions by customers in the banks, as it enables customers to make financial transactions and other banking services according to their different needs without the need for physical presence in the bank, which enhances adherence to the rules of quarantine and health safety, and contributes to improving the quality of the various services provided by banks, and raising the level of pressure on operating banks, whereby customers can buy and sell through credit cards, or payment through electronic services. Accordingly, the current research will study the impact of the quality of electronic banking services in light of the Covid-19 pandemic on customer satisfaction and a field study is on a sample of Arab banks

## LITERATURE REVIEW

Alarifi & Husain, (2021) compared e-customer satisfaction in Saudi banks before and during coronavirus disease 2019 (COVID-19) pandemic by assessing the e-service quality dimension before and during the pandemic. To examine e-customer satisfaction among Saudi bank e-customers, data were collected using convenience sampling methods utilizing two questionnaires before and during COVID-19, distributed to Saudi bank e-customers. The sample size of collecting data of 588 bank e-customers was analyzed through a well-known statistical technique, multiple regression, and paired sample t-test, using Statistical Product and Service Solutions (SPSS) software and Excel. It is found that efficiency is the major determinant of e-customers' satisfaction with banks in Saudi Arabia. The Saudi context is different from other countries. There are differences between the impact of Internet banking e-service quality on e-customer service before and during the COVID-19.

Bala, et al. (2021) aimed to capture the impact of different dimensions of services of mobile banking on customer satisfaction for the mobile banking users for rural areas of Bangladesh during the COVID-19 pandemic times. The study also finds out the affiliation between the customer satisfaction and loyalty of different types of mobile banking users during the pandemic times. The researchers designed a self-complete questionnaire that was used for data collection and received 180 questionnaires out of 250 questionnaires. This research conducted on the rural people in Bangladesh who are availing the service of mobile banking during the pandemic situation and for this reason, the results may not be applicable to other times as well as other areas. The finding of the study indicated that reliability, responsiveness, and

efficiency dimensions of mobile banking service have significant influence on customer satisfaction during the COVID-19 lockdown times.

Arum et al. (2021) aimed to analyze factors affecting e-banking user satisfaction and e-banking user loyalty during Covid-19 pandemic with e-banking service quality that consists of reliability, privacy and security, design on application or website, and customer service and assistance as the independent variables, while the dependent variables in this study are e-banking user satisfaction and e-banking user loyalty. This research was viewed based on an e-banking user perspective. This research used nonprobability sampling and purposive sampling. This research is a quantitative study using primary data based on a questionnaire distributed online to 110 e-banking users like respondents. The hypothesis testing in this study used the SPSS analysis tool through the IBM SPSS Statistics Version22 applications. The result illustrates that e-banking service quality, reliability, and design on application and website influence both e-banking user satisfaction and e-banking user loyalty. Meanwhile, privacy and security only influence e-banking user loyalty, not on e-banking user satisfaction. Furthermore, customer service and assistance have no effect on both e-banking user satisfaction and e-banking user loyalty during the Covid-19 pandemic.

Claudia et al. (2021) investigated the impact of the COVID-19 crisis on consumer behavior in retail banking, with a special focus on the Romanian banking sector. To achieve our goal, we performed a survey among the Romanian consumers in retail banking, using as research method the field survey based on questionnaire. The final sample comprised 738 valid responses from the metropolitan area retail banking consumers. The research brings a fresh insight on retail banking services consumption during the pandemic and validates a conceptual model regarding the internet and mobile banking services acceptance. The research' results highlighted, among others, that the variable concerning the perception of the COVID-19 pandemic effect on consumers' lifestyle has a direct and positive influence on the variable regarding the attitude toward internet and mobile banking services, mediated by other variables like safety of internet and mobile banking use and trust in banks. Several social and managerial implications are also discussed, because it is possible that the tendency to use internet and mobile banking services will prevail even after the post pandemic stage, as new consumption behavior models are developing. Banks in Romania should increase their initiatives to offer financial education courses and online tutorials to familiarize customers with the use of digital channels. Banks should also improve communication with clients and design new products and services to increase the attractiveness of saving process. They should demonstrate flexibility in negotiating lending and refinancing conditions as well.

UIHaq & Awan, (2020) aimed to empirically explore e-banking service quality and its impact on the e-banking loyalty through a mediating impact of e-banking satisfaction. The account holders of three domestic systemically important banks of Pakistan were surveyed during COVID-19 to examine the electronic services provided by these banks. The data was collected through an adapted questionnaire by using emails and messaging applications. The database of a local marketing company in Pakistan was used, and 976 responses were included in the analysis. The structured equation modeling was used to test the propositions of study. The findings delineate that reliability and website design proved to increase e-banking loyalty, particularly during COVID-19. The link between e-banking privacy and security and e-banking loyalty was proved as fully mediated by e-banking satisfaction; however, indirect effect of the reliability and website design with e-banking loyalty was partially mediated.

## **Evaluation of previous studies and the similarities and differences between the current study and previous studies.**

Previous studies dealt with the issue of the quality of electronic banking services as well as customer satisfaction, and many previous studies dealt with the factors affecting customers' acceptance of electronic banking services. Most of the previous studies were conducted on international organizations, and their trends varied in terms of the quality of banks, public or private, commercial or Islami. The current study differs from previous studies because it deals with the impact of the quality of electronic banking services in light of the Covid-19 pandemic (the independent variable) with its dimensions on customer satisfaction (the dependent variable) in a sample of Arab banks by applying to a new environment represented by a sample of Arab banks during the pandemic.

### **Study Problem**

Through the exploratory study carried out by the researcher on the Arab banks under study, the researcher noticed that banks provide various and multiple electronic banking services according to a certain quality level that the bank's management believes that it achieves through it the competitive advantage required to achieve customer satisfaction and retention, but the process of improving and developing The quality of the electronic services provided must be built according to the needs of customers on the one hand and according to the new conditions and developments related to the spread of the Covid 19 pandemic on the other hand. Therefore, the problem of the study lies in trying to evaluate the level of quality of the electronic services provided by arabbanks and how it affects the level of customersatisfaction in light of the Covid 19 pandemic.

Therefore, and due to the importance of this relationship between the quality of electronic banking services and the achievement of customer satisfaction in Arab banks in light of this pandemic, the following study questions can be provided:

1. Q1: What is impact for the quality of electronic banking services in its dimensions (ease of use, time savings, confidentiality, security) on customer satisfaction in Arab banks in light of the COVID-19 pandemic?
2. Q1.1: What is the impact of the ease of use of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic.
3. Q1.2: What is the impact of saving time for electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic?
4. Q1.3: What is the impact of the secrecy of electronic banking services on customer satisfaction in Arab banks in light of the Covid-19 pandemic?
5. Q1.4: What is the impact of the safety of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic?
6. Q2: Is there an impact of demographic variables on customer satisfaction with the quality of electronic banking services in Arab banks in light of the COVID-19 pandemic?

### **Research Objectives**

The research aims to achieve the following objectives:

1. Investigating the impact of the quality of electronic banking services in its dimensions (ease of use, time savings, confidentiality, security) on customer satisfaction in Arab banks in light of the COVID-19 pandemic.

2. The attempt to reach a set of results and recommendations through the field study that the researcher will carry out on the Arab banks will help the bank management in identifying the relative importance of the factors used by the bank's clients in their assessment of the quality of electronic banking services provided to them and identifying the behavior of bank clients towards the electronic banking services provided. In order to enable the banks management developing the quality of electronic services and adapting with COVID-19 pandemic circumstances.

## Study Importance

The banking sector plays a major role in economic and social development. Therefore, this study could contribute supporting the banking sector as follows:

1. Investigating the trends of Arab banks customers towards the electronic banking services provided to them during the COVID-19 pandemic in order to suggest recommendations based on field study results to enable and motivate them to provide high quality electronic services.
2. Enable banks achieving their goals of survival and growth, and pay attention to the needs of their customers and work to meet them, especially in light of the COVID-19 pandemic.
3. Electronic banking services are a growing and becoming an effective tool to reducing the costs of collecting information, investing time, achieving customer satisfaction in banks.

## Study Hypothesis

The first main hypothesis is formulated as follows:

**H1:** *There is a statistically significant effect of the quality of electronic banking services with its dimensions (ease of use, time saving, confidentiality, and security) on customer satisfaction in Arab Banks in light of the COVID-19 pandemic.*

**H1.1:** *There is a statistically significant effect of ease of use as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic.*

**H1.2:** *There is a statistically significant effect of saving time as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arabia in light of the COVID-19 pandemic.*

**H1.3:** *There is a statistically significant effect of confidentiality as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic.*

**H1.4:** *There is a statistically significant effect of security as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic.*

**H2:** *There is a statistically significant effect of demographic variables (bank name, gender, age, educational qualification, profession, number of years of dealing with the bank) on customer satisfaction with the quality of electronic banking services in Arab banks in light of the COVID-19 pandemic. (Table 1), (figure 1)*

## Community and Sample Research

The Arab banks customers represents research community, and the researcher will select a sample of them by applying the statistical sample equation:

$$n = E(s.d) + P + N$$

Where:

n: Sample research

E: The permissible error rate is usually 5%.

s.d: The standard degree is equal to (1.96) at a confidence coefficient = 95%.

P: is a probability value = 0.50

N: The size of the research community.

The sample size, due to the research conditions reached (253) clients

## Study Population and Statistical study Tool

The study community is represented by the customers of Arab banks, and to complete this study, the researcher distributed a special form to study the impact of the quality of electronic banking services on customer satisfaction on the customers of these banks in light of the Covid 19 pandemic, where the form was distributed to all sample items and sent through on Google Form A total of 253 forms were retrieved and analyzed (Awoke, 2015).

## Results and Analysis

This study uses primary data collected using questionnaires. The questionnaire can be filled out if the respondent meets the criteria that have been set for this research, the criteria are that the respondent is arab banks customers and is a user of ebanking services. The e-banking referred to in the research can be in the form of mobile banking (m-banking) or internetbanking (I-Banking) users. The questionnaire includes seven sections, the first section includes questions about the demographic variables of customers and the second section includes a scale (the quality of electronic banking services in general), and the third to sixth sections measure the quality of electronic banking services across 4 dimensions (ease of use, time savings, confidentiality, security), and the seventh section includes questions that measure the dependent variable (customer satisfaction).

1. The quality of electronic banking services in general (phrases 1-6).
2. Ease of use (phrases 7 - 12).
3. Save time (phrases from 13 - 18).
4. Confidentiality (phrases 19 - 24).
5. Safety (phrases 25-30).
6. Customer satisfaction (phrases 31 - 36).

To answer the questions of the questionnaire, the researcher used the five-point Likert scale

Table 1 FIVE-POINT LIKERT SCALE				
Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1

Table 2 THE RELIABILITY AND VALIDITY OF THE STUDY TOOL (CRONBACH'S ALPHA TEST)				
Result	Cronbach's alpha	No of Questions	Dimensions	Scale
0.70 >	0.807	6	quality of electronic banking services	quality of electronic banking services
	0.757	6	Ease of use	
	0.777	6	Time saving	
	0.798	6	Confidentiality	
	0.75	6	Security	
0.70 >	0.856	6	customer satisfaction	customer satisfaction

The average responses were categorized into three levels: high, medium, and low, and on the basis that the degree of neutrality is a medium degree of approval and corresponds to the number (3). The above Table 2 shows that the Cronbach's alpha value for all study Questions are good and statistically acceptable because they are greater than 0.70, which means that the set of questionnaire questions used in the research has an acceptable stability coefficient, which is higher than the statistically acceptable value indicated by (Narver & Slater, 1990; P 5) which is (0.70) (Table 2).

## Descriptive Statistics

The following table shows the value of the mean, standard deviation for the responses of the sample members to the phrases constituting the quality of electronic banking services in general. It is clear from the table 3 that, in general, there is a quality of the services provided, where the mean of the quality dimension of the electronic banking services provided was 3.87, with a great consensus among the study sample, and this was evident through the value of the standard deviation.

<b>Table 3</b> <b>RESULTS OF DESCRIPTIVE STATISTICS FOR THE INDEPENDENT VARIABLE QUESTIONS (THE QUALITY OF ELECTRONIC BANKING SERVICES)</b>			
<b>Phrases of variable quality of electronic banking services</b>	<b>Question number</b>	<b>Standard deviation</b>	<b>Mean</b>
I find electronic banking convenient for me	25	0.6337	4.081
The service I receive through the ATM is excellent	26	0.7485	4.030
The level of service quality you got through mobile banking is high	27	0.7182	3.788
The website processes transactions quickly and accurately	28	0.6623	3.899
Electronic banking has positively affected the quality of the bank's services.	29	0.5345	4.000
The bank offers higher quality electronic banking services than I would expect	30	0.8850	3.495
<b>The overall average of the electronic banking services quality variable</b>		0.494	3.8711

**Source:** prepared by the researcher based on data analysis according to the SPSS program

To be sure, we conducted a test comparing means, where we note from the table that the mean of the quality of electronic banking services is 3.87, which is higher than degree 3. This indicates that the sample members are convinced that the quality of the electronic services provided is good, and the expressions constituting this variable are statistically significant, because the level of significance is less than 0.05.

It is clear from the Table 3 that, there is ease of use, as the mean of the dimension of ease of use was 3.86, and this was within a great consensus, where the standard deviation was 0.52, which is small when compared to the mean. It is also noted that there is a strong consensus about providing electronic banking services without complexity and easy to use, as the average for this phrase (first phrase) reached 4.02, which is closer to strongly agreeing with this phrase.

To be sure, I conducted a comparison test for averages, where I note from the table that the average for ease of use is 3.86, which is higher than degree 3. This indicates that the sample members are convinced of the ease of using electronic commercial services, and the expressions that make up this variable are statistically significant, because the level of significance is less than 0.05 Table 4.

<b>Table 4 RESULTS OF DESCRIPTIVE STATISTICS FOR THE INDEPENDENT VARIABLE QUESTIONS (EASE TO USE)</b>			
<b>Phrases of variable Ease to use of electronic banking services</b>	<b>Question number</b>	<b>Standard deviation</b>	<b>Mean</b>
The bank offers uncomplicated and easy-to-use electronic banking services.	1	0.7140	4.020
The website is quickly and easily accessed	2	0.7596	3.88
The website uses more than one language	3	0.7572	3.91
The website provides a set of instructions for the purpose of obtaining the service easily and conveniently	4	0.6529	3.89
The website takes a short time to load	5	0.9115	3.62
The Bank provides electronic banking services at any time.	6	0.8127	3.82
<b>The overall average of the Ease to use of electronic banking services variable</b>		0.5187	3.86

**Source:** prepared by the researcher based on data analysis according to the SPSS program

It is clear from the Table 5 that, in general, there is time saving, as the mean of the time saving dimension was 3.81, but this was different among the study sample, according to the study's different phrases. And it is also noted that there is a strong consensus that electronic banking services save time, effort where the mean of this fifth statement (the fifth statement) was 4.10, which is closer to agreeing strongly.

<b>Table 5 RESULTS OF DESCRIPTIVE STATISTICS FOR THE INDEPENDENT VARIABLE QUESTIONS (TIME SAVING)</b>			
<b>Phrases of variable Time saving of electronic banking services</b>	<b>Question number</b>	<b>Standard deviation</b>	<b>Mean</b>
The customer benefits from the bank's electronic services at anytime and anywhere.	7	0.9631	3.70
The electronic services provided by the bank helped facilitate the customers' access to services in a short time	8	0.7758	4
The bank is developing a plan to reduce the times of completing electronic transactions for customers	9	1.0032	3.5
The customer can obtain the required service from the first time electronically	10	0.9348	3.61
Electronic services save time, effort, and no need to go to bank and doing banking transactions	11	0.8268	4.10
The bank's electronic transactions are quickly characterized	12	0.7912	3.92
<b>The overall average of the Time saving of electronic banking services variable</b>		0.5965	3.81

**Source:** prepared by the researcher based on data analysis according to the SPSS program

It also notes the difference in opinions about the customer's benefit from the bank's electronic services at any time and any place, where the standard deviation was 1 while the mean was 3.5, and this can be interpreted from the researcher's point of view to the fact that there is a difference in the capabilities of banks in providing the basic technical requirements for electronic payment.

To be sure, i conducted a test comparing means, where i note from the table that the mean for saving time is 3.81, which is higher than degree 3. This indicates that the sample members are convinced that the electronic services provided save time, and the phrases for this variable are statistically significant, because the level of significance is less than 0.05.



It is clear from the table 6 that, there is confidentiality of the data, where the mean of the dimension of data confidentiality was 4.08, but that was a great consensus among the study sample members, and this was evident through the value of the standard deviation. To be sure, i conducted a test comparing means, where i noted from the table that the mean of data confidentiality is 4.08, which is higher than degree 3. This indicates that the sample members are convinced that there is confidentiality of the data, and this variable are statistically significant, because the level of significance is less than 0.05.

<b>Table 6</b> <b>RESULTS OF DESCRIPTIVE STATISTICS FOR THE INDEPENDENT VARIABLE QUESTIONS</b> <b>(CONFIDENTIAL)</b>			
<b>Phrases of variable Confidential of electronic banking services</b>	<b>Question number</b>	<b>Standard deviation</b>	<b>Mean</b>
There is confidentiality and privacy when getting the electronic banking service	13	0.6308	4.101
The online service does not allow anyone to see any information about me.	14	0.6432	4.212
The Bank keeps accurate records of all electronic banking transactions and can be referred quickly.	15	0.7822	3.980
The Bank verifies the ID of the customer in every electronic banking transaction	16	0.6169	4.131
The Bank explains to customers how to use their data and information through the website	17	0.5759	3.929
The Bank has a good reputation for the confidentiality and privacy of electronic services	18	0.5159	4.172
<b>The overall average of the confidential of electronic banking services variable</b>		0.459	4.0759

**Source:** prepared by the researcher based on data analysis according to the SPSS program

It is clear from the Table 6 that, there is safety for the data, as the mean of the safety dimension was 3.91, with great disproportion among the study sample, and this was evident through the value of the standard deviation.

To be sure, i conducted a test comparing arithmetic averages, where i noted from the table that the mean of data security is 3.91, which is higher than degree 3. This indicates that the sample members are convinced that the use of electronic banking services is safe, and this var Here, it noted that security is close to neutrality, which means relative doubts about the security of information, which is normal considering the lack of a supportive culture for electronic services Table 7.

<b>Table 7</b> <b>RESULTS OF DESCRIPTIVE STATISTICS FOR THE INDEPENDENT VARIABLE QUESTIONS</b> <b>(SECURITY)</b>			
<b>Phrases of variable security of electronic banking services</b>	<b>Question number</b>	<b>Standard deviation</b>	<b>Mean</b>
There is a feeling of security and when obtaining the service from the website	19	0.7156	3.909
The website directs you to use difficult-to-crack passwords.	20	0.7213	3.990
The site informs you of all changes and developments that occur in the electronic service	21	0.6919	3.970
The site cancels the transaction unless it is confirmed by the client	22	0.6543	3.980

The legal environment is sufficient to address all violations on the Internet.	23	0.6496	3.919
Provides the customer electronically with any repeated attempts to access his account via SMS	24	0.9417	3.697
<b>The overall average of the security of electronic banking services variable</b>		0.490	3.9108

**Source:** prepared by the researcher based on data analysis according to the SPSS program

It is clear from the Table 8 that, there is customer satisfaction with the services provided, where the mean of the customer satisfaction provided was 4.01, with great unanimity among the study sample, and this was evident through the value of the standard deviation.

To be sure, i conducted a test to compare the mean, where i note from the table that the mean of satisfaction is 4.02, which is higher than 3. This indicates that the sample members have satisfaction, and this variable is considered significant, because the level of morale is less than 0.05.

<b>Table 8</b> <b>RESULTS OF DESCRIPTIVE STATISTICS FOR THE DEPENDENT VARIABLE QUESTIONS</b> <b>(CUSTOMER SATISFACTION)</b>			
<b>Phrases of variable Satisfaction of electronic banking services</b>	<b>Question number</b>	<b>Standard deviation</b>	<b>Mean</b>
Electronic banking services are superior to traditional services.	31	0.7889	3.990
The quick electronic services provided by the bank helped in achieving customer satisfaction.	32	0.6739	3.929
The diversity of electronic banking services meets the needs of customers and achieves their satisfaction.	33	0.7782	4.081
I have very high confidence in the electronic services provided by the bank.	34	0.7860	3.879
The quality of electronic banking services increases customer satisfaction.	35	0.6603	4.182
Customers are recommended to use electronic banking services.	36	0.6972	4.061
<b>The overall average of the customer Satisfaction of electronic banking services variable</b>		0.558	4.0195

**Source:** prepared by the researcher based on data analysis according to the SPSS program

## Hypothesis Test

***H1.1:** There is a statistically significant effect of ease of use as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic.*

The following table shows the results of the correlation and regression of the effect of the ease of use variable on the dependent variable customer satisfaction. The explanatory power of the model was 0.326, meaning that approximately 33% of the changes in customer satisfaction are due to the change in ease of use. Also, the value of the correlation coefficient is (0.571), and this indicates a medium degree of correlation between the two variables, and it is a direct relationship since an increase in one of the variables will be accompanied by an increase in the other variable. Also, the F test value is 46.923, with a significance value of 0.00 which is less than 0.05, which means that ease of use affects customer satisfaction. .

It is clear from the Table 9 that there is a significant effect of ease of use in customer satisfaction with the services provided, where the Sig value is 0.00, which is greater than 0.05, and with an effect coefficient of 0.615. Therefore, the following form can be written:

$$\text{Customer satisfaction} = 0.1.65 + 0.615 * \text{Ease of use}$$

<b>Table 9</b>						
<b>EFFECT OF EASE OF USE IN CUSTOMER SATISFACTION</b>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
<b>1</b>	(Constant)	1.650	0.349		4.727	0.000
	ease of use	0.615	0.090	0.571	6.850	0.000
a. Dependent Variable: Customer satisfaction						

**H1.2:** *There is a statistically significant effect of saving time as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arabia in light of the COVID-19 pandemic.*

The explanatory power of the model was 0.326, meaning that approximately 33% of the changes in customer satisfaction are due to the change in time savings. The value of the correlation coefficient is (0.731), and this indicates the degree of strong correlation between the two variables, and it is a direct relationship as the increase in one of the variables will be accompanied by an increase in the other variable. Also, the F test value is 111,633, with a Sig value of 0.00 which is less than 0.05, which means that saving time affects customer satisfaction.

It is clear from the below Table 10 that there is a significant effect of reducing time on customer satisfaction with the services provided, where the Sig value is 0.00, which is less than 0.05, and with an effect coefficient of 0.615. Therefore, the following form can be written:

$$\text{Customer satisfaction} = 1.408 + 0.685 * \text{time reduction}$$

<b>Table 10</b>						
<b>EFFECT OF SAVING TIME AS ONE OF THE DIMENSIONS OF THE QUALITY OF ELECTRONIC BANKING SERVICES ON CUSTOMER SATISFACTION</b>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
<b>1</b>	(Constant)	1.408	0.250		5.631	0.000
	Time saving	0.685	0.065	0.731	10.566	0.000
a. Dependent Variable: customer satisfaction						

**H1.3:** *There is a statistically significant effect of confidentiality as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic.*

The explanatory power of the model was 0.373, meaning that approximately 37% of the changes in customer satisfaction are due to the change in data confidentiality. The value of the correlation coefficient is (0.611), and this indicates the degree of strong correlation between the two variables, and it is a direct relationship as the increase in one of the variables will be

accompanied by an increase in the other variable. Also, the F test value is 57.611, with a Sig value of 0, which is less than 0.05, which means that data confidentiality affects customer satisfaction. It is clear from the Table 11 that there is a significant effect of data confidentiality on customer satisfaction with the services provided, as the Sig value was 0.00, which is less than 0.05, and with an effect coefficient of 0.741. Therefore, the following form can be written:

$$\text{Customer satisfaction} = 0.998 + 0.741 * \text{data confidentiality}$$

Table 11 Effect of confidentiality on customer satisfaction						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.998	0.400		2.492	0.014
	confidentiality	0.741	0.098	0.611	7.594	0.000
a. Dependent Variable: customer satisfaction						

**H1.4:** *There is a statistically significant effect of security as one of the dimensions of the quality of electronic banking services on customer satisfaction in Arab banks in light of the COVID-19 pandemic.*

The explanatory power of the model was 0.351, meaning that approximately 35% of the changes in customer satisfaction are due to the change in security. The value of the correlation coefficient is (0.593), and this indicates a medium degree of correlation between the two variables, and it is a direct relationship as the increase in one of the variables will be accompanied by an increase in the other variable. Also, the F test value is 52.517, with a Sig value of 0.00 which is less than 0.05, which means that safety affects customer satisfaction.

It is clear from the Table 12 that there is a significant effect of safety in customer satisfaction with the services provided, where the Sig value is 0.00 which is less than 0.05, and with an effect coefficient of 0.675. Therefore, the following form can be written:

$$\text{Customer satisfaction} = 1.381 + 0.675 * \text{Security}$$

Table 12 EFFECT OF SAFETY IN CUSTOMER SATISFACTION						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.381	0.367		3.763	0.000
	Security	0.675	0.093	0.593	7.247	0.000
a. Dependent Variable: customer satisfaction						

**H1:** *There is a statistically significant effect of the quality of electronic banking services with its dimensions (ease of use, time saving, confidentiality, security) on customer satisfaction in Arab Banks in light of the Covid 19 pandemic.*

The explanatory power of the model was 0.587, meaning that approximately 59% of the changes in customer satisfaction are due to the change in the independent variables. Also, the F test value is 33.354, with a Sig value of 0.00 which is less than 0.05, which means that the independent variables together affect customer satisfaction.

It is clear from the Table 13 that:

1. There is no significant effect of ease of use on customer satisfaction with the services provided, as the sig value was 0.738, which is greater than 0.05, and this can be interpreted from the researcher's point of view to the fact that most of the customers are from the educated category, and accordingly they can use electronic services.
2. There is a significant effect of saving time on customer satisfaction, where the sig value is 0.00 which is less than 0.05, and the effect coefficient is 0.31, and this can be interpreted to the fact that most workers are from the private sector and businessmen in which time is essential.
3. There is a significant effect of data confidentiality on customer satisfaction, where the sig value was 0.047 which is less than 0.05, and this can be interpreted from the researcher's point of view to the fact that data confidentiality is a major concern for the majority of customers, due to the respondents' awareness of the potential risks of cyber intrusions.
4. There is no significant effect of security on customer satisfaction, as the sig value was 0.207, which is the larger than 0.05, and this can be interpreted from the researcher's point of view to the fact that this is a normal characteristic of electronic banking services, and therefore does not lead to an increase in customer satisfaction. Therefore, the following form can be written:

**Customer satisfaction = 0.605 - 0.037 \* Ease of use + 0.521 \* Time saving + 0.248 \* Data confidentiality + 0.144 \* Security**

Table 13 THE IMPACT OF SERVICE QUALITY DIMENSIONS N CUSTOMER SATISFACTION						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.605	0.354		1.710	0.090
	Ease of use	-0.037-	0.112	-0.035	-0.335-	0.738
	Time saving	0.521	0.102	0.557	5.108	0.000
	Confidentiality	0.248	0.123	0.204	2.009	0.047
	Security	0.144	0.113	0.126	1.270	0.207
Dependent Variable: customer satisfaction						

**H2:** *There is a statistically significant effect of demographic variables (bank name, gender, age, educational qualification, profession, number of years of dealing with the bank) on customer satisfaction with the quality of electronic banking services in Arab banks in light of the COVID-19 pandemic.*

The extent of substantial differences between the clients of the arab banks under study was tested with regard to the factors affecting their satisfaction with the quality of electronic banking services according to demographic variables, using one-way anova analysis.

Depending on the results of the one way anova test to find out the essential differences with regard to the effect of the gender variable on customer satisfaction with the quality of electronic banking services provided in the arab banks under study and looking to the F values calculated in the Table 14 which is smaller than its tabular value of (3.94) at the two degrees of freedom (1 , 97) and it is not significant at the significance level of 0.05, and therefore there are

no significant differences between males and females with regard to their satisfaction with the quality of electronic banking services.

<b>Table 14</b>					
<b>VARIATION TEST: ACCORDING TO GENDER</b>					
<b>ANOVA</b>					
Customer Stasfaction					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.075	1	.075	.239	.626
Within Groups	30.481	97	.314		
Total	30.556	98			

Depending on the results of the one way anova test to find out the differences with regard to the effect of the age variable on customer satisfaction with the quality of electronic banking services provided in the Arab banks under study and looking to the calculated F values in the Table 15 which are smaller than their tabular value of (2.46) at two degrees of freedom (4 , 94) and it is not significant at the significance level of 0.05, and therefore there are no differences between the age groups with regard to their satisfaction with the quality of electronic banking services, and the researcher believes that this is a result of the technology and Internet revolution that invaded the world and affected society in its various age groups.

<b>Table 15</b>					
<b>VARIATION TEST: ACCORDING TO AGE</b>					
<b>ANOVA</b>					
Customer Stasfaction					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.628	4	0.157	0.493	0.741
Within Groups	29.928	94	0.318		
Total	30.556	98			

Depending on the results of the one-way anova test to find out the differences with regard to the effect of the educational qualification variable on customer satisfaction with the quality of Arab electronic banking services provided, looking to the calculated F values in the Table 16 (1.573), which is smaller than its tabular value of (2.46) at the two degrees of freedom (4, 94), and it is not significant at the level of 0.05, and therefore there are no differences according to the educational qualification with regard to customer satisfaction with the quality of services Electronic banking, and the researcher attributes this to the fact that approximately 80% of the study sample hold higher degrees such as bachelor's and master's, and this distinguishes them with awareness and high awareness of the importance of electronic banking services.

<b>Table 16</b>					
<b>VARIATION TEST: ACCORDING TO THE EDUCATIONAL QUALIFICATION</b>					
<b>ANOVA</b>					
Customer Stasfaction					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.917	4	0.479	1.573	0.188
Within Groups	28.638	94	0.305		
Total	30.556	98			

Depending on the results of the one way anova test to find out the differences with regard to the effect of the income variable on customer satisfaction with the quality of electronic banking services provided in the Arab research sample, and given the values of F calculated in the above Table 17 (1.748), which is smaller than its tabular value of (2.70) at the two degrees of freedom (3, 95) and it is not significant at the level of 0.05, and therefore there are no differences according to income with regard to customer satisfaction with the quality of electronic banking services, and the researcher attributes this to the fact that electronic banking services suit all groups in terms of income, so those with lower incomes can use the services and benefit. It also middle and high income earners can benefit from it, and that there is no differentiation in the type of services provided in favor of those with higher or lower incomes.

<b>Table 17</b>					
<b>VARIATION TEST: ACCORDING TO INCOME</b>					
<b>ANOVA</b>					
Customer Satisfaction					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.598	3	0.533	1.748	0.162
Within Groups	28.957	95	0.305		
Total	30.556	98			

Depending on the results of the one way anova test to find out the differences with regard to the effect of the variable number of years of dealing with the bank on customer satisfaction with the quality of electronic banking services provided in the Arab banks research sample and looking to the F values calculated in the Table 18 (3.508), which is greater than its tabular value of (2.46) at two degrees of freedom (4, 94), which is a function at the significance level of 0.05, and therefore there are differences between the different categories for the number of years customers have dealt with the bank with regard to their satisfaction with the quality of electronic banking services. It is unreasonable for the customer to be dissatisfied with the electronic banking services provided by the bank and remain on long-term dealings with him.

<b>Table 18</b>					
<b>VARIATION TEST: ACCORDING TO NUMBER OF YEARS DEALING WITH BANK</b>					
<b>ANOVA</b>					
Customer Satisfaction					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.969	4	.992	3.508	0.010
Within Groups	26.587	94	.283		
Total	30.556	98			

## CONCLUSION AND RECOMMENDATIONS

In light of the results of the study and to develop and improve the quality of services provided by arab banks, the researcher recommends the following:

1. Promoting interest in the dimension of customer satisfaction by relying on the ease of using electronic banking services by analyzing the problems and difficulties that customers face in using electronic banking products.

2. Strengthening interest in the dimension of customer satisfaction by relying on saving time when using electronic banking services through the bank performing its electronic services on time without any delay on the customer, and that the bank can provide the service without interruption for any reasons, and that the bank is able to solve problems for customers about the services provided to them easily and smoothly.
3. Strengthening interest in the dimension of customer satisfaction by relying on the reliability and confidentiality of using electronic banking services through the use of the system to confirm transactions via SMS before completing them by sending a code consisting of several numbers on the customer's phone, in turn, transmitting the code to the website to complete the process to preserve customer data, and work automatically may terminate client login sessions after a period of time to protect against abuse.
4. Enhancing customer satisfaction by relying on security when using electronic banking services by encrypting electronic banking services, and protecting banking services systems using advanced security solutions such as firewalls, intrusion detection systems, and anti-malware systems.
5. Working on measuring the quality of electronic banking services on a regular basis, using different measurement methods such as personal interviews, or any other model. Services provided from the customer's point of view, thus enabling any deviations to be addressed.
6. The bank periodically evaluates electronic banking services through the website to identify weaknesses and strengthen them, and identify and enhance strengths.
7. The necessity for the bank to prepare training courses for employees specialized in providing electronic services, which helps in providing the service with quality and time, in addition to serving customers in a way that reaches the level of their expectations.
8. Working on issuing educational brochures by the bank on the importance of electronic banking services and their advantages and explaining how to use them in a manner that maintains the confidentiality and privacy of their customers' data.

### **Recommendations related to COVID -19 pandemic We suggest some recommendations according to this phenomena:**

1. Banks managers should take into consideration in the following post COVID -19 pandemic stages to closely monitor the needs and perception of customers because it is very possible that a large amount of them will continue to use this new interface despite the recovering of the bank's full functionality with traditional banking.
2. Banks should offer online tutorials to familiarize customers with the use of digital channels is a necessity, especially for customers with few skills in the field or for those who are reluctant to use such alternatives during COVID -19 pandemic.
3. In order to increase confidence in online banking, banks should also improve communication with customers, highlighting the benefits they offer, but also the measures they take to increase the security of online transactions and reduce risks.
4. In the conditions of major uncertainty generated by the COVID-19 crisis, it is desirable that banks meet customer requirements and demonstrate flexibility in negotiating lending and refinancing conditions.

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