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## **The Efficiency of the Electronic Banking in Improving the Quality of the Banking Services in the Algerian Commercial Banks Field study at the Algerian External Bank – Ouargla Agency-**

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### **Abstract:**

This study sheds light on the development of the electronic banks in satisfying the customers to save time and effort. Besides, it analyzes their main risks, advantages, and success requirements. In so doing, we made a field study to know the attitudes of the customers of the Algerian External Bank of Ouargla regarding the development, improvement, and diversity of the banking services. In this context, we used the indices of service evaluation (the use, the safety, the responsiveness, the credibility, and the design). Furthermore, we used the analytical descriptive method. The population of our study included a set of customers of the bank, from whom we randomly chose 75 customers as a sample. We administered questionnaires to these customers and used SPSS to analyze their answers. Findings show a statistically significant relation in the effect of the electronic banking on the improvement of the banking services from the perspective of the customers. Besides, there is good mastery of the communication techniques thanks to the protection of internet from piracy to protect the secrecy of the banking transactions and respond to the concerns.

**Key words:** electronic banking; quality of the banking services; the dimensions of the banking services; the Algerian External Bank.

### **1. Preamble:**

The development of the information and communication technologies ICTs in the international banking sectors developed the economic activities and created the concept of the electronic banking. The banks found themselves obliged to adopt the concept to save efforts and time. Nevertheless, this concept needs legal bases to secure and achieve the customer

satisfaction. The electronic banking provides online services using softwares and websites, and needs a continuous update of the banking systems to face the competition of the other banks, which make huge efforts to survive in the field and respond and interact with all the socioeconomic and technological changes. Thus, more efforts, innovations, and services are needed to create a benefit for the banks and the customers, increase the market share, and maintain the loyalty of the customers who need services that suit their needs at the lowest cost and in the briefest time.

### **Problematic of the study:**

We can raise the problematic of the study saying:

- **To what extent does the electronic banking improve the banking services in the Algerian banks?**

Based on this question, and to cover our topic, sub-questions arise as follows:

- What is the electronic banking and how did it develop in the banks?
- Are there electronic banking services in the Algerian External Bank AEB based on the demographic variables?
- Is there an effect of the electronic banking through the dimensions on the quality of the services of AEB?

### **Hypotheses:**

To answer the questions, we hypothesize that:

- There is a positive relation between the human resource and the material guide in developing the banking systems tools.
- The electronic banking has an effect on the improvement of the quality of the banking services provided by AEB thanks to the demographic variables.

### **Importance of the study:**

The importance of the study lies within its contribution to modernizing the banking sector, as follows:

- It covers the concept of the quality in the banking sector and its effect on the electronic banking.
- It presents the various tools of the electronic transactions in the banks in general, and AEB in particular.
- It covers a modern topic and sheds light on the electronic payment to save time and effort.

**Aims of the study:**

The study aims at:

- Tracing the development in the e-banks in achieving the customer satisfaction to save time and effort.
- Knowing the obstacles that face the banking services in the light of the modern technologies.
- Focusing on the status-quo of the electronic banking and measuring the quality of the banking services provided by AEB of Ouargla.

**c. Literature review:**

**1. The study of Ben Moussa Omar (2020), “the electronic banking services and the requirements of their development in Algeria”.** It is a PhD thesis in the financial studies that aims at knowing the status-quo of the electronic banking services in Algeria through tackling the various obstacles that hinder their development. In addition, it aims at knowing the main requirements of developing these services in Algeria from the perspective of the customers, and at identifying the horizons of success. It used the analytical descriptive method and a survey on 126 informants in 09 banks in the Wilaya of Ghardaia. For analysis, it used Cronbach’s Alpha and the frequencies. Findings showed no differences in the answers and showed the suitable legal requirements to protect the customers’ rights and fight the electronic crime to increase the trust of the customers. In addition, the increase of the investments in the information and communication technology contributes to providing excellent banking services.

**2. The study of Boukhari Fatma (2020), “the status-quo of applying the electronic banking and the mechanisms of its promotion in the Algerian banks –case study of Algeria (2002-2017)-.** It is a paper from the journal of the financial and administrative sciences that aims at knowing the main requirements of the electronic banking, and at shedding light on the main mechanisms used by the Algerian banks. In this regard, the study used the analytical method to focus on the application of the system and the use of the credit cards. Finding show that in the light of the high competition in the banking industry, the Algerian government adopts and develops this system to update the sector.

**3. S. V. Abil Das1, Nima Ravi (2021), “A Study on the Impact of E-Banking Service Quality on Customer Satisfaction”.** It is a paper from the Asian Journal of Economics, Finance, and Management India. It aimed at finding the dimensions of the electronic service quality and at measuring the effect of the credibility, the security, the privacy, the website design, the responsiveness, and the communication on the customers in India. It used an electronic questionnaire to collect data. Then, it provided recommendations to improve the customer satisfaction and increase the quality of the services.

**4. Jean Bosco Harelimana (2019), “The Effect of Electronic Banking on Customer Services Delivery in Commercial Banks in Rwanda”.** It aimed at showing the effect of the electronic banking services on the customers in the commercial banks in Rwanda, and at analysing the factors that affect the connection between the customers and the banking services in Kigali bank. The study used a questionnaire on 400 informants, who included the employees and customers. Findings showed that the bank uses awareness raising to increase the customers’ knowledge about the services and encourage their use.

## **II The theoretical frame of the study:**

### **1. The electronic banking:**

#### **a. The concept of the electronic banking:**

The electronic banking has various concepts. To discuss them, we must distinguish two types of banks. The first is electronic and virtual and has no geographical site, while the second is a physical bank that provides traditional and electronic banking services. The definitions of the concept are as follows:

- They are new systems based on many advantages and benefits that attract the customer and provide financial services with more quality and less costs than the traditional banks.
- It is the banks’ expansion towards the internet, instead of building new physical headquarters.
- According to Deniz, it is the banking services provided by the financial institutions to allow the customer making online transactions using the computer, phone, etc.
- It is the use of the personal computers and internet subscriptions to immediately exchange information in a net that includes the financial institutions, the securities markets, the investors, and the economic operators.

#### **b. The motives of the electronic banking emergence:**

The emergence of these banks was due to many factors, namely:

- The revolution in ICTs brought about radical changes in the banking sector and created aspirations towards developed and various banking services.
- The e-commerce takes place through the electronic tools, mainly the internet, and differs than the traditional trade, which used to be common in these financial institutions. Thus, the aware developments of the banks work strategies and methods turned into a necessity.
- The severe competition among the banks that took international dimensions, mainly in the light of the free international trade.
- The increase of the non-banking financial institutions, such as the insurance companies and the securities companies and their competition to the banks.
- The penetration of the banking sector by many commercial companies, such as the big stores that provide services to the customers that can save them the time and effort of going to the banks.

Thus, the tools used in the banks changed and the traditional methods decreased due to the new circumstances that require new tools that suit the new developments.

**c. The aims of the electronic banking:**

- It is a tool to strengthen the share market and reduce the costs.
- It widens the activities inside and outside the state.
- It provides the information about the services of the bank.
- It provides the banking and non-banking services to the customers anywhere and any when.

**d. The risks of using the electronic banking:**

**a. The reputation risks:** this happens when there is a negative view about the inability of the bank to provide electronic services respecting the security, exactitude, persistence, and immediate responsiveness to the customer's requirements. This obliges the bank to pay more attention to developing the performance criteria.

**b. The legal risks:** The electronic banking services imply high legal risks because the bank widens its range more than the traditional banks, which may sometimes imply an ignorance of the applicable laws in the state of activity and violate the laws and regulations of respecting the customers. Thus, the bank may face losses and lawsuits.

**c. The interest rates and liquidity risks:** the interest rates may decrease and affect the financial aspect of the bank. As for the decrease of the liquidity, it may result from the import of the electronic money.

**d. The operational risks:** these risks may take place due to:

- The failure of the electronic systems in meeting the users' requirements, or their low problem resolution and system maintenance, mainly when relying on external parties for the technical support.
- The customers' misuse of the services due to their ignorance of the insurance and prevention measures, or due to laundering money using personal data.
- The risks of fraud resulting from the fake electronic programs or piracy to access and exploit the users' data.
- The risks of the traditional banking services, namely the banks' use of the traditional services. In this regard, granting credibility online and the customers' failure to pay increase the credibility risks. Besides, the electronic banking increases the movement of the deposits and increases the need for continuously and exactly controlling the liquidity to check any changes.

**e. The insufficient security of the systems:** these risks come from the potential of unauthorized access to the bank accounts and systems to exploit the customers' data. Therefore, stringent measures are needed to stop and detect such acts.

**c. The requirements of the electronic banking:**

The main requirements are:

**1. The technical infrastructure:**

It is at the top of the requirements because the electronic banks work in a virtual world. To guarantee the continuous electronic business, strategic elements are needed, namely:

- Identifying the priorities to develop the state communication market.

- Providing a clear legal frame that determines the commitments of all the parties.
- The continuous training of the employees on the dialogue management to strengthen their abilities.
- Seeking the experience and help of the international counselling offices in training the employees on using the banking systems.
- Establishing specialized institutes in developing the scientific research in the banking services.

**2. The competent human resources:**

This competency is based on understanding the needs of performance and training communication. The performance competency must cover all the technical, financial, marketing, legal, counselling, and administrative tasks related to the electronic banking activity.

**3. The continuity, development, and interaction with the news.**

**4. The interaction with the tools and the technical, administrative, and financial strategies:**

The interaction is with the modern ideas and theories, mainly regarding the technical, marketing, and services performance.

**5. The control:**

The objective evaluation is among the main success elements in the technical fields, marketing, laws, and electronic publication in evaluating the efficiency of the performance of the electronic banks websites.

**6. The security:**

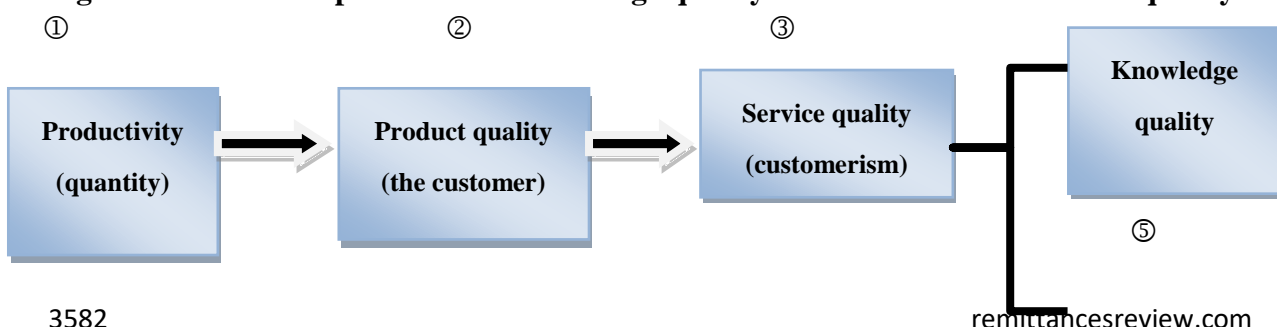
The online executive services are the most risks. They need security from the electronic attacks and piracy. Besides, the internal banking systems must be protected through various methods and techniques.

**2. The concept of the quality of the electronic banking services:**

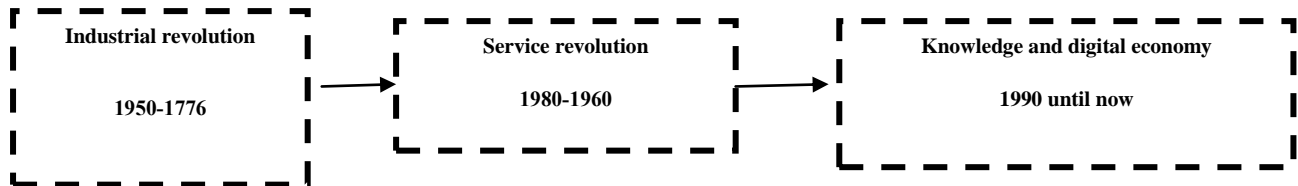
**The 1<sup>st</sup> definition:** it is all the banking services in innovative method using the internet, either for the traditional or modern services. The legitimacy of access to these services is limited to the users only according to control measures used by the bank. These systems do not need the customers coming to the bank.

**The 2<sup>nd</sup> definition:** it is the general evaluation of the services toward the service provided online or on ATMs. Besides, it is the last and most developed aspect of the development of the interests, policies, and efforts of the quality. Figure 01 shows two intersected trends, the knowledge development and the electronic services quality.

**Figure 01: the development of the knowledge quality and the electronic services quality**



**Electronic  
service quality**



**Source:** Salah Eddine Meftah Saad al Bahi, the effect of the quality of the electronic banking services on the customer's satisfaction, p. 32.

### Section two: the importance of the quality of the banking services:

We can say that the quality of the banking services is the basis for the bank success and stability. Its importance can be summed up mentioning:

- 1. The growth of the service range:** the number of the commercial organizations that provide services has increased. For instance, half of the US businesses work in the field of services.
- 2. The increase of the competition:** It is known that the survival, development, and success of the companies depend on the sufficient amount of the competition. When the quality of the banking services are good, the projects and services get competitive advantages.
- 3. The bigger understanding of the customers:** The customers prefer being well-treated rather than getting high quality and good price products.
- 4. The economic significance of the customer service quality:** Today, the companies make sure to maintain their customers through the continuous interaction with them and attracting new ones. Here, the importance of the quality of the customerservice manifests.

### Section three: the characteristics of the banking services:

The characteristics of these services can be summed up mentioning:

- **The intangibility:** it means that the banking services do not have a material existence and cannot be sensed.
- **The complementarity between the production and distribution:** it means that the banking service is produced and consumed at the same time.
- **Personal-direction marketing:** the banking service highly relies on the personal marketing, and on the personal communication between the service provider and recipient.

- **The difficulty of excellence:** the banking services are almost the same. In this regard, the customer's choice of the bank depends on different indices such as the location, reputation, quality, speed, exactitude, competency, and good treatment.
- **The geographic spread:** to achieve the goals, it is necessary to reach the customers in their places.
- **The wide range of the banking services:** the bank must provide wide and various services that meet the customers' financial and credit needs and desires.
- **The balance between the growth and the risks:** selling financial products is accompanied by risks. Hence, the bank must find a balance between the expansion in its activities and facing the risks.
- **The difficulty of evaluating the banking services:** these services are intangible. Thus, it is difficult to find material and beneficial characteristics. Therefore, the customer cannot evaluate the product, what affects the promotion and distribution programs.

In addition, we find other characteristics, as follows:

- Generally, the services are surrounded by banking and fiscal laws.
- The customer participates to producing the banking services.
- The services are a product for the bank, and services for the customer.

### III. The practical chapter of the study:

#### 1. The use of the electronic banking in AEB –Ouargla Agency-:

When conducting the study in the bank, we noticed that its performance is good despite the weak communication infrastructure. The bank uses various electronic channels, namely the ATMs, the credit cards, the banking transfers, and clearings, which are all subject to the control of the governmental electronic financial agency (SATIM). Besides, it has a website and phone services.

#### Third: the challenges facing the agency in applying the electronic banking:

Despite the modern banking techniques in the bank, we find obstacles, namely:

- The weak infrastructure to make the electronic banking projects, mainly the lack of connection among the banks at the international and national levels, and the absence of an organization between the Algerian banks in the electronic banking industry.
- The absence of training for the employees because of the absence of initiatives, despite the availability of the necessary human and material resources.
- The lack of trust and fear of the modern payment tools, and the belief that cash is the best and most secure tool for transactions.
- The absence of research to use this technique, and the lack of the efficient administration to publish all what is new in the bank management.



- The dominance of the traditional methods on the Algerian banks.
- The high costs of the maintenance of the electronic banking nets.

**Third: the electronic payment systems and tools in the bank:**

EAB provides many electronic services and consolidates the interaction and the relation with the customers. Upon our study of its services, we found out that it uses the bankcards, the online payment, the website, etc. These services increase its flexibility.

**1. The payment via ATMs:**

ATMs meet the services of the customers automatically without direct contact with the bank. They were adopted in 2003 to allow non-stop financial transactions. The customer can transfer or withdraw a limited amount of money from ATMs, which are outside the bank, using a bankcard.








**II. The electronic cards used in the bank:**

The bank uses electronic cards that allow withdrawing and transferring money. This incarnates the efforts of the bank in diversifying the services.

**Table 01: the electronic services provided by EAB of Ouargla**

Service	Details	Image
The classical banking card	They are local non-credit blue cards, valid for 02 years, for payments in the banks. They allow withdrawing money less than 50000 AD per month from ATMs and other financial institutions. The fees are 25 AD when withdrawing money from other banks.	

<p><b>Carte CIB Gold</b></p>	<p>They are local non-credit golden cards given to the high-income customers for an annual subscription of 1200 AD. The card allows withdrawing money more than 50000 AD and provides the same services as the ordinary card. The fees are 25 AD when withdrawing from GAB and DAB.</p>	
<p><b>Classical master card</b></p>	<p>They are international credit cards obtained based on a request from the customer who has a local account in the agency. He must open a hard currency account that does not exceed 2000 Euro monthly and 500 Euro weekly. The card allows its holder to buy and pay inside and outside the state, such as in restaurants and banks under agreement with the banks.</p>	
<p><b>Platinum master card</b></p>	<p>It is an international card with the same advantages of the classical one. However, it is given to the customers with high incomes, and is limited to a monthly amount of 5000 Euro and a weekly amount of 1250 Euro.</p>	
<p><b>Business master card</b></p>	<p>They are international credit cards given to the small and middle-sized companies to pay online all over the world. Besides, the card ensures a comprehensive travel and allows its holder to withdraw from the ATMs locally and internationally. Its monthly limit is 7000</p>	

	<p>Euro, weekly limit is 1750 Euro, and cots is 3500 Euro.</p> <p>It gives free administrative services and allows checking the balance of all the accounts from one card. It can be a classical card whose monthly limit is 50000 AD, or a golden work card whose monthly limit is 80000 AD.</p>	
<p><b>World business master card</b></p>	<p>It is an international card given to the companies to make online payments all over the world, with a comprehensive insurance of the travel. Besides, it allows its holder to withdraw money from inside and outside the state, of an amount limited to 8000 Euro monthly and 2000 Euro weekly, with a guarantee of 4000 Euro.</p>	

**Source:** by the author based on the information provided by the bank

The table above shows the credit cards provided by AEB to his customers to make financial transactions. The cards are freely activated and facilitate the international transactions, which require two accounts in the bank; a local one and an international one with the local or international currency.

**1. Population and sample of the study:**

The population of the study covers all the customers of AEB in Ouargla. The sample members were randomly chosen and were employees, traders, and other free business men. We administered 80 questionnaires to the informants and recovered only 75 valid ones because we excluded 05 that were not valid.

**Table 02: sample of the study and the administered questionnaires**

	Questionnaire	
	Number	Rate
Number of the administered questionnaires	80	%100

Number of the excluded questionnaires	05	%6.25
Number of the valid questionnaires	75	%93.75

**Source:** by the author based on the administered questionnaires

**Consistency of the questionnaire:** we used Cronbach's Alpha to measure the rate of the informants who would give the same answers if reasked in the same conditions. Findings are shown in the table:

**Table 02: the consistency measurement**

Dimension	Items	Number of items	Consistency coefficient
Axis two: the quality of the banking services			
The use dimension	26-22	5	0.774
The security dimension	31-27	5	0.618
The credibility dimension	35-32	4	0.618
The response dimension	40-36	5	0.727
The design dimension	45-41	5	0.675
Axis two	45-22	24	0.896
Axis one: the electronic banking			
Axis one	21-1	21	0.622
General consistency		45	0.868

**Source:** by the author based on the outputs of SPSS

The consistency test of the 45 questions of the questionnaire shows a coefficient of 0.868, which means that in case of administering the questionnaire in the same conditions, 86.6% of the informants will give the same answers. This is a high consistency coefficient, which shows the credibility of the results. In addition, the consistency coefficient of the 1<sup>st</sup> axis is 62.2% and of the 2<sup>nd</sup> axis is 89.6%. As for the dimensions of the second axis, they were 77.4%, 61.8%, 72.7%, and 67.5%, respectively. They are good results, which show a high consistency and the ability of relying on the questionnaire in the field study.

## 2. The results of the field study: interpretation and discussion:

### The distribution of the informants according to the scientific degree

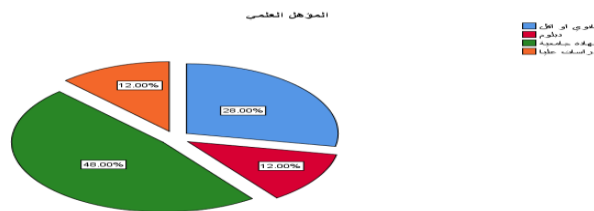
**Table 04: the distribution of the informants according to the scientific degree**

Scientific degree	Frequency	Percentage
Secondary or less	21	%28.0
Diploma	9	%12.0
University degree	36	%48.0
Higher studies	9	%12.0
Total	75	%100.0

Source: by the author based on the outputs of SPSS

Table 04 shows that 60% of the informants are academics who hold university degrees (bachelor, Magister, master, or PhD), 12% hold professional degrees, and 28% have a secondary education level or less.

Figure 01: the graphic representation of the informants' distribution according to the scientific degrees



Source: by the author based on the outputs of SPSS

The distribution of the informants according to job

Table 05: the distribution of the informants according to the job

Job	Frequency	Percentage
Employee	60	%80.0
Trader	4	%5.3
Other	11	%14.7
Total	75	%100.0

Source: by the author based on the outputs of SPSS

Table 04 shows that 80% of the informants are employees, 5.3% are traders, and 14.7% exercise other unmentioned jobs.

Figure 02: the graphic representation of the informants' distribution according to the job



**Source:** by the author based on the outputs of SPSS

**The distribution of the informants according to the professional experience**

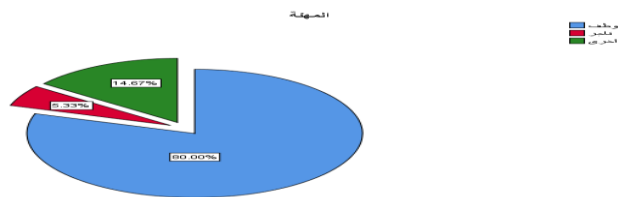
**Table 06: the distribution of the informants according to the professional experience**

Professional experience	Frequency	Percentage
Less than 03 years	5	%6.7
03-05 years	11	%14.7
More than 16 years	58	%77.3
Total	75	%100.0

**Source:** by the author based on the outputs of SPSS

Table 05 shows that the low frequent category is that whose experience is less than 3 years (6.7%), and that the most frequent is the one where the experience is more than 10 years (77.3%), followed by 03-05 years (14.7%). This shows that most of the informants have an acceptable professional experience.

**Figure 03: the graphic representation of the informants' distribution according to the professional experience**



**Source:** by the author based on the outputs of SPSS

**3. Analysis and interpretation of the informants' views:**

**First: the orientation of the answers of the informants to the items of axis 01:**

The table below shows the results of answers to the 1<sup>st</sup> axis on the electronic banking

**Table 07: the results of the informants' views about the electronic banking**

Number	Item	Arithmetic mean	Standard deviation	Order	Level
1	Ignorance about the new	2.79	1.177	20	Average

	banking technological developments				
2	The easy electronic money transfer	3.77	1.034	6	High
3	The bank makes sure of the security policy	4.17	.795	1	High
4	The customers have a low banking awareness and mistrust	3.05	1.064	18	Average
5	The Central Bank prefers the banks that use the electronic banking	3.40	.973	15	Average
6	The bank technical infrastructure is not sufficient	3.36	1.123	16	Average
7	The customer feels comfortable and secure when dealing with the bank online	3.36	1.170	16	Average
8	The electronic banking services are protected from piracy	3.52	1.057	10	High
9	It is possible to use the credit cards internationally	3.41	1.220	14	High
10	It is easy to check the balance	4.03	1.000	2	High
11	It is possible to pay the services easily (electricity, phone, etc)	3.84	1.014	5	High
12	ATMs work 24 hours	3.52	1.201	10	High
13	The phone provides information about the banking services	3.91	1.129	3	High
14	The electronic services are more secure in payments	3.89	1.060	4	High
15	ATMs are limited to the bank façade	3.46	1.207	13	High
16	The amount allowed for withdrawal from the ATM is very sufficient	2.80	1.346	19	Average
17	The list of the financial transactions is sent to the customers on the phone	3.68	1.080	8	High
18	The electronic banking reduces the cost of the services	3.49	1.120	12	High
19	There are no risks in	3.59	1.116	9	High

	dealing with ATMs and credit cards				
20	The traditional banking services are more efficient than the electronic	2.32	1.042	21	Average
21	The electronic banking services are diverse	3.76	.984	7	High
The general mean of axis one		3.4822	37303.	--	High

**Source:** by the authors based on the outputs of SPSS

**Analysis:** table 07 shows that the arithmetic means of the items of axis one, which measures the electronic banking, are between 4.17 and 2.32, and that the standard deviations are between 0.795 and 1.346. This means that the general orientation of the informants' views lean to the strong agreement on the items. In this regard, the 3<sup>rd</sup> item is in the top, followed by the 10<sup>th</sup> and the 13<sup>th</sup>, with arithmetic means of 3.91, 4.03, and 4.17, respectively. As for the 16<sup>th</sup>, 01<sup>st</sup>, and the 20<sup>th</sup> items, they lean towards the average agreement with arithmetic means of 2.79, 2.80, and 2.32, respectively. Besides, we see a high agreement on the axis as a whole, as the general arithmetic mean is 3.482 with a standard deviation of 0.373. This means no big dispersion between the items and that the degree of heterogeneity is high.

**b. Interpretation:** from the analysis, we find that the informants believe that the main advantages of the electronic banking is the policy of information security and safety, followed by the easy access to the balance, followed by phone facilitation to the banking services. This increases the citizens' well-being and reduces bureaucracy and the negative aspects witnessed in the traditional services. On the other hand, few informants see that the traditional services are more efficient than the electronic due to the drawbacks of the electronic banking, which include the low internet access. In addition, some informants believe that the ignorance of the electronic banking services affects the services, while others see that the allowed withdrawal amount is enough.

### **Second: the orientation of the answers of the informants to the items of axis 02:**

The table below shows the results of answers to the 2<sup>nd</sup> axis on quality of the electronic banking

**Table 08: the results of the informants' views about the quality of electronic banking**

Number	Item	Arithmetic mean	Standard deviation	Order	Level
1	The use of the electronic banking is easy	3.71	1.037	3	High
2	It is easy to get what I want from the website	3.45	1.031	9	High
3	It is easy to move from a service to another	3.60	.854	4	High
4	The electronic services solve the	3.56	1.003	6	High



	customers' problems rapidly				
5	The language of the website is clear	3.79	1.017	1	High
6	The electronic transactions are secure	3.11	1.098	22	Average
7	The electronic services allow the permanent contact with the bank	3.48	1.031	8	High
8	The bank employees have enough experience to answer all the inquiries	3.19	1.049	20	Average
9	I feel comfortable when giving the personal information to the bank online	3.37	.955	15	Average
10	I feel secure when making online transactions with the bank	3.43	.932	12	High
11	The bank provides services correctly	3.77	.863	2	High
12	The electronic services are exact and suitable to everyone	3.59	.974	5	High
13	The bank provides a database all the time	3.31	.900	19	Average
14	The employees make sure to avoid mistakes when providing the service	3.56	1.043	6	High
15	The electronic services are provided with no delay	3.39	1.012	14	Average
16	The bank employees respond to the customers' inquiries	3.41	1.079	13	High
17	The bank considers the complains and problems of the customers	3.36	1.098	16	Average
18	The inquiries about the electronic banking services are answered in short time	3.09	1.093	23	Average
19	The use of the offices decreased due to the use of ATMs	3.12	1.284	21	Average
20	The design of the website allows easy surfing	3.44	1.043	10	High
21	The external façade of the bank is attractive and suits the services provided	3.35	.937	18	Average
22	The ATMs are widespread	3.44	1.068	10	High
23	The customer shows a bad impression towards the bank rooms and comfort tools	2.96	1.156	24	Average
24	The website is continuously updated	3.36	1.098	16	Average
The general mean of axis two		3.4153	<b>.55888</b>	--	High

**Source:** by the authors based on the outputs of SPSS

**Analysis:** table 08 shows that the arithmetic means of the items of axis two are between 3.79 and 2.96, and that the standard deviations are between 1.284 and 0.863. This means that the general orientation of the informants' views lean to the agreement on the items. In this regard, the 05<sup>th</sup> item is in the top, followed by the 11<sup>th</sup> and the 01<sup>st</sup>, with arithmetic means of 3.79, 3.77, and 3.71, respectively. As for the 06<sup>th</sup>, 18<sup>th</sup>, and the 23<sup>rd</sup>, they lean towards the average agreement with arithmetic means of 3.11, 3.09, and 2.96, respectively. Besides, we see an agreement on the axis as a whole, as the general arithmetic mean is 3.415 with a standard deviation of 0.558. This means no big dispersion between the items.

**b. Interpretation:** from the analysis, we find that the informants believe that the quality of the electronic banking services relies on using a clear language in the website and on providing correct and easy services. This interprets the customer's orientation towards easiness and comfort in their transactions with the bank, and their admiration of the simple services. Besides, some informants see that the customer has an average impression towards the comfort means and the rooms of the bank, what does not serve the design and site of the bank. Moreover, some complain about not answering the inquiries about the electronic services in the suitable time, which means that the responsiveness dimension has an average degree.

**4. Presentation of the results of the linear regression:**

We shall estimate the simple linear regression using the least squares at significance level 5%, where the independent variable is the electronic banking and the dependent is he quality of the banking services.

**First: the interpretation power of the regression equation**

The following table shows the determination coefficient and the interpretation power of the regression equation. In this regard, 18.8% of the changes in the banking services quality is caused by the changes of the electronic banking. Besides, the remaining 81.2% is due to other factors, random factors, or the error. Thus, the equation has a low interpretation power.

**Table 09: the interpretation power of the linear regression equation**

Model Summary <sup>b</sup>						
Mode	R	R Square	Adjusted Square	R	Std. Error of the Estimate	Durbin-Watson
1	.433 <sup>a</sup>	.188	.177		.50713	1.994

**Source:** by the authors based on the outputs of SPSS

**Second: Analysis of the variance interpreted by the regression line**

**Table 10: the variance interpreted by the regression line**

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.339	1	4.339	16.872	.000 <sup>b</sup>
	Residual	18.775	73	.257		
	Total	23.114	74			

**Source:** by the authors based on the outputs of SPSS

Table 10 shows that the value of the analysis of the variance interpreted by the regression line is 16.87, and that its significance level equals 0.0001 and is less than the significance level of the study (5%). Thus, the regression line suits the data and has full significance despite the weak interpretation power.

**Third: the condition of the natural distribution of the residuals**

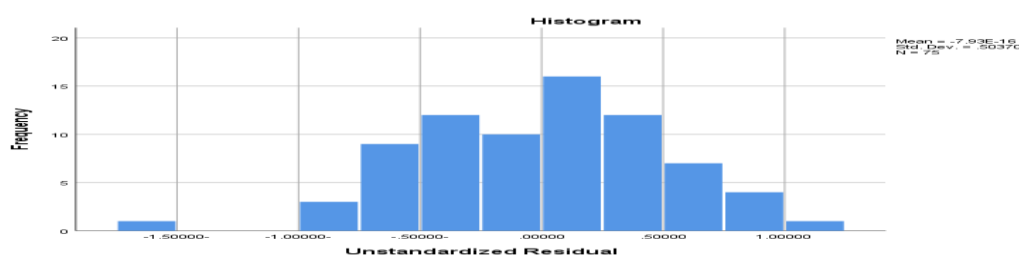
**Table 11: the test of the natural distribution of the residuals**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Unstandardized Residual	.068	75	.200 <sup>*</sup>	.986	75	.577

**Source:** by the authors based on the outputs of SPSS

Table 11 shows that Smirnov test value is 0.068 and significance level is 0.200, which is higher than the significance level 5%. Thus, the residuals are normal and naturally distributed.

**Figure 04: the residuals normality**



**Source:** by the authors based on the outputs of SPSS

**Fourth: the correlation between the residuals**

The importance of studying the correlation between the residuals lies within the fact that it makes the value of the variance that estimates the error less than its real value. Thus, the value of the tests statistics that depend on this variance, such as Student and Fisher, may be more than the real value, what makes the decision about the model’s good of fit doubtful.

In addition, Durbin Watson statistics equals 1.994 and is limited in the range of accepting the null hypothesis. Hence, the residuals are independent from each other.

**Fifth: the condition of the residuals homogeneity of variance**

The inconsistency of the residuals variance in the regression model brings about effects similar to the issue of a correlation between the residuals. In this regard, the errors may be estimated less than their real values, making the estimations biased and the results doubtful. The table below shows the homogeneity of variance of the residuals regarding the significance level of the test, which equals 0.069, which is higher than the significance level 5%.

**Table 11:** Levene's Test for Equality of Variances

Levene's Test for Equality of Variances	
F	Sig.
3.408	.069

**Source:** by the authors based on the outputs of SPSS

**Sixth: analysis of the coefficients of the regression line:**

The following table shows the coefficients of the regression line of the quality of the banking services.

**Table 12: the coefficients of the regression line of the quality of the banking services**

Coefficients <sup>a</sup>					
Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	1.155	.553	2.087	.040
	Electronic banking	.649	.158	4.108	.000

**Source:** by the authors based on the outputs of SPSS

We notice that:

The regression line cross point is 1.155, which represents “a” of the equation  $Y=a+Bx$ . In addition, it has a statistical significance at significance level 5%, i.e., other factors strongly contribute to the quality of the banking services. As for the gradient of the regression line, we notice that the sign of the coefficient Beta for the accounting disclosure variable is 0.649 and has a positive effect on the quality of the banking services at significance level 0.0001, i.e., less than 5%. Hence, the equation of the regression line is:

$$Y = 1.155 + 0.649X$$

## 5. Presentation and interpretation of the results:

**Discussion of the results:** from the analysis of the answers to the questionnaire, we found out that:

1. 57.3% of the informants are males, which is natural because of the nature of the work in the banks, and because the women have limited contact with the banks.
2. 48% of the informants have university degrees.
3. 80% of the informants have high professional experience.
4. Most of the answers of the customers showed strong and average agreement, with arithmetic means between 4.21 and 5. This means that the questions of the questionnaire were well-formulated and conveyed the meaning of the study.
5. There is a statistically significant effect at the significance level that is programmed for the electronic banking, thanks to the easy use.
6. The electronic banking from the service provider increases the speed, security, and trust of the customer.
7. ATMs do not have a big effect on the improvement of the quality of the banking service provided by the study bank due to the low awareness and belief that it is more difficult than the checks.
8. The evaluation of the online transactions does not have a big effect on improving the quality of the banking services because of the effect of the educational level of the informants on the use of the modern banking services.

## VI. Conclusion:

The electronic banking is a modern trend in the banking sector, which changed the way of providing the banking services from traditional ones into online electronic ones using modern communication tools. The aim is increasing the marketing and communication with the customers. In this regard, the electronic banking uses electronic cards and meets the international standards, despite that they are still in their beginning in Algeria. In this context, the electronic banking in Algeria needs more ICTs. Besides, AEB of Ouargla provides enough services to create a good image for the local and foreign customers, and aims at coping with the sophisticated payment and withdrawal systems.

## References:

1. Ben Moussa Omar, the electronic banking services and the requirements of their development in Algeria, PhD thesis in the financial studies, Faculty of Economics and Commercial and Management Sciences, University of Ghardaia, 2020.
2. Boukhari Fatma, the status-quo of applying the electronic banking and the mechanisms of its promotion in the Algerian banks –case study of Algeria (2002-

- 2017), journal of the financial and administrative sciences, University of el Oued, 2020.
3. S. V. Abil Das<sup>1</sup>, Nima Ravi (2021), A Study on the Impact of E-Banking Service Quality on Customer Satisfaction, Asian Journal of Economics, Finance and Management India, 2021.
  4. Jean Bosco Harelimana (2019), The Effect of Electronic Banking on Customer Services Delivery in Commercial Banks in Rwanda, 2019.
  5. Wassim Mohamed et al., the electronic banking services, al Massira house for publication and distribution, 2012, Jordan, Amman, p. 55.
  6. Jaya Mohamed Hassan et al., the relation between the potential of applying the electronic banking and the readiness of the commercial banks in the province of Slimania, the scientific journal of the University of Jihan- Slimania, Vol. 03, No°. 01, July 2019, p. 130.
  7. Chenchouh Ouassama, **Les déterminations de l'adoption du E-banking**, par les institutions, financières et la clientèle organisationnel-et son impact sur l'approche relationnel : cas de l' internet - banking en Tunisie, mémoire présenté comme exigence partiel, de la maîtrise en administration des affaires, université du Québec A Montréal, Juillet 2011 :p 29.
  8. Farid Najjar, the digital economy (the internet and the restructuration of the investment and the electronic banks), the university house, Alexandria, Egypt, 2007, p. 478.
  9. Wassim Mohamed et al., op. cit., p. 57.
  10. Hala Abdalli, the electronic banking: a mechanism to guarantee the quality of the electronic services, journal of al Assil for the economic and administrative researches, No° 01, June 2017, p. 386.
  11. Nasr Hammoud Meznane Fahd, the potentials of shift towards the electronic banking in the Arab states, journal of the Faculty of Administration and Economics for the economic studies, University of Naples, 05<sup>th</sup> edition, No° 286, 2011, p. 12.
  12. Fallah Hassan Thouini & Wahida Jabr Khalaf, the electronic banking (the justifications, risks, and success requirements), journal of administration and economy, University of al Mostansaria, No° 54, 2005, p. 10.
  13. Cherine Badri al Baroudi, the role of the knowledge economy in developing the electronic services –analytical study on the electronic banks-, paper submitted in the 5<sup>th</sup> scientific congress (knowledge management and the economic development), the Jordanian University of Zaytuna, Faculty of Economics, 25-27 April 2005, p. 11.
  14. Nadia Sami Khader, narrowing the gap between the industrial and the developing states in the field of the electronic banking: analytical theoretical study, journal of developing Mesopotamia, 87<sup>th</sup> edition, Vol. 29, 2007, p. 157.
  15. Nasr HammoudMezyane Fahd, op. cit., p. 13.
  16. Amina Abdullah Halbois, the electronic banking in the Iraqi banks, the Iraqi journal for economics, year 12, No° 2014/43, p. 125.