الجمهورية الجزائرية الديمقراطية الشعبية
Ministry of Higher Education and Scientific Research
وزارة التعليم العالي والبحث العلمي
People's Democratic Republic of Algeria

HIGHER SCHOOL OF MANAGEMENT AND DIGITAL ECONOMY

H.S.M.D.E

المدرسة العليا للتسيير والاقتصاد الرقمي

End of cycle dissertation with a view to obtaining a Master's degree

Speciality: E-BUSINESS

THEME:

THE DETERMINANTS OF E-PAYMENT USAGE IN ALGERIA

CAS: The Agricultural and Rural Development Bank (BADR)

Presented By:

Mr **Fentazi Abdelghafour**

Supervised By:

Mr **Mohamed BOUATELLI**

College year

2023-2024

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index

dedication

I would like to express my heartfelt appreciation to friends within my field of study, whose unwavering support and guidance have been invaluable throughout my academic journey. Your encouragement and insightful advice have been instrumental in shaping my academic path, and I am deeply grateful for your steadfast presence.

I am also grateful to my family and friends within my academic community, whose encouragement and support have provided me with the strength and motivation to pursue my goals. Their belief in my abilities has been a constant source of inspiration, and I am fortunate to have them by my side.

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This dedication is a token of gratitude to my academic partner, with whom I have shared countless experiences and challenges. Our collaboration and mutual support have been essential in navigating the complexities of our field, and I am grateful for the opportunity to learn and grow together.

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To my beloved parents, I dedicate this end-of-cycle dissertation. This dedication is a testimony of my love, gratitude, and eternal appreciation for your unwavering support, immeasurable love, and invaluable guidance throughout my academic journey.

Finally, I extend my heartfelt thanks to my closest friends, whose friendship and support have been invaluable nilli Mohamed, taha adnan, benayada salim, raghda rahma, Malak, mohira Randa,ayoub hannat.

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To all those who inspired, helped, criticized and encouraged me in the realization of my search we thank you from the bottom of my hearts

List of Figures

List of tables

Abbreviations list

ATM: Automated Teller Machine

BCA: The Central Bank of Algeria

BNA: National Bank of Algeria

BEA: External Bank of Algeria

BADR: Bank of Agriculture and Rural Development

BDL: Local Development Bank

CAD: Algerian Development Bank

CNEP: National Savings and Insurance Fund

CPA: People's Credit of Algeria

GRE: Regional operating group cells

LMC: Money and Credit Law

PAC: Develop the commercial action plan

Summary

The research aims to determine the factors influencing the adoption of e-payment in Algeria's banking sector. It begins with an overview of the Algerian banking system, highlighting its diverse services, and examines the role of technology in transforming the sector. Through a comprehensive literature review and analysis of previous studies, key factors affecting e-payment adoption are identified, including accessibility, usability, transaction security, user confidence, and regulatory compliance. Integrating these factors into hypotheses, the study conducts practical research, confirming the impact of income and security on e-payment adoption while finding ambiguity in hypotheses related to the perceived security of electronic payments in Algeria and the using of e-payment. These findings lead to recommendations aimed at enhancing user experience and promoting e-payment usage in Algeria, thereby contributing to the modernization and expansion of the Algerian banking sector.

Keywords: banking sector, e-payment, adoption, technology, individual, environmental context.

GENERAL INTRODUCTION

Banks are institutions whose main role is receiving funds from the public, conducting credit operations, and making means of payment available to customers while managing them. Financial establishments, on the other hand, cannot receive funds from the public, nor manage means of payment or make them available to their customers. Like banks, they can carry out all other operations. Banks and financial establishments can also engage in activities related to their main operations, such as foreign exchange transactions, operations in gold, precious metals and coins, investments, subscriptions, purchases, management, custody, and sale of transferable securities and any financial product, advice and assistance in wealth management, financial advice, management and engineering, and in general, all services intended to facilitate the creation and development of businesses or equipment while respecting the legal provisions in this area.

We can also define the role of banks as intermediaries in the capital markets since they have a supply of capital from customers which they make available to other customers who request it for various financing needs. The bank thus becomes the main source of financing for the country's economy. To ful fill this role, the bank must first collect resources and then carry out credit operations. In an ever-changing world, financial systems are undergoing profound transformations driven by technological advancements. At the heart of these changes, banks play a central role as essential financial intermediaries, facilitating monetary transactions and ensuring the smooth flow of funds within the economy. Concurrently, the emergence and widespread adoption of digital technologies have revolutionized traditional payment methods, paving the way for the advent of e-payment.

Electronic payment, or e-payment, represents a form of financial transaction conducted through electronic systems, such as credit cards, electronic transfers, e-wallets, and mobile payments. This form of payment offers a rapid, secure, and convenient alternative to traditional cash or check payments, enabling individuals and businesses to conduct transactions without geographical or temporal constraints. In this context, banks occupy a privileged position as major providers of e-payment services, integrating these innovative technologies into their service offerings to meet the growing needs of customers. As custodians of financial trust and transaction security, banks play a crucial role in promoting the adoption of e-payment, ensuring the reliability and integrity of electronic transactions.

Algeria, as a developing economy in North Africa, is also experiencing a gradual transition to e-payment, with Algerian banks at the forefront of this transformation. In an environment characterized by widespread cash usage and evolving financial infrastructure, the integration of e-payment into the Algerian banking sector presents significant opportunities as well as unique challenges. Thus, this study aims to explore the determinants of e-payment usage in Algerian banks, examining the economic, sociocultural, technological, regulatory, and psychological factors that influence the adoption of this innovative technology. By analysing these determinants, this research aims to provide valuable insights into current and future trends of e-payment in the Algerian banking context, along with strategic recommendations to promote broader and more effective adoption of this payment modality.

In recent years, the evolution of human social life has seen immense technological advancements affecting virtually every sector. These developments have minimized production costs and improved the quality of products and services offered. The financial and banking sector has not been an exception, as technological advances have allowed this sector to develop by offering several accessibility possibilities that were previously unavailable but are now indispensable for smooth banking operations. Technological progress has facilitated access to banking services. Previously, it was necessary to physically visit a bank branch to perform operations such as depositing or withdrawing money, paying bills, etc. However, thanks to technological developments, it is now possible to access bank accounts and conduct transactions online via a computer, smartphone, or tablet, saving clients time and energy by avoiding unnecessary trips.

Moreover, technological advances have also improved the security of banking transactions. IT security systems have significantly strengthened, offering increased protection against fraud and cyberattacks. Online transactions are encrypted and secure, ensuring the confidentiality of clients' personal and financial information. The introduction of technologies such as mobile payments has also simplified daily transactions. Bank mobile apps allow users to pay for their purchases using their mobile phones, utilizing technologies such as Near Field Communication (NFC) or QR codes. This makes payments fast, convenient, and contactless, which is particularly important in the context of the COVID-19 pandemic, where social distancing is essential. Additionally, technological developments have enabled the emergence of new forms of financial services, such as online banking and fintech (financial technology companies). Online banks offer comprehensive banking services via the Internet without the need for physical branches.

This research aims to examine the impact of various elements such as income, access to technology, trust in online transactions, transaction security, and other socio-economic and cultural factors specific to Algeria. I have chosen to study the determinants of e-payment usage due to our interest in the digitization of the economy, which includes e-payment as an important aspect. As students specializing in this field, i seek to deepen our knowledge and understand the factors influencing the adoption and use of e-payment. This study will help identify the factors hindering or encouraging the development of digital banking in Algeria and provide recommendations to develop the digitization of banking services. Research on this topic is still scarce in the country. The effects of certain variables identified in other countries have not yet been explored in Algeria, and the factors specific to Algerian banks and clients are largely unknown.

The objective of the research is to identify the factors influencing the use of e-payment in the current context characterized by the Algerian government's commitment to promoting the digitization of the economy. Thus, our research problem is formulated as follows: What are the factors influencing the adoption and use of e-payment in Algeria, particularly in the context of the Algerian government's commitment to promoting the digitization of the economy

This leads to our research problem, which is formulated as follows: What are the determinants of the use of e-payment in Algeria?

This problem gives rise to several secondary questions:

1) Does the level of education and the demographic factors influence the adoption and use of e-payment?

2) Does income play a significant role in the adoption and use of e-payment?

3) Is trust in financial institutions a determining factor in the adoption and use of e-payment?

4) Does infrastructure availability impact the adoption and use of e-payment?

5) Do cultural preferences and social factors play a significant role in the adoption and use of e-payment?

And for that they were some hypnotizes of using the payment in Algeria;

H1: Impact of income on e-payment usage:

Individuals with higher income levels are more likely to adopt e-payment methods in their banking transactions due to increased access to technological resources and a greater willingness to embrace innovative financial services. Conversely, individuals with lower incomes might face barriers to e-payment adoption, such as limited access to digital devices or concerns about transaction fees. By examining the relationship between income levels and e-payment usage, we can gain insights into the socioeconomic factors influencing the adoption of digital payment solutions in Algeria.

H2: Effect of trust in financial institutions on e-payment:

Trust in financial institutions significantly influences consumer attitudes towards e-payment services. Individuals who perceive banks as trustworthy entities are more likely to feel confident in using e-payment methods for their financial transactions. Factors such as the reliability of online banking platforms, data security assurances, and customer service responsiveness contribute to building trust. A lack of trust in the banking sector may deter individuals from embracing e-payment solutions, favoring traditional cash-based transactions instead. Exploring the interplay between trust and e-payment usage can provide insights into the importance of confidence-building measures for promoting digital payment adoption in Algeria.

H3: Influence of e-payment infrastructure availability:

The availability and accessibility of e-payment infrastructure significantly impact the adoption of digital payment methods within the Algerian banking sector. A robust e-payment infrastructure, including online banking platforms, mobile payment apps, and secure transaction networks, facilitates the integration of electronic payment solutions into consumers' lives. Individuals in urban areas with extensive e-payment coverage are more likely to embrace digital payment options. Convenience and reliability, such as the availability of ATMs and POS terminals, play a crucial role in shaping consumer preferences for cashless transactions. Examining the relationship between e-payment infrastructure and usage patterns can identify strategies to promote digital payment adoption across diverse demographic segments in Algeria.

H4: Effect of education and the demographic factors on e-payment usage:

Education level significantly influences e-payment adoption among Algerian consumers, with higher education correlating with increased usage due to better digital literacy and technological proficiency. Age is another factor, as younger consumers are more likely to adopt e-payments due to greater familiarity with technology, while older individuals may face barriers due to a lack of experience or security concerns. Gender also plays a role, with men generally more inclined to use e-payments than women, possibly due to differences in access to technology, financial independence, and risk perception. Addressing these demographic factors through targeted education, user-friendly technology design, and empowering initiatives for women can promote wider acceptance of digital payment methods in Algeria.

H5: Impact of cultural preferences social factors on e-payment:

Cultural norms and social factors collectively influence consumer behavior towards e-payment adoption in Algeria. Attitudes towards financial transactions, privacy concerns, and the perceived value of cash shape preferences for payment methods. Younger generations may prefer e-payment for its convenience, while older demographics may Favor traditional cash transactions due to familiarity. Social factors such as trust in digital platforms, peer influence, and institutional support also play crucial roles in shaping e-payment adoption. Additionally, cultural aspects like informal economies or cash-based remittances may present barriers to widespread e-payment usage. Understanding the complex interplay between cultural and social factors can inform targeted strategies to promote digital payment technologies effectively within Algeria's unique cultural and social context.

Study Methodology:

The study we are undertaking aims to analyze the determinants of e-payment usage in banks in Algeria. To achieve this objective, we have chosen to utilize a questionnaire as the primary instrument for data collection. This section explains our methodological choice and provides an overview of how we structured the questionnaire.

Questionnaire Structure:

The questionnaire is divided into several sections, each addressing specific aspects of e-payment usage in banks in Algeria. We will collect basic demographic information, such as age, gender, education level, and income, to better understand respondents' characteristics. Then, we will explore current e-payment usage, reasons for its use, as well as perceptions and attitudes towards it.

CHAPTER 1: DIGITALIZATION OF THE BANKING SECTOR

Chapter 1: Digitalization of the banking sector

introduction

The banking sector is experiencing a radical shift driven by digitalization. Technological advancements and changing consumer behaviors have reshaped banking practices, introducing online platforms, mobile apps, and digital payments. This transformation offers unparalleled convenience but also poses challenges like data security and digital literacy gaps. Yet, digitalization promises enhanced efficiency, revenue growth, and financial inclusion. In this chapter, we explore the drivers, trends, and challenges of digital banking, and The Algerian Banking history.

Section 1: General Campaign on the Establishment of the Algerian Banking System

The Algerian state inherited financial and banking institutions following independence, which were previously under French control. Consequently, it could not meet the developmental requirements desired for the Algerian economy. The Algerian authorities made significant efforts to initiate development in all sectors, especially in commerce and banking. This led to the creation of some essential institutions that are indispensable to any country's economy. Thus, in the final stages, a banking system was established in Algeria that aligns with the needs of the national economy.[1]

- The Algerian Banking System during French Colonization:

During the French colonization in 1830, Algeria, like other parts of the Ottoman Empire, had a scarcity of currency circulation, mainly consisting of gold and silver coins, with no official currency system. The French franc was not officially adopted as the currency until 19 years later. The establishment of a banking institution in Algeria occurred following the decree issued on 19/07/1843, which authorized the establishment of a branch of the Bank of France. This branch began issuing currency in 1848. The institution, named "Escompte National Comptoir Le," was primarily responsible for issuing currency but failed due to a lack of deposits. Another institution, the "Banque de l'Algérie," was established in 1851 with a capital of 3 million francs divided into 6,000 shares. The French authorities supported it by granting a loan covering half of the initial capital.

1.The Algerian Banking System before Independence:

Before independence, the banking sector's activity primarily revolved around the urban areas, especially the capital, and was dominated by numerous branches of French banks engaged in commercial and investment banking. These branches included the following banking institutions:

1.1. Bank of Algeria: Its activity revolves around issuing currency and demand deposits.

[1] *Othmani Salah, (2015/2016) "The Reality of the Algerian Banking System and Its Role in Economic Development," Master's Thesis, Faculty of Economics, University of Belhadj Bouchaib, Timimoun, pp. 20-19.*

1.2. Commercial Banks: Before independence, there were around 13 banks with a total of 409 branches, including 149 in Algiers, 154 in Oran, 83 in Constantine, and 23 in the Sahara. The concentration of branches in Algiers reached 92, including branches of French banks such as Banque Nationale de Commerce et de l'Industrie.

1.3. Popular Banks: These banks cater to small-scale commerce and include the Algerian People's Bank and regional banks, totalling 22 branches in 1961.

1.4. Fund for Equipment and Development of Algeria: Established in 1959 to finance development programs and expanded its activities after independence.

1.5. Agricultural Sector Loans: There are two types of financing in the agricultural sector:

- Cooperative Agricultural Credit Fund providing short-term agricultural loans.

- Agricultural companies for investment, characterized by cooperative nature, offering medium-term loans.

1.6. Business Banks: The Algerian Industrial Bank is the most prominent, with 3 branches in Algeria.

1.7. Development Banks: Established in 1959, including the Equipment Fund, aimed at financing industrial projects.

1.8. Public Enterprises: Engaged in financing and exploration of petroleum in the Sahara and were nationalized in 1962[2].

2. The Algerian Banking System after Independence:

Following independence, the Algerian state inherited a wide banking system consisting of over 20 banks, but it was still under foreign colonization and based on the principles of the French financial system. Consequently, the Algerian economy lacked essential conditions for development, and most transactions were conducted within the framework of French dealings. Additionally, many institutions inherited from the colonial period couldn't continue their activities smoothly due to a lack of resources to support their operational and productive needs.

[2] *Larraboui Amine, (2015/2016), "Banking Reforms in Algeria: Reality and Prospects," Master's Thesis in Economics, Finance, and Management Sciences, University of Abi Bakr Belkaid - Tlemcen, Faculty of Economic Sciences, Magnia, p. 3.*

These circumstances prompted the Algerian authorities, since gaining independence, to work on breaking the dependency on the French economy in all aspects.

Efforts were made to establish an independent banking system, and this continued until the mid-1960s when a phase of nationalizations began in 1966. Following these nationalizations, state-owned national banks were established, but before that, there were significant developments in the national finance system. The establishment of the Central Bank of Algeria and the National Development Fund marked the beginning. Initially, institutions such as credit banks were established to provide financial support, with a noticeable presence of dominant socialist financing institutions. Subsequently, specialized banks were established for housing finance and national development, leading to the introduction of the Algerian dinar as the national currency in early 1964. Its development continued through the 1970s and until 1986, supporting the establishment of other institutions like the Agricultural and Rural Development Bank and the Microcredit Development Bank[3].

During the 1970s and 1980s, there was a phase of economic and political shifts, leading to economic reform initiatives in the 1990s. After independence, Algeria adopted a socialist-oriented system, abandoning the French franc-based financial system and establishing sovereign monetary and fiscal institutions.

2.1. Public Treasury:

The Public Treasury was established on August 29, 1962, and was entrusted with all financial operations of the state, local authorities, and administrative public institutions. It serves as a crucial tool for implementing the state's investment policies. The Treasury is classified into two main groups[4]:

The first group involves executing the annual financial and budgetary laws of the state.

The second group includes Treasury operations, which consist of:

-Deposits management for state accounts.

[3] *Ashour Amal, (2014/2015), "The Banking System: From Public Nature to Privatization of Activity," Master's Thesis, Faculty of Political Science, University of Kasdi Merbah - Ouargla, p. 5.*

[4] *Taïr Latrèche, (2003), "Banking Techniques," 2nd Edition, University Press, Algeria, p. 179.*

-Public debt operations aimed at ensuring liquidity and managing revenue inadequacies.

-Granting various types of loans.

2.2. Central Bank of Algeria (CBA):

The Central Bank is considered the monetary authority established in independent Algeria. It was founded on December 13, 1963, by Law No. 144/62, inheriting the functions of the Bank of Algeria established during the colonial period. With its establishment, Algeria aimed to break any ties with colonialism and assert its sovereignty and independence.

The Central Bank was entrusted with all central banking functions in each monetary sphere. It is responsible for currency issuance and circulation, regulating the banking system, determining and controlling monetary policies, and serving as the government's bank. Additionally, it provides facilities to the Treasury through advances or discounted bonds backed by the government.

2.3. Algerian Development Bank (B.A.D):

The Algerian Development Bank was established by Law No. 165-63 issued on May 7, 1963. It was restructured as the Algerian Development Bank in 1972. The Algerian Development Bank inherited the activities of four medium-term credit institutions and one long-term credit institution that operated during the colonial period. These institutions included the Housing

Loan, National Credit, Deposit and Savings Bank, State Contracts Bank, and the Development Bank of Algeria.

2.4. National Savings and Reserve Fund (C.N.E.P):

The National Savings and Reserve Fund was established on August 10, 1964, by Law No. 227/64. Its mission is to collect small savings from families and individuals. Regarding lending, the Fund is tasked with financing three types of operations: building savings, local authorities, and some specific operations with national benefits. Within these operations, the Fund can purchase government bonds issued by the Public Treasury.

Starting from 1971, by decision of the Ministry of Finance, the National Savings and Reserve Fund was designated as a national housing bank. This designation provided a strong impetus, as incentives for housing acquisition through the Fund's programs increased household savings and boosted its financial resources. Within its lending policy for housing, the Fund provides loans for building new houses, purchasing new houses, or participating in real estate cooperatives.

2.5. National Bank of Algeria (B.N.A):

The National Bank of Algeria was established on June 13, 1966, and is considered one of the commercial banks established in independent Algeria. It replaced several foreign banks, including the Housing Loan Bank for Algeria and Tunisia, the Industrial and Commercial Office Bank, the National Bank of Trade and Industry in Africa, the BNP Paribas Bank, and the Maasker Bank. It's worth noting that the mergers of these banks into the National Bank of Algeria occurred on various dates Different As a commercial bank, it collects deposits and grants short-term loans

2.6. People's Credit Bank of Algeria (C.P.A):

The People's Credit Bank of Algeria was established on May 14, 1966, and it acted as a rural bank founded in Algeria. It was established on the basis of the Algerian People's Credit Bank branches in Algiers, Oran, Constantine, Annaba, and the Central Bank of Algeria for People's Credit. Subsequently, it absorbed three foreign banks: Banque de Marseille, Crédit Foncier de France, and Banque Mixte d'Algérie-Égypte. Like the National Bank of Algeria, the People's Credit Bank of Algeria collected deposits and provided short-term loans. Starting from 1971, it also began offering medium-term loans. With its banking specialization, the People's Credit Bank of Algeria provided loans for the agricultural, artisanal, and tourism sectors, as well as fisheries development in rural areas.

2.7. Foreign Bank of Algeria (B.E.A):

The Foreign Bank of Algeria was established in October 1967 by Order No. 204/67, making it the third and final rural bank established in accordance with the nationalization decisions of the banking sector. It was established on the basis of the liquidated branches of several foreign banks: Crédit Lyonnais, Société Générale, Crédit du Nord, Banque Industrielle de l'Algérie et du Maghreb, and Banque Barclay. It conducted all commercial banking activities and thus became a mandatory deposit collector. In addition to lending, it financed foreign trade operations, provided loans to states, facilitated Algerian exports, and provided financial support for them.

2.8. Agricultural and Rural Development Bank (B.A.D.R):

The Agricultural and Rural Development Bank was established on March 13, 1982, by Decree No. 206/82. In reality, it was established as a subsidiary of the National Bank of Algeria. It acted as a rural bank, collecting both current and savings deposits regarding the lending aspect of this bank, it is considered a bank specialized in the agricultural sector, and in this field it can grant loans to finance the agricultural sector, promote agricultural and craft activities, and finance food industry activities and various activities in the countryside.

2.9. Local Development Bank (B.D.L):

The Local Development Bank was established on April 30, 1985, by Decree No. 85/85, making it the last rural bank to be established in Algeria before the era of reforms. It collects deposits and provides loans to support community associations and public utilities.

The most important reforms of the Algerian banking system and their causes (motivations)

3. Reforms of the Algerian banking system

The reforms that affected the national economy also included the banking sector, in order for it to adapt to the mechanisms of the market economy and thus rely on modern management techniques in order to achieve effectiveness and improve performance. The most important of these reforms are Law 12/86, Law 01/88 relating to the independence of institutions, and Law 10/90 relating to with cash and loan.

3.1. Monetary reform:

Pursuant to Law No. 86-12 issued on August 19, 1986 relating to the banking and loan system, a radical reform was introduced to the banking function, the most important of which are:

- The Central Bank restored its role as a bank for banks, and began to undertake the traditional tasks of central banks. It was also separated from commercial banks.

- Financial institutions regained their role within the financing system by mobilizing savings and distributing loans within the framework of the national loan scheme. After this law, banks became able to receive deposits regardless of their form and duration. They also became able to grant loans without specifying their duration or the forms they take. They also regained the right to monitor the use and return of the loan.

-Reducing the role of the treasury in the financing system and establishing supervisory bodies over the banking system and other advisory bodies.

3.2. Law of 1988 and reform adaptation

The 1986 law was issued before the reform laws were issued in 1988. Accordingly, some of its provisions are no longer in line with the requirements of the new reforms brought by Law 88-06, Issued on January 12, 1988, amending and supplementing Law 8-12 mentioned above, which grants independence to banks, Within the framework of the new organization of the economy and institutions, and within this framework we can conclude the main elements that came the law is as follows:

The bank is considered a commercial legal entity subject to the principle of financial independence and accounting balance. This means that the bank's activity is subject, starting from this date, to the rules of commerce and must follow the principle of profitability during its activity, In addition, the cost-effectiveness. Non-bank financial institutions can carry out financial employment operations, such as obtaining shares and bonds issued by institutions operating inside and outside the national territory. Loan institutions can also turn to the public for long-term borrowing, and they can also resort to requesting external debt. The bank has now played a fundamental role in conducting monetary policy

3.3. Reforms to the Monetary and Loan Law 1990

The banking system has witnessed remarkable development since 1990, and the true independence of the banking and financial system did not appear until after the issuance of Law No. 90-10 issued on April 14, 1990, relating to cash and loans. Among the most important basic axes of this law, we find granting independence to the Central Bank of Algeria and restoring it to its traditional powers. The principles are also on which Law 90-10 is based; it shows what the banking system will look like in the future. These are the principles Separation between the monetary circle and the real circle, The Monetary and Loan Law builds a principle between the monetary and real circles. Monetary decisions are no longer made on a quantitative basis by the Planning Commission, but are taken on a quantitative basis. The basis of the monetary objectives set by the monetary authority. Among the most important objectives achieved by this principle are:

Restoring the central bank’s role at the top of the monetary system. Restoring the dinar to its traditional functions and unifying its use among public institutions. Move and activate the money market. Creating relative flexibility in setting interest rates by banks.

Separation between the monetary department and the state budget department:

According to this principle, the treasury is no longer free to finance its deficit by resorting to the central bank. This principle achieves the following goals:

-The independence of the central bank from the growing role of the treasury.

-Reducing treasury debts to the Central Bank and paying off previous debts accumulated on it.

-Creating appropriate conditions for monetary policy to play its role effectively.

-Reducing the negative effects of public finances on cash balances.

-Separation between the State Budget Department and the Loan Department

The treasury played the primary role in financing the investments of public institutions, as the banking system was marginalized and its role was limited to recording the passage of funds from the treasury department to the institutions. The Monetary and Loan Law was aware of this problem, as it excluded the treasury from granting loans to the economy, so that its role remained limited to financing strategic investments planned by the state. Starting from this moment, the banking system became responsible for granting loans within the framework of its traditional tasks. Separating these two departments allows achieving the following goals:

Decreasing treasury obligations to finance the economy.

Banks and financial institutions will restore their traditional functions, especially those of granting loans, Loan distribution is no longer subject to administrative rules, but is based primarily on the concept of the economic feasibility of projects.

Establishing a single and independent monetary authority.

The monetary authority was represented at several levels at the level of the Central Bank and at the level of both the Ministry of Finance and the Treasury. The Monetary and Loan Law abolished this pluralism by establishing a single and independent monetary authority called

The Monetary and Loan Council, which consists of the governor and his three deputies, with the addition of three high-level employees, The Monetary and Loan Law made this sole monetary authority to ensure the harmony of monetary policy and be independent to implement it this policy is in order to achieve monetary objectives, It is one of the most important banking institutions that emerged after the 1990 reform Establishing a two-level banking system.

The Monetary and Loan Law established the principle of a two-level banking system. This means distinguishing between the activity of the central bank as a monetary authority and the activity of commercial banks as a distributor of loans. Under this chapter, the Central Bank effectively became a bank for banks, monitoring their activities and following up on their operations. He can also use his position as a last resort for lending in influencing banks' lending policies as required by the monetary situation, and by virtue of his leadership of the monetary system and his presence above all banks, he can determine the general rules of banking activity and the criteria for evaluating this activity, In the direction of serving its monetary objectives and controlling its policy.

4. The reasons and motivations for Algeria undertaking economic and financial reforms:

4.1. Internal reasons and motivations:

Algeria relied on industry and neglected agriculture. It adopted planning and neglected the rules of rational economic management. It preferred the public sector and neglected the private sector.

The absence of a development model in the 1980s. Despite the Algerian government's attempt to apply some of the principles of capitalist oil, the wheel of development stopped due to the decline in investments resulting from a sharp decline in resources.

The country was completely dependent on fuel as a result of the decline in oil prices and the decline in external debt. The high volume of imports of essential goods and services, such as food and entertainment, led to a deficit in the balance of payments, a high volume of external debt, and inefficiency in the public sector, so that Algeria introduced important reforms, beginning with the independence of institutions, with the aim of achieving decentralization in decision-making.

4.2. External causes and motivations

Global changes in oil prices: As Algeria's dependence on fuel resources exceeds 95% in all stages of development of the Algerian economy, it created a real crisis when fuel prices fell in 1986 and the dollar exchange rate declined.

External debt: Algeria, like other developing countries, fell into the trap of external debt, as foreign financial and monetary markets opened opportunities to lend to the Algerian authorities under the pretext of development that they adopted, The government in the first four-year plan (1970-1974) and the second four-year plan (1974-1977).

The external changes, represented by the collapse of the socialist system in Eastern European countries, and the adoption of a liberal economic model by these countries, obliged the Algerian authorities to keep pace with the internal and external economic transformations in order to bring about deeper and more comprehensive reforms.

5.Challenges facing the Algerian banking system

The banking sector represents the basic pillar of any economic and social development. We can limit the most important challenges facing the banking sector in Algeria to two basic types: internal and external challenges.

5.1. Internal challenges

[5]It relates to the reality of the Algerian banks themselves, the most important of which are the following:

-Small size of banks: Despite the development that Algerian banks have witnessed in terms of increasing their assets and capital, they still suffer from their small size compared to Arab and foreign banks, as the prevailing trend now is the merger of banks among themselves in order to strengthen their position and enhance their efficiency.

-Concentration in the share of banks: The high degree of ownership of the total banking assets by a small number of banks as public commercial banks own more than 95% of the total assets, which limits competition, because in such cases the practices of some banks have important repercussions on the performance of other banks and the development of the banking industry, which fundamentally affects market performance.

-Fragmentation of banking activity: The development policy followed in Algeria, which is based on allocating financial resources in a planned manner to include various aspects of economic activity to achieve comprehensive development, has led to the creation of a type of specialization in banking activity, by making loans available to a specific sector in itself. This

[5] *Qalmin Fayza, (2014/2015), reforms of the Algerian banking system and their effects on the mobilization of savings, thesis for obtaining a master's degree in economic sciences, specializing in finance and money, Mohamed Boudiaf University of M'sila p. 99*

was reflected in the fragmentation of banking activity, which suppressed the mechanism of competition in the banking market, reducing incentives, expanding its financial portfolio, and managing the risks resulting from it.

-Bank ownership structure the ownership structure of the banking system in Algeria is characterized by the large shareholding of the public sector, and the presence of ownership and control in the financial structure of banks has affected the strategies and operations of banking institutions.

Weak efficiency of payment systems Payment settlement systems suffers from a significant weakness of the traditional method used to complete clearing operations, which often relies on the manual method of examining and processing debt instruments. In general, the weaknesses that control the banking system are concentrated in several areas The most important points are:

Low efficiency of employees in the banking system, especially in public banks. Weakness and decline in the number of banking services provided by Algerian public banks.

The control of routine management over the work of Algerian banks and the absence of the spirit of innovation and creativity.

The traditional banking style dominates the work of Algerian banks, which is represented in bringing in deposits and granting loans.

-Weakness and lack of use of banking industry technology.

-Weak capital base in the banking system in general.

-Poor credit portfolio in the banking system, especially public sector banks, and high non-performing loans

-Weak oversight of banking activity and the application of sound governance concepts to Algerian banks and the lack of use Optimum resources available to it in addition to the high volume of liquidity, but it remains not used rationally and properly

Scattered loans the previous lending practice in Algeria led to a noticeable deterioration in the quality of banks' loan portfolios, which was later exacerbated by the unfavorable general economic conditions, which limit the ability of banks to perform intermediary functions.

Weak use of technology and oversight. The banking system in Algeria needs to increase the level of investment in banking technology and apply modern systems and programs in order to be able to keep pace with competition in internal markets. The use of technology also increases the speed of settlements and increases transparency, as it allows all available information to be published immediately, which increases investors' confidence in banks, and international competition requires the presence of comparable data according to unified standards.[6]

Tightness of the primary and secondary money market: The banking system needs an organized and developed money market because it is of great importance that cannot be ignored, through which it secures cash liquidity and provides payment tools to banks, and through this, these banks can finance economic activity in various sectors at the lowest possible cost. In the same context, the Algerian Stock Exchange remains modern and is characterized by a lack of transactions, which deprives Algerian banks of the advantages of dealing with this market through financing, and this requires more efforts, reform, and the provision of specialized expertise with high technical capacity and competence.

Regulatory financial and accounting restrictions, including the inadequacy of the sectorial accounting plan for banks in covering accounts and methods for processing banking operations, as well as the absence of accurate banking analytical accounting adapted to the reality of these banks.

Legal restrictions, which are the sum of the legal and legislative texts and regulatory instructions that frame banking activity, as we do not see in reality the independence and dealing on the basis of returns stipulated in Law 88-0 amending and supplementing Law 86-12. Rather, we find in practical reality the permanent interference of the state in directing policies. Commercial banks[7].

5.2. External challenges

Among the most prominent challenges are:

[6] *Abdel Qader Breish: (2005/2006), Banking liberalization, requirements for developing banking services, and increasing the competitiveness of banks. Doctoral dissertation in economic sciences Management Sciences, Money and Finance Branch, p. 92*

[7] *Othmani Saliha: year (2015/2016), The reality of the Algerian banking system and its role in economic development, memorandum for obtaining a master's degree in economic sciences, specializing in banking money and international finance, Belhaj Bouchaib University, Ain Temouchent,, p. 34*

The phenomenon of globalization, and we mean in particular the globalization of banking services, which will directly affect the performance of Algerian commercial banks.

The phenomenon of integration of international markets This phenomenon spread following the removal of international restrictions on the supply of banking and financial services due to the increase in capital flows that exceeded the volume of global trade in goods, which led to an increase in the number of bank branches and then an increase in the share of foreign commercial banks in the local banking markets in many countries of the world.

The phenomenon of bank mergers is one of the external challenges facing Algerian commercial banks in the form of giant banks.

The phenomenon of electronic banks: These banks are considered a first-class challenge to our banking system, which must be confronted with all determination and seriousness, as electronic banks are characterized by their superior and very fast ability to provide banking services at any time and without interruption (24/24 hours) and even on holidays, and from anywhere. By any means.

6.The importance of commercial banks:

Financial Assets: Commercial banks typically hold approximately three-quarters of all financial assets in the economy. They serve as the primary means of payment, with the ability to generate money through reserves created from public deposits.

Monetary Policy Transmission: Commercial banks play a crucial role in transmitting the monetary policies of the government. They implement policies such as interest rate adjustments and reserve requirements set by the central bank.

Financial Intermediaries: They serve as the primary storehouse of the financial system, facilitating the flow of funds between savers and borrowers.

Wide Range of Financial Services: Commercial banks offer a wide range of financial services catering to the credit, payment, and savings needs of individuals, businesses, and governments. They are better equipped to provide these services compared to other financial institutions.

7.Objectives of commercial banks:

- Profitability: Like any other business institution, commercial banks aim to maximize profits to satisfy their shareholders. Profitability is achieved through the difference between total revenues and total expenses, primarily generated from lending, investments, and various banking services.

- Liquidity: It represents the bank's ability to maintain a balance between deposits and withdrawals at any given time. Lack of liquidity can lead to insolvency and a loss of customer trust. Hence, banks must manage their liquidity effectively to meet customer withdrawal demands promptly[8].

The bank must protect itself from the risk of liquidity and not risk investing all of its money to make a profit only, but rather leave a portion of it to meet sudden withdrawal requests.

- Safety: The commercial bank's capital is relatively small, as its ratio to net assets usually does not exceed 10 percent. This means a small edge of safety for depositors; on whose money the bank relies as a source of investment. The bank cannot absorb losses that exceed the value of the capital. If the losses exceed that, they may consume part of the depositors' funds, and the result is the bankruptcy of the bank.

The primary goal that the Commercial Bank seeks remains maximizing profit, which is what the bank's owners primarily target, while liquidity and security are targeted by depositors, and are achieved through legislation and directives of the Central Bank that reduce the chances of the Commercial Bank being exposed to financial hardship and increase the state of safety.

The bank's objectives may also expand, the most important of which are:

7.1. Financial goals:

-Maximize the interest rate to continue.

-Maintaining a reasonable structure of liquidity, meaning that there is a sufficient amount of it in the bank's possession that is sufficient to meet its obligations to customers at all times and various outstanding debts.

7.2. Production goals

-Improving and developing banking services to meet customer requirements.

[8] *dief khalaf, (2014-2015), Commercial banks and their role in financing foreign trade. This information is referenced from a master's thesis in Management Sciences at the University of Oum El Bouaghi, Algeria, from the academic year pages 22-23.*

-Reducing the costs of banking services provided.

-Reduce wasted time.

Objectives for survival, continuity, and avoiding dangers.

Objectives for growth, continuity, and preserving its financial and human resources.

Social and environmental objectives such as achieving satisfactory levels of revenues or services for the dealing parties Internal and external[9].

8.Sources of financing: commercial banks.

Commercial banks' financing sources can be divided into internal and external sources as follows:

8.1. Internal source: "It is divided into:

8.1.1Capital represents: the funds that the bank obtains from the owners of the project when it begins its formation. This source represents a small percentage of the total funds that the bank obtains from all sources, but the importance of this source cannot be overstated as capital helps create confidence. In the hearts of those dealing with the bank, especially those with deposits, as capital determines the value of the guarantee on which depositors rely against any changes that occur in the value of the assets in which the bank invests its money.

8.1.2 Reserves: are the amounts deducted from profits annually with the aim of not being able to distribute profits from them. Reserves are of two types:

-Restricting it to achieve certain purposes. This means a legal reserve, as the bank is obligated to supply it by virtue of the law issued by the Central Bank in this regard, and it represents a percentage of the deposits with the bank.

-The special reserve, which the bank maintains voluntarily. It is usually called the "hidden reserve," as it is kept to represent this reserve to cover high expenses in the future.

8.2. External sources represent the bank's obligations to others and are represented in:

[9] *Mubaraka Boulkarun, (2013-2014), The Risks of Bank Loans, a memorandum for obtaining a Master's degree in economic sciences in Sakra, Mohamed Kheidar University, p. 30.31.*

8.2.1 Deposits: They are considered one of the most important sources of commercial bank financing. They are debts owed to their owners by commercial banks, and are divided into three main types, the most important of which are:

-deposits (demand deposits are amounts deposited with a commercial bank that the bank undertakes to pay at any time when the deposit holder wishes to withdraw them in whole or in part. They are usually withdrawn by check, and no interest rates are paid on them, as this type of deposit represents the primary source of liquidity. Commercial banks.

- Term deposits: means deposits according to which the bank is obligated to pay at a later time than its deposit, as agreed upon by the depositor and the bank, and on which the bank pays interest rates to the depositor in exchange for waiting for a period of time.

There are also what are called fixed deposits with notice, which are the ones that the bank agrees with its owners to pay at a specific time. When withdrawing, the depositor must notify or notify the bank before the appropriate time from the date of withdrawal, and the bank will pay interest rates on it[10].

- Savings deposits: This type is deposited in mailboxes or savings banks, and their owners obtain books on which deposit and withdrawal payments are recorded and the banks pay the interest rate on them[11].

Checks, transfers, and periodic credits: are discounts and obligations that the bank must pay on the due date.

8.2.2 borrowing from the Central Bank: Banks resort to borrowing for various reasons, when banks go through a crisis

Liquidity for any reason, it resorts to lending from the central bank, but if it wants to increase its ability to invest and expand when there are good investment opportunities, then it issues debt

[10] *Nour Bahiwa,(2017-2018), The Role of Commercial Banks in Financing Small and Medium Enterprises, Master's Degree Thesis, M'Sila, Mohamed Boudiaf University, pp. 15-16,*

[11] *Abdul Wahab Youssef Ahmed, (2008), "Finance and Financial Institutions Management", First Edition, Dar Al-Hamid for Publishing and Distribution, Jordan, p. 157.*

bonds whose interest is lower than the returns it will earn from investing the money collected from selling these bonds[12].

9.What are bank loans?

The bank's function considers its interests and individuals to be one of the most important functions, the most important of which is investing the bank's financial resources, so that it is based on knowledge of their ability to expand issues and their benefits, which is the basic resource on which the bank depends to represent the largest part and it is possible to pay the interest due to its depositors.

The first requirement: the concept of banking reasons, their importance, and their characteristics.

9.1. Definition of bank loans.

Providing loans is considered one of the most important banking operations, as it expresses all trust and confidence on the part of the customer bank based on guarantees of protection from this party. The ninth delay in the bank loan is an advanced form of financial intermediation services. This intermediation has begun to form the transfer of funds from units with high income to units without inability.

We took the word “credit” in English, and found that it grew from command to “credo” in Latin, which is a mixture of two terms.

- “cred” means trust.
- “Do” means “put”.

The term means “I put trust.” Trust is the basis of every idea that grants a loan. Here are some definitions of financing. It is the exchange of a present value for the survey only. When the lender offers the borrower a sum of money, he is exchanging a present value with him in the hope of obtaining the value in a way that is usually greater than the value. Introduction) when the loan amount is repaid in the agreed future.

[12] *Hussein Mohammed Samhan, Soheil Ahmed Samhan Al-Wadi, Mahmoud Hussein Al-Naqood, (2010), "Money and Banks", First Edition, Dar Al-Masira for Publishing, Distribution, and Printing, Jordan, p. 162.*

A private loan is a leasing of capital or purchasing power based on the trust deserved by a specific legal or natural person due to the large insurance that the loan includes, as the debtor must invest the borrowed capital until he chooses who will return it in addition to the interest due on it.

As for the Algerian Money and Loan Law, amended in 2003, in its article 86, it defines a loan as follows: “The method of loan, in the meaning of this matter, is every act of exchange of consideration by which a person places or prepares a commercial contract under the umbrella of another person’s law, or takes within it the relationship of the requested person as a goal.” “By signature, such as a reserve guarantee, guarantee, or guarantee

According to Article 32 of the Banking Law dated August 19, 1986, the process of granting credit is defined as any contract through which a qualified institution places funds at the disposal of legal or natural persons, or both, on the condition that they sign or endorse for it[13].

According to "Mannel Deseze," loans are an essential cornerstone for businesses, as without them, institutions cannot develop, especially in the modern world. Therefore, loans are the fundamental factor for the advancement of humanity[14].

According to "G Petit Dutalis," providing a loan implies acknowledgment of trust, where the lender commits to repay or return the borrowed amount after a specified period[15].

Bank loans are defined as those services provided to clients, through which individuals, institutions, and entities in society are supplied with the necessary funds. The debtor undertakes to repay the borrowed funds, along with their interest and applicable fees, either in a lump sum or in installments on specified dates. This relationship is reinforced by providing various forms of collateral without loss[16], A loan is defined as the lending of money for investment in production and consumption, based on two fundamental elements: trust and duration.

[13] *Wafa El Qoursou, (2018-2019) "The Impact of Bank Loans on Economic Growth," Doctoral Thesis, Tlemcen, Abi Bakr Belkaid University, p. 26.*

[14] *Nasira Yahyaoui, (2013), "The Role of Bank Loans in the Development of the Agricultural Sector in Algeria," Journal of Economic Future, Volume 1, Issue. Algeria, December p. 37.*

[15] *Raqa Mohamed Al-Amin, as previously mentioned, p. 39.*

[16] *Islam Abdelkader Othman, (October 11, 2017), "Bank Loans as a Tool for Financing Economic Institutions and Real Estate in Algeria as a Model," First Edition, Alexandria, p 9.10.11*

Bank loans are also defined as acts of trust between individuals. The bank, as the creditor, grants funds to a person who is the debtor, promises to grant them, or guarantees them to others, in exchange for interest. The debtor undertakes to repay after the agreed-upon period between the parties, Bank loans are essential and important factors in the process of creating credit, resulting in an increase in deposits and the circulating cash (quantity of means of payment).

9.2. The importance of bank loans:

Bank credit is of utmost importance in economic activity due to its interconnected and multi-dimensional impact on the national economy. It is considered one of the most important sources for meeting the financing needs of various economic sectors. Granting loans enables banks to contribute to economic activity and its development, as well as the prosperity of the society they serve. Loans create employment opportunities and increase purchasing power, which, in turn, helps in the utilization of economic resources and improves living standards. The importance of bank loans is further emphasized in the following points:

-Bank loans are the primary source on which banks rely to generate their revenues, as they represent the largest portion of their operations. Therefore, banks pay special attention to bank loans.

-An increase in the proportion of loans in bank budgets always indicates the growing importance of interest and commissions as a source of revenue, enabling banks to pay the due interest to their depositors.

-Bank loans are a fundamental and important factor in the process of creating credit, resulting in an increase in deposits and circulating cash (quantity of means of payment).

-Loans play a crucial role in financing the needs of industry, agriculture, trade, and services. Borrowed funds enable producers to purchase raw materials, pay necessary labor wages, finance future sales, and sometimes acquire production goods themselves.

In addition to the above, bank credit serves the following purposes:

-Facilitating transactions, which have become the basis of contracts, through the promise of repayment.

-Serving as a means to transfer capital from one person to another, thus acting as an intermediary in exchange.

-Utilizing bank credit for state supervision of projects through dedicated credit balances.

-Assisting in savings and reducing consumption, which helps in combating inflation.

Bank loans are the primary resource relied upon by banks to generate their revenues, as they represent the largest portion of their operations. Therefore, commercial banks pay special attention to bank loans, as they constitute a significant percentage of their overall operations, as evidenced by studying the consolidated budgets of commercial banks in the Gulf Cooperation Council countries.

In addition, the increasing percentage of loans in the budgets of commercial banks always indicates the growing importance of interest and commissions as a source of revenue. This enables banks to pay the due interest to their depositors and manage and organize profits suitably, while retaining a level of liquidity to meet the withdrawal needs of clients.

Bank loans, provided by commercial banks, are important factors in the process of creating credit, resulting in an increase in deposits and circulating cash (quantity of means of payment). Loans play a crucial role in financing the needs of industry, agriculture, trade, and services. Borrowed funds enable producers to purchase raw materials, pay necessary labor wages, finance future sales, and sometimes acquire production goods themselves.

Furthermore, loans assist wholesale and retail traders in obtaining goods, storing them, and then selling them either for cash or on credit. In summary, loans are used in production, distribution, and consumption processes.

This means that granting loans enables banks to contribute to economic activity and its advancement, as well as the prosperity of the society they serve. Loans create employment opportunities and increase purchasing power, which helps in the utilization of economic resources and improves living standards.

9.3. Characteristics of Bank Loans:[17]

Bank credit is provided to both large and small enterprises, with larger enterprises having a greater need for bank credit to finance their projects. It enjoys the following characteristics:

[17] *Abdel Hamid Abdel Muttalib, (2000), Comprehensive Banking Operations and Management, Alexandria: Dar Al Jamea Al Iskandariyya, pp. 104-105.*

- Trust between parties: It is one of the most important characteristics of credit. The bank must have trust in the customer who will repay the loan on time.
- Determination of maturity date: There must be a time gap between the disbursement of funds and their maturity.
- Commitment or initiative: The bank offers credit to the customer after the latter agrees to the terms of the contract.
- Profit or initiative: The customer must pay the price for using these funds, represented in the form of interest[18].

Section 2: payment tools in banks

1.The payment system

The payment system constitutes one of the main components of a country's monetary and financial system. The proper functioning of the payment system which ensures the proper functioning of the banking system and therefore the economic development of a country.

2.Payments Tools

For a payment transaction to take place, the parties must agree on the payment instrument. Payment tools are the raw material of payment systems. Starting with classical payment tools that encompass both fiat money and scriptural money, then moving on to modern payment tools, which consist of electronic money.

3. Classical Payment Tools

Payment tools are considered to be any instruments that allow any person to transfer funds, regardless of the medium or technical process used.

3.1. Fiat Currency Fiat currency consists of:

-Banknotes

-Coins

[18] *Mahfouz, Amal Al-Attawi and Warda, previously mentioned reference, pp. 15-16.*

Fiat currency has a dual monetary nature: it is defined as both a monetary medium and a monetary instrument that allows various economic agents to conduct their transactions. It serves as a monetary medium as it represents units of payment denominated in a unit of value or account. It is a monetary instrument because it enables the transfer of the payment units it represents from one asset to another through simple tradition[19].

Fiat currency issued by the central bank acquires legal tender status, to the exclusion of all other forms of currency. It has unlimited discharge power. It is prohibited for anyone else to issue.

3.2. Scriptural Money

Scriptural money is simply a number recorded in a bank's ledger against the name of a person or a company. Through a simple bookkeeping entry. It can serve as an intermediary for exchanges between individuals or businesses that have an account with a bank or postal checks to circulate scriptural money, payment instruments such as:

3.2.1. The Check

While cash transactions have the advantage of simplicity, they are not very useful when it comes to making remote payments or for large amounts. The check offers infinitely more advantages for this purpose.

Definition of the check

According to Luc Bernet-Rolland: "the check is a written document by which a person referred to as the drawer orders another person referred to as the drawee to pay a certain amount to the holder or to a third party, called the payee, up to the funds deposited with “The drawee “

So, the check is a written document by which a customer orders his bank to pay a certain amount to the person he designates.

The check thus involves three parties:

-The drawer: It is the one who draws up and signs the check; he must be capable

-The drawee: It is the one who holds the funds and pays; it can be a bank, a stock exchange company, a general paymaster treasurer, etc.

[19] *S. PIEDELVIERE. (2000), "Instrument of credit and payment," Edition DALLOZ, Paris, p151.*

-The payee: It is the one who receives the payment. the check can be stipulated payable to a named person, or to the bearer (if the check is not crossed). it can also be issued blank; in this case, it is treated as a bearer check. The check can be issued in favor of the drawer himself.

Characteristics of the check

Are divided into mandatory and optional mentions.

- Mandatory mentions: The mandatory mentions of the check are six (06) "Article 472 of the Algerian Commercial Code":

a- Mention of the check: The denomination of the checks inserted in the text of the title itself and expressed in the language used for its drafting;

b- Amount to pay a determined sum: The check is payable on demand, it cannot be subject to a condition (pay if...), nor to a term (pay on such date). The amount to be paid must be written in figures and in words, in case of difference between the amount in figures and in words, the check is valid for the amount written in words;

c- The drawee: The name of the one who must pay;

d- Place of payment: The place designated next to the name of the drawee is the place of payment, if several places are indicated, the check is payable at the first place indicated. If no indication of place is given, the check is payable at the place where the drawee has its main establishment;

e- Date and place of creation: The indication of the date and place of creation of the check, the check without indication of the place of its creation is considered as subscribed in the place designated next to the name of the drawer, on the other hand, regarding the date, it is appropriate to refuse to accept an undated check (absence of a mandatory mention)[20];

f- The signature: The signature of the person issuing the check (the drawer) must be handwritten.

- Optional mentions: The check sometimes includes certain optional mentions, among them, three are very frequently encountered: the mention regarding the prohibition of the payee (this

[20] *ROLLAND, Luc-Bernet. (2001), "Principle of Banking Technique," 21st Edition DUNOD, Paris p42. 2 Internal bank documents.*

mention is optional because some checks can be made payable to the bearer if they are not crossed), the one prohibiting endorsement (a non-endorsable check), and those relating to crossing (non-endorsable except in Favor of a bank or similar institution).

a- Endorsement: Endorsement is a means of transferring ownership of negotiable instruments and checks. Therefore, the endorsement is written on the back of the check. It must be signed and dated by the endorser to potentially release the bank's liability regarding presentation deadlines.

b- Crossing: Crossing is done by two parallel lines placed on the front of the check; a crossed check cannot be paid:

Except to a banker, or to the person whose name appears between the two lines (special crossing), or to any banker if there is no name between the two lines (general crossing).

Except to a client of the banker on whom the check is drawn.

In case of loss or theft of a crossed check, the thief can only cash it through a banker; therefore, if the banker handles the cashing because the thief has an account with him, it will be easy to pursue the fraudster later, who will have denounced himself, and if the check is presented by a stranger, the banker will not accept it without obtaining the necessary information[21].

Types of Checks There are several types of checks:

a-The visa checks

The visa check is an ordinary check for which the drawee guarantees the existence of the provision at the time of creation. This guarantee is provided by the opposition of a visa. This possibility is practically never used.

b-Certified Check

The certified check is an ordinary check issued by the account holder, for which the bank confirms the existence of sufficient funds during the collection period by affixing the mention "certified for the amount..."; The certification of the check can be requested by the drawer or the payee; it can only be refused by the drawee for insufficient funds.

[21] *ROLLAND, Luc-Bernet. Op.cit, page 44.*

c-Banker's Check

Firstly, it is specified that the banker's check has replaced the certified check. The banker's check is a check issued by a bank either from one of its branches or from another bank. This check can be requested by a bank's client or by those who do not have a bank account and do not wish to open one; the person requesting the check must immediately pay the amount.

d-Traveller’s Check

A traveller’s check is a pre-printed check with a fixed amount, designed to allow the signer to pay a third party without any conditions. After paying the issuer of the check to obtain this privilege. Since a traveller’s check can usually be replaced if lost or stolen, they are often used by vacationers traveling abroad.

e-Crossed Check

A crossed check1 is distinguished from a regular check by the two parallel lines drawn by the drawer, or by a bearer, from left to right, diagonally across the check.

3.2.2. Deposit: A deposit is a banking transaction in which the client deposits cash to fund his own account or that of a third party.

Deposits can be made by the account holder, but also by any person who does not have to justify their identity.

On the cash deposit slip, the name of the account holder, the account number, and optionally the name of the person who made the deposit, if they are not the account holder, will be mentioned. Deposits can be made at any branch of the bank.

3.2.3. Transfer: Luc Bernard defined a transfer as an operation that involves debiting one account to credit another.

And according to Dominique Rambure: "The transfer order issued by the debtor is sent to his bank in order to transfer funds to another bank or another account at the same bank." It is the technique by which an originator requests to debit his account by a specified amount to credit, with the same amount, another account of a beneficiary. The beneficiary can be the originator himself or a third party. The transfer thus allows funds to be transferred from one account to another without the movement of cash.

The transfer has many advantages: it is easily automated. Its use is very simple, cheaper, and the risk of non-payment is nonexistent; its informational content is extensive.

-Operation Mechanism:

The model of the transfer order is generally provided on special forms made available free of charge by banks to account holders.

But the originator can use a simple letter duly signed and completed with all the information necessary for its execution, namely:

-The client's signature;

-The amount of the transfer in numbers and in words;

-The name of the originator and their account number;

-The name of the beneficiary and their complete account number;

-The date of the transfer order.

After verifying this information, the banker will confirm the existence of sufficient funds. They will then proceed with the rapid execution of the transfer because once the transfer order is issued.

Accepted, the banker's responsibility is engaged in case of damages caused to the client or their relationships.

-Different Forms of Transfer Two forms of transfer are distinguished:

-Direct transfer: The transfer is "direct" when it is made between two individuals, each having an account with the same bank (on the books of the same branch or on the books of two different branches of a single bank). In this type of transfer, the originating branch transfers the amount through a link (credit advice) sent to the beneficiary client's branch.
-Indirect transfer: The transfer is "indirect" when it is made between two individuals holding accounts in different banks. In this case, it is necessary to use clearing to carry out the operation.

3.2.4. Direct Debit: The account holder authorizes a creditor to debit any amount owed to them from their account. It should be noted that the authorization is generally comprehensive and rarely specific regarding deadlines or amounts. Direct debits are frequently used for settling electricity or telephone bills, for loan repayments, and generally for recurring debts.

3.2.5. Negotiable Instruments: When companies provide services or deliver goods, they may demand immediate payment. However, to compete or comply with the customs of their profession, they are often obliged to accept or propose deferred payment. To guarantee payment at maturity, the seller may demand the delivery of a document called a negotiable instrument, so we will see in turn the bill of exchange, the promissory note, and the warrant.

- Bill of Exchange: The bill of exchange is a written document by which the drawer invites the drawee to pay a specified sum to the beneficiary or their order at a agreed-upon maturity.

- Validity Characteristics: The validity characteristics of the bill of exchange consist of mandatory mentions and optional mentions,Mandatory mentions of the bill of exchange:

The denomination of "bill of exchange": Inserted in the text of the document and expressed in the language used for its drafting.

Amount: The order to pay a specified sum; the bill of exchange, whose amount is written both in words and in figures, is valid for the amount written in words in case of any discrepancy. If the amount is written multiple times, either in words or in figures, the bill is valid for the lesser amount in case of any discrepancy[22].

The name of the drawee: Followed by indications allowing the bearer to identify them,Indication of maturity: A bill of exchange can be drawn:

-At sight: Upon presentation of the bill of exchange (up to one year after its creation at most),

-At a certain period after sight: The maturity date is then determined by the acceptance date;

-At a certain period after date: The maturity is determined from the creation date of the bill of exchange; On a fixed day: The day is indicated as the maturity date; if the maturity date is not indicated, the bill of exchange must be considered payable on sight.

[22] *S. PIEDELIEVRE. Op.cit, p50*

Optional mentions of the bill of exchange: The optional mentions are as follows:

-Domiciliation: The bill of exchange is paid at the domicile of the drawee or that of a third party (the instrument is domiciled), and the domiciliary is generally the banker.

-Value mention: It expresses the cause of the obligation between the drawer and the beneficiary.

-Without protest or free of charges mention: The bill of exchange should not be subject to protest in case of non-payment[23].

- Promissory Note

The promissory note is a document by which a person, called the subscriber, undertakes to pay a certain sum to another person, called the beneficiary, at a specified time.

• Validity Characteristics: The mandatory mentions of the promissory note are as follows:

-The clause "to order" or the denomination "promissory note," inserted in the text of the document and expressed in the language used for its drafting.

-The simple promise to pay a specified sum.

-Indication of the due date.

-A promissory note that does not mention a due date is considered payable on demand.

-The place where the payment must be made.

-The name of the person to whom or to whose order the payment must be made.

-Indication of the date and place of subscription of the promissory note.

-The handwritten signature of the issuer of the document.

• The essential differences between the bill of exchange and the promissory note:

- The bill of exchange involves three parties (drawer, drawee, and beneficiary, the promissory note involves only two (subscriber and beneficiary.
- The bill of exchange is an order to pay given by the drawer; the promissory note is a commitment to pay by the subscriber.

[23] *Interbank Training Company "Portfolio Operations," p13.*

- Acceptance is not conceivable in the case of a promissory note; it results from the mere drafting of the document.
- Unlike a bill of exchange, which is commercial by nature, the promissory note is commercial only if it is subscribed by a merchant, or on the occasion of a commercial transaction; in other cases, it is civil.

- The Warrant

The warrant is a pledge certificate issued when goods are deposited in warehouses, along with a receipt which is the title of ownership of these goods[24].

- Use of the receipt-warrant

Once both parties have the document, the depositary merchant will use it accordingly:

- Either they keep both parts until the indicated date to withdraw their goods stored in the warehouses.
- Or they plan to sell the merchandise. In this case, they endorse the receipt alone to the order of the rightful owner, taking care to detach the warrant.
- Or they need money but do not intend to sell the merchandise. In this case, they endorse the warrant alone to their creditor who lends them the funds.

4.Modern Payment Methods (Monetics)

Monetics refers to all activities related to digital payment, particularly payment by card. It enables money exchanges in a dematerialized manner[25]. Monetics encompasses the following domains:

- The creation and personalization of cards.
- Real-time systems allowing card usage.
- Hardware accepting cards (ATMs, electronic payment terminals).

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[24] *DIDIER, Hallepee. (2011) "The World of Monetics: History, Functioning, and Perspectives," FONDCOMB Edition, Italy, p18.*

[25] *Monetics (2012). [http://www.dicodunet.com/definitions/economie/monetique-carte-bancairebanque.htm], (page consulted on January 25, 2013).*

- Transaction processing systems (telecompensation).
- Monetic systems are categorized according to their functions:

The cardholder: They are a bank's client and subscribe to a "card contract" with the bank. They can either be the named holder of the contract (for individuals) or the "professional" bearer of a card linked to a company's account.

The issuer: This is the bank that provides the cardholder with a card. It handles the debit/credit transactions on the cardholder's account, as well as any opposition requests and disputes related to the card's usage.

The acceptor: This refers to the domain encompassing the entity that accepts the use of the bank card for a service. For example, the bank in the case of an ATM withdrawal, or the merchant in the case of a payment. In general, it includes all places where the cardholder can use their card.

The acquirer: This covers the collection of data enabling the processing of a transaction. In the case of an ATM withdrawal, it's the bank that installed the ATM. In the case of a payment at a merchant, it's the merchant's bank (or their service provider in case of outsourcing). The acquiring bank handles transactional processing directly related to the acceptor.

FIGURE 1: ATM

SOURCE : https://en.wikipedia.org/wiki/Automated_teller_machine#/media/File:Otto_pankkiautomaatti_20180827_(cropped).jpg

4.1. Bank Cards

As a means of payment, bank cards offer advantages for all parties involved: for the cardholder, it's a simple and universal payment method; for the merchant, it provides payment security and eliminates the need for cash handling; for banks, the card is a fully computerized instrument with low processing costs.

The bank card is a plastic card measuring 4.5 x 8.5 cm. It is equipped with a magnetic stripe and/or a microchip. Moreover, the bank card is a safe, fast, and convenient way to conduct financial transactions anywhere[26].

The bank card allows for:

- Cash withdrawals from ATMs.
- Payments to suppliers with a "payment terminal".
- Online payments.
- Making phone calls (for some).
- The bank card is defined by:
- A BIN (Bank Identification Number) which identifies the issuing bank.
- The cardholder's name.
- The expiry date.
- The CVV (Card Verification Value) or CVV2 number (the last 3 digits on the back of the card).

In the bank card market, there are different types of products: the payment card, the withdrawal card, the credit card, and the electronic wallet.

[26] *The bank card. [http://banque.comprendrechoisir.com/comprendre/carte-bancaire], [page consulted on January 5, 2013].*

Figure 2: PAYMENT CARD (BANK CARDS)

Source ; https://fr.wikipedia.org/wiki/Carte_de_paiement

4.1.1. The withdrawal cards

The withdrawal card only allows for cash withdrawals from ATMs. It does not allow for purchases. The withdrawals associated with this card are limited.

This card can be issued to minors from the age of 12, with the authorization of their parents who will set the maximum withdrawal limit per week. They can be free of charge and cannot be used to pay for purchases at merchants or online. It is automatically linked to a bank account or a savings account.

4.1.2. The payment cards

The payment card (charge card)[27] is a card issued by a bank allowing the holder to immediately debit the amount of their payment from their bank account.

The payment card is a rigid plastic rectangle containing:

[27] *JEANNE, (2000), Dancette and Christoph RETHORE. "Dictionnaire analytique de la distribution", Edition les presses University of Montreal, p2*

- On the front: the card name, card number, expiry period, name of the bank that issued the card, cardholder's name, and an electronic chip.
- On the back: a magnetic stripe and a specimen of the cardholder's signature[28].

The payment card is a payment instrument issued by a banking institution and is associated with the possession of a bank account. It is also known as a "bank card".

The payment card allows for:

-Payment at merchants equipped with a payment terminal;

-Online and remote purchases.

-Cash withdrawals from ATMs.

-Topping up your mobile phone.

The payment card offers several options that need to be determined before signing the contract, and it provides various possibilities:

- Immediate debit payment card: In addition to the operations possible with a withdrawal card, it allows for direct card payments at merchants and online purchases (Internet and phone). The purchase amount is immediately deducted from the account.
- Deferred debit payment card: Offers the same services as an immediate debit card, but the total amount of transactions made in the month is withdrawn once and on a fixed date.
- National or international payment card: Can be used only in France, in Eurozone countries, or worldwide.

A payment card can be issued by a financial institution as well as by a merchant. Increasingly, large retail companies have their own payment cards. Some payment cards are also associated with insurance and assistance services.

4.1.3. The Credit Card

[28] *Rolland, Luc-Bernet. Op.cit, page.54*

The credit card is defined as "An accreditation that allows its holder to make purchases of goods or services from affiliated establishments, by simply affixing signatures on a standardized invoice or voucher, where the card details are provided." [29]

The credit card, which generally allows payment for all forms of goods and services, currently dominates electronic commerce transactions.

4.1.4. The Electronic Wallet (EW)

The electronic wallet, [30] which comes in the form of a rechargeable prepaid card, allows for the payment of small purchases at merchants who accept it. It replaces the use of coins or banknotes.

The electronic wallet usually has a limited validity period of 2 years:

- When it expires, it cannot be recharged.
- However, the holder of an EW has a period of 6 months to use the remaining credit or request a refund from the bank.

The holder of an electronic wallet cannot spend more than the available credit.

The electronic wallet comes in different forms: smart card, bankcard, USB key, or mobile phone. We can present these different supports as follows:

-Smart card equipped with an electronic chip: It is a non-nominal card that does not require a bank account:

-You can obtain it on the dedicated website and at post offices.

-This card is customizable.

-Rechargeable using your bankcard.

-A nominative card linked to your bankcard: You can obtain this card from your bank.

[29] *FREDERIC, Georges. (2006) "Seizure of Scriptural Currency," Lacier Editions, Brussels, p. 576.*
[30] *THIBANLT, Verbiest, and ETIENNE Wery. (2001), "Internet and Information Society Law," Lacier Editions, Brussels, p. 314.*

• Bank card: The electronic wallet system is now included on most bankcards. The cardholder must request activation of this service from their bank. The consumer is free to activate this service or not.

• USB key: This system allows you to securely make purchases on the internet by connecting the USB key to your personal computer.

• Mobile phone: The electronic wallet system can be activated on the mobile phone if it has NFC technology. This system allows you to make purchases by simply passing the phone in front of the payment terminal.

There are multiple places to recharge the electronic wallet:

- Payment terminals at equipped merchants.
- Telephone booths.
- ATMs.
- Banks.
- Post offices.
- Terminals located in certain communities.

4.2. Remote payment

Remote payment is an "act of paying by a telephone or telematic means," so remote payment includes all transactions made remotely through means of communication such as the internet (online payment), landline telephone, mobile phone, electronic wallet (PME), mail, etc.

Various instruments of remote payment

There are several instruments:

- Direct debit.

- Interbank payment slip (TIP).

- Debit card.

Credit card.

- Electronic wallet.

- Telecommunication operators.
- SMS (Short Message Service).

The main reasons for using telepayment that explain its development:

- Electronic payment terminals open 24/7.
- Avoiding the need to travel to a payment terminal, as some people may have difficulty or be physically unable to travel.
- Time-saving for the customer.
- Some people are geographically distant from financial institutions.
- Rapid transaction processing.
- Ability to compare competitors.
- Payment security is guaranteed by the creditors.

The payment system has made efforts in prevention by introducing new payment systems by the relevant authorities to rectify the situation and make various payment methods as reliable and secure as possible.

The development of payment methods has led to the creation of electronic money or electronic banking, which is experiencing considerable growth, ensuring the proper functioning of the bank and improving the quality of services as well as the diversity of products offered.

- The modernization of the payment system in Algeria began with reforms aimed at establishing a national economy to replace the colonial legacy shortly after independence. By the late 1980s, significant reforms were implemented to transition towards a market economy while emphasizing the importance of the private sector.

Progress in banking intermediation, the development of institutions, and increased competition have allowed for the evolution and diversification of payment instruments and methods. Hence, there is a necessity to modernize the payment system in Algeria to ensure greater security in banking operations.

5.The Algerian Banking System

Following Algeria's independence, institutions inherited from colonialism continued to operate within the French system, which was based on a capitalist framework, contrary to the socio-political choices of independent Algeria. Hence, there was a need to nationalize productive and banking sectors. Following the reorganization of these institutions, it became necessary to create new establishments and evolve the banking and financial system from a debt-based economy to a financial market economy to strengthen the country's economic development.

We will provide a historical overview of the Algerian banking system, which we consider essential for understanding the context in which banking evolved in Algeria.

5.1. Emergence of the Algerian Banking System (1962-1985)

During this period, the following major stages are generally distinguished:

Stage of sovereignty (1962-1966)

Stage of nationalization (1966-1970)

Stage of specialization (1970–1979)

Organic restructuring (1980-1986)

5.1.1 Stage of Sovereignty (1962-1966)

This period witnessed the establishment of four main institutions: the Treasury, the Central Bank, the Algerian Development Bank, and the National Savings and Insurance Fund (CNEP).

- The Central Bank of Algeria (BCA)

The BCA was created in December 1962 by Law 62-144 of December 13, 1962. It was endowed with the status of an issuing institution. Therefore, it exercised the traditional functions of currency issuance, credit direction, and supervision, particularly through discount operations, as well as the management of foreign exchange reserves.

However, similar to the Treasury, the BCA was tasked, exceptionally and temporarily (1963/1964), with the direct granting of credits (in the form of "advances"), notably operating credits to the self-managed agricultural sector, replacing existing banks and credit institutions due to their "failure."

- The Treasury

The Algerian Treasury was established in August 1962. Its mission was to undertake the traditional activities of the treasury function (handling fund movements to reconcile government revenues with expenditures, overseeing financial activities, etc.), to which significant prerogatives were added in terms of granting investment credits to the economic sector.

This is evident in the equipment credits provided to the self-managed agricultural sector, which could not obtain the necessary loans from existing banking institutions starting from the 1962/1963 campaign for its operation.

- Algerian Development Bank (CAD)

Established in 1963 by Law 63-165 of May 7, 1963, to fill the void left by major French banks that granted medium and long-term credits. Thus, it replaced the CEDA (equipment and development fund of Algeria), the CDC (deposit and consignment fund), and the CME (state market fund), Indeed, the CAD was created to finance the state's medium and long-term investment projects, making it a specialized development bank in financing the construction or renewal of fixed assets.

- National Savings and Insurance Fund (CNEP)

Established by Law No. 64-227 of August 10, 1964, it has been specialized since its creation in collecting savings, providing housing loans to individuals, and financing public and private developers.

The CNEP-Bank also finances projects for the acquisition and strengthening of means of production for construction material production companies and upstream construction companies, Moreover, the CNEP-Bank is involved in financing investment projects in the energy, water, petrochemical, or aluminium sectors.

5.1.2. Stage of Nationalization (1966-1970)

The period of nationalization of the foreign banking network gave rise to three commercial banks called "deposit banks," each specializing in financing specific sectors.

- National Bank of Algeria (BNA)

Established on June 13, 1966, it was tasked with financing and supporting the self-managed and traditional agricultural sector, as well as providing credit for industrial and commercial activities.

- People's Credit of Algeria (CPA)

Established on December 29, 1966, the CPA's main mission was to finance small and medium-sized public and private enterprises, as well as the tourism, hospitality, fishing, and craft sectors.

- External Bank of Algeria (BEA)

It was created by Ordinance No. 67-84 [31] on October 1, 1967, as a deposit bank. Its primary role was to develop banking relations with foreign countries, However, the specialization mode as initially planned in the statutes of these three banks did not strictly apply in practice. This is because all three banks ended up carrying out the same functions concerning foreign relations and providing credit to industrial and commercial enterprises.

These functions were gradually divided among the three banks based on criteria such as sectoral or branch affiliation and financial balance. However, the banks remained specialized in financing activities in two specific sectors: BNA for the agricultural sector and CPA for construction companies (Building and Public Works - BTP)[32].

5.1.3. Stage of Specialization (1970 – 1979)

In the early 1970s, after the nationalization stage, the sector further specialized. It was organized by branches of activity (agriculture, industry, crafts, hospitality, tourism, construction, energy, foreign trade) and specialized by enterprise. This specialization was introduced by the Finance Act of 1970, which mandated specialized banking activities for specific sectors and enterprises.

National companies and public establishments were required to concentrate their bank accounts and operations with a single bank.

5.1.4. Organic Restructuring (1980-1986)

Starting from the early 1980s, Algerian authorities implemented a new reform for public enterprises called "organic restructuring" of the Algerian banking system. This reform aimed

[31] *"KPMG, (2012), « guide des banques et des établissements en Algérie », Edition ELLIPSE, Algérie 2012, p.07."*

[32] *KPMG, "Guide to Banks and Establishments in Algeria," ELLIPSE Edition, Algeria p.07*

to establish an efficient banking system capable of fulfilling its role in financing planning in Algeria., Indeed the organic restructuring, which was implemented by the authorities starting from 1982, led to the creation of two new banks.

- Bank of Agriculture and Rural Development (BADR)

BADR was established on March 13, 1982[33], to take over certain activities previously financed by BNA. Its primary purpose was to finance the agricultural sector and the agro-industrial agri-food sector, which were previously managed by BNA.

- Local Development Bank (BDL)

BDL was created by Ordinance No. 85-85 dated April 30, 1985[34], as a deposit bank. Stemming from the restructuring of CPA and inheriting some of its functions, BDL's main objective was to finance activities of local enterprises, primarily those overseen by public authorities (departments and municipalities). The establishment of BDL aimed to provide improved banking services to these enterprises and more effective oversight of the loans provided to them.

The organic restructuring that gave birth to these two new banks did not significantly alter the organization and operation of the Algerian banking system. Banks were required to follow government plans, and they were prohibited from granting long-term credits. Essentially, they functioned as conduits for capital flow.

With the changing economic context of the country in the latter half of the 1980s (the decline in oil prices resulting in decreased public revenues), national and public entities were encouraged to consolidate their bank accounts and operations with a single bank.

The Algerian economy became imbalanced, and plans suddenly required urgent reform.

5.2. Beginning of Banking System Autonomy: Laws of 1986 and 1988

To finance the planned investments of the public sector, the only resource available to the State was revenue from the export of hydrocarbons. This task was achieved thanks to the financial prosperity the country enjoyed during the 1970s and early 1980s.

[33] *BADR, [http://www.badr-bank.dz/], (page consulted on March 10, 2013)*

[34] *BDL, [http://www.bdl.dz/], (page consulted on March 2013)*

Following the oil price crash of 1986, which halved the country's external revenues, the national economy plunged into a deep recession. Consequently, a new rigorous management of resources became necessary. Banks needed to reassess their mode of intervention and adopt a new role suited to this new economic situation. It is in this context that Law 86-12 of August 19, 1986, was enacted.

5.2.1. Law 86-12 of August 19, 1986, Regarding the Banking and Credit Regime

The law concerning the banking and credit regime of August 19, 1986, is the first banking law since the country's independence in 1962. It had the advantage of putting an end to the ambiguous regulatory texts governing banking activity.

The main points of the law can be summarized as follows:

-This law confirms the tasks traditionally performed by the central bank.

-The issuance of currency is attributed to the Central Bank of Algeria by the State, as stipulated in Article 2 of Law 86-12: "The privilege of issuing banknotes and metal coins within the national territory belongs to the State."[35]

-It grants new prerogatives to primary banks, allowing them to operate in a more autonomous framework.

-Under this banking law, the treasury no longer holds a monopoly on financing the economy or collecting resources (the treasury is no longer involved in bank lending).

5.2.2. Complementary Law 88-01 of January 12, 1988[36], Regarding the Orientation of Public Economic Enterprises

This banking law amends the 1986 banking law. It redefines the status of credit institutions, which now take the form of public economic enterprises 1, endowed with legal personality, subject to commercial rules, and benefiting from financial autonomy.

It introduces a new organization that grants the central bank more freedom in managing monetary policy instruments according to the principles set by the National Credit Council,

[35] *KPMG. Op. cit., p.8*

[36] *ABDELKRIM, Naas. (2003) "The Algerian Banking System," INAS Editions, Paris, p.141.*

authorizing it to establish banking conditions and determine discount conditions and ceilings for credit institutions.

This new law reflects the government's resolute orientation towards a market economy. The legislator aims to widely open up the banking sector to private investors, both domestic and foreign. This openness, particularly towards foreign investors, has led to the establishment of banks, branches, and representative offices of major foreign banks (such as BNP Paribas, Société Générale, etc.) and foreign financial institutions (such as Arab Leasing Corporation, Cetelem Algeria...).

5.3. Banking System Reform in 1990 and the Enactment of the Money and Credit Law (LMC)

5.3.1. Objectives of the LMC

The scope and extent of application of the law relative to money and credit of April 1990 will be studied as follows:

-Monetary and Financial Objectives

The monetary and financial objectives of the LMC are:

-Put an end to any administrative interference in the financial and banking sector.

-Rehabilitate the role of the Central Bank in managing currency, credit, and exchanges.

-Restore the value of the Algerian dinar by ending the various statuses conferred on the currency in different spheres of transactions.

-Encourage foreign investments.

-Diversify the sources of financing for economic agents, especially businesses, by creating a - financial market.

-Introduce monetary regulation factors such as banking ratios, rate systems, reserves, and refinancing ceilings.

- Economic Objectives[37]

[37] *LILA, Brahmi. (July 2008), "Evaluation of the Algerian banking system through its contribution to the financing of projects.Of local development", magister thesis, University of Béjaïa, p82*

The economic objectives of the law on money and credit are:

-Stop administrative interference in the financial sector; financial and banking institutions must play a universally defined role and adhere to prudent management rules.

-Open up to foreign investments that create jobs or those resulting in technological advancements.

-Open the banking profession to national and foreign private capital.

According to this law, business relations between national and foreign operators are encouraged, which influences the modernization of the banking system in Algeria, especially the payment system, ensuring greater security of banking operations.

5.3.2. Content of the Law

The law on money and credit constitutes a break from old practices. It serves as the basic instrument for transitioning from a planned economy to a market economy.

Section 3: the determinants of e-payment

Electronic payments (e-payments) have become pervasive in today's digital economy, offering convenience and efficiency to individuals, businesses, and governments worldwide. Understanding the factors that drive the adoption and usage of e-payment methods is crucial for stakeholders seeking to leverage the benefits of digital financial transactions.

This section aims to explore the determinants influencing e-payment adoption, ranging from individual attributes to regulatory frameworks and socio-economic conditions.

1 Determinants Related to the Individual

Various factors related to the individual, primarily sociodemographic in nature, are also advanced to explain the choices of payment instrument usage. The effects of these factors are more or less well-founded theoretically and generally appeal to economic reasoning and deductions. Empirically, these factors have a substantial influence, even though they primarily serve as control variables in econometric tests.

1.1. Gender

The first characteristic of individuals to be studied is gender. This variable is particularly integrated into econometric studies using individual data. The theoretical foundations of the impact of gender on payment instrument usage are rather tenuous. They sometimes refer to differences in risk and risk perception of theft and/or loss of instruments, and sometimes to intrinsic differences in the management of payment instruments. Ultimately, the empirical integration of this factor appears more ad hoc than theoretically well-founded. Moreover, the explanatory power of the variable can be rather limited and dependent on the places of sale, and the goods and products consumed

1.2 Age

The second sociodemographic determinant is the age of individuals. The questions studied revolve around the ability of elderly individuals, on one hand, to use existing payment instruments, and on the other hand, to adopt new electronic payment instruments.

The use of payment instruments by elderly individuals is affected by certain physiological difficulties. For example, filling out a check, visually recognizing the keys of a payment terminal, or traveling to a bank branch to withdraw cash incur costs. These age-related difficulties generally lead users of a certain age to favour instruments with lower usage costs.

Moreover, elderly individuals are more sensitive to theft risks than other age groups. This latter element can influence the behaviour of elderly individuals regarding cash withdrawals since they must weigh the costs of travel, the amounts held, and the risks of theft and loss. Empirically, it appears that the amount of cash held by elderly individuals is higher. The desire to limit travel seems to outweigh the risks and amounts involved. As a result, elderly individuals tend to prefer cash over other instruments.

Finally, some studies have shown that the diffusion of new electronic payment offerings is slower among elderly populations. The adoption of new electronic payment offerings (from credit cards to electronic wallets) entails two relatively significant costs. Firstly, the individual adopting a new instrument must bear the learning costs of the procedure. Secondly, they must also bear costs associated with changing usage. However, these two costs are all the more significant as the duration of the return-on-investment period, i.e., the time during which the person will benefit from the adoption of the new instrument, is unknown and presumed to be shorter for elderly individuals.

1.3 Level of Education and Learning by Practice

The level of education and the capacity for learning through practical experience also influence the choices of payment instrument usage.

Thus, a person's level of education has the same impact on these choices as their income level. Indeed, as both levels are linked (income level is generally correlated with the level of education), they both increase the opportunity cost of using instruments. The higher the opportunity cost of time for an instrument, such as obtaining cash, the more limited its usage will be. Consequently, educated individuals use cash less frequently for purchases. However, these individuals hold higher average amounts of cash, indicating specific provisioning behaviours as they tend to withdraw cash less frequently but in larger amounts).

Moreover, the level of education also has its own impact on the usage of payment instruments. This impact, similar to age, is manifested by individuals' capacity to adopt new payment instruments. It is expected that the more educated and qualified individuals are, the lower the learning cost of using a new payment instrument, independent of income level or age. The main consequence is that educated individuals tend to use new electronic payment offerings more than others.

Similarly, the skills and preferences developed by individuals in electronic activities (computing, internet usage, etc.) influence the adoption of new payment instruments, especially electronic ones. Indeed, there is a cumulative effect in the use of new technologies since the probability of using an electronic payment instrument increases when the person already uses other types of new technologies.

1.4 Income

The effect of income on the usage of payment instruments has been the subject of primarily empirical research. Three effects can be particularly discussed.

Firstly, a person's income level is generally linked to their level of expenditure (mainly in value). However, we have seen that the level of expenditure influences the choices of payment instrument usage. If this effect is not statistically controlled, income can have a positive impact on cash holdings. For example, Murphy's study (1991) shows an increase in the use of checks in American households as income increases. This result can be explained by the absence of data concerning household expenditures and by the fact that the income variable then reflects consumption behaviours rather than necessarily the link between instrument usage and earned income.

Secondly, the usage and acquisition of a payment instrument have an opportunity cost, especially in terms of time allocated to this activity. The higher an individual's hourly wage, the higher the opportunity cost of the time they will spend, for example, obtaining cash. As a result, individuals with higher incomes should a priori prefer payment instruments that save time. Since obtaining cash is time-consuming, these individuals should have lower withdrawal frequencies, higher withdrawal amounts, and a preference for withdrawals from ATMs (rather than bank counters). These three relationships have been empirically verified.

Symmetrically, payment instruments that allow for quick payments (especially electronic payment instruments) should be favoured and more frequently used by high-income individuals.

Thirdly, certain payment instruments, especially prestigious payment cards, can be considered as superior goods. For these goods, consumption increases as the consumer's income increases. Thus, it appears that the ownership and usage of payment cards increase with income level, which is reinforced by the possible existence of a conspicuous consumption effect for the owners and users of such cards.

1.5 Type of Activity

The last sociodemographic characteristic considered in the research is the person's activity. This characteristic encompasses several elements.

Firstly, it refers to the socioeconomic category and how individuals perceive their income. For example, an entrepreneur whose business assets are merged with their personal assets directly earns income from their activities. In other words, their remuneration does not necessarily pass through a banking intermediary and may take the form of cash payments. As a result, these individuals use more cash in their expenses than other socioeconomic categories. Similarly, they hold on average more cash.

Secondly, it may also involve individuals engaged in illegal activities or practicing tax evasion. For instance, some studies have shown that these individuals receive their remuneration in cash for reasons of confidentiality and often use high-denomination banknotes.

However, empirically validating these effects is rather delicate and not entirely satisfactory. In the case of using individual data, it is very difficult to obtain reliable data regarding illegal activities and tax evasion through declarative responses. With macroeconomic data, the difficulty lies in the approximations used for both types of activity. Thus, using tax levels as an approximation for tax evasion is not satisfactory even though the results show that countries with high tax levels have a higher cash usage.

Similarly, using the aggregate crime rate for a country as an approximation variable takes into account the level of illegal activity without distinguishing the impact of crime on the holding and usage behaviours of payment instruments for individuals who do not engage in illegal activities. Indeed, cash usage choices are influenced by the security environment. These approximations then lead to less robust results[38].

1.6 Accessibility

Accessibility is a key factor in the use of e-payment services. This refers to the extent to which individuals with physical, sensory, or cognitive limitations can access online banking services.

In the context of e-payments, accessibility can be understood as users' ability to access online banking services, navigate through the payment platform's website, and conduct transactions independently, without requiring additional assistance. Individuals with physical limitations, such as mobility issues or visual impairments, may face challenges in using e-payment services if they are not designed to meet their specific needs, Therefore, it is important for banks to consider accessibility when designing their online services. This may include using larger font sizes, providing alternative navigation options for those unable to use a mouse, or offering screen-reading tools for visually impaired individuals. Banks can also offer online or telephone assistance for customers with specific needs.

In summary, accessibility is an important factor to consider when designing online payment services to enable all customers, regardless of their physical, sensory, or cognitive limitations, to use online services autonomously and effectively.

2 Determinants Related to the technology

2.1 Digital infrastructure: The availability and reliability of digital infrastructure, including internet access and mobile coverage, are essential factors in facilitating the use of electronic

[38] *Abdellah Belmadani, (2019), The determinants of the use of means of payment, In Money and payment systems pages 69 to 98*

payments. In regions with limited infrastructure, the adoption of electronic payments may be hindered.

2.2 Transaction security: User confidence in the security of online transactions is crucial for the adoption of electronic payments. Technological advancements such as cryptography and security protocols increase consumer confidence by ensuring the confidentiality and integrity of financial data during online transactions.

2.3 Availability of payment devices: The availability of various electronic payment devices, such as credit cards, e-wallets, mobile payment applications, and point-of-sale (POS) terminals, influences the adoption of electronic payments. The more choices available, the more likely users are to adopt these payment methods.

2.4 System interoperability: Interoperability between different electronic payment platforms and providers is essential to enable seamless transactions between users, merchants and financial institutions. Lack of interoperability can create barriers to the use of electronic payments, particularly in environments where multiple systems coexist.

2.5 Technological innovation: Constantly evolving technologies, such as biometrics, contactless payments, and tokenization, can drive the adoption of electronic payments by providing more convenient, faster, and secure payment methods.

2.6 Speed: Customers want a fast and smooth experience when transacting online. Banks must therefore use fast and efficient technologies to process transactions, such as real-time payment processing technologies, to ensure quick and smooth transactions.

3 Environmental factors

Environmental factors also play a crucial role in determining the use of electronic payments. Here are some of these factors:

3.1 Regulations and standards: Government regulations and industry standards can influence the adoption of electronic payments. Favourable regulations and strict security standards can encourage users to adopt these payment systems.

3.2 Physical infrastructure: Accessibility to physical infrastructures such as electronic payment terminals (EPTs), cash withdrawal ATMs, and points of sale equipped with contactless payment technologies can facilitate the use of electronic payments.

3.3 Consumer trust: The economic and social environment, including levels of security and crime, can influence consumer trust in electronic payments. A safe and stable environment can encourage the adoption of these systems.

3.4 Access to banking: Access to basic banking services, such as opening bank accounts, can also influence the use of electronic payments. In regions where access to banking services is limited, electronic payments may be less widespread.

3.5 Education and awareness: Education and awareness programs about the benefits and risks of electronic payments can help increase their adoption. A clear understanding of the advantages in terms of convenience and security can encourage more people to use these systems.

Conclusion

The evolution of the Algerian banking system from its inception during French colonization to its modern-day structure reflects a journey of adaptation, reform, and response to internal and external challenges. Initially established under foreign influence, the Algerian banking sector underwent significant transformations post-independence to align with the nation's economic goals and assert its independence.

Key milestones include the establishment of crucial institutions like the Central Bank of Algeria, the Algerian Development Bank, and the National Savings and Reserve Fund. These institutions played pivotal roles in shaping Algeria's monetary policies, facilitating economic development, and ensuring financial stability, Furthermore, the introduction of various forms of electronic wallets, such as smart cards, bank cards, USB keys, and mobile phones, alongside remote payment methods, has provided consumers with convenient and secure options for making payments, reducing reliance on physical cash. These developments reflect a significant shift towards digital transactions in Algeria, contributing to the modernization and efficiency of the Algerian banking system, However, the Algerian banking system faces multifaceted challenges, both internal and external. Internally, issues such as the concentration of banks' assets, fragmentation of banking activities, and inadequate use of technology hinder efficiency and competitiveness. Externally, globalization, market integration, and the emergence of electronic banking pose additional challenges, to address these challenges and unlock the full potential of the banking sector, concerted efforts are needed. This includes enhancing regulatory frameworks, investing in technological infrastructure, promoting innovation, and fostering competition. Moreover, fostering a culture of transparency, accountability, and good governance within banks is essential to rebuild trust and confidence among stakeholders, looking ahead, the continued modernization of the payment system in Algeria will be essential to ensure greater security, efficiency, and inclusivity in banking operations. By leveraging technological advancements, promoting financial literacy, and fostering an enabling regulatory environment, Algeria can further enhance its banking infrastructure and support sustainable economic growth and development, Ultimately, the Algerian banking system's ability to navigate these challenges and capitalize on emerging opportunities will be crucial in driving sustainable economic growth, financial inclusion, and prosperity for the nation and its citizens.

CHAPTER 2: THE DETERMINANTS OF THE USE OF E-PAYMENT

Chapter 2: the determinants of the use of e-payment

Introduction:

The digitalization of banking is reshaping financial services provision, driven by technological advancements. Online platforms and mobile apps offer unprecedented convenience, revolutionizing how customers interact with banks. This transformation democratizes finance, with new products and services enhancing accessibility. Yet, challenges like data security and digital literacy persist. Nonetheless, embracing digitalization can enhance efficiency, revenue, and financial inclusion. This exploration aims to dissect the drivers, trends, and challenges of digital banking to unlock its full potential in the 21st century.

Chapter 2: the determinants of the use of e-payment

Section 1: General presentation of the BADR

1. History, evolution, missions, and objectives of BADR Bank

1.1: History

The Agricultural and Rural Development Bank (BADR) is a national financial institution created by decree No. 82-106 of March 13, 1982, with the mission of developing the agricultural sector and promoting rural areas. It is a joint-stock company with a social capital of 2,200,000,000 Algerian dinars. It is tasked with providing advice and assistance to public economic enterprises in the use and management of payment means at their disposal, while respecting the banking sector.

Under Law 90/10 of April 14, 1990, concerning currency and credit (LMC), BADR Bank became a legal entity engaged in granting credit operations and providing payment and management means to customers since 1990. Its capital increased and reached the threshold of 33,000,000,000 Algerian dinars. Initially comprising 140 branches transferred by BNA, its network currently comprises over 293 branches, 41 regional offices, and over 7000 executives and employees operating within central, regional, and local structures.

In the early 2000s, BADR granted a credit of 65 billion dinars to Tonic Emballage, an Algerian SME. This loan had adverse effects on the bank's operations due to the bankruptcy of Tonic Emballage.

Moreover, due to its network density and significant workforce, BADR was ranked by the 'BANKERS ALMANAC' (2001 edition) as the top bank in terms of network nationally, 13th in Africa, and 668th globally, out of approximately 4100 ranked banks.

In 2011, the bank's net profit stood at 10.2 billion dinars, compared to 10 billion dinars in 2010, In May 2016, the bank opened its first stock exchange point. In 2017, BADR Bank announced its launch into Islamic finance before the end of the year, offering banking products compliant with Islamic Sharia law.

1.2: Evolution

Initially an agricultural institution at its inception, BADR Bank has evolved over time, particularly since the promulgation of Law 90/10, into a universal bank involved in financing across all sectors. Thus, the bank has undergone three major stages characterizing its evolution: from 1982 to 1990, from 1990 to 1999, and from 2000 to 2002.

- The period from 1982 to 1990: Over these eight years, BADR aimed to establish its presence in rural areas by opening numerous branches in agricultural regions. It gained recognition and significant experience in financing agriculture, agro-food, and agricultural machinery industries. This specialization occurred within a context of planned economy where each public bank had its field of operation.
- Period from 1991 to 1999: With Law 90/10 ending the specialization of banks, BADR expanded its scope to other sectors, notably towards SMEs/SMIs, while remaining a privileged partner of the agricultural sector.
- Period from 2000 to April 2002: The current stage is characterized by the significant involvement of public banks in revitalizing productive investments and aligning their activities and service levels with market economy principles.

In terms of intervention in financing the economy, BADR significantly increased the volume of credits granted to private sector SMEs/SMIs (all branches combined) while also increasing its support to the agricultural and para-agricultural sectors.

To keep pace with profound economic and social changes and meet customer expectations, BADR implemented a five-year action program focused on modernizing the bank, improving services, and financial and accounting restructuring.

1.3: Missions and Objectives of BADR

The main missions of BADR can be summarized as follows:

Processing all credit, exchange, and treasury operations.

Opening accounts for all individuals.

Accepting deposits on sight and term.

Contributing to savings collection.

Contributing to the development of the agricultural sector.

Ensuring the promotion of agricultural, agro-food, agro-industrial, and artisanal activities.

Collaborating with supervisory authorities to ensure compliance of financial movements of domiciled enterprises.

-The objectives of BADR Bank can be summarized as follows:

Increasing resources at the best costs and ensuring their profitability through productive and diversified credits while adhering to rules.

Rigorous management of the bank's treasury in both local currency and foreign currencies.

Ensuring the harmonious development of the bank in its areas of activity.

Expanding and redeploying its network.

Ensuring customer satisfaction by offering products and services that meet their needs.

Implementing dynamic management in terms of debt collection.

Promoting commercial development by introducing new managerial techniques such as marketing and introducing a new range of products.

2. Regional operating group cells

These actions are to be coordinated by the Human Resources Department and the Logistics Department in collaboration with the General Inspection and Audit, the Permanent Control Division, the Finance Division and the Information System Division.

2.1 The Director of the Regional Group

He is the first person in charge of the group, he is in charge of the development and promotion of the Bank's activities within its scope of intervention, and exercises his functions in accordance with the commercial rules, ethics and profitability of his business, while being concerned with controlling the various risks linked to banking activity.

He represents the Bank at the regional level, and is accountable to General Management for the results and performances recorded by the group and all the agencies attached to it.

The Director of GRE is responsible for:

- Manage, with the help of its divisions, the customer portfolio which it must constantly retain and develop.

- Develop with its employees the culture of service for customers (reception, speed in processing operations, listening to customers, loyalty, etc.).

- Promote local management of teams based on exchanges, dialogue, communication, and ensure the establishment of good practices.

- Supervise and assist employees in the difficulties encountered in the exercise of their duties.

- Chair arbitration meetings in the development of the group's budget forecasts.

- Chair the GRE Committees.

- Provide its employees with the financial and commercial objectives set by the Executive management.

Supervise the development of agency activities taking into account risk and compliance dimensions.

- Supervise and monitor the modernization actions undertaken by the bank.

- Scrupulously ensure the preservation and improvement of the Bank's brand image.

Carry out periodic visits to agencies and inquire about the working conditions of employees and the reception conditions of customers, and take all measures to remedy them if necessary.

- Supervise, in collaboration with agency directors, the commercial initiatives of important clients.

- Handle complaints from major customers of the group.

- Regularly evaluate the group's position in the different market segments and in relation to the competition, and take steps to improve it.

- Supervise operational marketing and communication actions in the agencies and ensure the involvement of GRE structures.

- Maintain and develop relationships with different partners.

- Maintain cordial relations with local authorities and public institutions, as well as with various local organizations and representations.

- Supervise and boost recovery actions for customers in difficulty, encourage the maintenance of the relationship, assist and/or monitor the various negotiations depending on the importance of the customer with the permanent concern to preserve the interests of the Bank.

- Establish a healthy climate, favorable to the development of team spirit among employees.

- Anticipate/manage any emerging conflict likely to compromise the stability of the group, damage the bank's brand image or alter the group's results.

- Ensure the proper management of the bank's assets and security.

Furthermore, the Group Director is responsible for the smooth running of permanent control at the group level and in the agencies attached to it.

As such, he is responsible for:

- Respect and ensure compliance with operational safety rules.

- Implement permanent control procedures and tools, and ensure the proper functioning of 1st level permanent control.

- Lead and consolidate at second level, the permanent control of agencies.

- Ensure that agencies are provided with the necessary resources to carry out the control function.

- Periodically examine the control results of the agencies and take all necessary measures to remedy the dysfunctions observed.

- Take charge of and monitor the lifting of reservations and/or dysfunctions formulated by internal or external control bodies.

- Ensure the relay of PCA, LAB-FT and FATCA systems:

- Ensure that all documentation necessary for carrying out controls is made available to employees, whether by operational staff or by controllers.

- Ensure that agencies are assisted and supported by GRE structures, particularly with regard to daily business-related concerns (deployment of commercial policy, monitoring of financing actions, admission of clients and management of commercial risks external, control activities...etc.).

- Ensure the availability of documentation inherent to its field of activity and its distribution.

- Maintain dashboards and reports of your activity.

- Implement 1st level Permanent Control procedures and tools for its GRE activity and ensure its proper functioning.

- Ensure any other relevant mission of its prerogatives.

The Group Director is assisted in his missions by four (4) deputy directors:

- The Assistant Commercial Director.

- The Deputy Director of Financing and Commitment Monitoring.

- The Support Deputy Director.

- The Deputy Director Control and Permanent Surveillance.

2.2 The Commercial Sub-Directorate

The Commercial Sub-Directorate's mission is to develop quality commercial activity and to promote the products and services made available to customers.

It is headed by a Deputy Director who is responsible for.

- Supervise the services and teams under his responsibility.

- Develop the commercial action plan (PAC) of the agencies, in collaboration with the ALE Directors, and decline it after validation by the Director of ERM at the ALEs.

- Track achievements of GRE business objectives.

- Supervise and assist agencies in handling important customers (courtesy calls, periodic visits, handling of complaints.

- Ensure the promotion of the Bank's products and services to customers and the general public.

- Monitor the equipment of customers with products and services (domestic and international cards, TPE, SMS-banking, E-banking, or any other marketed product).

- Identify the economic potential of the GRE operating scope and share it with ALE directors.

- Create a file of clients/prospects and ensure the consequent commercial procedures, particularly for clients who activate in the nomenclature of activities financed by the Bank.

- Lead regular meetings with ALE employees, allowing optimal management of team management, organization of the sales force's work, communication and exchanges, evaluation of resources, finding solutions to difficulties encountered...etc.

- Organize open days for the general public to popularize the Bank's products and attract potential customers.

- Evaluate the opportunity to deploy the GRE network (opening of new agencies, digital spaces, location with high potential, installation in a new city, creation of investment centres, etc.).

- Participate in the regional credit committee, and enrich the debates with commercial information to aid decision-making.

- Use the alert reports transmitted by the ALEs at the end of customer visits, engage in discussions and/or negotiations with customers in difficulty, prepare a report to the back-office sub-management for sanction to the regional credit committee (due date postponement, rescheduling, consolidation, etc.).

- Popularize activities financed by the bank and state support mechanisms.

- Ensure the completion of purchase and sale formalities of goods subject to operations on behalf of the ALEs.

- Prepare monthly meetings to evaluate the group's commercial and financial performance.

- Manage the commercial monitoring of recovery, prevent unpaid debts and manage pre-litigation, in collaboration with the back office and agencies.

- Ensure the availability of documentation inherent to its field of activity and its distribution.

- Maintain dashboards and reports of its activity.

- Implement first level Permanent Control procedures and tools for its activity and ensure its proper functioning.

- Carry out any other mission falling within its prerogatives.

The Commercial Sub-Directorate is made up of three (3) services:

- The commercial animation service.

- The electronic banking and online banking service.

- The commercial and pre-litigation monitoring service.

2.3 The Financing and Commitment Monitoring Sub-Directorate:

The Financing and Commitment Monitoring sub-department's main mission is to develop the level of employment at the bank, while ensuring the production of quality studies and assessments, and coverage of the bank's exposure linked to credit risks, but also provide assistance in legal matters and recovery to ALEs.

It is headed by a deputy director responsible for:

- Ensure quality management of the teams placed under his authority.

- Process and present financing requests to the GRE credit committee, including those relating to the GFI, within the regulatory deadlines.

- Update the rating of the group's portfolio annually and/or with each new financing request.

- Process credit files relating to central authorities and submit them to the regional credit committee for detailed opinion.

- Manage the annual renewal of credit files.

2.4 The Support Sub-Directorate

The Support Sub-Directorate's mission is to provide all financial, human, logistical and security resources to enable GRE structures to achieve their commercial performance and operational security objectives.

You feel

It is headed by a Deputy Director responsible for:

- Supervise the services and the team under his responsibility.

- Take charge of end-of-day/month/year accounting statements in coordination with local and central structures.

- Manage GRE tax and par fiscal declarations.

- Monitor and explain the evolution of outstanding accounts.

- Be the contact person for the Statutory Auditors for General Management at the regional level.

- Ensure, in collaboration with central structures, the management of Human Resources, logistics, security and IS.

- Ensure the availability of documentation inherent to its field of activity and its distribution.

- Maintain dashboards and reports of its activity.

- Implement 1st level Permanent Control procedures and tools for its activity and ensure its proper functioning.

- Carry out any other mission falling within its prerogatives.

The Support Sub-Directorate is made up of four (4) services.

- Accounting Service.

- The Human Resources Department.

- The General Resources and Security Department.

- The IT and Telecommunications Department.

2.5 The Permanent Control and Surveillance Sub-Directorate

The “Permanent Control and Surveillance” Sub-Directorate’s mission is to ensure 2nd level Permanent Control actions on operations carried out at the level of the GRE and the agencies attached to it.

It ensures that the mechanisms for (i) permanent control, and (ii) compliance control are deployed at the regional and local level, following the guidelines of the Bank's policies in this area, whether by means of the GRE or by permanent agency controllers.

It implements regular control processes consisting of: collecting information, verifying operations (accounting and non-accounting), detecting possible anomalies, examining the origin (cause and effect link), issuing remedial recommendations and preventive measures, collect the response from the agency or the ERM structure, and follow the regularization (status of the anomaly).

The Permanent Control and Surveillance sub-directorate staff do not occupy operational functions.

It is headed by a Deputy Director responsible for:

- Supervise the services and the team under his responsibility.

- Implement Permanent Control procedures and tools for its scope.

- Supervise, monitor and guide the activities of permanent controllers in the agency, evaluate the results of their controls and take all measures to improve their performance.

- Ensure the proper functioning of 1°5 level Permanent Control in the GRE and agencies attached to it.

- Ensure, at 2nd level, the Permanent Control of agencies on-site and off-site (including remote control).

- Ensure the implementation and monitoring of the recommendations of the audit and inspection reports.

- Ensure compliance with safety rules for people, property and operations.

Section 2: Traditional banking and online banking

In the ever-evolving landscape of finance, the dichotomy between traditional brick-and-mortar banks and their innovative online counterparts has become increasingly pronounced. These two distinct models, each with its own set of advantages and challenges, represent the dynamic nature of the banking sector in response to technological advancements and shifting consumer behaviours.

Traditional banks, with their physical branches and long-established presence in communities, have historically served as the bedrock of the financial industry. They offer a wide array of services, including savings accounts, loans, mortgages, and investment products, often accompanied by personalized in-person assistance from bank tellers and financial advisors. The familiarity and reliability of traditional banks have instilled a sense of trust and security among customers, making them a preferred choice for many individuals and businesses seeking comprehensive financial solutions.

1.Traditional BADR Bank:

Main Activities of BADR:

BADR offers a range of products and services from traditional to innovative. BADR's strategy is to be a pioneer in applying new technologies to banking services. Its development financing activities are oriented towards the financing of the following sectors:

- Agriculture and Livestock.
- Fishing and Aquaculture.
- Food industry and the industry of needs and tobacco.
- Distribution trade and rural development; Packaging and conditioning.
- Transport, Warehousing, and Handling.

2.Online BADR bank BADRnet :

BADRnet, is an online banking service, which is mainly used to consult the balance and movements of the customer account through an internet connection. This consultation is done through an electronic portal managed by an e-banking service provider and dedicated to the BADR. It is accessible using one of the following two internet addresses:

https://www.badr-bank.dz

https://ebanking.badr.dz

This service is extended to other related services (Transfer file transfer, direct debits, etc.), as it may have other remote communication channels (SMS, fax, voice).

2.2. Subscription of Subscription:

Subscribing to BADRnet subscriptions. Customers of the bank, whether a natural or legal person, is done in the following manner.

2.2.1. Subscription to individual customers:

Upon receipt from the individual customer or his agent, requesting the subscription of a “BADRnet” e-banking subscription, the account manager.

Carefully complete, in two (02) copies, both parts of the

Subscription agreement form model in appendix:

First part:

• It reports all information relating to the customer

Second part:

The services designated by the customer to be entered “nature of the service”

• The accounts he wishes to include in the subscription

• Mentions the accounts that the customer wishes to include in their subscription (all accounts, part of it or only one). “Account number of the service”

• Put a cross in the box that concerns the chosen channel “internet”

• Specifies the periodicity of the consultation frequency authorized for the client. For the “internet” service, the frequency is unlimited

Reiterates the number of the main account (designated by the client at the top of the list in the "account number for the service" column) for the subscription fee deduction.

Informs the client that the designated account must be regularly funded to allow for the deduction.

Hands over the two (02) copies of the subscription agreement to the client along with the general terms and conditions related to the "BADRnet" services for verification and signature preceded by the handwritten mention "Read and approved".

2.2.2. Subscription for Businesses:

Upon receiving a request for subscription to BADRnet from a corporate client (legal representative) with a subscription request, the account manager:

Verifies the request (signature of the representative, company seal).

Carefully fills out, in duplicate, the subscription agreement form provided in Appendix 2.

‹ Hands over the form to the client for signature and affixation of the company's round seal.

In addition to the services common with individual clients, a dedicated service for businesses is offered, which is "multiple salary transfers" according to the prevailing procedure.

2.2.3. Client with Multiple Account Prefixes:

In the event that the client (individual or business) has multiple accounts with different prefixes, the account manager:

Creates subscriptions as many times as the number of accounts in question.

Fills out a separate agreement for each subscription with the specific information for each account to be subscribed, which is signed by the client.

2.2.4. Subscription for a Third Party:

Upon receiving the subscription request, evidenced by the signature of the subscription agreement, from the account holder themselves (individual or business) or their authorized representative wishing to designate one or more contacts.

2.3. Registration of Subscription in the SYBU System:

Once the agreement is signed, the account manager proceeds to enter the subscription into the system, following the steps below:

Accesses the "internet access entry" module.

Client menu Chooses the creation phase to enter a new subscriber "client" who is subscribing for the first time or contact.

2.3.1. Creation Phase for Client:

Enters the account prefix to be subscribed in the field "Client Number":

The system automatically generates:

A membership numbers.

Name or company name.

Address of the individual client or the headquarters of the corporate client.

The "Service" field by displaying the code of the only currently operational channel, which is "Internet".

In the case of a corporate client, the account manager fills in the "contact name" and "contact address" fields of the legal representative of the company.

Enters the code "M" for "password" in the "Connection Type" field.

Enters the subscription date in the "Start Date of Validity" field.

Enters the subscription anniversary date (01 year) in the "End Date of Validity" field.

Enters in the "Account Series" field the series of accounts with the corresponding currency code for each of the accounts, if the client has multiple accounts under the same prefix and wishes to include all of them in the subscription.

Specifies with the client the main account for the monthly deduction of subscription fee(s).

Fills in the fields "first and last name" and "profession" of the account holder (signatory of the agreement) who signs the membership form issued on the occasion.

Validates and confirms the entry "creation" with the message "Yes".

The system automatically generates a membership form according to Appendix 04 in two (02) copies, incorporating the entered information.

The account manager hands over the two copies of the membership form to the client for signature.

2.3.2. Creation Phase for Interlocutor:

When entering an "interlocutor," the account manager proceeds as follows:

Verifies that the "interlocutor" form provided in Appendix 06 is carefully filled out and signed by the client.

Enters the account prefix to be subscribed in the "Client Number" field.

The system automatically generates.

A membership number, different from that of the subscription holder (referred to as "client"), which is generated automatically by the system when entering the account prefix in the "Membership Number" field.

Name or company name

Address of the individual client or the headquarters of the corporate client (account holder).

Enters the information of the respective interlocutor in the fields "Interlocutor Name", "Interlocutor Address", and verifies that this information matches the one provided in the interlocutor designation form.

Enters the code "M" for "password" in the "Connection Type" field.

Enters in the "Account Series" field the series of accounts with the corresponding currency code for which the client grants access for consultation to their interlocutor.

Validates and confirms the entry "creation" with the message "Yes".

Triggers the generation of a membership form summarizing the client's information.

Hands over the generated membership form to the subscribing client for signature and acknowledgment of the designation of the interlocutor, along with the relevant information.

2.4. Password Generation:

Upon finalizing the creation of the dossier, the account manager submits the dossier to the director/supervisor containing:

For the account holder.

The subscription requests.

The 02 copies of the subscription agreement duly signed by the client and stamped with the mention "read and approved".

The 02 copies of the signed membership form.

For the interlocutor.

The interlocutor designation form(s).

The 02 copies of the signed membership form by the account holder.

After verifying these documents, the director/supervisor signs the documents authorizing the account manager to generate the password.

The account manager then proceeds on the system to generate the password, allowing the client to access the BADRnet portal as follows:

Accesses the system's "Password" menu.

Enters the client's membership number.

Activates option 15 "Password generation for internet consultation," which automatically generates an advisory containing the same membership number and a corresponding password.

2.5. Delivery of Documents to the Client:

Once the generation is completed, the account manager organizes the documents and hands over to the client.

One copy of the subscription agreement.

One copy of the membership form.

The password strictly for personal use and under the seal of confidentiality (for the account holder or legal representative).

Keeps a copy of the dossier at the branch.

The account manager reminds the client receiving this password.

It is imperative to change it upon the first connection to the BADRnet portal.

The bank disclaims all responsibility in case of use or fraudulent use of this password.

To inform the bank in case of loss for a possible reissue.

Therefore:

If the password is not changed: the reissue of the password to the client is done under the same conditions as the initial password generation.

If the password is changed: the account manager submits a written request signed by the branch manager to the DEDI to proceed with the reconstitution of a new password by their technical services, canceling the one the client had previously set. In this case, the subscribed client later comes to retrieve their new password.

2.5.1. Modification Phase:

The account manager has the possibility to make modifications to the subscription in the following cases:

Correction or Rectification of Errors.

Errors that may occur during data entry in the "creation" phase can be corrected.

Updating or changing personal information of individual clients/interlocutors, or information of the company or its representative (for corporate clients).

Client's request to add other accounts to their subscription or remove accounts already registered.

Client's request to add other accounts to the interlocutor's access or prohibit access to accounts already registered.

Introduction of the new security technique using the device (DIGIPASS), which generates a unique password for each connection and provides enhanced security.

In this case, the account manager:

Enters the client's number and membership number, and the subscription information is displayed on the system.

Re-enters the fields subject to modification except for the "client number" and "membership number" fields.

Validates and confirms the modifications with the message "Yes."

Triggers the generation of a new membership form summarizing the new information entered in the "modification" phase, which is then signed by the client.

2.5.2. Deletion Phase:

The account manager activates the "deletion/client" function to unsubscribe a client who is already subscribed Unsubscribing a client can occur in the following cases:

At the client's request: The account manager provides the client with the subscription termination request for BADRnet, as per the model provided in Appendix 05 or Appendix 07 if it concerns the interlocutor.

At the bank's request: The bank decides to terminate the client's subscription in case of the client's failure to fulfill any of their obligations (e.g., non-payment of subscription fees).

Cleaning up Old Subscriptions:

Old subscriptions whose holders have not shown up for administrative subscription to this service (signing of the agreement for subscribers registered before the year 2010) need to be sanitized.

To do this, the account manager:

Enters the client's number and the client's or interlocutor's membership number.

Validates and confirms the deletion with the message "Yes."

2.6. Subscription Renewal:

Upon receiving the subscription renewal request form (see Appendix 08) from a client who has terminated their subscription contract, the branch takes action in the following cases:

Subscription terminated at the request of the subscribed client, if the client wishes to renew it.

Subscription terminated at the bank's initiative as part of managing the subscriber liability for those who have not signed the subscription agreement (prior to January 2010) (see point "9a" below), and their enrollment in the new scheme.

Subscription terminated by the bank due to the client's non-payment of subscription fees or any other breach of obligations, if the client has regularized their situation regarding their subscription.

The account manager, to proceed:

Fills out the subscription renewal request form for "BADRnet" (see Appendix 08).

Provides the renewal request form to the client for signature.

Validates the client's request through the "Creation/Interlocutor" option.

Enters the subscription into the system.

Section 3: Different BADR products and services

Like its sisters in the regional operating group, it is a public bank, which offers traditional banking products, innovative financial services, and financing structured. It has a wide range of products and services intended for businesses, to individuals. In addition to classic products and services, it offers specific credit, it also offers:

1.General credits

1.1. Short-term credits

- Agricultural operating credit

These are short-term loans, usually granted by banks or suppliers to companies enabling the financing of circulating assets, also known as operating values (stocks, work in progress, customer receivables, etc.) not covered by working capital.

- Campaign Credits

It allows a company, whose activity is seasonal, to produce and possibly build up stocks. It comes in the form of an overdraft or discount on banknotes. Order accepted by the customer. The seasonal nature of the business can be either supplies or on sales.

Hiring credit, it is granted to finance the purchase of livestock and their fattening for resale. THE Risks incurred are significant: possible fluctuation in livestock meat prices.

- Inventory financing credit

The bank provides financial assistance to the company financing its storage times (credit on goods and warrant discount). In addition to the seasonal nature of the activity of a business, other circumstances may require a business to build inventory above the average of its operating needs.

- Credits for customer debt mobilizations

Granted to companies and consists of mobilizing commercial receivables held on private national customers (commercial discount) or public (acquired right mobilization).

- Credits by disbursement

There are three types of disbursement credits that a company can request from its bank in order to finance the carrying out of a walk: pre-financing credits, credits support or mobilization of unrecognized debts and mobilization credits claims or acquired rights,

- Documentary credit

An importer and exporter who do not know each other well may hesitate to give up their goods the other to pay for it before having received it. For this, it is necessary to untie their commercial transaction by opening a documentary credit in order to avoid this situation embarrassing. It is communicative to the respective bank and through the presentation of documents without which the operation cannot be completed, therefore, the importer will not act in this operation only on the instructions of its exporting client. As for the exporter, he will have to show compliant documents to his banks against payment on sight or at maturity.

- Credit by signature

A bank can provide assistance in the form of a commitment called credits. By signature. The bank then simply lends its signature without incurring payment charges.

Treasury. The study carried out by the bank must be as careful as for any other banking assistance, because this commitment can lead to significant disbursements.

1.2. Medium and long-term credits

Medium and long-term loans are investment loans whose lifespan corresponds to the depreciation period of the asset with an applicable rate of 5.5%. These are therefore medium and long-term credits, they finance the production tool, as they can have as its object the subsidy of goods and products. They are intended to finance the part of the top of the balance sheet, fixed assets, the company's working tools. It Is possible to classifie into two main categories.

- Medium-term credits

They are by definition credits whose duration is between three and seven years. These credits are generally intended to finance the acquisition of light equipment, that is to say those whose amortization period equal to the repayment period of these credits.

- Long-term credits

They are by definition credits whose duration exceeds seven years, that is to say seven years and more. They are generally intended to finance heavy investments, that is to say those whose depreciation period goes beyond seven years. Long-term credits are most often granted by financial organizations specializing in national credit. These latter grant ordinary loans and loans with mutual guarantees subject to acceptance of a file. All commercial industrial companies in the competitive sector can obtain an ordinary loan to finance their physical investments or intangible.

The duration of such a loan is in practice between ten (10) years and fifteen (15) years and can go up to 20 years. National Credit requires the guarantee of a mutual company of professional, when the requesting company, most often an SME, does not offer a guarantee deemed sufficient.

- partially subsidized medium and long-term credits

A bonus in the interest rate over the entire duration of the deferral, including interest dividers. A 3% bonus over the amortization period of the credit.

- Fully subsidized medium and long-term credits

A total interest rate bonus applied over the entire duration of the deferral. A 0% bonus over the amortization period of the credit.

- Condition and structure of medium- and long-term financing.

- The project must meet the criteria of eligibility, profitability and solvency. bank financing cannot exceed 70% of the project cost.

- Taking into account the contribution in kind in the evaluation of the self-financing of projects is subject to the results of their expertise by an approved expert with the bank.

1.3. Financial leasing

- Definition

It is a contract between the bank (lessor credit) and the promoter (lessee credit) for the rental of property, locally manufactured, directly involved in the realization of the project investment.

- General

Furniture leasing credit is a financial and commercial operation, linking the bank with national economic operators, on a property rental contract equipment goes directly into the realization or extension of the project investment.

- The leasing financing organizer is designated as the lessor (bank) and as beneficiary of this financing as lessee (client beneficiary).
- The BADR is in the first phase of launching financial leasing in order to diversify products to support the national economy, and in application of the resolutions of the general package relating to the launch of the leasing activity, the BADR has put in place places financing through financial leasing internally.
- Characteristics of leasing.
- Amount: The credit can reach 100% of the cost of the equipment to be acquired, plus generally a participation from the promoter of 20% to 30% of the overall cost is required.

- Duration of rental: 10 years for combine harvesters and 5 years for other equipment differs from clients depending on the nature and type of project.
- Deadlines: Depending on the type of activity and according to a frequency agreed between the two parts, repayment can be monthly, quarterly, half-yearly or annual.
- Interest rate: The rate applied is 9% including tax per year (5% +4% of bonus).
- Subsidy: A subsidy of 25% to 40% is granted by the State to the funded client by the BADR. Customers paying cash also benefit from the subsidy.

The personal contribution within the framework of projects subsidized by the state is calculated in 10% of the project cost. The contribution is of the order of 20% to 30% of the cost global, when the project is carried out without intervention from public authorities.

2. Credits specific to the BADR

2.1. CREDIT AGRICOLE R'FIG

Definition

The R'FIG credit is a fully subsidized operating credit intended to finance farmers and breeders operating individually, organized in cooperatives or in economic groups.

- Sector: Agriculture.
- The beneficiaries of this credit are:
- Farmers and breeders individually or organized in cooperatives, groups, associations, or federations.
- Pilot farms.
- Farmers and breeders organized in cooperatives, groups, associations or federations.
- Agricultural service units.
- Stores of widely consumed agricultural products.
- Legal entities involved in the rural and agricultural renewal program.
- Economic enterprises, which contribute to the intensification, transformation, valorization and storage of agricultural products.

- Targeted actions:
- Acquisition of inputs necessary for the activity of agricultural operations (seeds, plants, fertilizers, phytosanitary products).
- Acquisition of feed for livestock (all species), means watering and veterinary medicinal products.
- Acquisition of agricultural products to be stored within the framework of the regulation system widely consumed agricultural products.
- Livestock restocking (chicks, started pullets, rabbits, etc.), large-scale breeding fattening (acquiring bull calves, lambs, camels, etc.).

Types of R'FIG credit

Campaign credit: Acquisition of inputs necessary for farm activity agricultural (seeds, plants, fertilizers, phytosanitary products). Acquisition of food for livestock (all species) of watering means and products veterinary drugs. Acquisition of agricultural products to be stored in the framework of the system of Regulation of Agricultural Products of Large Consumption " SYRPALAC ". Crop work, combine harvest.

-R'FIG export credit: This is a fully subsidized operating credit intended for financing of date packaging and export units.

-R'FIG FEDERATIVE credit: This is a fully subsidized operating credit intended for the financing of economic enterprises organized as companies commercial or cooperative, active in the processing, storage and/or valorization of agricultural products.

.2.2. "ETTAHADI" investment credit

- Definition

The investment credit is a medium and long-term credit partially subsidized by the state and granted to companies producing goods or services within the framework of creation or the expansion of their activities.

- Characteristics of ETTAHADI credit

- This is a partially subsidized investment credit intended for new agricultural and livestock operations or projects located on agricultural land not exploited falling within the property or private domain of the state.

- Projects validated and meet the eligibility conditions with the structures inhabited by the Ministry of Agriculture and Rural Development and/or ONTA must meet the following requirements:

-The validity of the project and its sustainability.

-The financial profitability of the project.

-The repayment capacity.

- The areas concerned by the ETTAHADI credit.

- The creation, equipment and modernization of new agricultural operations and/or breeding.

-strengthening production capacities of existing and insufficient ones valued.

-Economic enterprises, which contribute to the intensification, transformation, valorization of agricultural, and livestock products requiring financing needs (federal credit) in the medium term.

- Interests are covered by the Ministry of Agriculture and Development rural on the FNDIA as follows.

-Total coverage of interest by the MADR when the repayment period credit does not exceed three 3 years.

-The beneficiary of the credit will have to pay 1% interest when the repayment is carried out between 3 and 5 years.

-The beneficiary will have to pay 3% interest when the repayment is made between 5 and 7 years old.

- Beyond this period the beneficiary will have to repay the entire rate credit interest.

-Any beneficiary of the ETTAHADI credit who repays on the deadlines set above is entitled to another credit of the same nature.

-For farms of less than 10ha the beneficiary of the ETTAHADI credit opens right to personalized support, if necessary, provided by the EAGR, during the land development phase.

-The costs incurred by this support are covered by the MADR on the FDRVMTC.

-The concession act constitutes with the BADR, a mortgage as guarantee for the credit granted.

2.3. RURAL HABITAT CREDIT

- Definition

State aid for rural housing is part of a new policy of rural development, having as its main objective the development of rural areas of the fixation of local populations.

The Habitat Rural credit is a mortgage real estate loan intended for individuals and reserved exclusively for rural housing, in accordance with the municipal nomenclature rural areas decided by the Ministry of Agriculture and Rural Development.

The financing can be for the construction of a new home, the extension of the existing home, the development or renovation of the existing home.

- Population concerned.

- Natural persons of Algerian nationality (residents or non-residents in Algeria).

- Adults aged 65 and under.

- People with a stable income equal to at least 1.5 SNMG.

Section 04: Practical framework

1. Construction of the questionnaire

In the ever-evolving landscape of financial services, the adoption and utilization of electronic payment methods have become increasingly prevalent, revolutionizing the way individuals and businesses conduct transactions. As technology continues to advance, banks and financial institutions are tasked with understanding and meeting the evolving needs and preferences of their customers regarding electronic payment options.

The construction of a questionnaire aimed at determining the factors influencing the adoption and usage of electronic payment methods in the banking sector is crucial for gaining insights into customer behaviours, attitudes, and preferences. This introduction provides an overview of the key considerations involved in constructing such a questionnaire, focusing on the selection of appropriate measurement instruments, the design of survey questions, and the validation of the questionnaire's content and structure.

1.1. Selection of Measurement Instruments:

To construct a questionnaire for determining electronic payment preferences in the banking sector, must first identify suitable measurement instruments to assess relevant variables. This may include established scales and surveys that have been validated in previous research studies, as well as customized items tailored to the specific context of electronic payment adoption in banking. Measurement instruments should capture a range of factors influencing electronic payment decisions, such as perceived ease of use, perceived usefulness, security concerns, and trust in the banking institution.

1.2. Design of Survey Questions:

Once the measurement instruments have been selected, can begin designing survey questions that effectively capture the constructs under investigation. Survey questions should be clear, concise, and relevant to the research objectives, ensuring that respondents can provide accurate and meaningful responses. Questions may cover various aspects of electronic payment adoption, including usage frequency, preferred payment methods, satisfaction with existing services, and barriers to adoption. Additionally, researchers should consider incorporating demographic questions to capture respondent characteristics that may influence electronic payment preferences.

1.3. Validation of Questionnaire Content and Structure:

To ensure the reliability and validity of the questionnaire, must validate its content and structure through rigorous procedures. This may involve conducting pilot testing with a sample of banking customers to assess the clarity and comprehensibility of the survey questions, as well as performing psychometric analyses to evaluate the reliability and validity of the measurement scales used. Feedback from experts in the banking and electronic payment fields can also help ensure that the questionnaire adequately addresses relevant factors and constructs.

In summary, the construction of a questionnaire for determining electronic payment preferences in the banking sector requires careful attention to the selection of measurement instruments, the design of survey questions, and the validation of questionnaire content and structure. By systematically addressing these considerations, researchers can develop a robust instrument for gathering insights into the factors influencing electronic payment adoption and usage among bank customers (to see in appendix 01).

2. The method of Statistical regression

Statistical regression is a method used in data analysis to investigate the relationship between one or more independent variables and a dependent variable. It's a fundamental tool in statistics and machine learning for understanding and predicting the behavior of a system or phenomenon. Here's an introduction to statistical regression:

Introduction to Statistical Regression

Statistical regression is a powerful analytical technique employed across various fields such as economics, sociology, psychology, and biology, among others. It allows exploring the relationship between variables, uncovering patterns, and making predictions based on observed data.

At its core, regression analysis seeks to understand how changes in one or more independent variables are associated with changes in a dependent variable. The relationship between these variables is typically expressed through a mathematical equation, which enables quantification and prediction.

The essence of regression lies in its ability to model complex relationships between variables, even in the presence of noise or uncertainty. By fitting a regression model to data, researchers can estimate the strength and direction of the relationships, identify influential factors, and assess the significance of their findings.

There are various types of regression models, each suited to different types of data and research questions. Simple linear regression, for instance, examines the relationship between two variables, while multiple linear regression allows for the consideration of multiple predictors. Additionally, logistic regression is used when the dependent variable is binary, and polynomial regression captures nonlinear relationships.

In practice, regression analysis is often complemented by diagnostic techniques to assess model validity and assumptions. These may include residual analysis, goodness-of-fit tests, and cross-validation methods to ensure the robustness and reliability of the findings.

Overall, statistical regression serves as a cornerstone of quantitative research, offering valuable insights into the dynamics of complex systems and informing decision-making processes across various domains. Its versatility and applicability make it an indispensable tool for understanding and interpreting data-driven phenomena.

3. Description of the sample:

As a component of this research endeavour, I conducted with 49 bank customers. This process involved administering a meticulously crafted questionnaire that I developed to elicit comprehensive insights and gather pertinent data for the study.

Table 1: Sample characteristics.

The factors	percentage
Sexe	- 44,9% Man - 55,1% Woman
Age	- 8,2% from 19 years to 25 years - 44,9% from 25 years to 40 years - 30,6% from 40 years to 55 years - 16,3% 55 years and over
Level of education	- 4,1% Doctoral level - 2% Bachelor's level (licence) - 49 % high school level - 44,9% master level
Income	- 22,44% less than 50,000 DA - 51,02% between 50,000 DA and 100,000 DA - 26,53% more than 100,000 DA
the use of e-payment	- 22,44% Do not use - 77,55% Used

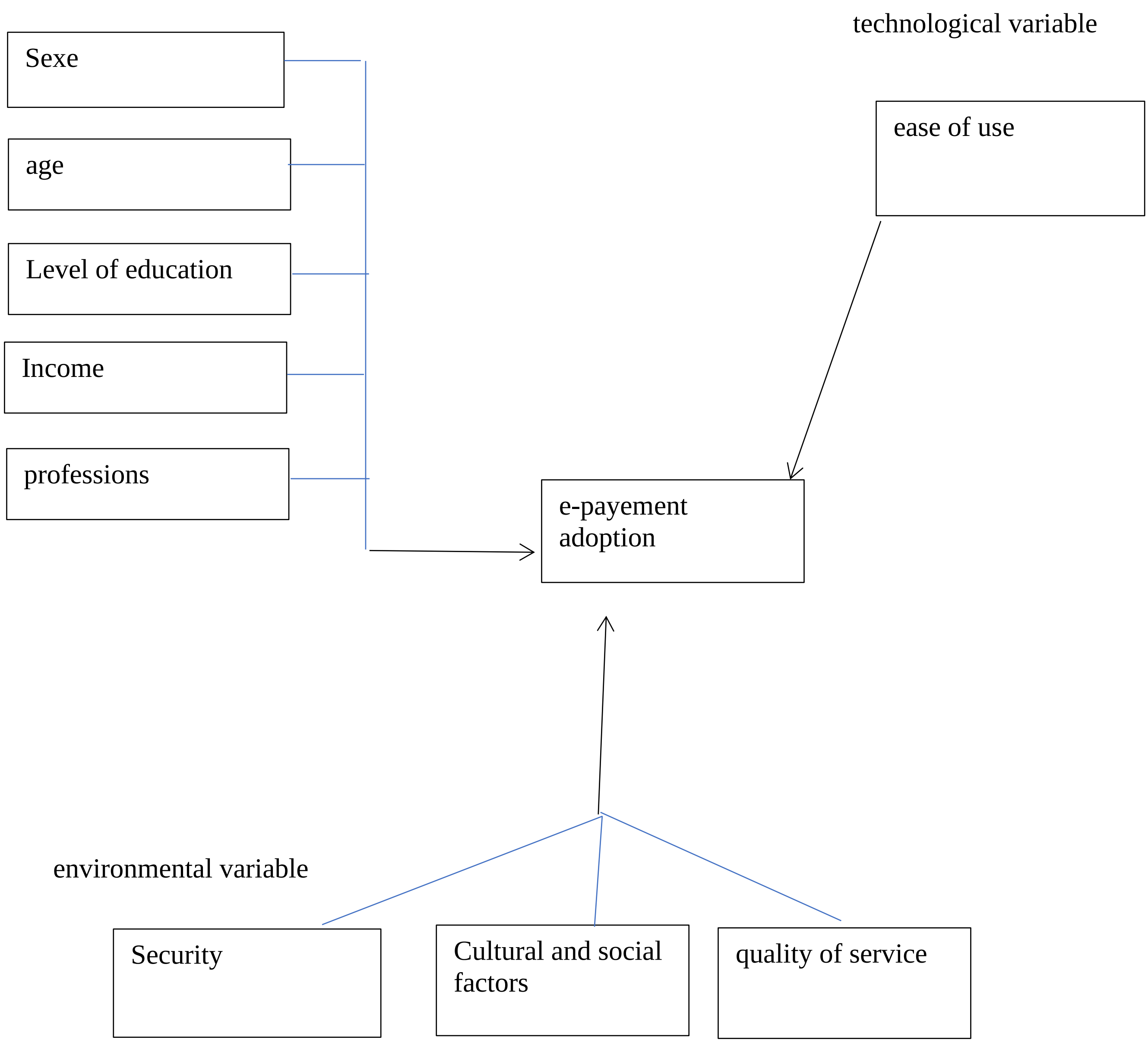
Source: Developed by the author

In order to carry out your study, the variables were classified into three categories:

- individual variable
- environmental variable
- technological variable

Figure 3: Theoretical model of the study.

individual variable



Source: Developed by the author

4. Individual Variables (Socio-demographic):

It is important to choose appropriate individual variables to construct a meaningful logistic regression model. The selected individual variables should be relevant to the research question and have a potential link with the dependent variable. Additionally, it is essential to consider collinearity (high correlation) among individual variables, as this can affect the interpretation of coefficients.

The selection of individual variables and how they are coded (e.g., coding categorical variables with indicator variables) are important aspects of logistic regression that can impact the model's performance and interpretation.

4.1. Age:

Age is commonly used as an individual variable in logistic regression because it often holds relevance in various research questions and has the potential to influence the outcome being studied. In many scenarios, age can be a significant predictor of certain events or behaviours. For example, in healthcare studies, age may be a crucial factor in predicting the likelihood of developing a particular disease. Similarly, in marketing research, age can help predict consumer preferences or purchasing behaviours.

When using age as a predictor variable in logistic regression, it is typically treated as a continuous variable measured in years. Researchers often examine how changes in age affect the probability of a particular outcome. This can involve assessing whether the relationship between age and the outcome is linear or if it follows a different pattern, such as quadratic or cubic relationships.

Additionally, age may interact with other predictor variables in the model, influencing the outcome differently across different age groups. Researchers must consider such interactions to accurately interpret the relationship between age and the outcome variable.

Overall, age serves as a valuable individual variable in logistic regression due to its widespread relevance and potential to provide valuable insights into various phenomena.

4.2. Income:

Income is another common example of an individual variable used in logistic regression. Income is typically measured as a continuous variable denominated in a specific monetary unit (e.g., dollars, euros, etc.).

When including the income variable in a logistic regression model, it is important to consider how this variable may be associated with the binary or categorical dependent variable that one wishes to predict. Income can potentially influence the probability of an event of interest in various ways. For example, in a study on consumption habits, higher income may be associated with a higher probability of purchasing luxury products.

However, it is also important to note that the income variable may present challenges in logistic regression. For instance, income distribution may be asymmetric with significant dispersion, making model fitting more difficult. In such cases, transformations or categorizations of income can be used to better fit the relationship between income and the dependent variable.

Additionally, the income variable may also be subject to missing values, requiring appropriate strategies for managing missing data.

In summary, the income variable can be included as an individual variable in logistic regression to examine its impact on the dependent variable. However, it is important to consider the specific characteristics of the income variable, such as its distribution, potential transformation, and handling of missing values, to construct an appropriate model.

4.3. Education level:

Education level is a crucial variable in understanding the dynamics of e-payment usage within populations. It serves as a proxy for individuals' knowledge, skills, and socio-economic background, which can significantly influence their adoption and utilization of electronic payment methods.

By examining the impact of education level on e-payment usage through logistic regression analysis, researchers can delve deeper into the relationship between educational attainment and technological adoption. Higher levels of education may indicate greater digital literacy and comfort with technology, potentially leading to higher rates of e-payment adoption. Conversely, lower levels of education may be associated with barriers such as limited access to technology or apprehension towards digital financial services.

Logistic regression offers a robust statistical framework for assessing the association between education level and e-payment usage while controlling for confounding variables such as income, age, and technological infrastructure. This enables researchers to isolate the unique contribution of education level to e-payment adoption, providing valuable insights for policymakers, financial institutions, and technology providers.

Moreover, logistic regression facilitates the identification of potential interaction effects between education level and other predictor variables, illuminating nuanced patterns of e-payment adoption across different demographic groups. For instance, education level may interact with income to shape e-payment usage patterns differently among various socio-economic strata.

In summary, investigating the impact of education level on e-payment usage through logistic regression empowers researchers to elucidate the underlying mechanisms driving digital financial inclusion. By uncovering the determinants of e-payment adoption, stakeholders can develop targeted interventions to promote financial literacy, enhance digital infrastructure, and foster equitable access to electronic payment systems.

4.4. Gender:

To investigate the influence of gender on e-payment usage using logistic regression, we aim to assess the association between gender and e-payment adoption while controlling for the effects of other explanatory variables. This analysis will provide quantitative estimates of the impact of gender on e-payment usage and help determine whether gender is a significant factor in e-payment adoption.

Understanding how gender affects e-payment usage is essential for promoting inclusive digital financial services. Logistic regression allows us to explore whether gender disparities exist in e-payment adoption rates, considering factors such as socio-economic status, education level, and technological infrastructure.

Moreover, logistic regression enables us to investigate interaction effects between gender and other predictor variables, revealing how gender intersects with factors such as income, education, and age to shape e-payment behaviour. Understanding these complex dynamics is essential for developing tailored strategies to promote gender-equitable access to digital financial services.

In conclusion, examining the impact of gender on e-payment usage through logistic regression provides valuable insights into the socio-economic and cultural factors influencing digital financial inclusion. By identifying and addressing gender-specific barriers, we can work towards creating more inclusive and accessible e-payment ecosystems that benefit individuals of all genders.

5. Environmental Factors:

Environmental conditions during the adoption of a new technology can also influence e-payment adoption. In the context of this study focusing on the adoption of e-payment systems by Algerian customers, several environmental variables have been identified as potentially influential. These variables include the level of security in electronic transactions, the extent of legal protection and legislation governing e-payment operations, the quality of e-payment services offered, and the risks perceived by users.

5.1. Security:

Logistic regression serves as a robust statistical tool for analysing the factors influencing security in e-payment usage. By identifying relevant independent variables such as password strength, transaction verification frequency, and user authentication methods, researchers can construct a model that predicts the likelihood of transaction security based on these factors.

Through data collection and model specification, logistic regression estimates coefficients for each independent variable, elucidating their impact on transaction security. Interpreting the results allows researchers to discern the direction and magnitude of these effects, identifying significant variables that contribute to transaction security. Validation and evaluation ensure the model's predictive accuracy, while drawing insights from the analysis informs strategies to enhance e-payment security. Ultimately, logistic regression empowers researchers to pinpoint critical factors shaping security in e-payment usage and guide efforts to mitigate risks and bolster security measures.

5.2. The risk:

logistic regression enables stakeholders to gain valuable insights into the drivers of risk in electronic payment systems. Beginning with the selection of relevant variables such as user characteristics, transaction attributes, and device information, researchers gather data to build a predictive model of security incidents or fraud occurrence. Through model specification, estimation, and interpretation of results, logistic regression provides a comprehensive understanding of how these independent variables influence the likelihood of security incidents or fraud in e-payment transactions. By validating the model's predictive performance and assessing its accuracy, stakeholders can assess risk levels and prioritize mitigation strategies effectively. Ultimately, logistic regression serves as a powerful tool for identifying, assessing, and mitigating risk factors in e-payment usage, thereby enhancing the security and resilience of electronic payment systems.

5.3. Cultural and social factors:

Cultural and social factors permeate various facets of e-payment adoption, influencing both individual behaviours and broader societal dynamics. Cultural values such as collectivism versus individualism, attitudes towards authority, and perceptions of risk profoundly impact technology adoption patterns. For instance, in collectivist societies, where trust is often built through interpersonal relationships, peer recommendations and community endorsements may carry significant weight in driving e-payment adoption. Conversely, in more individualistic cultures, emphasis may be placed on personal experiences and convenience factors, such as ease of use and perceived benefits, to encourage adoption.

Moreover, social structures and hierarchies can shape access and usage patterns. Gender norms, for example, may influence women's participation in e-payment ecosystems, with factors like digital literacy, mobility restrictions, and decision-making autonomy affecting their engagement. Tailoring outreach strategies to address gender-specific barriers and fostering inclusive participation is crucial for ensuring equitable access to digital financial services.

Cultural practices related to privacy, data protection, and financial management also impact adoption trends. In cultures where privacy is highly valued, concerns about data security and identity theft may pose significant barriers to e-payment adoption. Addressing these concerns requires robust data protection measures, clear communication about privacy safeguards, and empowering users with control over their personal information.

Furthermore, cultural perceptions of money, savings, and spending habits influence attitudes towards digital transactions. In societies where cash is deeply ingrained in daily transactions or where saving practices differ significantly from Western norms, promoting the benefits of e-payment systems as a secure, convenient, and efficient alternative becomes essential. This necessitates culturally sensitive messaging and educational initiatives to instill confidence and promote behaviour change.

In summary, understanding and navigating cultural and social factors are paramount for fostering widespread e-payment adoption. Tailoring strategies to address cultural values, social norms, and gender dynamics can mitigate barriers, build trust, and promote inclusive participation, ultimately driving financial inclusion and empowering individuals and communities in the digital era.

5.4. Quality of services:

The pivotal role of service quality in e-payment adoption is underscored by customers' discerning preferences and expectations. In today's digital landscape, where convenience and efficiency are paramount, users gravitate towards e-payment systems that not only offer seamless transactions but also prioritize user experience and security. Service quality, encompassing various facets such as intuitive interface design, swift and reliable transaction processing, and responsive customer support, serves as a critical determinant shaping users' perceptions and, consequently, their adoption decisions.

Logistic regression, a versatile statistical technique, emerges as a robust tool for elucidating the intricate relationship between service quality and e-payment adoption. By treating service quality as an independent variable within the logistic regression model, researchers can meticulously examine its impact on the likelihood of e-payment adoption while controlling for other influential factors. Through rigorous analysis, logistic regression unveils nuanced insights into how different dimensions of service quality influence users' propensity to embrace e-payment solutions.

Furthermore, logistic regression allows researchers to quantify the significance of each aspect of service quality, shedding light on areas where improvements are most needed to drive adoption rates. Whether it's enhancing the user interface for greater intuitiveness, bolstering transaction processing speed for efficiency, or fortifying security measures to instill trust, logistic regression empowers stakeholders to prioritize strategic interventions that resonate with users and foster greater acceptance of e-payment systems.

In essence, the synergy between service quality and logistic regression offers a systematic approach for understanding and optimizing e-payment adoption. By leveraging this analytical framework, organizations can tailor their service offerings to meet users' evolving needs and preferences, ultimately propelling the widespread adoption of e-payment solutions in an increasingly digital-centric world.

6. Technological factor:

In addition to individual user characteristics, it's crucial to consider technological factors when studying the adoption of a new technology, such as e-payment systems. Within the realm of e-payment systems, specific technological variables can significantly influence their adoption by customers of Algerian banks. Two such variables selected for this study are usability and relative advantage.

Usability refers to the simplicity and accessibility of the e-payment system. A system that is easy to understand, navigate, and use can significantly enhance its adoption by customers. When customers find the e-payment system user-friendly and intuitive, they are more inclined to adopt it and use it regularly.

Relative advantage is another crucial aspect that can influence the adoption of e-payment systems. It pertains to the perceived benefits that customers associate with using these systems compared to traditional methods of managing payment transactions. These benefits may include convenience, speed, accessibility 24h/24 and 7d/7, availability of additional services such as online account checking, quick bank transfers, etc. When customers clearly perceive the advantages, they can gain from using e-payment systems, they are more likely to adopt them.

It's important to note that usability and relative advantage may be perceived differently by individuals based on their experience, technical skills, and personal preferences. Hence, it's essential to consider these factors when evaluating the impact of technological variables on the adoption of e-payment systems.

In summary, usability and relative advantage are two critical technological variables that can influence the adoption of e-payment systems by customers of Algerian banks. When systems are user-friendly and offer clear advantages over traditional methods, customers are more inclined to adopt and use them regularly.

6.1. Ease of use:

Ease of use is a crucial determinant in the adoption of e-payment systems, as it directly influences users' decisions to adopt and utilize such platforms. The ease with which individuals can navigate, understand, and interact with e-payment systems significantly impacts their willingness to adopt these technologies. To comprehensively understand the role of ease of use in e-payment adoption, logistic regression methodology provides an effective analytical framework.

Logistic regression used to model the relationship between a binary dependent variable, such as the adoption of e-payment systems, and one or more independent variables, including ease of use. By incorporating ease of use as an independent variable in logistic regression analysis, researchers can quantitatively assess its impact on the likelihood of adoption.

Through logistic regression, researchers can gather empirical evidence on how variations in ease of use influence the probability of individuals adopting e-payment systems. This methodology allows for the identification of statistically significant associations between ease of use and adoption behaviour, providing insights into the relative importance of ease of use compared to other factors.

Furthermore, logistic regression enables researchers to control for potential confounding variables, such as demographic factors or prior technology experience, ensuring a more accurate assessment of the relationship between ease of use and e-payment adoption.

Additionally, it is essential to consider other relevant variables in the logistic regression model, such as age, education level, prior technology experience, etc., to control for confounding effects and obtain more precise results.

In summary, logistic regression methodology offers a robust approach to studying the critical role of ease of use in the adoption of e-payment systems. By leveraging this statistical technique, researchers can effectively analyse the influence of ease of use on adoption behaviour and gain valuable insights for improving the design and implementation of e-payment platforms.

Table 2: Types of variables

Types of variables	variables

ordinal qualitative	- Age - Income - level of Education - the quality of e-payment presentation
nominal qualitative	- Sexe - using e-payment - security - Cultural and social factors - the risk

Source: Developed by the author

analysis of questionnaire data

Table 3: Model estimation

variable	estimate
intercept	32.373
Sexe (women)	-2.401
Age	4.252
level of Education	2.424
Income	-7.584
e-payment presentation quality	8.047

Cultural and social factors “electronic payment is an alternative to traditional payment” (yes)	-22.757
Ease of Use (yes)	20.059
Security (yes)	1.715
Personal Data Security / transaction fees	-36.902
Personal Data Security / Financial fraud	-42.924
Personal Data Security / Technical Failures	-26.480
Personal Data Security / Other	-43.434

Source: The results given by the R software

Table 4: Results of the exponential calculation.

variable	The exponential
intercept	1.146125e14
Sexe	0.09060223
Age	70.26696
level of Education	11.28779
Income	5.083833e-4
e-payment presentation quality	3.124392e3
Cultural and social factors “electronic payment is an alternative to traditional payment”	1.308609e-10

Ease of Use	5.148430e8
Security	5.556014
Personal Data Security / transaction fees	9.415456e-17
Personal Data Security / Financial fraud	2.282246e-19
Personal Data Security / Technical Failures	3.160869e-12
Personal Data Security / Other	1.370471e-19

Source: The results given by the R software

The table presenting the results was generated using R software and highlights the impact of various variables on the use of e-payment. It is important to emphasize that the most significant variables are security and ease of use.

7. Observations and result:

7.1. Age

The observation reveals that in Algeria, the likelihood of using electronic payment increases significantly with age. Specifically, as individuals move to older age groups, the probability of adopting electronic payment methods rises by 6926%. This suggests that older age groups are much more inclined to utilize e-payment systems compared to younger individuals.

7.2. level of Education

The observation indicates that in Algeria, the likelihood of using electronic payment increases substantially with higher educational levels. Specifically, as individuals attain higher educational qualifications, the probability of adopting electronic payment methods rises by 1028%. This suggests that better-educated individuals are significantly more inclined to utilize e-payment systems.

7.3. Income

We observe an interesting trend regarding electronic payment usage and income levels in Algeria. It's intriguing to note that as income levels increase, there's a significant decrease, by 99%, in the likelihood of adopting electronic payment methods. This suggests that higher-income individuals in Algeria are markedly less inclined to embrace electronic payment systems compared to those with lower incomes.

7.4. quality of e-payment services

We observe an intriguing pattern concerning the quality of electronic payment services in Algeria. As the perceived quality of these services improves, there's a remarkable increase of 3024 % in the likelihood of their adoption. This underscores the critical influence of service quality on consumer behaviour and adoption decisions. Thus, our observation highlights the importance of continually enhancing the quality of electronic payment services to promote their widespread adoption and usage in Algeria.

7.5. Sexe

We observe an interesting correlation between gender and electronic payment usage in Algeria. Specifically, the observation suggests that individuals who identify as female are significantly less likely to use electronic payment methods compared to their male counterparts, with a decrease in probability of 91%. This gender disparity in electronic payment adoption rates prompts further investigation into potential factors influencing usage patterns among different genders.

7.6. security

In Algeria, there is a clear link between the level of security in electronic payment systems and their adoption rates. As security measures improve, the likelihood of using electronic payment increases significantly, by 455%. This underscores the importance of robust security features in building trust and confidence among users, which in turn drives the adoption of electronic payment solutions. Thus, enhancing the security of electronic payment systems is crucial for promoting their widespread acceptance and usage across the country.

7.7. electronic payment is an alternative to traditional payment

The observation suggests an intriguing relationship between the perception of electronic payment as a practical alternative to traditional methods and its adoption in Algeria. Surprisingly, as individuals perceive electronic payment as a more practical alternative to traditional payment methods, there is a substantial decrease in the probability of using electronic payment, by 99%. This indicates a potential reluctance among Algerian consumers to fully embrace electronic payment despite its perceived practicality.

7.8. ease of using

In Algeria, there is a clear correlation between the ease of using electronic payment technology and its adoption rates. As electronic payment systems become more user-friendly, there is a notable increase in the probability of their adoption by a significant percentage. This emphasizes the importance of intuitive interfaces and streamlined processes in encouraging the uptake of electronic payment solutions. Simplifying the user experience can greatly enhance convenience and accessibility.

We describe a logistic regression model where the reference category is the security of personal data in the context of electronic payment usage in Algeria. Here's how the factors we've described are affecting the likelihood of using electronic payment:

- Other factors: Compared to the security of personal data, other factors are terrifying in using electronic payment in Algeria, reducing the chance of usage by 99%.
- Financial fraud: Financial fraud is a terrifying factor in using electronic payment in Algeria, compared to the security of personal data, which reduces the chance of usage by 99 %.
- Transfer fees: Transfer fees are a terrifying factor in using electronic payment in Algeria, compared to the security of personal data, which reduces the chance of usage by 99 %.
- Technical malfunctions: Technical malfunctions are a terrifying factor in using electronic payment in Algeria, compared to the security of personal data, which reduces the chance of usage by 99 %.

This logistic regression model suggests that these factors significantly deter individuals from using electronic payment methods in Algeria when compared to the security of personal data. Each of these factors reduces the likelihood of electronic payment usage by a substantial percentage, indicating their significant impact on consumer behavior.

8. Interpretation:

8.1. age

The significant increase in the likelihood of using electronic payment with age, particularly highlighted by the substantial rise of 6926 percent in adoption probability among older age groups, suggests a strong association between age demographics and e-payment usage patterns in Algeria.

One reason for this trend could be attributed to the life stage and financial circumstances of older individuals. As people age, they often acquire more financial responsibilities, such as managing retirement funds, paying bills, and conducting various transactions. Electronic payment methods offer convenience and efficiency in managing these financial tasks, leading older adults to adopt them more readily.

Moreover, older individuals may have greater stability and established banking relationships, making them more comfortable with adopting new technologies like electronic payments. They may also have more disposable income to invest in digital tools and services that simplify their financial management.

Additionally, older age groups may prioritize security and reliability in financial transactions. Electronic payment systems, when perceived as secure and trustworthy, provide peace of mind to older users, encouraging their adoption over traditional payment methods.

Furthermore, as technology becomes increasingly integrated into daily life, older adults are becoming more digitally savvy and receptive to technological innovations. This growing familiarity with digital platforms and services likely contributes to the rising adoption of electronic payment methods among older age groups in Algeria.

Overall, the observed correlation between age and electronic payment adoption underscores the importance of considering demographic factors in designing and promoting digital financial solutions. Tailoring these services to meet the specific needs and preferences of older users can help drive further adoption and foster financial inclusion across all age groups in Algeria.

8.2. level of Education

The observation suggests a clear correlation between educational attainment and the adoption of electronic payment methods in Algeria. As individuals achieve higher levels of education, there is a significant increase in the likelihood of using electronic payment.

One interpretation of this trend is that individuals with higher levels of education are more likely to possess the digital literacy skills necessary to navigate electronic payment systems effectively. Education often correlates with higher levels of technology proficiency and comfort with digital tools and platforms. Therefore, individuals with higher educational qualifications may feel more confident and competent in using electronic payment methods compared to those with lower levels of education.

Moreover, higher education is often associated with higher socioeconomic status and access to financial resources. Individuals with higher levels of education may have greater disposable income and a greater need for efficient financial management tools, making electronic payment methods more attractive and practical for them.

Furthermore, higher levels of education may also be associated with greater awareness of the benefits and advantages of electronic payment systems, such as convenience, security, and efficiency. Better-educated individuals may be more likely to understand and appreciate these benefits, leading to higher adoption rates among this demographic group.

Overall, the observed correlation between educational attainment and electronic payment adoption underscores the importance of digital literacy and access to education in driving the adoption of digital financial technologies. Tailoring electronic payment solutions to meet the needs and preferences of individuals with varying levels of education can help promote financial inclusion and expand access to digital financial services in Algeria.

8.3. income

The observed trend regarding electronic payment usage and income levels in Algeria presents an intriguing paradox. While one might expect higher-income individuals to be more likely to adopt electronic payment methods due to their greater financial resources and access to technology, the data show the opposite: as income levels increase, there is a significant decrease, in the likelihood of adopting electronic payment methods.

One interpretation of this trend is that higher-income individuals in Algeria may have a stronger preference for traditional banking and payment methods, such as cash or checks. This preference could stem from factors such as a lack of trust in electronic payment systems, cultural norms favoring physical currency, or a perceived lack of need for electronic payments among higher-income groups.

Additionally, higher-income individuals may have greater access to alternative financial services, such as credit cards or banking facilities, which provide them with convenient payment options outside of electronic payment systems. As a result, they may be less reliant on electronic payment methods for their financial transactions.

Furthermore, concerns about privacy and security may also play a role in the lower adoption of electronic payment methods among higher-income individuals. They may be more cautious about sharing personal and financial information online, leading them to prefer more traditional and secure payment methods.

Overall, the observed decrease in electronic payment adoption among higher-income individuals in Algeria highlights the complexity of consumer behavior and the diverse factors that influence payment preferences. Addressing these factors, such as building trust in electronic payment systems, improving accessibility, and enhancing security measures, may be key to promoting broader adoption of electronic payment methods across all income levels in Algeria.

8.4. quality of e-payment services

The quality of monetary services plays a crucial role in the adoption and usage of digital banking platforms in Algeria, as confirmed by the results of our study. An increase in the quality of monetary services leads to a significant increase in the percentage of people who are aware of and use these platforms.

One interpretation of this trend is that consumers in Algeria prioritize convenience, reliability, and security when choosing electronic payment methods. When electronic payment services are perceived as high-quality, offering user-friendly interfaces, robust security measures, and efficient transaction processes, consumers are more inclined to adopt them as their preferred payment option.

Furthermore, positive experiences with electronic payment services can lead to increased trust and confidence among users, further driving adoption rates. Conversely, poor service quality, such as frequent technical glitches, slow transaction processing, or inadequate customer support, can deter consumers from using electronic payment methods and lead to lower adoption rates.

Additionally, as technology continues to evolve and consumer expectations evolve accordingly, the bar for service quality in electronic payment systems is continually being raised. To remain competitive and meet the demands of consumers, service providers must prioritize continual enhancement of service quality through innovation, investment in technology infrastructure, and responsive customer service.

Overall, the observed relationship between service quality and electronic payment adoption underscores the importance of delivering exceptional user experiences to drive widespread adoption and usage of electronic payment services in Algeria. By focusing on improving service quality, service providers can effectively promote the adoption of electronic payments and contribute to the advancement of digital financial inclusion in the country.

8.5. Sexe

Our research confirms a notable gender gap in the adoption of electronic payment platforms, with women displaying lower usage compared to men. This disparity raises intriguing questions regarding the factors shaping women's attitudes and behaviours towards electronic payment services. Further exploration is warranted to uncover the underlying drivers of this gap and to pinpoint any specific challenges or reservations that women may encounter when considering electronic payment options.

Differences in consumption habits and financial priorities between genders likely contribute to variations in electronic payment adoption rates. Women may prioritize alternative channels for financial management or payment methods, such as traditional banking services or cash transactions, potentially due to cultural norms, perceived security concerns, or a preference for face-to-face interactions. Understanding these nuances is essential for developing gender-inclusive strategies to promote broader adoption of electronic payment platforms and enhance financial inclusion for all segments of society.

8.6. security

In Algeria, there is a clear link between the level of security in electronic payment systems and their adoption rates. As security measures improve, the likelihood of using electronic payment increases significantly. This highlights the crucial role of robust security features in building trust and confidence among users, which in turn drives the adoption of electronic payment solutions. Therefore, enhancing the security of electronic payment systems is essential for promoting their widespread acceptance and usage across the country, Several factors contribute to this relationship:

- Enhanced security measures help build trust among users, making them feel more confident in using electronic payment methods. When users trust that their financial information is protected, they are more likely to adopt and use these systems.

- Strong security features protect users from financial fraud and cyber threats. Knowing that their transactions are secure and their personal information is safeguarded encourages more people to use electronic payment platforms.

- Implementing stringent security measures often aligns with regulatory requirements and standards. Compliance with these standards not only ensures user protection but also enhances the credibility of electronic payment providers.

- A secure electronic payment system contributes to a positive user experience. Users are more likely to continue using and recommending services that they perceive as safe and reliable.

In summary, improving the security of electronic payment systems is vital for increasing their adoption in Algeria. By focusing on robust security features, service providers can foster greater trust, protect against fraud, comply with regulations, and provide a positive user experience, all of which contribute to the widespread acceptance and usage of electronic payment solutions.

8.7. electronic payment is an alternative to traditional payment

The observation suggests an intriguing relationship between the perception of electronic payment as a practical alternative to traditional methods and its adoption in Algeria. Surprisingly, as individuals perceive electronic payment as a more practical alternative, the likelihood of using electronic payment decreases significantly. This indicates a potential reluctance among Algerian consumers to fully embrace electronic payment despite its perceived practicality, several factors may explain this paradox:

Cultural and Habitual Preferences: Algerian consumers might have a strong preference for traditional payment methods such as cash or in-person transactions due to long-standing habits and cultural norms. Even if they recognize the practicality of electronic payments, the ingrained comfort and familiarity with traditional methods can hinder adoption.

Trust and Security Concerns: There may be underlying trust and security concerns that outweigh the perceived practicality of electronic payments. Consumers might be wary of potential fraud, data breaches, or other security issues associated with digital transactions.

Lack of Infrastructure and Accessibility: Practicality does not always equate to accessibility. There might be insufficient infrastructure, such as internet connectivity or availability of electronic payment options, making it challenging for consumers to transition from traditional methods.

Perceived Complexity: Even if electronic payments are seen as practical, they might be perceived as complex or difficult to use compared to straightforward cash transactions. This perceived complexity can deter consumers from adopting new payment technologies.

Economic Factors: Economic considerations, such as transaction fees or additional costs associated with electronic payments, might discourage their use. Consumers may find traditional methods more economically viable despite recognizing the practical benefits of electronic payments.

In summary, the reluctance to adopt electronic payment methods in Algeria, despite their perceived practicality, highlights the importance of addressing cultural preferences, enhancing trust and security, improving infrastructure, simplifying user experiences, and considering economic factors to promote broader adoption of electronic payment systems.

8.8. ease of use

In Algeria, the ease of using electronic payment technology is strongly correlated with its adoption rates. As electronic payment systems become more user-friendly, the likelihood of their adoption increases notably. This underscores the crucial role that intuitive interfaces and streamlined processes play in encouraging the uptake of electronic payment solutions.

Several factors contribute to this relationship:

User Experience: Simplified and intuitive interfaces make it easier for users to navigate electronic payment systems. When users find the technology straightforward and easy to use, they are more likely to adopt and continue using it.

Accessibility: User-friendly electronic payment systems lower the barrier to entry, making them accessible to a broader audience, including those who may not be tech-savvy. This inclusivity helps in reaching more users and encouraging widespread adoption.

Efficiency and Convenience: Streamlined processes that reduce the steps required to complete a transaction enhance overall efficiency and convenience. Users are more likely to adopt electronic payment methods that save them time and effort compared to traditional methods.

Positive Feedback Loop: As more people adopt user-friendly electronic payment systems, positive word-of-mouth can further drive adoption. Satisfied users are likely to recommend the technology to others, creating a cycle of increasing usage.

Support and Assistance: Easy-to-use systems often come with better support and assistance features, helping users quickly resolve any issues they encounter. This support reinforces user confidence and satisfaction, promoting continued use.

In summary, making electronic payment technology more user-friendly is vital for boosting its adoption in Algeria. By focusing on improving the user experience, enhancing accessibility, and ensuring convenience, service providers can significantly increase the acceptance and usage of electronic payment solutions.

8.9. financial fraud

The observation that financial fraud significantly impacts the usage of electronic payment methods in Algeria suggests a complex interplay of factors influencing consumer behavior and adoption patterns, Algerian consumers may perceive electronic payment systems as inherently vulnerable to fraudulent activities, leading to a reluctance to use these platforms for financial transactions. This apprehension reflects broader concerns about the security and integrity of digital financial services in the country.

Cybersecurity Concerns: Weaknesses in cybersecurity infrastructure and protocols may expose electronic payment systems to various forms of fraud, including phishing, identity theft, and unauthorized transactions.

Lack of Trust: Previous incidents of financial fraud, either experienced firsthand or reported in the media, can erode consumer trust in electronic payment platforms. Without trust in the security of these systems, consumers are less likely to adopt them.

Perceived Risk: Consumers may perceive electronic payments as riskier than traditional payment methods due to the intangible nature of digital transactions and the potential for unauthorized access to sensitive financial information.

Regulatory Environment: Inadequate regulation and enforcement mechanisms may contribute to an environment where fraudulent activities go unchecked, further exacerbating consumer concerns about the safety of electronic payments.

Addressing these causes requires a multi-faceted approach that involves strengthening cybersecurity measures, enhancing consumer education and awareness about fraud prevention strategies, and implementing effective regulatory frameworks to safeguard against fraudulent practices.

8.10. transfer fees

The observation that transfers fees significantly impact the usage of electronic payment methods in Algeria suggests underlying challenges related to cost and affordability, which influence consumer behavior and adoption trends.

Algerian consumers appear to be highly sensitive to transfer fees associated with electronic payment methods, with the fear of these fees acting as a significant deterrent to adoption. This indicates that the financial aspect, particularly the perceived value proposition and cost-effectiveness of electronic payments compared to traditional methods, strongly influences consumer decision-making.

Cost Sensitivity: Algerian consumers may have limited disposable income, making them highly sensitive to additional costs associated with electronic payments. High transfer fees can significantly increase the overall cost of transactions, reducing the attractiveness of electronic payment methods compared to alternative options such as cash.

Perceived Fairness: Consumers may perceive high transfer fees as unjustified or disproportionate to the services provided. In the absence of transparent pricing structures or perceived value for money, consumers are less inclined to utilize electronic payment methods.

Competitive Landscape: The presence of high transfer fees may reflect pricing strategies adopted by financial institutions or payment service providers in Algeria. Limited competition in the market may contribute to higher fees, further deterring consumers from adopting electronic payment methods.

Lack of Incentives: The absence of incentives, such as discounts or rewards for using electronic payments, may fail to offset the impact of transfer fees on consumer behavior. Without tangible benefits, consumers may perceive electronic payments as less advantageous compared to traditional methods.

Addressing these causes requires a concerted effort to reduce transfer fees, improve transparency in pricing, and provide compelling incentives to encourage the adoption of electronic payment methods. By enhancing affordability and perceived value.

8.11. Technical malfunctions

The observation that technical malfunctions significantly impact the usage of electronic payment methods in Algeria points to underlying challenges related to reliability and trust in digital financial services, which influence consumer behavior and adoption patterns.

Algerian consumers appear to be highly concerned about the reliability and stability of electronic payment systems, with the fear of technical malfunctions acting as a major deterrent to adoption. This suggests that issues such as system outages, transaction failures, and other technical glitches undermine confidence in the effectiveness and dependability of electronic payment platforms.

Infrastructure Limitations: Inadequate technological infrastructure, including internet connectivity and power supply, may contribute to frequent technical malfunctions in electronic payment systems. Insufficient investment in infrastructure development and maintenance can exacerbate reliability issues, leading to user frustration and dissatisfaction.

Software Bugs and Errors: The presence of software bugs, glitches, or coding errors within electronic payment platforms can result in technical malfunctions, disrupting transaction processing and user experience. Inadequate testing and quality assurance processes may fail to detect and address these issues before deployment, leading to system instability.

Insufficient Maintenance: Poor maintenance practices, including irregular system updates, patch management, and hardware maintenance, can increase the risk of technical malfunctions in electronic payment systems. Without proactive maintenance protocols in place, systems may become susceptible to performance degradation and operational disruptions.

Cybersecurity Threats: The presence of cyber threats, such as malware attacks, ransomware, and distributed denial-of-service (DDoS) attacks, can compromise the integrity and availability of electronic payment systems, leading to technical malfunctions. Inadequate cybersecurity measures, including weak authentication mechanisms and insufficient network security controls, can leave systems vulnerable to exploitation by malicious actors.

Addressing these causes requires a comprehensive approach that focuses on improving technological infrastructure, enhancing software quality and reliability, implementing proactive maintenance practices, and strengthening cybersecurity defenses. By addressing underlying issues related to technical malfunctions.

8.12. other

he observation that factors other than the security of personal data significantly impacts the usage of electronic payment methods in Algeria sheds light on the multifaceted nature of barriers influencing consumer behavior. Algerian consumers exhibit a notable reluctance towards electronic payments, driven by concerns beyond data security. These unidentified factors, presumed to encompass various issues such as user experience, trust, cultural norms, and regulatory complexities, exert a considerable influence on adoption patterns. Addressing these underlying challenges requires a comprehensive approach that prioritizes improving user experience, building trust, addressing cultural preferences, and fostering a supportive regulatory environment. By identifying and mitigating these barriers, stakeholders can facilitate the widespread acceptance and usage of electronic payment methods in Algeria, thereby contributing to the advancement of digital financial inclusion and innovation in the country.

conclusion

In conclusion, the observations and analyses regarding the factors influencing the usage of electronic payment methods in Algeria reveal a complex landscape of challenges and opportunities. While electronic payments offer the potential to enhance financial inclusion, efficiency, and convenience, several barriers impede their widespread adoption in the country.

The findings highlight the critical importance of addressing concerns related to security, affordability, reliability, and cultural preferences to promote broader acceptance of electronic payment methods. Factors such as financial fraud, high transfer fees, technical malfunctions, and unidentified barriers significantly deter consumers from embracing electronic payments, underscoring the need for targeted interventions and strategic initiatives.

To overcome these challenges and capitalize on the potential of electronic payments, stakeholders must adopt a multi-faceted approach that focuses on enhancing user experience, building trust and confidence, addressing cultural nuances, streamlining regulations, promoting financial education, incentivizing adoption, and fostering collaboration among key stakeholders.

By implementing these recommendations, Algeria can pave the way towards a more inclusive, efficient, and digitally-driven financial ecosystem, unlocking numerous benefits for consumers, businesses, and the economy as a whole. With concerted efforts and collective action, the vision of a cashless society in Algeria can become a reality, driving progress and prosperity for the nation in the digital age.

General conclusion

General conclusion

In conclusion, the exploration of factors influencing the usage of electronic payment methods in Algeria underscores the complex interplay of socio-economic, technological, trust-related, infrastructural, educational, and cultural dynamics. The study addresses nine secondary questions: How does income level influence the adoption of e-payment methods? What is the impact of trust in financial institutions on e-payment usage? How does the availability of e-payment infrastructure affect its adoption? In what ways does educational level determine e-payment usage? How do cultural preferences shape attitudes towards e-payment methods? What is the relationship between age and the likelihood of using e-payment systems? How does gender influence the adoption of e-payment technologies? What role does the quality of electronic payment services play in their adoption? And how does the ease of using e-payment technology impact its usage rates?

Alongside these questions, several research hypotheses were tested to gain deeper insights into these factors. These hypotheses examined the relationships between income levels and e-payment usage, the role of trust in financial institutions, the influence of e-payment infrastructure availability, the effect of education on e-payment adoption, and the impact of cultural preferences.

These dimensions collectively shape consumer attitudes and behaviors towards e-payment adoption within the Algerian banking sector, highlighting both challenges and opportunities for promoting digital payment solutions. The results obtained have provided significant insights into the factors influencing the adoption and use of online banking services in the country, highlighting the need for targeted strategies to enhance digital payment adoption in Algeria.

H1 Hypothesis number one, stating that individuals with higher income levels are more likely to adopt e-payment methods, is not confirmed. Despite assumptions that higher income correlates with greater access to technological resources and a willingness to adopt innovative financial services, adoption of e-payment methods is not strictly dictated by income. Factors such as personal preferences, security concerns, and traditional banking habits play significant roles in determining adoption rates. Furthermore, lower-income individuals may adopt e-payment methods due to targeted solutions and affordability, challenging the hypothesis that income level alone predicts e-payment usage. Therefore, the relationship between income levels and e-payment adoption is nuanced and does not unequivocally support the hypothesis in the context of banking transactions.

The second hypothesis H2 delves into the role of trust in financial institutions in driving e-payment adoption. Trust is a critical determinant of consumer confidence in utilizing electronic payment methods, with factors such as reliability, data security, and customer service responsiveness playing pivotal roles. Building trust in the banking sector is essential for fostering the adoption of e-payment solutions, highlighting the importance of confidence-building measures and transparent communication strategies.

Furthermore, the hypothesis H3 concerning the influence of e-payment infrastructure availability emphasizes the significance of technological infrastructures in shaping adoption patterns. A robust e-payment infrastructure, including online banking platforms and secure transaction networks, facilitates the integration of electronic payment solutions into consumers' lives. Urban areas with extensive e-payment coverage exhibit higher adoption rates, indicating the importance of infrastructure accessibility in driving digital payment adoption.

The hypothesis H4 related to effect of education and the demographic factors on e-payment usage Based on the provided information, we can conclude that the hypothesis regarding education level and its influence on e-payment adoption is not confirmed, whereas the assertion about age is not fully supported and rejected. Higher education indeed correlates with increased e-payment usage due to enhanced digital literacy and technological proficiency among Algerian consumers. However, while younger consumers generally exhibit greater familiarity with technology, suggesting higher adoption rates, the assumption that older individuals are less likely to adopt e-payments due to age-related barriers like lack of experience or security concerns is not really confirmed. In reality, older demographics can also adopt e-payment methods, especially with improved digital literacy and targeted educational efforts. Gender differences, with men generally more inclined to use e-payments, may be influenced by various factors like access to technology and risk perception.

Lastly, the hypothesis H5 addressing cultural preferences highlights the influence of societal norms and values on e-payment adoption. Cultural factors such as attitudes towards financial transactions and the perceived value of cash shape preferences for payment methods. Tailored strategies that consider cultural nuances are essential for promoting digital payment technologies within Algeria's cultural context.

In synthesizing these hypotheses, a comprehensive understanding of the factors influencing e-payment adoption in Algeria emerges. By recognizing and addressing these multifaceted dynamics, stakeholders can develop targeted strategies to overcome barriers and promote the adoption of digital payment solutions, thereby advancing financial inclusion and innovation in Algeria's evolving digital landscape.

The determination of electronic payments, influenced by individual factors such as age, gender, income, and educational level, embodies a nuanced interplay of socio-economic dynamics and personal preferences within Algeria's financial landscape. As we navigate through the intricate web of these determinants, a mosaic of insights emerges, shedding light on the diverse motivations and barriers shaping the adoption of electronic payment methods.

Age emerges as a significant determinant, with older individuals exhibiting a greater propensity to embrace electronic payments, perhaps reflecting a combination of technological familiarity and evolving consumer preferences over time. Meanwhile, gender disparities reveal themselves, with females demonstrating a lower likelihood of adopting electronic payments compared to their male counterparts, highlighting potential gender-specific barriers or societal norms influencing usage patterns.

Income levels play a pivotal role in shaping e-payment adoption, with higher-income individuals exhibiting a greater inclination towards digital financial solutions, likely driven by increased access to technology and a greater comfort with financial innovation. Conversely, lower-income segments may face barriers to adoption, such as limited access to digital infrastructure or concerns about transaction costs, underscoring the importance of addressing socio-economic disparities in promoting financial inclusion.

Educational attainment emerges as a key determinant, with higher levels of education correlating positively with e-payment adoption, indicative of the role of digital literacy and awareness in shaping consumer behaviors. Individuals with greater educational attainment may possess the knowledge and skills necessary to navigate digital financial platforms confidently, highlighting the importance of educational initiatives in fostering widespread adoption.

In synthesizing these determinants, a nuanced understanding of the factors influencing electronic payment adoption emerges, underscoring the need for targeted strategies that address the diverse needs and preferences of Algeria's population. By recognizing the intricate interplay of age, gender, income, and educational level, stakeholders can develop tailored interventions aimed at promoting digital financial inclusion and empowering individuals to embrace the benefits of electronic payments fully.

the determination of electronic payments among individuals in Algeria reflects a complex interplay of socio-economic factors, personal preferences, and societal norms. By addressing the unique needs and barriers faced by different demographic groups, Algeria can foster a more inclusive and accessible digital financial ecosystem that empowers individuals to participate fully in the digital economy and realize their financial goals.

In addition to socio-economic and demographic factors, technological elements play a crucial role in shaping the determination of electronic payments among individuals in Algeria, as highlighted by the research findings. These technological factors encompass the quality of electronic payment services, the ease of using electronic payment technology, and the perceived security of electronic payment systems.

The research underscores the significant impact of the quality of electronic payment services on adoption rates. Findings reveal a positive correlation between the perceived quality of services and the likelihood of adopting electronic payments. Factors such as advanced features, user-friendly interfaces, fast processing times, enhanced security measures, and extended service availability contribute to a positive user experience, thereby encouraging greater acceptance and utilization of electronic payment methods.

Moreover, the ease of using electronic payment technology emerges as a critical determinant of adoption. The research indicates that individuals are more inclined to adopt electronic payments when the technology is user-friendly and intuitive. Simplified interfaces, straightforward processes, and seamless integration with existing banking platforms contribute to a frictionless user experience, reducing barriers to adoption and promoting widespread usage of electronic payment solutions.

Furthermore, the perceived security of electronic payment systems significantly influences adoption behaviors. The research findings highlight a positive association between perceived security measures and the likelihood of adopting electronic payments. Robust encryption protocols, multi-factor authentication mechanisms, fraud detection systems, and data privacy safeguards instill trust and confidence among users, mitigating concerns about financial fraud and identity theft, and fostering greater acceptance of electronic payment methods.

Based on the observations regarding the factors impacting the usage of electronic payment methods in Algeria, the following recommendations can address the identified challenges and promote broader adoption. Firstly, enhancing user experience by investing in the usability, functionality, and convenience of electronic payment platforms is crucial. Streamlining registration processes, optimizing user interfaces, and simplifying transaction procedures will make electronic payments more intuitive and user-friendly. Secondly, building trust and confidence through strengthened cybersecurity measures, transparent information about security protocols, and responsive customer support will enhance the reliability of electronic payment systems. Additionally, addressing cultural preferences by tailoring solutions to align with local customs and traditions, while educating consumers about the benefits and safety of digital financial services, is essential. Streamlining the regulatory environment to create a supportive framework that encourages innovation and fosters consumer protection is also important. This involves clarifying regulations, streamlining compliance processes for service providers, and establishing robust enforcement mechanisms. Promoting financial education through initiatives that increase awareness and understanding of electronic payment methods among Algerian consumers is vital. Providing guidance on safe and secure usage, as well as information on the rights and responsibilities of users, will further support adoption. Incentivizing adoption by introducing rewards such as discounts, cashback, or loyalty programs can encourage regular use of electronic payments. Finally, fostering collaboration among government agencies, financial institutions, payment service providers, and other stakeholders to collectively address challenges and share best practices will accelerate progress towards a cashless society.

Bibliography

1) Othmani Salah, (2015/2016) "The Reality of the Algerian Banking System and Its Role in Economic Development," Master's Thesis, Faculty of Economics, University of Belhadj Bouchaib, Timimoun, pp. 20-19.

2) Larraboui Amine, (2015/2016), "Banking Reforms in Algeria: Reality and Prospects," Master's Thesis in Economics, Finance, and Management Sciences, University of Abi Bakr Belkaid - Tlemcen, Faculty of Economic Sciences, Magnia, p. 3.

3) Ashour Amal, (2014/2015), "The Banking System: From Public Nature to Privatization of Activity," Master's Thesis, Faculty of Political Science, University of Kasdi Merbah - Ouargla, p. 5.

4) Taïr Latrèche, (2003), "Banking Techniques," 2nd Edition, University Press, Algeria, p. 179.

5) Qalmin Fayza, (2014/2015), reforms of the Algerian banking system and their effects on the mobilization of savings, thesis for obtaining a master’s degree in economic sciences, specializing in finance and money, Mohamed Boudiaf University of M’sila, p. 99

6) Abdel Qader Breish (2005/2006), Banking liberalization, requirements for developing banking services, and increasing the competitiveness of banks. Doctoral dissertation in economic sciences Management Sciences, Money and Finance Branch, p. 92

7) Othmani Saliha: year (2015/2016), The reality of the Algerian banking system and its role in economic development, memorandum for obtaining a master’s degree in

economic sciences, specializing in banking money and international finance, Belhaj Bouchaib University, Ain Temouchent, p. 34

8) dief khalaf , year (2014-2015), Commercial banks and their role in financing foreign trade. This information is referenced from a master's thesis in Management Sciences at the University of Oum El Bouaghi, Algeria, from the academic pages 22-23.

9) Mubaraka Boulkarun, (2013-2014), The Risks of Bank Loans, a memorandum for obtaining a Master's degree in economic sciences in Sakra, Mohamed Kheidar University, p. 30.31.

10) Nour Bahiwa, (2017-2018), The Role of Commercial Banks in Financing Small and Medium Enterprises, Master's Degree Thesis, Mohamed Boudiaf University, M'Sila, pp. 15-16,

11) Abdul Wahab Youssef Ahmed, (2008), "Finance and Financial Institutions Management", First Edition, Dar Al-Hamid for Publishing and Distribution, Jordan, p. 157.

12) Hussein Mohammed Samhan, Soheil Ahmed Samhan Al-Wadi, Mahmoud Hussein Al-Naqood, (2010), "Money and Banks", First Edition, Dar Al-Masira for Publishing, Distribution, and Printing, Jordan, p. 162.

13) Wafa El Qoursou, (2018-2019), "The Impact of Bank Loans on Economic Growth," Doctoral Thesis, Abi Bakr Belkaid University, Tlemcen, p. 26.

14) Nasira Yahyaoui, (December 2013),"The Role of Bank Loans in the Development of the Agricultural Sector in Algeria," Journal of Economic Future, Volume 1, Issue. Algeria, p. 37.

15) Raqa Mohamed Al-Amin, as previously mentioned, p. 39.

16) Islam Abdelkader Othman, (October 11, 2017), "Bank Loans as a Tool for Financing Economic Institutions and Real Estate in Algeria as a Model," First Edition, Alexandria, p 9.10.11

17) Abdel Hamid Abdel Muttalib, (2000), Comprehensive Banking Operations and Management, Alexandria: Dar Al Jamea Al Iskandariya, pp. 104-105.

18) Mahfouz, Amal Al-Attawi and Warda, previously mentioned reference, pp. 15-16.

19) S. PIEDELVIERE. (2000), "Instrument of credit and payment," Edition DALLOZ, Paris p151.

20) ROLLAND, Luc-Bernet. (2001) "Principle of Banking Technique," 21st Edition DUNOD, Paris, p42. 2 Internal bank documents.

21) ROLLAND, Luc-Bernet. Op.cit, page 44.

22) S. PIEDELIEVRE. Op.cit, p50

23) Interbank Training Company "Portfolio Operations," p13.

24) DIDIER, Hallepee. (2011), "The World of Monetics: History, Functioning, and Perspectives," FONDCOMB Edition, Italy, p18.

25) Monetics (2012). [http://www.dicodunet.com/definitions/economie/monetique-carte-bancairebanque.htm], (page consulted on January 25, 2013).

26) The bank card [http://banque.comprendrechoisir.com/comprendre/carte-bancaire], (page consulted on January 5, 2013).

27) JEANNE, (2000), Dancette and Christoph RETHORE. "Dictionnaire analytique de la distribution", Edition les presses University of Montreal, p2

28) Rolland, Luc-Bernet. Op.cit, page.54

29) FREDERIC, Georges. (2006)"Seizure of Scriptural Currency," Lacier Editions, Brussels, p. 576.

30) THIBANLT, Verbiest, and ETIENNE Wery. (2001), "Internet and Information Society Law," Lacier Editions, Brussels, p. 314.

31) "KPMG, (2012), « guide des banques et des établissements en Algérie », Edition ELLIPSE, Algérie, p.07."

32) - KPMG, (2012) "Guide to Banks and Establishments in Algeria," ELLIPSE Edition, Algeria p.07

33) BADR, [http://www.badr-bank.dz/], (page consulted on March 10, 2013).

34) BDL, [http://www.bdl.dz/], (page consulted on March 2013)

35) KPMG. Op. cit., p.8

36) ABDELKRIM, Naas. (2003), "The Algerian Banking System," INAS Editions, Paris p.141.

37) LILA, Brahmi. (2008), “Evaluation of the Algerian banking system through its contribution to the financing of projects.Of local development", magister thesis, University of Bejaia, July p82

38) Abdellah Belmadani (2019), The determinants of the use of means of payment, In Money and payment systems pages 69 to 98

Annexes

Appendix01: The questionnaire of our study

محددات استعمال الدفع الالكتروني في الجزائر

1. الجنس
   - رجل
   - امرأة
2. العمر
   - من 19 سنة إلى 25 سنة
   - من 25 سنة إلى 40 سنة
   - من 40 سنة إلى 55 سنة
   - 55 سنة فما فوق
3. المستوى التعليمي
   - مستوى الثانوية
   - مستوى ليسونس
   - مستوى الماجستير
   - مستوى الدكتوراه
4. الدخل
   - أقل من 50.000 دج
   - بين 50.000 دج و100.000 دج
   - أكثر من 100.000دج
5. هل سبق لك استخدام الدفع الإلكتروني؟
   - نعم
   - لا
6. هل تعتقد أن الدفع الإلكتروني في الجزائر آمن
   - نعم
   - لا

7. ما هو أكثر شيء تخافه؟
   - الاحتيال المالي

- رسوم التحويل
- الأعطال الفنية
- أمن البيانات الشخصية
- آخر

8. هل تعتقدون أن الدفع الإلكتروني يمكن أن يصبح بديلا صالحا للدفع التقليدي في الجزائر

- نعم
- لا

9. ما رأيك في جودة طريقة تقديم الدفع الإلكتروني

- سيء
- متوسط
- حسن
- ممتاز

10. هل تجد تكنولوجيا الدفع الإلكتروني سهلة الاستخدام؟

- نعم
- لا

Source: Developed by the author

Appendix 02: The results given by the R software

```
Call:
glm(formula = MODEL, family = binomial(), data = DATA)

Deviance Residuals:
     Min        1Q    Median        3Q       Max
-1.64367   0.00000   0.00000   0.05809   1.55283

Coefficients:
                                                                          Estimate Std. Error z value Pr(>|z|)
(Intercept)                                                                 32.373  14918.498   0.002    0.998
GENREFemme                                                                  -2.401      2.517  -0.954    0.340
AGE                                                                          4.252      2.593   1.640    0.101
NIVEAU_EDUCATION                                                             2.424      5.653   0.429    0.668
REVENU                                                                      -7.584     11.734  -0.646    0.518
QUALITE_DE_PRESENTATION_DU_PAIEMENT_ELECTRONIQUE                             8.047      5.452   1.476    0.140
LA_SECURISATION_DU_PAIEMENT_ELECTRONIQUEOui                                  1.715      1.813   0.946    0.344
FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUEAUTRE                       -43.434  14918.489  -0.003    0.998
FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUEFRAUDE_FINANCIERE           -42.924  14918.489  -0.003    0.998
FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUELES_FRAIS_DE_TRANSACTIONS   -36.902  14918.492  -0.002    0.998
FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUELES_PANNES_TECHNIQUES       -26.480  14192.451  -0.002    0.999
PAIEMENT_ELECTRONIQUE_UNE_ALTERNATIVE_VIABLE_AU_PAIEMENT_TRADITIONNELOui   -22.757   4597.366  -0.005    0.996
SIMPLIFICATION_DE_UTILISATION_DE_LA_TECHNOLOGIE_DE_PAIEMENT_ELECTRONIQUEOui  20.059   4597.352   0.004    0.997

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 52.188  on 48  degrees of freedom
Residual deviance: 14.658  on 36  degrees of freedom
AIC: 40.658

Number of Fisher Scoring iterations: 20
```

```
                                                                (Intercept)                                                               GENREFemme
                                                               1.146125e+14                                                             9.060223e-02
                                                                        AGE                                                         NIVEAU_EDUCATION
                                                               7.026696e+01                                                             1.128779e+01
                                                                     REVENU                         QUALITE_DE_PRESENTATION_DU_PAIEMENT_ELECTRONIQUE
                                                               5.083833e-04                                                             3.124392e+03
                                LA_SECURISATION_DU_PAIEMENT_ELECTRONIQUEOui                     FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUEAUTRE
                                                               5.556014e+00                                                             1.370471e-19
           FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUEFRAUDE_FINANCIERE FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUELES_FRAIS_DE_TRANSACTIONS
                                                               2.282246e-19                                                             9.415456e-17
       FACTEUR_LE_PLUS_CRAINT_DU_PAIEMENT_ELECTRONIQUELES_PANNES_TECHNIQUES PAIEMENT_ELECTRONIQUE_UNE_ALTERNATIVE_VIABLE_AU_PAIEMENT_TRADITIONNELOui
                                                               3.160869e-12                                                             1.308609e-10
SIMPLIFICATION_DE_UTILISATION_DE_LA_TECHNOLOGIE_DE_PAIEMENT_ELECTRONIQUEOui
                                                               5.148430e+08
```