

# The Adoption and Challenges of E-Payments in Albania: Trends, Security Concerns, and Future Prospects

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**Abstract:** Technological and digital advancements have shaped every industry and activity nowadays, with finance and banking being among the pioneers in integrating modern technologies. Payments, as a fundamental aspect of the transactions individuals and businesses carry on daily, need a close study of evolving trends, advantages, and challenges at both local and global levels. This paper aims to explore the adoption of electronic payments in the Albanian environment, identifying the most prominent barriers and strategies for further promotion. This research highlights the hurdles both e-payment service users and providers should overcome by analyzing the current state. A combination of qualitative and quantitative methodologies was employed to establish the framework of this study, and a site survey was the main instrument to give answers to the study questions. The findings emphasize the necessity of combined efforts from all stakeholders to enhance adoption of e-payment in the country, accompanied by measures that enable and ensure their secure, convenient, fast, and cost-effective use. This study provides academic and practical implications for advancing electronic payment systems in Albania.

**Key-Words:** Electronic payments, digital banking, cybersecurity, cashless economy, financial education.

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## 1 Introduction

Today's society is under the great influence of digitalization and the internet, which have become a crucial part of almost all areas such as business, education, healthcare, finance, government, public sector, communication, logistics, etc. The rapid advancement of technology has led to a notable transformation in the way transactions are conducted, leading to the widespread adoption of electronic payment (e-payment) systems. E-payments' contribution to financial inclusion, which in turn stimulates employment and economic growth, has been one of their most important effects. In today's economy, electronic payments are essential and can promote steady, long-term growth [1]. The 2023 McKinsey Global Payments Report highlights a potential correlation between the growth of e-payment usage and economic development, stating that technological advancements and the rise of electronic transactions have significantly contributed to the remarkable increase in global payments income [2].

Despite that, some nations still have a long way to go towards cashless economies, facing challenges related to infrastructure, security, and user acceptance.

Due to a range of historical and economic factors, developing countries of the Western Balkans region, including Albania, are still in the process of transitioning toward greater adoption of e-payments and reducing cash usage. Historically, Albania has been a cash-dominant economy. As stated in a report from the Bank of Albania [3], 99.2% of all payments received by businesses in 2016 were made in cash, as well as 66% of payments initiated by businesses were in cash too. That indicates that most Albanian households and businesses were affected by infrastructural, economic, and cultural reasons, preventing them from a broader use of electronic payments, while still viewing cash as a real and safe asset.

Despite the challenges, e-payment adoption has risen, particularly among younger generations in Albania. The decision-making and executive institutions in Albania have been working on implementing the National Retail Payment Strategy (2018–2023) [3], intending to modernize the market, expand the financial inclusion of the population, and increase the use of electronic payments. Reduction of cash in the Albanian economy is considered and also recommended by international institutions [4] as an approach to avoid informality and increase the transparency of the country's economy in its road to

joining the EU. Since 2017, the Albanian Association of Banks has pointed out the role and engagement of commercial banks to promote innovative products that significantly contribute to financial inclusion, financial education, and investing in security [5].

It is broadly accepted in all publications after 2020 that the COVID-19 pandemic has played a considerable role in accelerating the shift, as concerns over physical contact prompted greater reliance on card payments and electronic transactions [6]. The expansion of internet access and digital globalization has contributed to increased online shopping in international e-commerce platforms such as Amazon, Temu, AliExpress, Shein, etc., which has brought a higher reliance on e-payment methods when purchasing.

In addition, Albanian banks have expanded their digital banking services, providing more advanced online and mobile payment options, which have gained traction among tech-savvy users. The result was an increase at a double-digit rate in the use of electronic payments, reaching 21 electronic payments per capita, compared to only 2 payments in 2015 [7].

Despite recent advancements, Albania still faces considerable challenges in fully integrating e-payments into everyday transactions. While there are many e-commerce sites in Albania, the majority continue to rely on cash-on-delivery as a payment method, and just a few may offer card payments directly from their websites. This situation brings to light potential barriers such as technological capacities, online security, digital education of individuals and businesses, and limited incentives for businesses to invest in secure payment infrastructures.

Considering these aspects and the gaps from previous research about the Albanian setting, this study aims to collect and analyze the most recent data, while exploring the development of e-payments in the country. It examines user perspectives on e-payment adoption and strategies to encourage widespread use.

The paper is organized into five sections, with the final one presenting key conclusion and offering recommendations to stakeholders to enhance the adoption of e-payments and support the shift toward a less cash-dependent economy.

## 2 Literature Review

The adoption and usage of electronic payments has been an important area of study in recent years. Much research has been conducted to understand the relationship between the usage of e-payments and

economic growth, customer preferences, and other implications in the business world. Therefore, this literature offers various perspectives, definitions, and frameworks that serve as the foundation for our research, while highlighting the need for further exploration within the context of the Albanian economy.

### 2.1 Forms and Drivers of E-payments

The adoption and encouragement of e-payments at a country's level is closely linked to the relationship between e-payments, e-payment systems, and financial inclusion.

There are many different definitions of the term electronic payment or e-payment [8, 9, 10], differing from the perspectives and context (regulatory, technologically, and economically) in which they are explained, such as:

- The electronic transfers of funds between payers and recipients,
- transactions managed remotely through digital payment mechanisms or platforms,
- electronic fiscal exchanges,
- Any form of payment that does not involve physical cash.

All these definitions essentially define e-payments as cashless transactions that incorporate payments done online and offline. Among the several e-payment methods are debit and credit cards, bank transfers, banking apps, digital wallets, mobile payment apps, cryptocurrencies, and more. According to Ox Journal [11], electronic payment systems appeared in the 20th century with the arrival of credit cards in the 1950s, contributing to the facilitation of purchases over time. The invention of Automated Teller Machines (ATMs) in the 1960s has further developed them, by facilitating access to cash on site. The development of the Internet in the 1980s accelerated the creation of online banking and e-commerce, giving rise to digital payments, which are considered a subset of e-payments where the entire process is digital. The evolution of mobile payments and other applications in the 21st century has brought digital payments to the center of attention and the focus of research due to continuous development [12].

Many benefits come with using electronic payments, such as timeliness, efficiency, convenience, variety of payment options, and potential for improvement for users and service providers [13]. E-payments have been embraced at different rates globally and to understand better why that happens, it is useful to consider the Diffusion of Innovation Theory [14], which explains how new

technologies are spread among populations at different rates, particularly following the pattern: Innovators → Early Adopters → Early Majority → Late Majority → Laggards. This adoption is influenced by some key factors such as the benefits of e-payments, ease of use, accessibility, infrastructure, opportunities, etc.

Since bank account ownership is a requirement for using the majority of digital payment methods, it is a key factor in the adoption of e-payments. The World Bank Group's 2021 statistics show that the growth of digital financial services has greatly increased global financial inclusion [15]. Between 2011 and 2023, there was an increase in account numbers, bringing to 76% the share of adults having a bank account.

Depending on account ownership, internet access, and technological advancements, some nations have led the way in digital financial transactions, while others have struggled because of different issues. South Korea and Indonesia top the list, followed by Brazil, Japan, and Finland [16, 17], while Sweden is also often cited as the world's most cashless society, with less than 10% of all payments made in cash in 2020 [18]. China has highly advanced digital payment ecosystems and is moving towards biometric payments [19], while in India, the shift towards a society with minimal cash has been significantly impacted by the government's policy and measures intended to tackle corruption and encourage digital payments [11]. The European Central Bank reports on recent improvements in the Eurozone, where 55% of consumers preferred paying with cards and other non-cash methods [20, 21].

The adoption of e-payments in the countries mentioned above can be attributed to their strong technological infrastructure and digital literacy, combined with supportive policies and partnerships between the private and public sectors. While the situation in Albania is a bit different. It had a late and slower adoption after the 2000s, which has been due to historical reasons, complexity, lack of knowledge, or even limited access. Nevertheless, the changes after 2021 are visible in Albania. The public policy toward a cashless economy has been reinforced through the fiscalization process, by the provisions of the respective law to implement cashless transactions between taxpayers and public government bodies since 2021 [4]. According to the Bank of Albania (2023), account ownership has recently increased (78% of the adult population having an account), with more people and companies utilizing digital financial services. There's an immense increase in usage of cashless payments per capita per account from 2018 to 2023, with 388 % [22]. A larger portion

of the population can now access banking services and take part in the formal economy thanks to this change, which is opening new avenues for financial inclusion [23, 24]. Currency outside banks (a measure of cash in circulation) accounts for 51% of the money supply (M1), compared to 52.7% in the previous year [25].

As Albania is part of a global digital payment market whose size was valued at USD 119.40 billion in 2024 and is expected to grow from USD 142.28 billion in 2025 to reach USD 578.33 billion by 2033 [26], this growth highlights the importance of platforms, systems, and infrastructures that enable e-payments. Therefore, well-developed e-payment systems are needed to offer accessibility, affordability, and security, making the widespread adoption of e-payments possible.

## 2.2 Barriers to E-payment Adoption

The Technology Acceptance Model [27] explains how several individual decision-making factors impact the adoption of electronic payments. This model states that if people believe new technology is practical and user-friendly, they are more likely to adopt it. Adoption rates, however, drop when users face challenges that have a detrimental effect on these perceptions. Although e-payment solutions are becoming more widely available, many obstacles keep people from fully utilizing them. These obstacles could include a preference for cash transactions, high transaction costs, a lack of trust in financial institutions, a lack of digital infrastructure, a lack of knowledge, or security concerns.

Recent studies back up this idea. Previous research [28] was mainly focused on the theoretical analysis of barriers to electronic payments, providing cost-related recommendations for banks as intermediaries between customers and merchants. A few surveys in Albania have investigated the awareness and ease of using e-banking [29], in some cases focusing their attention on specific targets like students [30], or regions [31]. More recent studies have deepened the analysis by revealing the relationship between the use of online banking and customer experience [32, 23].

Security is one of the greatest issues related to transactions happening online. The 2024 AFP Payments Fraud and Control Survey documents that 80% of organizations were victims of payments fraud attacks/attempts in 2023 [33]. However, the latest report from the Global Cybersecurity Index 2024 [34] indicates that Albania achieved a Tier 2 (Advancing) ranking, demonstrating a high level of cybersecurity. Nonetheless, the country hasn't been free of such attempts, both in the public (government

systems) and the private sector (bank systems), but they have resisted attacks with minor damage.

High costs associated with implementation, infrastructure development, transaction processing, maintenance, and security measures, or as they are called, social costs, are another issue. Based on a study by the European Central Bank, while individual costs are lower with e-payment methods compared to physical cash, the social costs can be quite high initially [35].

Infrastructure has a significant impact on the uptake of electronic payments. In general, e-payment adoption rates are higher in nations with better connectivity. This isn't always the case, though, as data from the World Bank Group shows [36]. This implies that the adoption of e-payments cannot be adequately explained by internet usage alone. It's also necessary to consider other factors such as mindset, tradition, work culture, lack of awareness, legal restrictions, etc. [37]. This forms the foundation of our study and adds a new dimension to the existing discourse on e-payment adoption.

### 3 Methodology

This research seeks to answer the following question: How is e-payment adoption developing in Albania, and what challenges hinder its widespread use?

To provide a more detailed analysis, the study will examine the following supporting questions:

- a. What are the main security issues and difficulties that consumers encounter when utilizing electronic payments?
- b. How do digital infrastructure and regulatory policies impact Albania's e-payments growth?
- c. What measures can be taken to boost Albania's adoption of electronic payments?

This study adopts a descriptive quantitative approach to provide a clear overview of recent developments in e-payment usage in Albania. A mixed-methods design was employed, combining both quantitative and qualitative elements to gain deeper insight into the factors that influence or constrain the adoption of electronic payments.

The existing literature on this topic, both in Albania and internationally, provided a strong foundation and valuable secondary data sources for this research.

Primary data was collected through a structured, anonymous survey, created in Albanian to ensure accessibility. The survey consisted of four sections, with 16 questions in total. The first section collected

demographic data, including age, place of residence, and employment status, concluding with a question on whether the respondent used electronic payments. Participants who answered "yes" proceeded to the remaining sections, which covered usage of electronic payments, security and trust, and lastly, challenges and perspectives for the future. Otherwise, those who answered "no" were directed to the final section about future perspectives.

Considering that e-payment adoption is closely correlated to bank account ownership, the study targeted individuals who own a bank account in Albania, ensuring that participants were potential or current users of electronic payment systems.

To ensure a representative and diverse sample, a combination of probability and non-probability sampling techniques was employed [38, 39]. Initially, the survey was distributed to a random sample to reach a broad demographic. Additional responses were collected using convenience, snowball, and voluntary response sampling [38, 39], whereby the survey was shared with accessible individuals and further distributed by participants. To maximize reach, the survey was also posted on social media platforms.

The final sample included 390 valid responses, which provides a margin of error of 4.96% at a 95% confidence level [40]. All responses were complete, allowing full inclusion in the analysis. While the use of non-probability methods limits full generalization to Albania's entire population, the inclusion of a probability-based component strengthens the representativeness of the results.

Data analysis was performed using descriptive statistics. Chi-square tests were applied to determine relationships between variables such as age, gender, employment status, and the use of e-payment systems.

This study offers a unique contribution through:

- consideration of cultural and historical factors,
- national-level geographic diversity,
- inclusion of a broad age range and varying employment statuses,
- application of statistical tests to assess demographic effects on e-payment usage.

This comprehensive demographic scope enables a more nuanced understanding of e-payment adoption patterns across different life stages.

## 4 Results and Discussion

### 4.1 Demographic Characteristics

The demographic profile of respondents shows broad representation across age groups, employment

categories, and regions, reflecting the diverse structure of Albania's population. Most of the respondents (89%) were aged 18-54, the most economically active population, most likely to engage in digital financial transactions. However, perspectives from other age groups are also considered. Understanding the perspectives of both younger users (under 18), who represent future primary adopters of e-payments, and older adults (55+), who influence adoption through usage patterns and serve as role models, is essential for shaping inclusive and effective e-payment systems.

Besides age, the gender distribution of the respondents shows a slight predominance of female participants (56.2%), which, in our opinion, is more related to the willingness of this group to participate in surveys, rather than to the issue in discussion. Although the number of female participants in the survey is higher, there are fewer users of e-payments among the females (79%) than among the males (86.5%), which seems to be related to the financial aspect of gender inequality.

Regarding the sample distribution in geographical terms, it has achieved the participation of individuals from all the counties of Albania, differently from previous research [23, 29]. However, it should be noted that some of the regions are underrepresented in the sample, preventing a geographical analysis of factors hindering e-payment adoption.

An important feature of the dataset is the high concentration of population in Tirana County, with two-thirds of respondents being located there. Nevertheless, this does not distort the results, as Tirana has the highest concentration of economic activity in Albania, hosts the headquarters of all commercial banks, and is the main source of digital technology and infrastructure. Consequently, it makes sense that a high percentage of the individuals making digital transactions every day (13.4%) reside in Tirana.

Based on the answers, a high proportion of the sample declares a high level of education, with more than 85% holding a university degree. This is a premise for a better understanding of the benefits of e-payments and a smoother learning process towards using them. Furthermore, it reinforces the high concentration of respondents in Tirana, as graduates tend to seek better career opportunities and choose to settle in the capital. Also, they are the most promising group that can contribute to a higher number of electronic transactions in the short and medium term, as soon as they enter the job market and have more revenue.

## 4.2 Progress of E-payments

There is a trend of changing habits of individuals towards more frequent use of electronic payments, as evidenced by data in Albania [7, 25] and also in some Western Balkan countries [41, 42]. However, different features depend on the country's unique cultural, economic, and technological environments.

The data from this survey show varying levels of e-payment adoption, providing valuable insights into the first part of the research question. Among respondents aged 18 to 54, around 85 % are users of e-payments (Fig.1). It is understandable and goes in line with the fact that this age group has the necessary knowledge, digital literacy, courage, and incomes that support the use of electronic payments. E-payment adoption rates remain significantly lower among the under-18 and over-65 age groups, with only around one-third of respondents in these categories using electronic payments.

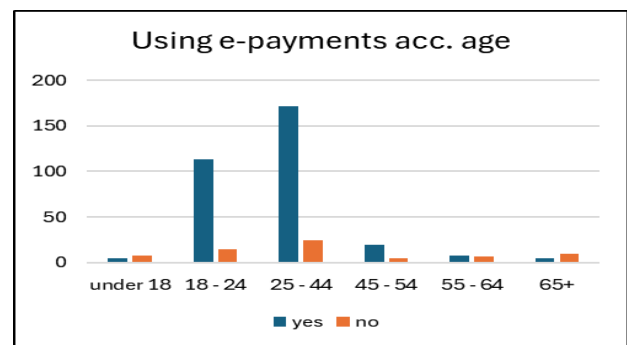


Fig.1. E-payments use acc. age

This outcome aligns with trends observed in other countries, where the older population, respectively the group 65–84 years old, relies more on the usage of cash, despite widespread digitalization [18].

To statistically examine the relationship between respondents' age groups and their use of e-payments, a chi-square test was conducted. The analysis revealed a significant association between the variables,  $\chi^2(5, N = 390) = 57.70, p < .001$ . This aligns well with the Diffusion of Innovation Theory, which suggests that young professionals act as early adopters, while older populations resist change.

Interestingly, the level of education does not seem to influence the choice of respondents to make e-payments. Individuals with diverse education levels and located all over Albania use such payment methods every week (36.8% of the sample). This pattern is consistent with reports from central banks across the Balkans (North Macedonia, Kosovo, etc.) [41, 42]. This similarity is related to the common efforts of these countries to digitize their economies, fight corruption and fraud, and also speed up integration into the EU. Whatever the reasons, it should be seen as an opportunity for synergistic

actions beyond the country's level with an impact on policy making.

### 4.3 Most used e-payment methods and their practical applications

The results reveal that 87.2% of the respondents use credit or debit cards as their primary e-payment method (Fig. 2). That trend aligns with Europe, as stated by a recent EU report about card payments in retail [43].

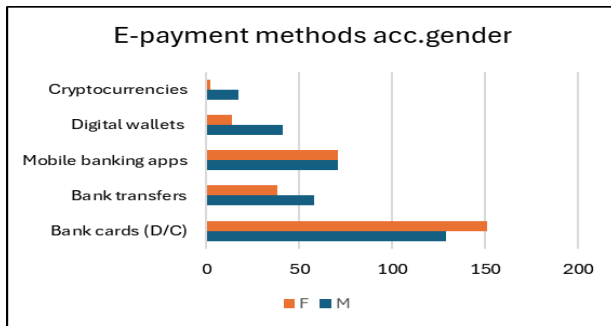


Fig.2. E-payment methods

Mobile payment applications are the second most used method, cited by 44.2% of respondents, which have gained popularity more recently in Albania, due to the high penetration of smartphones and the advancements of the banking sector in terms of digitalization.

Similarly, there is an increase in the use of digital wallets (PayPal, Paysera, EasyPay, GooglePay, etc.) that is fueled by the worldwide fintech developments applied even in Albania for more than a decade. 17.1% of respondents use digital wallets, mainly males aged 18–44.

Cryptocurrency use, though still limited, was reported by 5.9% of respondents, all of whom are young males (ages 18–44). Although cryptocurrency is a relatively new form of money, Albania has been one of the first European countries to adopt a regulatory framework for cryptocurrencies since 2020 [44]. The law was designed to protect users from the risks of fraud and impose fines in cases of abuse. However, effective implementation still requires further development in areas such as taxation, licensing and registration, consumer education, and security standards. Despite strong interest in this area, the use of cryptocurrency remains a topic for future research, particularly in the context of dynamic global financial developments.

Notably, mobile payment apps are equally used by both genders. In contrast, cards are more commonly used by females, while bank transfers and digital wallets are mostly used by males. This might have several factors, such as financial decision-making roles, risk tolerance, and technology

adoption. Since females usually handle more daily expenses and shopping for themselves or their households, that makes cards a convenient method of payment, whereas males tend to experiment more with financial technologies, as a field dominated by men.

In terms of application, respondents indicated that online purchases (73.2%) and supermarket payments (68.8%) are the most typical forms of electronic transactions. As online shopping on e-commerce platforms often entails direct payment during checkout, the use of cash is not an option, which naturally encourages the adoption of e-payments. On the other hand, payments in supermarkets have been on the rise due to loyalty programs, cashback promotions, and reward-based incentives from Albanian banks and merchants that tend to encourage contactless payments. Utility payments are ranked third. Among those who make monthly electronic payments, 77% report using this method for utility bills. Nevertheless, cash usage remains relatively high, particularly for low-value payments.

International transactions (other than online purchases abroad) conducted electronically are limited, which is generally in line with the fact that such transactions are not a frequent part of individuals' daily activities. Moreover, the Albanian market has been expanded and provides more services locally. We consider it an encouraging factor in pushing more local businesses to establish the right infrastructure for accepting e-payments and reducing costs.

This study incorporates employment status as a factor linking income resource to preferred method of payment, shown in Figure 3. A Chi-square test revealed a significant association between e-payment usage and employment status ( $\chi^2(4, N = 390) = 68.77$ ,  $p < .00001$ ), aligning with findings in the literature [14, 21].

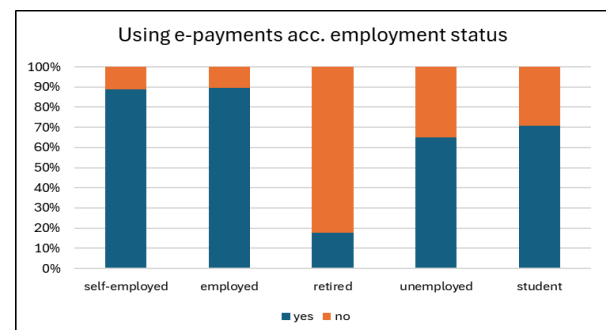


Fig.3. E-payment use acc. employment

In Albania, legal regulations mandate that salaries be paid through the banking system. Receiving payments into an account catalyzes the use of other



financial services, including electronic payments, as confirmed by our findings: most employed and self-employed respondents are users of different methods of e-payments. According to the latest legal changes, even retired people get their pensions via bank accounts, though other factors may hinder this group from adopting e-payments at higher rates.

Regarding students, their young age, education, digital literacy, curiosity, and tendency to adopt innovative tools strongly motivate them to try and continue using e-payments, regardless of income sources.

The unemployed constitute only 5.1% of the sample, so a specific analysis would be necessary to reveal more about their attitudes. Logically, individuals with lower incomes are less likely to use e-payments, particularly when these options are inaccessible to them. Assuming that such status is temporary, the drivers mentioned above would likely encourage adoption once they engage in any activity.

#### 4.4 Challenges to E-payments Adoption

The improved state of e-payments in Albania over the last decade, as shown in the earlier sections and confirmed by survey data, cannot obscure or overlook the various challenges and difficulties consumers face when using electronic payments.

The security issue is the main concern for most of the respondents, both users and non-users (Fig. 4).

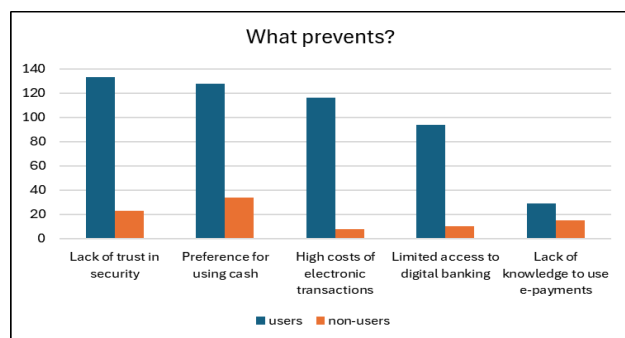


Fig. 4. Challenging factors

However, when trying to quantify this concern, only half of the participants rated it above 3 on a 1-to-5 increasing scale (Fig. 5).

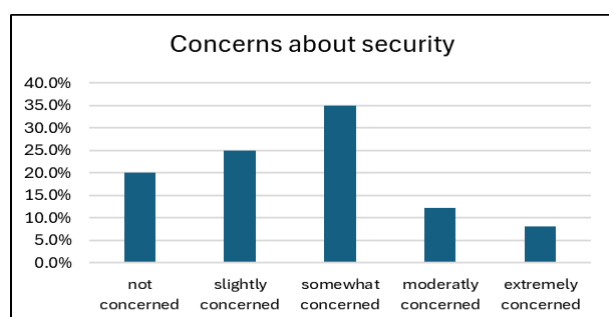


Fig. 5. Assessment of security concern

Actually, the security issues are consistently considered a major barrier in research from other Albanian [23, 28, 32] and international authors [19, 27, 37].

An interesting finding from our survey data is that the preference for using cash, a culture-related factor, is ranked nearly as high as security concerns when combining responses from both users and non-users. Among non-users, it is identified as the primary reason for not adopting e-payments. This result is not surprising, considering the relatively late introduction of banking services for individuals (mainly after the political and economic changes of the 1990s), which has contributed to cash being deeply embedded in the country's financial culture. The longstanding preference for cash "is based on an underlying preference for the supposedly concrete over the abstract". As research reveals, several factors can influence the amount of cash used in each region, such as the age of the population, the level of education, the level of income, and the availability of ATMs [18]. Although the Covid-19 crisis encouraged more contactless card payments in many countries, it did not end the reliance on cash for many vendors, nor the preference to use cash by many consumers.

There are some sectors in the Albanian economy where cash will remain the only alternative, unless legal and executive measures are taken. They include both public and private operators, like public transport and taxi services, rural areas, mountainous tourist zones, etc. Another factor that hinders the reduction of cash usage is informality, which is a concern in other Balkan countries as well. Despite the government's efforts to lower informality, there is still a high level of it in Albania, which should be addressed.

The cost of electronic transactions is considered an important hindering factor for the users of e-payments, but not very important for the non-users. The reason for such a difference might be the fact that non-users miss the factual information about such costs. Experience from other countries shows that lower costs of retail payments can also extend the access of electronic payment services to lower-income households.

Lack of access to digital payment platforms is another barrier to the use of e-payments. It might be interpreted as a technical barrier, due to digital infrastructure not available in all territories (missing or low-quality internet service, missing ATM or POS), consequently affecting the potential use of e-payments even when individuals want to. On the

other side bank systems impose requirements/provisions that are difficult to fulfill by different target-users (low-income people, or others), which restrict them from reaping the benefits of electronic payments.

Although the lack of knowledge to use e-payments is mentioned as a difficulty by a few respondents, both the everyday experience and the literature findings permit us to consider it a factor that might delay the progress of e-payments. Consequently, enhancing digital and financial literacy should be considered by the actors within the triple helix model.

#### 4.5 The road ahead to increase digital transactions

Although 23.1% of respondents have faced security/fraud issues, they continue to use e-payments. Nevertheless, the majority identify the need for stronger security measures as the key factor in increasing user trust, which could potentially lead to broader adoption of e-payment systems (Fig. 6). This aligns with the responses from both users and non-users, who consider a higher rate of cybersecurity as the main incentive for increasing or initiating the use of e-payments. Respondents emphasize the importance of the government's regulatory role, along with improved enforcement policies and customer service provided by banks, as necessary steps to build confidence in digital transactions. Strengthening users' trust by introducing a specific security concept for electronic payment transactions is recommended by specialized organizations for service providers [43].

Awareness campaigns regarding the safe use of e-payments are other approaches for a reinforced perception of security in a wide audience. It is accepted that the digitalization process in Albania is accompanied by potential cybersecurity risks, which can be tackled by offering adequate cybersecurity education, especially to younger generations, to ensure capacities for the future.

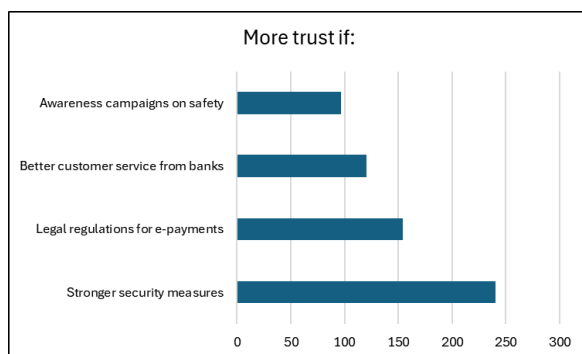


Fig. 6. Raising confidence in e-payments

Overall, respondents are divided on whether Albania is ready to implement a full or partial electronic payments system. More than half express optimism about future progress, provided national-level improvements are made. Approximately 19% believe the country is already ready, while the remainder anticipate the continued dominance of cash. Notably, opinions on readiness do not vary by age, gender, education, or employment status, suggesting that the driving factors for adoption may influence all potential users and could spark a positive chain reaction.

#### 5 Conclusion

As Albania advances toward EU integration, expanding electronic payments is essential for economic modernization, transparency, and financial efficiency. This study offers a nationwide perspective on electronic payment adoption, examining usage patterns across all age groups and employment categories.

The findings confirm that cultural shifts, better security measures, advanced digital infrastructure, and supportive regulatory policies are key enablers of e-payment growth. Despite optimism, the study reinforces the fact that cash cannot be avoided unless radical reforms are implemented in the country.

The study's findings lead to several recommendations for increasing e-payment adoption:

- Policy-making institutions can strengthen digital infrastructure and enhance the legislative framework to stimulate digitalization across the financial industry and the entire economy as well. Collaborating with other stakeholders would accelerate nationwide e-payment adoption.
- The banking and financial sector can reduce costs, refine regulatory compliance, adopt the most recent innovations, and improve customer service to encourage greater use of e-payments.
- The education system, from the lowest up to the highest level, can integrate digital and financial literacy into curricula. Early-stage and lifelong education programs will empower more individuals to adopt e-payment technologies.

Despite our efforts, this study is not free of limitations. As noted previously, data analysis is predominantly descriptive, relying only on a limited set of statistical tests to examine variable



relationships. Future research should utilize a larger, geographically stratified sample and employ more advanced statistical methods to facilitate broader generalizability.

Beyond recommendations, the survey process itself offers practical value by engaging participants directly. The study has also served to raise awareness of e-payment methods, their benefits, and the challenges users must overcome.

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