



# The Relationship of Applying Electronic Payment Systems to Improving Banks Services Quality's from the Viewpoint of Bank's Employees: A Case Study of Commercial Banks in Algeria

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## **Abstract :**

This study aimed to identify the relationship of Applying Electronic Payment Systems to Improving the of banks services quality's in Algeria from the viewpoint of bank's employees. The researcher used the descriptive analytical method. A random sample of employees in banks was selected and a total of 45 responses were obtained with a recovery rate 75% for the questionnaire of the employees. Findings indicated that the Spearman correlation coefficient found to be low and negative, indicating a weak and inverse relationship between applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

**Key Words:** Electronic Payment Systems, Quality, Banking Services, Algerian Banks.

**JEL Classification:** G21, G24.

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## **Introduction:**

Banks are keen to keep abreast of the rapid developments in order to achieve a better level of service delivery to meet the challenges and financial transformations they face especially in light of the growing needs of customers with emphasis on the additional benefits offered by banks and the quality of services in the face of intense competition. The quality of banking service is an advantage to be used to enhance the Bank's position in the market.

Algeria was not isolated from this perspective, as all concerned parties have many Algerian and Foreign banks operating in Algeria, where they are competing in the provision of banking and financial services on the various economic and human segments that exist. As a result of the rapid growth in information technology, the use of the electronic payment system has become one of the most important tools of competition among banks; the electronic payment system is an image of the traditional payment methods, but in a sophisticated way, which we use in our daily lives. The electronic payment systems are all electronically operated, so there are no remittances or coins (Cheriet & Ghanem, 2018, p. 214).

The Algerian electronic commerce law defines Electronic means of payment as: any payment instrument, authorized in accordance with the legislation in force, allowing its holder to make local or remote payments through an electronic system (OJAP, 2018, p. 5).



With the context of digitalization and development of communication technologies, the generalization of online payment in Algeria is more than imminent, which explains its growth shown since the launch of the E-payment platform by SATIM in 2016. Currently there is 19 Members of the Interbank Monetics Network at national level, where was issued 2160417 IBC (interbank card), 1374 ATM (Automatic Teller Machine) and BAT (Bank Automatic Teller) and 30,500 EPT (ELECTRONIC PAYMENT TERMINAL) (SATIM, 2021).

Banks have taken significant steps towards the transition to e-banking services to win their customers and compete in banking services, and provide e-banking services in a convenient and safe manner.

The problem of the study is determined by the following question: **What is the impact of applying electronic payment systems on improving the of banks services quality's in Algeria from the viewpoint of bank's employees?**

The main hypothesis:

- **H:** There is a statistically significant relationship between applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

The following sub hypotheses are derived from the main hypothesis:

- **H1:** there is a statistically significant relationship between general policies for applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.
- **H2:** there is a statistically significant relationship between monitoring on the procedures of electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.
- **H3:** there is a statistically significant relationship between challenges and risks of electronic payment systems and means and banks services quality's in Algeria from the viewpoint of bank's employees.

Many studies have addressed the electronic payment systems and the quality of banking services as the follows:

– **Study of (Mbama, 2018)**, showed how digital banking enhances banks' profitability. It found that attributes such as perceived value, convenience, functional quality, service quality and digital banking innovation are important in improving customer experience, satisfaction and loyalty, and banks' financial performance (MBAMA, 2018).

– **Study of (Cheriet and Ghanem, 2018)**, which showed the lack of electronic means in activities of commercial banks by adopting electronic banking, which is still only a project that knows many delays and procrastination. Despite Algeria's adoption of the system of gross settlement and remote clearing and the issuance of some e-cards and development of the communications network and mail (Cheriet & Ghanem, 2018).

– **Study of (Makdadi and Al-Sukkar, 2014)**, showed that there is arelationshipbetween the determinants of marketing innovation and improving the quality of banking service in commercial banks. The absence of differences in the



responses of the study sample to the determinants of marketing creativity due to gender, age, scientific qualification, career level) (Abdelaziz & Al-sukkar, 2014).

– **Study of (Milion Assefa, 2013)**, The results of the study implied e-banking has improved customer satisfaction, reduced frequency of bank hall for banking service, reduced waiting time for customers, there are customers who don't know the fee charged for being e-banking users, the bank customers' satisfaction increased after being e-banking users, enabled customers to control their account movements and there is high opportunity to expand e-banking service in the city (Assefa, 2013).

– **Study of (Sujeet Kumar sharma and Manisha Sharma, 2018)**, this research study presented a new model to predict the actual usage of the mobile banking in Oman, a Middle Eastern country. The obtained results imply that higher level of trust and better service quality in mobile banking will help in retaining old customers and attracting new and potential customers (Sharma & Sharma, 2018).

– **Study of (Qingji Zhou et al, 2021)**, this study examines the determinants of mobile banking service quality and loyalty intention through customized factors by combining the SERVQUAL model. A theoretical model was developed to reveal the determinants of MB service quality and loyalty intention. The interrelationships among the determinants were analyzed. The results directly or indirectly highlight the importance of interface design, system quality, security assurance, and service quality in mobile banking loyalty intention (Zhou & al, 2021).

## 1. The Theoretical Framework of the Study:

### 1.1. Electronic payment systems:

**a. Defining the e-payment system:** A payment system consists of a set of transfer systems that ensure the instruments, banking procedures and, typically, interbank funds circulation of money. Furthermore, for extending the payment system in detail– payments system is basically a third-party which helps payer and payee to transfer and receive money respectively or in other words, we can say that payment system is a backbone for creating a connection between payer and payee (Awais, Aziz, & Muhammad, 2019, p. 2). Electronic payment systems permit to transfer funds without restriction, definition as for the support or to the technology used for this purpose (Jean, 2008, p. 362). Electronic payment systems can be grouped into three broad classes: traditional money transactions, credit debit payments and digital currency (Havinga, Smit, & Helme, 1996, p. 2).

**b. Characteristics of e-payment systems:** Electronic payment systems are required to bring the necessary infrastructure to facilitate payment over the Internet. They are becoming an essential part of, and are greatly necessary for, further development of electronic commerce and electronic business; payment must have the following characteristics to become accepted around the world. Atomicity must be ensuring that during the transaction no loss of existing money and the new transaction can be made.

- **Confidentiality/Information kept secure:** The record of transaction kept in the organization as safe as can be and it should only be available to the confidential level if there is any need for trace back at some stage.



- **Security:** The system must ensure the possibility of fraud within the system.
- **Availability:** The system must be available during the said working hours.
- **Cost effective:** The transaction cost must obey the rules as per authority.
- **The ability of integration:** The system must ensure that it can work with all other existing payment systems that resemble the properties and they must be integrated with the new payment system within the same environment (Awais, Aziz, & Muhammad, 2019, p. 2).

### c. Types of Internet payment systems:

#### c.1. Traditional money transactions (Madhoushi & Mohebi, 2004, pp. 546-547):

Currently, debit cards are spread widely and deposit transfer via the Internet appears to be coming soon. On-line payment by credit card is already available at many commercial web sites today;

- **SET:** IBM, Netscape, GTE, Cyber Cash, Master Card, Microsoft and Visa have cooperatively developed the Secure Electronic Transactions Protocol (SET) for securing on-line transactions. This protocol will facilitate credit card transactions on the Internet.
- **PCT:** The Private Communication Technology (PCT) protocol, defined by Microsoft, provides privacy between two communicating applications, and authenticates at least one of the two to the other.
- **iKP:** iKP is an IBM proposal for a family of public key protocols supporting secure presentation of credit card information.
- **First Virtual's Info Commerce System:** In this system the credit card information is given to First Virtual via phone only when the account is opened.

**c.2. Credit-debit payments (Madhoushi & Mohebi, 2004, p. 547):** In payment mechanisms that use the credit-debit model, including CMU's NetBill, First Virtual's Info Commerce system, and USC-ISI's NetCheque System, customers are registered with accounts on payment servers and authorize charges against those accounts. This payment method is by definition not anonymous. An important advantage of the credit-debit model is its auditability. Once a payment has been deposited, the owner of the debited account can determine who authorized the payment.

- **Millicent:** Millicent aims at small-scale commercial transactions over electronic networks.
- **NetCheque:** NetCheque is a distributed accounting service supporting the credit-debit model of payment.
- **UEPS:** UEPS, the Universal Electronic Payment System, is an electronic fund transfer product based on off-line operation.
- **Others:** There are many systems in this category e.g. First Virtual Holdings, FSTC's Electronic Check project, Net-Bill.

**c.3. Digital currency (Madhoushi & Mohebi, 2004, pp. 547-548):** Developments in cryptography have brought a new kind of money: the digital currency (e.g. the DigiCash system, the CAFE project). The digital money, an encoded string of digits, can be carried on a smart-card, or stored on a computer disk. Like a traveler's check, a digital coin is a floating claim on a bank or other financial institution that is not



linked to any particular account. One cardholder can make a payment to another without bank involvement; by placing both cards in a 'digital wallet' that moves coins from one card to the other.

- **DigiCash:** The DigiCash system involves the creation of 'electronic coins' in the form of digitally signed numbers in exchange for real money from the user's bank account.
- **NetCash:** NetCash is an electronic currency service that supports real-time electronic payments with some provision of anonymity across multiple administrative domains on an unsecured network.
- **CAFE:** CAFE provides a high security of all parties concerned without being forced to trust other parties (so-called multi-party security).
- **Mondex:** The Mondex system is based on a tamper-proof smart card that holds the cash (in multiple currencies) and the software to make and receive payments.
- **Brands' off-line electronic cash system:** In this system a tamper-resistant smart card, issued by the bank and trusted by the user, controls a counter that represents the amount of electronic cash carried by the user.
- **Others:** Other systems in this category are currently in test or actually in use (e.g. Chipknip and Chipper in the Netherlands).

**d. Means of electronic payment:** we can divide electronic payment system as follows (Abdallah El Hirtsi & Belkella, 2012, pp. 9-10):

- Online Credit Card Payment System.
- Electronic Cheque System.
- Electronic Cash System and.
- Smart Card based Electronic Payment System.

Generally the most fluent mean in electronic payment is the card based ones such as: Credit and charge cards (buy now, pay later), debit cards (buy now, pay now), cash cards (buy now, prepaid or pay before), digital cash (conventional computerized cash by a financial surrogate like PayPal and beenz), e-cheque and mobile wallets (Abdallah El Hirtsi & Belkella, 2012, pp. 9-10).

**d.1. M-Banking Definition:** M-banking (mobile banking) is defined as an emerging facet of electronic banking, a wireless service delivery channel, an application of m-commerce, and an innovative method for accessing banking services that offers additional value for customers by providing "anytime, anywhere" access to banking service. In particular, and viewed m-banking as a potential platform for automated banking and other financial services which enables customers to access bank accounts through mobile devices or personal digital assistant to conduct and complete bank-related transactions such as balancing cheques, checking account statuses, transferring money and selling stocks. For the current study, this definition was considered as it represents the m-banking scenario in the best possible mode. More importantly, m-banking is enabling consumers to conduct a variety of financial functions including micropayments to merchants, bill payments to utilities, person to person (P2P) transfers, business to business (B2B) transfers, business to person (B2P) transfers and long distance settlements (Khasawneh, 2015, pp. 5-6).



**d.2. Credit Cards:** One of the major advantages of credit cards is their easy to use functionality with making online transactions in no time and from anywhere. Cardholder authentication procedure is also simple, with the provision of a name, credit card number, and expiry date. For the security of consumers' personal information, credit card companies have developed a number of complementary systems. These systems allow users to create a password and use it when they shop online through their credit cards (Zlatko, 2016, p. 128).

**d.3. Debit Cards:** Debit cards the most popular non-cash payments instrument globally. In contrast to credit cards, payments through debit cards are withdrawn directly from the personal account of the consumer instead of an intermediary account. This makes it difficult for consumers to handle payment disputes as there funds don't have an extra protection in a debit account. For debit payments, providing the account number is enough without the necessity of producing a physical card or card number (Zlatko, 2016, p. 128). As the latest report by Edgar, Dunn & Company suggests, the death of payment cards (credit, debit, prepaid, and other types) has been greatly exaggerated, their usage being expected to grow over the next five years. Globally, with a 37% share, payment cards remained the most popular payment method for ecommerce purchases in 2018, according to Global Payments Report by Worldpay. Moreover, in 2018, there were 6.3 billion cards; while payment cards in circulation on a global basis were forecasted to reach 11.7 billion by 2023 (8.4 billion are estimated to be debit cards). While slow growth is expected in mature markets, in emerging markets payment cards are expected to grow significantly (Pastravanu, 2019, p. 19).

**d.4. Mobile Payments:** Payments made through wireless devices like mobile phones and smart phones are thought to provide more convenience, reduce the fee for the transaction, and increase the security of electronic payment. This payment system has also made it easier for businesses to collect useful information about their customers and their purchases. Mobile payment methods are suitable for offline micropayments as well as for online purchases. This method is a potential attraction for online traders due to an enormous user base of mobile phones. The use of mobile payment service does not only reduce the overall cost of a transaction but also offer a better payment security. However, mobile payment systems have encountered certain challenges in obtaining a significant consumer base for a number of reasons including privacy issues and their inability to cater international payments (Zlatko, 2016, p. 128).

**d.5. Mobile Wallets:** Mobile wallet is formed when your Smartphone functions as a leather wallet: it can have digital coupons, digital money (transactions), digital cards, and digital receipts. Mobile wallet service allows the user to install an application from online stores in their smart phones and use them to pay for their online and offline purchases. mobile wallets are believed to provide more convenient payment solutions to the customers in future (Zlatko, 2016, p. 129).

**d.6. Electronic Cash:** During initial stages of introducing online payment systems, electronic cash systems proposed in the form of DigiCash or CyberCash. However, these systems were not much appreciated and disappeared soon. At present, smart



card-based systems are more common in use for the payment of small amounts by many businesses. Smart cards usually rely on specific hardware and card reader for their use and authentication. In addition to smart cards, numerous electronic cash systems have also been established such as Virtual BBVA and Clic-e. These systems work with the use of pre paid cards or electronic tokens that represent a certain value and can be exchanged for hard cash (Zlatko, 2016, p. 129).

**e. The use of Electronic Payment Systems in The Algerian Banking System:** In light of the development of the banking system in the world, Algeria found itself compelled to take a stand on this development, which made the modernization and modernization of the Algerian banking system necessary and inevitable, and this is done by taking advantage of technological developments. Algeria started implementing the modernization of means of payment starting in 2005 with the launch of the bank card payment and withdrawal project, and witnessed the implementation of several projects we will identify as follows (Cheriet & Ghanem, 2018, p. 216):

**e.1. Instant gross settlement system:** On 15 May 2006, the Bank of Algeria, in cooperation with the Ministry of Finance, introduced the system, also known as the immediate payment system for large amounts, It is a system of interbank payment orders using bank or postal transfers for large amounts or immediate payment, which is realized among the participants in this system (banks, financial institutions, public treasury and Algeria Post). As well as a system that includes funds that exceed one million dinars and for the operations that take place between banks, The electronic clearing operations of the Bank of Algeria, and even operations for the benefit of customers and financial institutions, such as those governing the capital market transactions, which are treated in real time as urgent and immediate operations and in total, In the sense of process, and what distinguishes the latter that if accepted by the system can not be canceled later (Cheriet & Ghanem, 2018, p. 216).

**e.2. Electronic Payment Clearing System:** The electronic clearing system in Algeria is known as ATCI (Algérie-Télécompensation Interbancaire), The system entered into force on May 15, 2006, as it permits the exchange of all payment methods associated with public payments (checks, trade papers, automatic deductions, card operations), Where in 2014 it reached 20.750 million transactions after it was 6.926 million in 2007, The table also shows clearly the evolution of payments. This is evidenced by the volume of payments checks, which amounted to 8.490 million dinars in 2014, after 5.6 million dinars in 2007, On the other hand, we note that transactions in the card, where the percentage of withdrawal is greater than the payment, also known as a continuous increase in the amount of transactions, except in 2012 there was a decline in the transfer of funds through this system. Despite the development of this system in Algeria, its use is still relatively narrow compared with the use of similar systems in developed countries and even in some Arab countries, despite the efforts made in the development of payment systems and tools. A report by the Algerian National Bank showed that most of the transactions were in cash, followed by the check as a second payment tool followed



by cash transfers that represented 10% of the banking operations in 2000 (Cheriet & Ghanem, 2018, p. 217).

**e.3. Establishment and operation of automated cash network and automatic relations between commercial banks:** This national project is aligned with international automated cash systems. The most important networks and companies in the operation of ATMs in Algeria are SATIM.

The Algerian Banking and Electronic Banking Company (SATIM) is among the companies that mainly guarantee the development and operation of the BIBNIC system based on the use of financial and banking information network and the diagnosis of bank cards in Algeria. In order to manage the interbank ATM network, banks (BDL, CNEP, CPA, CNMA, ALBARAKA, BADR, BEA) established SATIM in 1995 (Cheriet & Ghanem, 2018, pp. 217-218). Today, The number of participants in this company is estimated at 19 participants, 16 banks, as well as Algeria Post. The Algerian Company for Brokerage and Electronic Banking is a branch of public banks (Satim: Interbank And Money Transaction Automation Company).

### 1.2. Quality of banking services:

**a. Quality of bank service definitions:** The following are some definitions of the quality of banking service (Wasim I, Amala, Mazen M, Youssef M, & Samy S, 2017, p. 200):

- It is a measure of the degree to which the level of service provided to customers meets their expectations.
- The Bank's ability to respond to customers' expectations and requirements.
- The extent to which the service provided satisfies or exceeds customer expectations.
- The ability of banking services to achieve customer expectations in the light of a set of bases or indicators on which these customers are based on the judgment on the quality of services, including reliability, materiality, response, empathy and safety.
- The ability of the management to produce or provide a service capable of meeting customer needs.

One of the Bank's activities is to assist its clients in its financial activity, attract new customers, increase its financial resources and not be exposed to trade risks. The Bank aims to satisfy these customers and maintain them.

**b. Quality of service dimensions:** Researchers have used the SERVQUAL scale to measure the quality of various services, including bank services. According to the study conducted by Cowling and Newman in 1995 concerning the SERVQUAL scale, one bank found out that the highest disparity between the expectations and perceptions of customers was found to exist for reliability, responsiveness, and empathy, and the lowest for tangibles. Also, concerning the banking industry, by using the critical incident technique, Johnston (1995) examined the service quality perceptions of the customers. He found out 18 service quality attributes: access, aesthetics, attentiveness/helpfulness, availability, care, cleanliness/ tidiness, comfort, commitment, communication, competence, courtesy, flexibility, friendliness, functionality, integrity, reliability, responsiveness and





security. Furthermore, an alternative measure of service quality in retail banking that comprises 31 items with six underlying key dimensions was proposed by Bahia and Nantel (2000). These six dimensions are: effectiveness and assurance, access, price, tangibles, service portfolio and reliability. In addition, by using conjoint experiments to measure the service quality of retail banks, Oppewal and Vriens (2000) proposed the use of 28 attributes including four service quality dimensions to evaluate service quality. These four dimensions are: accessibility, competence, accuracy and friendliness, and tangibles. Of those four dimensions, the most important in determining banking preference turned out to be the accuracy and friendliness, followed by competence, tangibles and accessibility (Kenova & Jonasson, 2006, pp. 10-11). There is no agreement among researchers on the dimensions that determine the level of quality of service. There are ten basic dimensions of quality that determine the quality of service according to the perception of the customers as follows (Wasim I, Amal A, Mazen M, Youssef M, & Samy S, 2017, p. 201):

- **Reliability:** Degree of consistency in service performance and submission of the first time correctly.
- **Response level:** The speed of response of service providers to the demands and needs of customers.
- **Efficiency and capacity of service providers:** Ownership of individual service providers for capabilities that enables them to provide outstanding customer service.
- **Accessibility:** Easy access to the service providers and contact with them when necessary.
- **Courtesy:** Good customer treatment and appreciation of their own circumstances.
- **Connection:** Exchange information about service between service providers and customers in an easy and simple way.
- **Credibility:** The availability of a high degree of trust in service providers by taking into consideration the interests and needs of customers.
- **Security:** Freeness of bank transactions.
- **Attention, care and upkeep:** Be by making all efforts to notify the customer.
- **Tangible physical and human aspects:** Includes the exterior of equipment and personnel.

**c. Electronic Banking Services:** Is the conduct of banking operations in innovative ways through electronic communication networks, whether traditional or new banking and access to the electronic banking service is limited to participants only in accordance with the conditions of proof set by the bank, and in this light the customer will not have to come to the bank. Electronic banking services as electronic channels and ports that represent the bank and provide banking services to customers (Suliman A, Mazen J, & Samy S, 2019, p. 47). Electronic banking is the delivery of banking services and products through the use of electronic means irrespective of place, time and distance. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such



as electronic money. Electronic banking is also known as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels (Ahmadu, 2014, p. 81).

### 1.3. Linking Electronic E-Payment Systems to Quality of Banking Services:

Banks focus on maintaining customer loyalty through quality services, segmentation, cross-selling and long-term relationships via personal contacts, leading to increased consumer recommendation and re-purchase. This strategy has been altered due to digital banking service qualities, where personal contact between the banks and customers no longer takes place, requiring a different framework. Undoubtedly, how digital banking affects banks' financial performance will depend on customer perceptions and expectations of the service interfaces and qualities. Digital banking is the delivery of financial services over electronic devices; therefore, its conceptualization must include technology and service frameworks. Early e-banking framework uses cognitive beliefs to suggest that for communal customers, loyalty is generated based on personal touch and interaction while for exchange customers; loyalty is gained based on service efficiency and reliability. Digital banking reduces the face-to-face interaction between the customer and bank personnel, and differs from other services. The way customers' perceive service quality will be different in contact services. Therefore a multiple theoretical framework is required to ascertain the impact of digital banking on customer experience, satisfaction, loyalty and financial performance (MBAMA, 2018, p. 51).

## 2. Methods and Procedures:

Based on the nature of the study and the objectives that it seeks to achieve, the analytical descriptive approach was used, which is based on the study of the phenomenon as it is in fact and is concerned as a precise description and expressed in qualitative and quantitative terms.

### 2.1. Population and Sampling:

The study population consists of all employees in banks in Algeria. The study was applied in banks (Local Development Bank, The National Bank of Algeria, Gulf of Algeria Bank, Society General Bank, BNP Paribas Bank, Natixis bank). A random sample of employees in banks was selected and a total of 45 responses were obtained with a recovery rate 75%. The distribution of the sample of study according to the personal data of the individuals in it is as:

**Table 1. Frequency and percentages of personal and functional variables of the sample of the employees**

Age	Frequency	percentage
18-30	8	17,8
31-40	20	44,4
41-50	14	31,1
+50	3	6,7
Academic Qualification	The number	percentage
Average	2	4,4
Secondary	6	13,3
University	29	64,4
graduate studies	8	17,8
Experience	The number	percentage



1-5	12	26,7
6-11	14	31,1
12-17	9	20,0
18-23	8	17,8
24-30	2	4,4
<b>Number of training courses</b>	<b>The number</b>	<b>percentage</b>
0	11	24,4
1	7	15,6
2	8	17,8
3	9	20,0
4	10	22,2
<b>Total</b>	<b>45</b>	<b>100</b>

**Source:** Produced by the author, based on the SPSS results.

It is clear from the previous table that 64.4 % of the sample of the study has university degree. As for the years of experience, 57.8 % have less than 11 years of experience. The researcher attributes the high percentage of holders of university degrees and then graduate studies to the nature of the work of banks, which in turn require scientific qualifications and staff with experience and efficiency. Repetition the number of training courses, 24.4 % did not conduct training courses.

## 2.2. Data Analysis:

**a. Test of Reliability:** Before performing data, analysis has to ensure the reliability of the data collection tool. Using Cronbach's Alpha test, the reliability was measured by means of data collection, as can be seen in Table n°2. The value of Cronbach's alpha is 0.611 for applying electronic payment systems, and 0.956 for Banks Services Quality's, and 0.907 for all the questionnaire, so all the variables Cronbach's alpha are greater than 0.6 and reliability is confirmed.

**Table 2. Cronbach Alpha value.**

Dimensions	Cronbach's alpha	N of items
applying electronic payment systems	0.611	21
Banks Services Quality's	0.956	21
all the questionnaire	0.907	42

**Source:** Produced by the author, based on the SPSS results.

**b. Normality test:** The Kolmogorov-Smirnov Test was used to test if the data has normal distribution, and the results are as shown in the following table:

**Table 3. shows the normal distribution test of the questionnaire axes.**

The Axis	"Sig." Value
applying electronic payment systems	0.739
Banks Services Quality's	0.846

**Source:** Produced by the author, based on the SPSS results.

The table above shows that the values of "Sig." for all the axes of the questionnaire are greater than the significance level (0.05). This indicates that all the axes of the questionnaire follow the normal distribution.

**2.3. Hypotheses testing:** After confirming the validity of study model, we can test the hypotheses using Spearman correlation coefficients and results are shown in the next tables:



**Table 4.Spearman correlation coefficients between General policies for applying electronic payment methods and Banks Services Quality's.**

The axis	Correlation coefficient with Banks Services Quality's	"Sig." Value
General policies for applying electronic payment methods	-0,298*	0,047

\*. Correlation is significant at the 0.05 level.

**Source:** Produced by the author, based on the SPSS results.

Hypothesis (H1) was formulated: There is a statistically significant relationship between general policies for applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

The above table shows that spearman correlation coefficient is negative, indicating a statistically significant relationship at the level of ( $\alpha \leq 0.05$ ) between general policies for applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

The researcher attributed this to the more of infrastructure, legislative, and laws related to electronic payment systems are weak, whenever it has a negative impact on the quality of banking services. These results were approximately convenient with the study of (Akhisar, Tunay, & Tunay, 2015).

**Table 5.Spearman correlation coefficients between Monitoring on the procedures of electronic payment systems and Banks Services Quality's.**

The axis	Correlation coefficient with Banks Services Quality's	"Sig." Value
Monitoring on the procedures of electronic payment systems	0,650**	0,000

\*\* . Correlation is significant at the 0.01 level.

**Source:** Produced by the author, based on the SPSS results.

Hypothesis (H2) was formulated: There is a statistically significant relationship between monitoring on the procedures of electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

The above table shows that Spearman correlation coefficient is high, indicating a statistically significant relationship at the level of ( $\alpha \leq 0.01$ ) between the monitoring on the procedures of electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

The researcher attributed this to the contribution of the monitoring on the procedures of electronic payment systems in reliance on electronic bank work. This has played a prominent role in improvement of banks quality of service in Algeria. These results were convenient with the study of (Kamsa & Hada, 2019).



**Table 6. Spearman correlation coefficients between Challenges and risks of electronic payment systems and means and Banks Services Quality's.**

The axis	Correlation coefficient with Banks Services Quality's	"Sig." Value
Challenges and risks of electronic payment systems and means	-0,508**	0,000

\*\* . Correlation is significant at the 0.01 level.

**Source:** Produced by the author, based on the SPSS results.

Hypothesis (**H3**) was formulated: There is a statistically significant relationship between Challenges and risks of electronic payment systems and means and Banks Services Quality's in ALGERIA from the Viewpoint of Bank's Employees.

The above table shows that Spearman correlation coefficient is high and negative, indicating a statistically significant relationship at the level of ( $\alpha \leq 0.01$ ) between Challenges and risks of electronic payment systems and means and Banks Services Quality's in ALGERIA from the Viewpoint of Bank's Employees.

The researcher attributed this to the increase of risks of electronic payment systems and means, whenever it has a high negative impact on the quality of banking services. These results were convenient with the study of (Kamsa & Hada, 2019) and (Mahlousse, Beggat, & Yazid, 2021)

**Table 7. Spearman correlation coefficients between Challenges and risks of electronic payment systems and means and Banks Services Quality's.**

The axis	Correlation coefficient with Banks Services Quality's	"Sig." Value
applying electronic payment systems	-0,068	0,656

**Source:** Produced by the author, based on the SPSS results.

The problem of the study was determined by the following question:

What is the impact of applying electronic payment systems on Improving the of banks services quality's in Algeria from the Viewpoint of Bank's Employees?

The main Hypothesis (**H**) was formulated: There is a statistically significant relationship between applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

The above table shows that Spearman correlation coefficient is low and negative, indicating a weak and inverse relationship between applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees.

The researcher attributed this to weak application of electronic payment systems and the weak infrastructure, legislative, and laws related to it, and the increase of risks of electronic payment systems and means in Algeria contributed to the low quality of banking services.

**Conclusion:**

This paper presents a study about the relationship of Applying Electronic Payment Systems to Improving the banks services quality's in Algeria from the viewpoint of bank's employees.

Electronic payment systems are required to bring the necessary infrastructure to facilitate payment over the Internet. They are becoming an essential part of and are greatly necessary for further development of electronic commerce and electronic business.

Banks Services Quality's is The ability of banking services to achieve customer expectations in the light of a set of bases or indicators on which customers are based on the judgment on the quality of services, including reliability, materiality, response, empathy and safety.

Spearman correlation coefficient is low and negative, indicating a weak and inverse relationship between applying electronic payment systems and banks services quality's in Algeria from the viewpoint of bank's employees, the three dimensions indicate (General policies for applying electronic payment methods, Monitoring on the procedures of electronic payment systems and challenges and risks of electronic payment systems and means) that only one variable ( Monitoring on the procedures of electronic payment systems) has a significant effect on Improving the of banks services quality's. While the other two variables have a negative effect on improving the of banks services quality's in Algeria.

The study suggested the following recommendations:

- Enhancing the infrastructure, legislative, and laws related to electronic payment systems to facilitate payment over the Internet and development of electronic commerce and electronic business and developing the banking industry.
- Enhancing the skills of bank employees and developing their performance, and preparing banking competencies on a global level.
- Algerian banks have to should improve their banking products and develop through to design strategies and policies to improve the quality of the banking service, In order to achieve efficiency, banks must adopt effective strategies to their services.
- Develop and strengthen the oversight role of the monetary authority over banks, and to become a modern central bank with full powers to become more in line with international standards and practices.

**Implications:**

This study has a number of practical implications for decision makers in banking in Algeria:

The proposed research model of Applying Electronic Payment Systems and Improving the banks services quality's shows a weak and inverse relationship between applying electronic payment systems and banks services quality's in Algeria.

The researcher attributed this to weak application of electronic payment systems and the weak infrastructure, legislative, and laws related to it, and the



increase of risks of electronic payment systems in ALGERIA due to the low quality of banking services.

Decision makers and banks with regard to Applying Electronic Payment Systems and Improving the banks services quality's should consider and adopt the roles of the infrastructure, legislative, and laws as well as design strategies and policies to improve the quality of the banking service and enhancing the skills of bank employees and developing their performance.

#### **Limitations:**

This study has its own set of limitations, which will pave the way for future research. Firstly, since this study used survey data to evaluate and test the proposed conceptual model, although the data were of convergent validity and reliability, as well as discriminant validity, because of data were obtained through questionnaire surveys, the estimated results may not fully reflect the true parameters, but the findings can still be used by banks. Secondly, the results of this study were approved from the viewpoint of bank's employees only. Finally, the moderating effect of demographic variables studied has not been taken into account; the finding of effect of demographic variables on improving banks services qualities would provide deeper analysis.

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