

The Legal Framework for Electronic Payment in Algeria: Between the Requirements of Legal Certainty and Obstacles to Implementation

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Abstract

Traditional means of payment have become a considerable burden on banks because they rely heavily on paper-based procedures and are time-consuming. Technological development and the emergence of the Internet have provided an alternative solution to these problems. These developments have led to the emergence of electronic payment methods as alternatives to traditional means of payment, facilitating transactions in electronic commerce. Customers can also benefit from banking services, such as paying bills for goods and services, through electronic communication. This research paper seeks to define the concept of electronic payment methods and highlight the challenges facing their implementation in Algeria.

Keywords: Electronic payment methods, electronic cards, cyberspace, information and communication technology.

Introduction

Technological development has played a significant role in all aspects of life, particularly in the economic sphere. Considerable advances have been made in the hardware and software used in modern payment systems. These technological developments have led to the emergence of what are known as electronic payment methods, which constitute a form of electronic banking services that banks have adopted to keep pace with technological change and improve their performance in serving customers (Al-Achi & Bouras, 2018, p. 175).

To keep pace with these developments and modernise its banking system, Algeria has sought to update its payment system, which has experienced delays in implementing electronic payment methods. This effort is reflected in several projects aimed at modernising these methods, including bank cards for payments and cash withdrawals, automated teller machines, and electronic payment terminals. In addition, payment systems have been modernised. Since May 2006, two payment and settlement systems have been operational: the Algerian Real-Time Gross Settlement System (ARTS) and the Algerian Telecompensation System (ATCI). These developments coincided with measures and recommendations issued by international institutions, including the World Bank and the Bank for International Settlements.

This study seeks to address the following research question:

El marco jurídico del pago electrónico en Argelia: entre las exigencias de seguridad jurídica y los obstáculos para su implementación

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Resumen

Los medios de pago tradicionales se han convertido en una carga considerable para los bancos debido a su marcada dependencia de procedimientos en papel y al tiempo que requiere su tramitación. El desarrollo tecnológico y la aparición de Internet han ofrecido una alternativa para superar estas dificultades. Estos avances han propiciado el surgimiento de medios de pago electrónicos como alternativas a los instrumentos tradicionales, facilitando las transacciones en el comercio electrónico. Asimismo, los clientes pueden acceder a servicios bancarios, como el pago de facturas correspondientes a bienes y servicios, a través de medios de comunicación electrónicos. El presente artículo tiene como objetivo definir el concepto de medios de pago electrónicos y poner de relieve los desafíos que plantea su implementación en Argelia.

Palabras clave: medios de pago electrónicos, tarjetas electrónicas, ciberespacio, tecnologías de la información y la comunicación.

What challenges do electronic payment methods face in Algeria?

The study aims to provide a theoretical framework for understanding the concepts associated with electronic payment methods and to identify the factors that hinder their successful implementation. It is organised into two sections:

- Section One: The Concept of Electronic Payment Methods.
- Section Two: Challenges Facing Electronic Payment Methods.

To address the research question, the study adopts a descriptive-analytical approach, as this is generally suitable for this type of research and particularly appropriate to the subject under investigation. The study also relies on documentary research, drawing on a range of sources, including books, journal articles, and dissertations.

Section One: The Nature of Electronic Payment Methods

Economic development and the expansion of commercial exchanges have led to the evolution of payment methods, which have taken different forms over time rather than remaining fixed. These methods have developed from traditional money to cheques and, more recently, to what are known as electronic payment methods as a result of technological advances.

First Subsection: The Conceptual and Legal Framework of Electronic Payment Methods under Algerian Law

Electronic payment methods are among the most prominent manifestations of digital transformation in financial and commercial transactions. They facilitate the fulfilment of obligations, accelerate exchanges, and promote financial inclusion. The growing use of these methods has become a necessity driven by technological developments and the requirements of the digital economy. Consequently, the Algerian legislator has taken an interest in regulating them within a legal framework intended to ensure the security of transactions and protect the parties involved.

Several definitions of electronic payment methods have been proposed. The most important can be summarised as follows:

- A means that enables its holder to make remote payments through public telecommunications networks (Zouach, 2010/2011, p. 18).
- A secure and rapid electronic process for transferring funds from a buyer to a seller through financial institutions, at the lowest possible cost (Guerroumi & Dahhak, n.d., p. 143).

Based on these definitions, an electronic payment method can be defined as “a means of transferring funds using electronic technology, thereby facilitating exchanges securely, rapidly, and at the lowest possible cost.”

Electronic payment methods are characterised by the following features:

1. International character: They are accepted across countries and can be used to settle accounts in transactions conducted in cyberspace between users worldwide (Bakhti, 2008, p. 73).
2. Electronic payment: Payment is made using electronic money stored electronically and transferred between users to fulfil payment obligations (Al-Shafei, 2003).
3. Appropriate banking infrastructure: The use of electronic payment methods requires a banking system suited to the nature of these transactions, including the necessary electronic infrastructure to facilitate their use while ensuring security and trust (Al-Ani, 2006/2007, p. 224).
4. Remote settlement of transactions: These methods are used to settle transactions remotely. The contract is concluded between parties located in different places, and payment is made over the Internet

using electronic data that enables direct communication between the contracting parties (Abbassia, 2016, p. 349).

5. Two methods of electronic payment:

- First method: Payment is made using funds specifically allocated in advance for this purpose. This involves payment over the Internet through the exchange of electronic information using wireless communication technologies. Payment is made only after the funds have been deducted, and the same funds cannot be used to settle other transactions through a different method. This resembles contracts in which the price is paid in advance (Matar, 2008, pp. 97–99).

- Second method: Payment is made using ordinary bank cards, without funds being allocated in advance specifically for this purpose. The funds accessible through these cards can also be withdrawn or used through other means, such as cheques, to settle financial transactions (Bakhti, 2008, p. 72).

6. Use of two types of networks: Electronic payment takes place through either a private network, in which communication is restricted to the contracting parties and presupposes the existence of prior commercial and financial transactions or relationships between them, or a public network, through which individuals who have no prior relationship with one another can conduct transactions (Mahrez & Said, 2010, p. 277).

Second Subsection: Types of Electronic Payment Methods

Electronic payment methods have diversified and taken forms suited to the requirements of electronic commerce and the nature of transactions conducted over the Internet. Their development began with the emergence of bank cards, which subsequently evolved from magnetic-stripe cards to cards equipped with electronic chips. Other electronic payment methods have also emerged (Al-Achi & Bouras, 2018, p. 175).

1. Bank cards: These are magnetic cards issued by banks or entities legally authorised to do so, in accordance with specified standards. Cardholders can use them to purchase most of their needs or pay for services without having to carry large amounts of cash, which may be exposed to theft, loss, or damage (Mansour, 2003, p. 122).

2. Electronic money: This is a store of monetary value held in digital form in a secure location on the customer's computer hard drive, known as an "electronic wallet." It is available for immediate exchange in purchasing, selling, transferring funds, and other transactions.

The European Central Bank has defined electronic money as "an electronic store of monetary value on a technical device, widely used to make payments to undertakings other than the issuer, without requiring a bank account for the transaction, and used as a prepaid bearer instrument" (Al-Shafei, 2003).

3. Electronic cheques: An electronic cheque is the equivalent of a traditional cheque. It constitutes a payment order issued by the drawer to the drawee, instructing the payment of a specified amount to the beneficiary or bearer. However, unlike a traditional cheque, it is transmitted electronically. In other words, an electronic cheque is an authenticated and time-stamped electronic message sent by its issuer (the cheque holder) for authorisation and presentation to a bank operating over the Internet. The bank then transfers the cheque's monetary value to the holder's account, after which the cheque is cancelled and returned electronically to the recipient as evidence that it has been cashed. The recipient can also verify electronically that the amount has actually been credited to their account (Matar, 2008, pp. 97–99).

4. Electronic funds transfer: This is a process through which a bank is authorised to execute electronic credit and debit transfers from one bank account to another. In other words, funds are transferred

electronically by telephone or computer rather than through paper-based procedures. The process involves transferring a specified amount from one account to another by debiting the ordering party's account and crediting the beneficiary's account, whether the two accounts are held at the same bank or at different banks (Mahrez & Said, 2010, p. 277).

5. Electronic wallet: This is a payment instrument suitable for settling low-value transactions. It emerged from the convergence of information and communication technology with smart-card technology. It takes the form of an electronic application designed to organise and manage financial transactions. The wallet contains the user's data in encrypted form and can be installed on a personal computer or stored on a floppy disk or another device capable of retaining such data. It can then be used to make payments over the Internet for purchases. The wallet can be loaded through conventional recharging machines available at various locations, through dedicated telephone devices, in return for funds held in an account with the issuing entity that provides telephone-based recharging services, or by paying the relevant amount at the premises of the issuing bank or financial institution (Matar, 2008, pp. 97–99).

Common examples of temporary electronic wallets include:

- Telephone cards containing a specified monetary value stored on their chips. The balance is depleted through use, and these cards cannot be recharged.
- Cards used in vending machines, which store a monetary value on their chips and can be recharged.

6. Telephone banking: Telephone banking enables customers to enquire about their account balances without having to wait in long queues and to make payments. It also allows customers to be identified and payment notifications to be communicated to service providers through short message service (SMS) messages or telephone calls. Telephone lines have become one of the most widely used channels for financial transactions and commercial exchanges (Abbassia, 2016, p. 349).

7. Internet banking: Internet banking enables banks to establish a continuous electronic communication environment between service providers (banks or financial institutions) and service recipients (customers), allowing banks to provide the banking services their customers require (Al-Ani, 2006/2007, p. 224).

Section Two: Challenges Facing Electronic Payment Methods

Several factors hinder the successful adoption of electronic payment methods and undermine confidence in these modern instruments. Despite the achievements and advantages associated with their use, various factors have limited their success. In particular, new forms of crime targeting bank cards and computer systems have emerged, creating risks associated with the use of modern payment methods (Al-Janabhi & Al-Janabhi, 2004, p. 13).

First Subsection: Cybercrime and the Risks of Electronic Transactions

Cybercrime, also known as Internet crime, has become one of the most widespread forms of crime today. It offers perpetrators numerous advantages that encourage them to engage in such activities. Cybercrime can be defined as “crimes that know no geographical boundaries and are committed using a computer connected to the Internet by a person with extensive knowledge of the technology” (Al-Janabhi & Al-Janabhi, 2004, p. 13).

The emergence of electronic payment methods has contributed to the development of this type of crime, which can be summarised as follows:

1. Identity theft: This occurs when criminals exploit an individual's personal information, such as their address, date of birth, and social security number, on electronic networks to obtain a credit or bank card. Such information enables them to submit online applications for bank cards through institutions that do not implement sufficiently stringent online security procedures (Mansour, 2003, p. 122).

2. Theft of bank card numbers: Stealing bank card numbers over the Internet has become relatively easy. Consequently, incidents of this kind have increased, sometimes followed by extortion, in which perpetrators demand payment in exchange for returning the stolen numbers, refraining from disclosing them, or refraining from using them (Al-Janabhi & Al-Janabhi, 2004, p. 13).

3. Money laundering through bank cards: Money laundering involves converting funds derived from illegal activities, such as drug trafficking, into funds that appear to originate from legitimate sources, such as the car trade. One of the simplest methods described for carrying out this process involves withdrawing large sums of money in instalments from automated teller machines in a foreign country. The branch operating the machine from which the money is withdrawn then requests a transfer of the amount from the branch that issued the card. The transfer is completed by debiting the customer's account. In this way, the customer avoids paying transfer fees and succeeds in laundering the money (Badawi, 2005, pp. 61–62).

The Internet is also considered one of the newer methods used for suspicious money-laundering activities, particularly because it is easy to use and facilitates dealings with banks. With a single click, users can access accounts and financial and banking activities from anywhere in the world. Criminals exploit electronic funds transfers through banks by depositing stolen money into multiple bank accounts and subsequently transferring it to several branches in different countries (Abdel Hamid, 2003, p. 261).

4. Electronic embezzlement through fraudulent manipulation: This involves using an account to manipulate information by entering false data. The perpetrator may fabricate creditors and create fictitious wages or invoices that supposedly require payment, or invent nonexistent debtors who are allegedly required to settle invoices generated by a computer system. The victimised debtor may be unable to prove that no debt exists because computer-generated invoices appear to establish the obligation. In this way, the perpetrator exploits automated payment systems to obtain illicit funds (Abdel Rahim, 2010, p. 198).

Second Subsection: Crimes Involving Bank Cards

Despite the advantages offered by electronic payment methods, they are not without flaws. Various crimes have been committed in connection with their use. Crimes involving bank cards can be divided into those committed by the cardholder and those committed by third parties, as follows.

I. Crimes Committed by Customers Through the Misuse of Bank Cards

Customers who own bank cards may themselves use them to commit offences in breach of the contract concluded with the issuing bank. Such conduct is generally motivated by the desire to obtain money by any means. The main offences or violations of this kind are as follows.

1. Exceeding the Available Balance When Withdrawing Cash from ATMs

This offence occurs when a cardholder withdraws an amount of cash from an automated teller machine that exceeds the balance available in their account or the maximum authorised withdrawal limit.

2. Using an Expired Card

A credit card is issued for a specified period. Once this period has elapsed, the customer is required to return the card to the issuing bank, either for renewal or to discontinue its use. Some consider the failure to return the card in these circumstances to constitute an offence.

3. Misuse of a Payment Card

A customer may purchase goods and services whose total value exceeds the maximum amount guaranteed by the bank or issuing entity. Alternatively, the customer may purchase goods and services

whose value does not exceed the amount guaranteed by the bank but does exceed the balance available in their account (Abdel Karim, 2003, p. 72).

4. Using a Cancelled Card

The issuing bank may cancel a card before its expiry date as a penalty for the customer's misuse of it. The customer is then required to return the card to the issuer. However, the customer may refuse to return it and continue using its details. This may oblige the bank to reimburse the merchant for the resulting amounts, provided that the merchant is unaware that the card has been cancelled.

5. Misuse of a Cheque Guarantee Card

This offence occurs when an offender issues a cheque to the seller of goods for an amount exceeding the limit guaranteed by the card-issuing bank, or issues a cheque drawn on the bank for an amount greater than the value that the issuing bank has undertaken to guarantee (Abdel Fattah Bayoumi, 2005, pp. 56–57).

II. Crimes Committed by Third Parties Through the Misuse of Electronic Cards

Crimes involving electronic cards may also be committed by third parties, as follows.

1. Use of a Stolen or Lost Card by a Third Party

A person who steals a card or finds a lost one may use it to withdraw cash from an automated teller machine or to obtain goods and services from merchants. In countries such as France, such conduct is punishable as fraud (Abdel Rahim, 2010, p. 200).

2. Cash Withdrawals Using Counterfeit Electronic Cards

Third parties may counterfeit cards by using stolen credit cards and replacing or altering the information they contain. Alternatively, they may collude with the legitimate cardholder to use the card for cash withdrawals and forge the cardholder's signature. The cardholder may then dispute the withdrawals and allege that the signature is forged so that the withdrawn amount is debited from their own account (Abdel Rahim, 2010, p. 201).

Some banks have discovered repeated instances in which electronic payment cardholders disputed transactions they claimed not to have made. Investigations revealed that these transactions had been conducted over the Internet by criminals who had managed to capture and generate the electronic payment card numbers of certain customers and exploit them to obtain goods and services.

It is noteworthy that more than half of card-related fraud incidents occur in the United States, while approximately 30% of the remaining cases occur in Europe, particularly the United Kingdom. Lost or stolen cards account for more than half of the losses resulting from fraudulent transactions, while card counterfeiting represents the greatest threat to electronic commerce (Zouach, 2010/2011, p. 92).

Since fraudulent card use makes it difficult to determine whether the person using a card is its legitimate holder, a thief, or someone who has found it, the use of photographs has been proposed as a means of reducing this phenomenon.

Citibank, a bank in the United States, implemented a major project involving the inclusion of cardholders' photographs on bank cards. Under this system, more than one million cards bearing their holders' photographs were issued. The project was selected to assess the effectiveness of this measure, and it was found to be highly effective in combating fraud.

The latest statistics concerning the hacking of bank cards, reported in June 2005 by MasterCard, revealed that more than 40 million bank card numbers had been compromised. Of these, 14 million belonged to MasterCard, including 821,000 cards associated with Europeans and 70,000 with French cardholders, while 20 million belonged to Visa. The hacking operation exploited a security vulnerability

in the system of CardSystems Solutions, a company responsible for ensuring the security of bank card transactions (Zouach, 2010/2011, p. 93).

Conclusion

At the end of this study, several findings were reached, the most important of which are summarised below.

- The payment system is fundamental to any economy because it occupies a central position in economic activity. In the context of the digital economy and the emergence of modern technologies, the provision of services has become easier, facilitating the transition from traditional paper-based methods to electronic payment methods. This transition aims to improve operational efficiency and reduce payment-processing costs. Algeria is among the countries that have recognised the importance of improving payment methods. This was reflected in the launch of several projects in 2006, beginning with bank cards for cash withdrawals issued by banks and payment cards issued by Algérie Poste, which plays a significant role in payment operations in Algeria.
- The new banking environment, competition, and the technological applications of electronic payment instruments have placed pressure on banks to develop new mechanisms and diversify their electronic banking services in order to retain existing customers and attract new ones.
- Electronic payment methods have not proved to be as flawless as bankers had anticipated. Instead, they have generated problems that have hindered the achievement of their intended success. The most significant problem associated with these modern methods has been the absence of a unified legal framework governing their use. In addition, electronic crime has attracted criminals and hackers because these methods rely on remote communication. Bank cards have been the payment instruments most frequently targeted by such cybercrime.

In light of these findings, the following recommendations are proposed.

- Promote digital literacy by developing human capital in information and communication technology and preparing the necessary information and communication technology infrastructure.
- Provide intensive training courses for bank employees in electronic banking services.
- Continuously update the electronic payment systems used by banks in Algeria.
- Strengthen the legal framework governing electronic payment methods. This would enhance the confidence of various economic actors in these methods while helping to reduce the problems arising from their use.
- Ensure effective mastery of electronic technologies, protect them against fraud, and guarantee the confidentiality of all transactions conducted through them.

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