



Cash to Contactless: History, Advantages, and Evolution of this Payment Mode in Albania

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Abstract

Cash Payments have traditionally played a significant role in the economy of Albania, as in many countries. Over the decades, Albanian people prefer cash transactions due to cultural factors, financial inclusions, and economic considerations. Decades ago cash was the only way to perform payments, but the evolution of ATM, Debit Card, Credit Cards and other payment options, has played a significant role. During the latest years, the evolution of contactless payments reflects a significant shift in consumer behaviour and technology development. The 2010s saw rapid adaptation, fuelled by the rise of mobile wallets and smartphones, which integrated payment options seamlessly into daily life. In Albanian Banking Industry as contactless payments became more mainstream, advantages such as speed, convenience, security, and paying without any contact, pushed the Albanian customers to embrace this kind of payment, as the fastest choice to perform transactions. Contactless payments in Albania have been gaining traction in recent years, reflecting a broader trend towards digitalization in financial services, threatening PIN & Chip payments. Through analyses between different periods, we will try to understand if the contactless payments are the first choice in Albania, and if the financial industries and customers are prepared to these rapid changes.

Keywords: Contactless Payments, POS, ATM, Payments with PIN, CHIP, NFC Payments

1. Introduction

The history of cash payments in Albania closely tied to the country's economic and political developments over the decades. In our country many customers have been educated to manage only cash during previous decades, but in the lately years the customers behaviour has shown a different preference regarding payments. Over latest decades the processors and Albanian banks has shown a high interest to develop fast payments processes, taking in considerations AI evolution. Tap and Pay is a new method where users simplify tap their contactless card, smartphone, or wearable device in a compatible payment terminal to complete a transaction. This change has shown us the payments methods that has affect customer behaviour and has changed the payments direction. This new payment has inducted new products and sales strategies, including innovations in security features, such as biometric authentication and tokenization, further enhancing user confidence, but meantime has risen hypothesis and challenges that the customers and financial institutions should take in consideration.

1.1 Research Objectives

- Contactless Payments evolution and the role of the pandemic period in contactless payments mode evolution
- Which is the Albanian Customers behaviour against contactless payments, and which is the correlation of this payment's mode with Retail and Merchant Acceptance.
- Are the financial institutions and customers prepared for these fast developments including quality and security of the payments.

2. Materials and Methods

2.1 Evolution of Payments Methods

The evolution of contactless payments from traditional debit & credit cards to contactless payments has been driven by advancements in technology reflects advancements in technology changing the customer behaviour and the increasing demand for convenience and security in financial transactions. The technology used in this kind of transaction is NFC, which enables short -range communication between devices, allowing for quick data transfers and RFID, used in various contactless cards where an embedded chip communicates with a reader. The initial key developments have been presented at early stages of introduction of Contactless Cards during 1990s – 2000s. *The study of (Boehme, T, & Muehlhaeuser, M.) Contactless Payment Systems*” proceedings of the 1st International Conference on Mobile and Ubiquitous systems, *Networking and Services* discuss the basic concepts and security challenges in the early development of RFID- based payment systems. The Frequency Identification (RFID) that is the foundational technology behind contactless payments, which allows for communication between card and a reader without a physical contact. Early adopters of first Contactless Cards include companies like Mastercard and Visa who started issuing contactless cards, that typically used RFID technology to enable tap-and-go transactions.

According to O'Neill. & Cox, J. *The integration of RDI and NFC in Contactless Payment System*, M, a paper that explores how NFC technology revolutionized the way contactless payments are made, providing a comparison of RFID and NFC -based solutions, at the early 2000s, contactless payment technology began to be integrated into various consumer industries, particularly in transportation systems and retail environments. And this was made possible due to the increased availability of smartphones with NFC (Near field Communication) technology and the standardization of RFID. Exploring the factors that affect the adoption of mobile payment systems, including the early challenges and concerns about security and consumer trust, are shown in Siau, K, &Shen, Z, “Mobile Commerce: The influence of perceived Risks on the Adoption of Mobile Payment” presented at International Journal of Electronic Commerce”.

Rana, A, & Dixit, A. “*Mobile Payment Adoption in Emerging Economies: A literature Review and Research Agenda*”, reviews the drivers and barriers to mobile payment adoption, with a focus on NFC and contactless technologies. The integration with mobile phones has been shown at 2010s. From this period until nowadays the introduction of smartphones with built-in NFC capabilities (e.g., Apple Pay, Google Wallet, Samsung Pay, provided a huge boost to the adoption of contactless payments. The combination of mobile phones and contactless technology allowed users to store credit cards, debit cards, and loyalty cards in digital forms making the payment process faster and more convenient. The investigations how the adoption of mobile wallets influences consumer behaviour and attitudes towards contactless payments has been underlines by Lin, H, -F, & Wang, Y -C, *Exploring the impact of Mobile Wallet on Consumer Behaviour*”. In this decade a Mobile Payment Ecosystem has been developed. The Partnership between financial institutions, mobile providers, and tech companies (e.g., apple and Google) helped established a mobile payment ecosystem.

2.2 Evolution of Contactless Payments in Albania

Tap to Pay payments in Albania, has shown their development lately than the developments in other countries. In the early years of the 21st century, Albania's financial sector was still in the process of modernizing. Bank services were largely traditional, and credit card usage was not widespread. Cash was still dominant as a form of payment for any transaction and the infrastructure for contactless payments was minimal. Visa & Mastercard introduced in the early 2010s through Albanian Local Banks the contactless payments mode. In 2012 a pilot project has initiated when several banks in Albania, started to issue contactless cards in collaboration with Visa and Mastercard. These cards were typically linked to debit & credit account and allowed users to make quick payments by simply tapping their card on a contactless- enable

terminal. Based on Bank of Albania Raiffeisen Bank, BKT, and Intesa San Paolo Bank were early adopters of this technology. In the mid - 2010, Albania's banking sector was supported by government initiatives and EUR-backed reforms. The Albanian government and Bank of Albania have created the right environment for expansion of contactless payments, through strides to modernize its banking infrastructure and improve financial inclusions. Based on Albanian Bank of Albania, in 2016, Albania's government implemented regulations that facilitated the growth of e-money and digital financial services, and Bank of Albania started supporting policies to encourage financial inclusion, which included new strategies to promote contactless payments. Another factor that has affected the development of this kind of payments is the adoption of smartphones. The rise of smartphones usage in Albania during this period, created a more favourable environment for mobile- based contactless payment systems like Google Pay. Raiffeisen Bank and BKT as the major banks in Albania, has launched at 2018 the first credit contactless cards. From 2020 onward, Albania saw an explosion in the use of digital wallets and mobile payment services, with contactless payments becoming more mainstream, especially in the main cities. In the meantime, Mobile Payment Solutions has been developed, and the adoption of mobile payment solutions like Google Pay became more widespread. Raiffeisen Bank Albania, Procredit Bank and Union Bank began offering mobile wallet services. the introduction of digital wallet, alongside the expansion of contactless cards, contributed to improve financial inclusions, especially for younger generation and the tech-savvy population. Based on Bank of Albania Payments Instruments Reports, the number of POS terminals supporting contactless payments grew substantially, especially in the main cities and tourist-heavy areas like Tirana, Durrës, Vlorë, Saranda. Based on these arguments many merchants, particularly in the retail and hospitality industries, upgraded their payments systems to accept contactless cards and mobile payments. As of 2024, Albania is witnessing a further shift towards a cashless society, with contactless payments becoming an integral part of everyday transaction. The market for digital payment solutions is continuing to grow, with several trends shaping the future of contactless payments. Digital Banking services are becoming more advanced with local banks offering more comprehensive mobile apps, that integrate payment services, loans, investments, and savings accounts. Albania is gradually implementing EU- Open Banking regulations, which could facilitate new forms of payments and financial services. This fact could increase the interoperability of different payments systems and expand the availability of contactless payment mechanisms. In the meantime, the Albanian government is looking to integrate digital payments methods into public services, potentially expanding the use of contactless technology for public transportation , and on the other hand utility bills, taxes, and more through the Albanian platform e-Albania.

2.3 The role of Contactless Payments in the Covid -19 Pandemic

The pandemic period at 2019s, underscored the need for cashless transactions. According Bank Payments Instrument Reports, the use of cards for point -of-sale transactions rose dramatically during 2020, specially for contactless payment options, being favoured for their speed and hygiene benefits. The Covid -19 pandemic accelerated the shift toward contactless payments, and Albanian customers sought safer and more hygienic alternatives to physical cash and card payments. Many banks in Albania & merchants raised the contactless payment limit, and government policies encourages the use of digital payment solutions. In a rapid mode all the payments trend shifts to digital and QR Code Payments. Along with NFC-based contactless system, QR code -based payments gained traction in several countries.

A report of Accenture found that in 2020, more than 70% of consumers in various markets indicated that they were more likely to use contactless payments due to hygiene concerns associated with physical cash (Accenture, 2020).The pandemic thus acted as a catalyst for what has been a slowly growing trend towards contactless payments. Based on KPMG survey found that 40% of respondents said they used contactless payments more often during the pandemic reflecting an industry-wide trend of rapid adoption driven by the need for safer payment alternative. (KPMG,2020)

In Albania as in many countries around the world, many businesses quickly upgraded their POS terminals to support contactless payments, and financial institutions also played an important role by increasing transactions limits for contactless payments to encourage usage. According to Bank of Albania Contactless card payment limits were raised in several European countries during the pandemic to accommodate higher transactions volumes without requiring a PIN. The pandemic also accelerated the adoption of mobile wallet, as more customers turned to their smartphones to make contactless payments. According to Mastercard Reports 2020 a significant rise in mobile wallet usage has been presented during this period, with a 50% increase in contactless transactions.

2.4 Current Payments Landscape and customers perception for Contactless Payments

After several developments and different payments mode launched in the financial market during the latest decade, the most widely used form of contactless payment in Albania is the contactless Debit and Credit Card. Main banks including Raiffeisen Bank, BKT, OTP Bank Albania, Union Bank, Credins Bank and Intesa Sanpaolo Bank, offer these cards, which are equipped with Near Field Communication (NFC) technology. According to Central Bank of Albania Transparency Regulations (Jan 2024), the daily transaction limit for this payment mode is up to 50 EUR for a single transaction and up to 150 EUR for cumulative daily transactions limit. Another payment mode used in Albania are mobile wallet and Digital payments through Google. With the rise of the smartphones, mobile wallet have become increasingly popular in Albania. Services like Google Pay, allow customers to link their bank cards to their mobile devices and make contactless payments simply tapping their phone on POS terminals. Third -Party Payment Apps, and local digital payment platforms like Twilio and PayPal also gain traction in Albania for e-commerce and online purchases, further pushing the adoption of digital payment technologies. The use of QR codes, is another growing trend in Albania, particularly in smaller retail environments and peer-to-peer transactions. Several banks and mobile payments platforms in Albania have integrated QR code payment systems, allowing customers to scan a merchant's unique QR code, and perform directly payment from their mobile banking app or mobile wallet.

Albanian customers like their counterparts in other countries, have demonstrated a growing preference for contactless payments due to the convenience, speed, and promotional benefits. According to a survey by the bank of Albania (2021) one of the main reasons Albanian are adopting contactless payments is the convenience and the speed they offer. Around 65% of Albanian respondents preferred contactless payments for everyday purchase because of the speed and easy of use. Contactless payments allow for faster transactions, especially in high -traffic locations like grocery stores, cafes, and public transportation systems. The customers are able to perform payments in seconds, by simply tapping their card or phone. Another perception of Albanian customers to prioritize contactless mode, is the hygiene benefits. Based on KPMG survey (2020), over 50% of Albanian consumers reported to use contactless payments more frequently, to avoid touching shared surfaces. While many Albanian customers use contactless payments as their primary choice, some of the population, still express concerns about the security of these methods. According to Bank of Albania's Report (2020) security concerns were the primary barrier for 30% of Albanian customers when it came to fully embracing contactless payments. Unauthorized transactions or the possibility of being charged without realizing it, especially if the card is lost or stolen remain an existing issue. Taking in consideration this customer perception, Bank of Albania has launched the Authentication Regulations (2023) and according to these procedures the banks in Albania have largely alleviated these concerns by incorporating tokenization, and requiring PIN authentication for certain transactions amounts, which enhances security. Taking in consideration the evolution of payments mode, the younger consumers in Albania are more likely to adopt contactless payments technologies, as they are more familiar with the new trends, smartphones and digital financial tools, meanwhile older generations may be more reluctant to adopt digital payments, preferring traditional cash payments or card swiping. Around 80% of Albanian Customers under the age 40, regularly use contactless payments than the individuals over 50 (Raiffeisen Bank Survey .2021).In additional there is also a noticeable divide between urban and rural areas in Albania when it comes to the contactless payment's usage. While the customers in main cities as Tirana, Durres, are quickly adopted to this new payment method, the rural areas lag in the level of digital literacy.

3. Analysis and Results

Contactless payments in Albania have been on the rise, reflecting global trends in the adoption of digital payment solutions.

3.1 Adoption Rates

The use of contactless payment methods has been growing, especially among younger consumers and urban populations.

Many banks and financial institutions have started issuing contactless cards, making it easier for users to make transactions.

Based on Bank of Albania Payments Report the number of Contactless Transactions has increase in 2020 +62% or 185,330 more transactions than 2018, meanwhile the Contactless Transactions Volumes has increased +119% or 10

Mio EUR higher than 2018.

Table 1: Contactless Transactions Trend (prior pandemic)

Years	2018	2019	2020
Contactless Transactions No	297,136	351,082	482,466
Contactless Transactions Volumes Eur	8,682,376	11,285,149	19,026,040

Source: Central Bank of Albania Payment Instrument Report

Contactless Transactions after 2020, has shown same increasing trends data. The number of Contactless Transactions has increase in 2023 2024 +50% or 244,508 more transactions than 2020, meanwhile the Contactless Transactions Volumes has increased +91% or 17 Mio EUR higher than 2018.

Table 2: Contactless Transactions Trend (post pandemic)

Years	2021	2022	2023
Contactless Transactions No	635,852	681,669	726,974
Contactless Transactions Volumes Eur	29,227,723	36,945,248	36,361,881

Source: Central Bank of Albania Payment Instrument Report

3.2 Retail and Merchant Acceptance:

Issuing card activity from Banks has shown an increase during the years A significant number of retailers, restaurants, and service providers have installed NFC-enabled point-of-sale terminals. Large retailers and supermarkets are leading in acceptance, facilitating quicker and more efficient transactions.

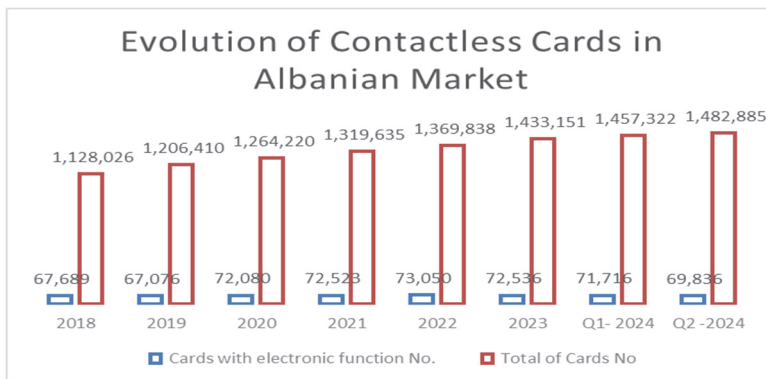


Figure 1: Evolution of Contactless Cards No in Albania

Source: Central Bank of Albania Payment Instrument Report

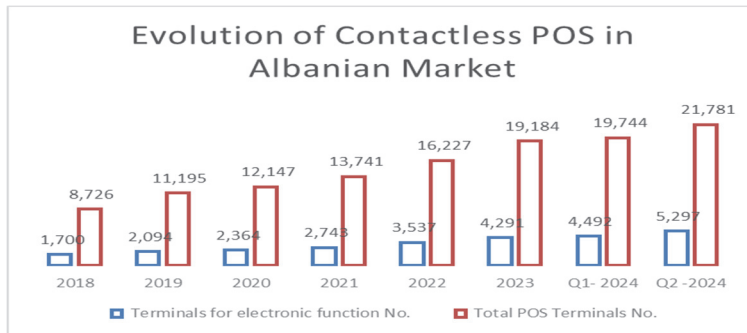


Figure 2: Evolution of POS No. in Albania

Source: Central Bank of Albania Payment Instrument Report

4. Discussions

4.1 Increasing Adoption Among Younger Consumers

The generational divide is an important discussion point, as young people appreciate the speed, convenience, and hygiene benefits of contactless payments, while older generations often exhibit scepticism or lack of familiarity with the technology (Raiffeisen Bank 2020).

4.2 Rise of Contactless Payments during Covid-19

Pandemic period has an unconditional impact in the contactless payments and has changed the direction. But the debate centres around whether the surge in usage during the pandemic will translate into long-term behaviour changes or if consumers will revert to cash once the pandemic has gone. Industry players and regulators are closely monitoring these shifts, with some arguing that the pandemic has permanently altered consumer behaviour towards cashless transactions.

4.3 Customers Concern over Security

How secure contactless payments really are, especially in light of concerns regarding NFC technology being potentially vulnerable to unauthorized scanning, even if banks in Albania have implemented security features like PIN for higher amounts, and tokenization to prevent fraud.

4.4 Countermeasures and Enhancements

The effectiveness of these security measures is an important argument. While security experts believe these measures significantly reduce the risk or fraud, still there is insufficient consumer awareness regarding security features. The need for financial literacy campaigns is often emphasized in today discussions on following trust in contactless system.

4.5 Legal & Regulatory Framework

The regulatory framework for contactless payments in Albania is governed by the Central Bank of Albania, which ensures that payment services comply with European standards and directives, but the main challenge in Albania is ensuring that regulations keep pace with the rapid adoption of digital payment technologies.

4.6 Financial Inclusion

How contactless payments can address barriers to financial inclusions in Albania, especially in rural areas where many consumers still rely on cash transactions. Better infrastructure and educational politics on digital banking are needed to accelerate adoption in in these regions.

4.7 Future of Contactless Payments

Future of Contactless Payments in Albania focuses on how Albanian's financial ecosystem can integrate these emerging technologies to not only enhance payment security but also create new opportunities for financial innovation.

5. Challenges and Concerns

Security, Privacy, and Regulatory Concerns: With the rise of contactless payments, security concerns arose due to the potential risk of fraud and data breaches. To address these, innovations such as tokenization, biometric authentication (fingerprint, facial recognition, and encryption) were integrated into contactless payment systems to enhance security. Above considerations highlights the need for continuous awareness campaigns from the banks and security features from the central bank of Albania to build consumer confidence, for contactless payments.

EMV Standards and Authentication: The European AMV (Europay Mastercard, and Visa) standard for chip cards introduced additional security measures for contactless payments by combining NFC with secure authentication protocols.

Security Risks: Although contactless payments are generally secure, there are concerns about fraud and unauthorized transactions. Security measures are continually being improved to address these issues.

Consumer Awareness: Some consumers remain unaware of how contactless payments work or their benefits, potentially hindering adoption.

6. Conclusion

Overall, contactless payments are gaining traction in Albania, driven by technological advancements, changing consumer preferences, and a broader shift towards digital payments. As the landscape continues to evolve, it is expected that contactless methods will become an integral part of the payment ecosystem in the country.

Contactless payments represent a significant evolution in the payment landscape, offering numerous advantages in terms of speed, convenience, and hygiene. While challenges remain, ongoing technological advancements and growing acceptance among consumers and retailers will likely drive the continued growth of contactless payment systems. Albanian customers are increasingly adopting contactless payments, but several key developments affect this customer behaviour as Convenience and speed, Safety Concerns, Security perceptions, digital Literacy and Accessibility. Banks customers in Albania, appreciate the convenience, speed and security of contactless payments, but there are still concerns related to privacy and security, particularly among older generations. Contactless payments are particularly popular for low-value, everyday transactions. Consumers in Albania typically use contactless cards or mobile wallets for small purchases in high people traffic zones where such as groceries, coffee, where the speed and convenience are the key.

Albanian customers are more oriented in loyalty Programs, and this fact can help the banks to use these preferences to design promotional campaigns and offers to educate the customers towards contactless transactions. Banks and retailers in Albania have started integrating contactless payments with loyalty programs to incentivize usage. Cash Back campaigns and rewards remain the most effective strategy to keep the customers linked with the digital trends and increase card usage. Mobile Payment Solutions and E-commerce growth has an important in the contactless payment's development. With the rise of e-commerce, mobile wallet usage for online payments is becoming more common. Google Pay and local apps are frequently used by Albanian customers for both domestic and international online shopping. The future of contactless payments looks promising, with continued advancements in technology and increasing consumer demand. As security measures improve and more businesses adopt these systems, contactless payments are likely to become a dominant method of transaction globally. The integration of wearables, expansion into e-commerce, has grown the aspiration in Albanian Market to expand this kind of service in the future in public transport. In additional the developments in Biometric authentication (such as facial recognition and fingerprint scanning) is likely to

play larger role in streaming contactless payments, making transactions faster and more secure. In the future there is also growing interest in integrating blockchain technologies and cryptocurrencies with contactless payment systems to provide decentralized secure payment options.

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