

The Role of Banks and EMIs in Advancing a Cashless Economy in Afghanistan: Case Study of Azizi Bank and APS

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ABSTRACT

Moving toward a cashless economy has become an important policy in many countries due to digital banking and payment systems can improve financial inclusion, increase transaction efficiency and boost economic transparency. In Afghanistan, even with recent developments in digital banking and payments, cash remains the dominant medium of exchange and all payments are made in cash due to people in the country preferring cash instead of digital services. Limited empirical research has examined the role of banks, Electronic Money Institutions (EMIs), and other financial institutions in promoting a cashless economy in Afghanistan. This study examines the role of banks and EMIs in advancing of cashless economy in Afghanistan, with specific emphasis on Azizi Bank's Digital Banking services and the role of Afghanistan Payment System (APS). A quantitative research method was employed using a structured questionnaire distributed to professionals working in Banks, EMIs and APS. A total of 396 valid responses were collected and examined using descriptive statistics, reliability, correlation, multiple regression testing and analysis through Microsoft Excel. The findings indicate that banks and EMIs play complementary and significant roles in promoting the adoption of digital payment systems through digital banking services, including debit, prepaid, and credit cards, mobile banking, mobile wallets, ATMs, POS networks, and other fintech initiatives that expand and enhance financial services. APS acts the critical role as the national payment switch by enabling the interoperability between banks, EMIs and other financial institutions. Low financial literacy, Public trust and security concerns are the key barriers for the adoption of cashless economy in Afghanistan. The research concludes that for the successful development of a cashless economy in Afghanistan requires coordinated action by the financial institutions and regulators and enhancing digital infrastructure, educating financial literacy and improving interoperability are the key accelerators toward sustainable digital ecosystem for cashless economy.

KEYWORDS: Cashless Economy, Banks, Electronic Money Institutions, Afghanistan Payments System, Digital Payments

1. INTRODUCTION

The cashless economy consists of an updated economic system that sees people transact without the use of paper-based banknotes and coins (International Monetary Fund [IMF], 2024). The prime research question of this study is: How banks and Electronic Money Institutions (EMIs) can help to develop a cashless society in Afghanistan? What role does the Afghanistan Payments System (APS) and Azizi Bank play in the digital financial services and electronic payment adoption of Afghanistan?

Debit cards, prepaid cards, credit cards, mobile banking, mobile wallets, Automated Teller Machines (ATMs), Point of Sale (POS) terminals, internet banking, Quick Response (QR) code payments, and interoperable payment systems are all digital payment channels that are increasingly relied upon to lower cash dependence, enhance payment efficiency and modernize national economies (World Bank, 2025; Bank for International Settlements [BIS], 2024). With the fast development of technology, financial systems have changed dramatically all over the world. Digital payment technologies have been increasingly embraced by governments, central banks, commercial banks and financial institutions in recent years to make payment methods more efficient, secure, transparent and accessible to financial services (IMF, 2024; BIS, 2024). Despite recent advancements in digital financial service, however, Afghanistan is still heavily dependent on cash for both commercial and personal transactions.

The national payment switch, called the Afghanistan Payments System (APS), is one of the biggest strides in the digital payments landscape in Afghanistan. APS is a national payment infrastructure that facilitates interoperability between licensed financial institutions, such as commercial banks and Electronic Money Institutions (EMIs), under the regulatory supervision of Da Afghanistan Bank (Da Afghanistan Bank, 2024). With this interoperable infrastructure, APS enables secure, efficient and instant electronic transactions among participating institutions. Meanwhile, commercial banks and EMIs such as Azizi Bank have been instrumental in the growth of digital banking by introducing various innovative financial products, such as mobile banking, internet banking, payment cards, electronic fund transfers, and digital wallet solutions (Azizi Bank, 2025; Da Afghanistan Bank, 2024).

The results of this study will help advance the knowledge of digital banking and cashless economies. Moreover, it will make some pragmatic recommendations for various stakeholders of the financial sector including the government, regulators, commercial banks, Electronic Money Institutions (EMIs), and various banks to enhance digital payment infrastructure, expand the adoption of electronic payments, and speed up the cashless economy in Afghanistan.

1.1. Problem statement

Despite the introduction of digital financial services by the banks, EMIs and APS, Afghanistan remains seriously dependent on cash. Low financial literacy, Public trust and security concerns are the key barriers for the adoption of cashless economy in Afghanistan. However, banks, EMIs and APS have expanded the digital banking services and channels there is limited empirical evidence on their contribution for the advancing cashless economy. Hence this study examines the roles of these institutions, identify the key barriers and enabling factors and provide recommendations to support digital payment adoption and financial inclusion in Afghanistan.

1.2. Research Objectives

- Describing the concept of cashless economy
- Identifying licensed banks, EMIs and their financial services
- Examining the roles of banks and EMIs in promoting of cashless economy in Afghanistan
- Assessing the influences of Azizi bank and APS
- Identifying the key barriers for the adoption of cashless economy in Afghanistan.

1.3. Research Questions

- How do banks and EMIs contribute to the advancement of cashless economy in Afghanistan and what roles do APS and Azizi bank play in promoting digital financial services electronic payment adoption?
- What specific roles do banks and EMIs play in enabling and promoting a cashless economy in Afghanistan?
- How have Azizi Bank and APS contributed to the development and adoption of digital financial services in Afghanistan?
- What are the key barriers and enabling factors influencing the transition toward a cashless economy in Afghanistan?

1.4. Hypothesis

H1: The development of cashless economy depends on the availability of digital payment infrastructure, supportive regulations, and widespread adoption of electronic financial services.

H2: The presence of licensed banks and EMIs with digital payment capabilities positively contributed to the growth of electronic transactions in Afghanistan.

H3a: Bank's digital banking services meaningfully contribute to the advancement of a cashless economy.

H3b: EMIs services significantly increase the adoption of electronic payments.

H4: Azizi Bank and APS have significantly contributed to the adoption of digital financial services in the Afghanistan.

H5a: Financial literacy, infrastructure, trust, security and regulatory constraints negatively affect the adoption of cashless payments.

H5b: Mobile penetration, government support, donor projects and fintech demand positively influence the advancement of a cashless economy

1.5. Significance of the Study

Contacting this research is necessary because Afghanistan's financial system remains heavily dependent on cash, limiting the efficiency, transparency and financial inclusion. This study lies in its examination of how banks and EMIs contribute to the advancement of cashless economy in Afghanistan. The rationale for selecting this topic stem from both its national importance and its practical relevance. Despite ongoing investment in digital payments channels, Afghanistan continues to face challenges related to financial inclusion, public trust and security concern.

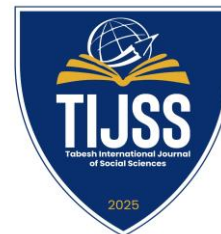
2. LITERATURE REVIEW

Earlier studies were limited and have evaluated the different dimensions of digital financial services in Afghanistan. Though previous studies added valuable insights into specific components of the digital financial ecosystem rather than examining the roles of banks, EMIs and APS. Limited studies have focused on how these institutions together contribute to the cashless economy in Afghanistan

2.1. Theoretical Framework and Conceptual Framework of the study

Table 1: TAM and FI Theory

Stage	Framework	Description
Theory 1	Technology Acceptance Model (TAM)	Customers adopt digital financial services when they perceive them as useful and easy to use.
Independent Variables	Banks, EMIs, Azizi Bank, APS	Financial institutions that provide digital financial services and payment infrastructure.



Mediating Variable	Digital Financial Services	Mobile Banking, Mobile Wallets, Plastic Cards, ATM, POS, Payment Gateway, USSD, Internet Banking, QR Payments, and APS Interoperability.
Theory 2	Financial Inclusion Theory	Digital financial services increase access to formal financial services and promote financial inclusion.
Dependent Variable	Advancement of a Cashless Economy	Increased electronic payments, reduced cash dependency, improved financial inclusion, and economic efficiency.

Source: Developed by the researcher based on Davis (1989) and Financial inclusion theory literature.

Table 2: Theoretical Framework and Conceptual Framework of the study with details

Theoretical Foundation	Variables	Expected Relationship
Technology Acceptance Model (TAM)	Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)	Customers are more likely to adopt digital financial services provided by Banks, EMIs, Azizi Bank, and APS.
Financial Institutions	Banks, EMIs, Azizi Bank, APS	Provide digital financial services and payment infrastructure.
Financial Inclusion Theory	Access to digital financial services	Greater access to digital financial services increases financial inclusion.
Research Outcome	Advancement of a Cashless Economy	Higher digital payment adoption reduces reliance on cash and supports financial modernization in Afghanistan.

Source: Developed by the researcher based on Davis (1989) and Financial inclusion theory literature.

This study is grounded in the Technological Acceptance Model (TAM) and Financial Inclusion Theory. The TAM explains that customers are more likely to adopt digital financial services when they perceive them as useful and easy to use. In this study TAM supports the adoption of digital banking services as mobile banking offered by banks and EMIs.

Financial Inclusion Theory emphasizes that providing accessible, affordable and secure financial services promotes financial inclusion and economic development. In the Afghanistan context, banks, EMIs and APS expand the access to digital financial services encourage electronic payment adoption which can reduce reliance on cash transactions. Both theories provide the theoretical foundation for examining how digital financial services contribute to the advancement of a cashless economy in Afghanistan.

2.2. Empirical Literature

Previous studies steadily indicate that digital financial services contribute to financial inclusion and digital payment adoption. Karimi (2020) emphasized the importance of digital banking infrastructure, whereas Wali (2022) highlighted the role and importance of APS and AfPay card, similarly Naseri, Frugh, and Shamsi (2025) examined the adoption of mobile banking services offered by banks contribute to cashless transactions. However, these studies agree on importance of digital financial services, but there are no assess of combine role of bank, EMIs and APS in advancing the cashless economy in Afghanistan. This gab provides the basis for this study.

Karimi (2020), in his research titled Cashless economy of Afghanistan, examines the concept and possibility of cashless economy with role of DAB and private banks in development of Afghanistan's cashless society. It also highlights key digital payment applications such as Azi-Pay, M-Paisa, M-Hawala, My-Money, and AfPay, as well as government and USAID efforts to promote electronic payments.

The National Financial Inclusion Strategy of Afghanistan (2020-2024) authored by Da Afghanistan Bank in collaboration with the world bank and published in 2020 as an official national policy document. The document emphasizes the importance of electronic payments, card-based transactions, and mobile financial services in fostering financial inclusion. It identifies APS as the national electronic payment switch that enables interoperability among banks, EMIs, and payment service providers.

Bumenstock, Callen and Ghani (2014) conducted a study titled "Promises and Pitfalls of Mobile Money in Afghanistan," found that financial efficiency can be improved by mobile money solutions. The Study provides important insights in the role of EMIs and Mobile Money platforms.

Naseri, Frugh, and Shamsi (2025) in their research titled "Challenges and Opportunities of Mobile Banking in Afghanistan," examined the adoption of mobile banking services offered by Afghan commercial banks, including Azizi Bank's Azipay and concluded that mobile banking services offered by Afghan banks contribute to cashless transactions.

Wali (2022) highlighted in an analysis titled "Afghanistan Digital Payments and the Rise of AfPay," that the strategic importance of APS and the domestic card scheme (AfPay) in enabling interoperability among banks and EMIs and strengthen the Afghanistan's digital payment ecosystem.

Moreover, reports published by UNDP and UNCDF (2023) it was published as development policy rest which indicate that digital payment systems can improve the efficiency, transparency and comprehensively of humanitarian aid distribution and government.

The Bank for International Settlements (BIS), through the Committee on Payments and Market Infrastructures (CPMI), published a report in 2015 titled “Digital Currencies and the Future of Retail Payments.” Released by the BIS quarterly review, the report analyses how banks and none bank institutions jointly contribute to the modern retail payment ecosystems. The report emphasizes that central banks and national payment infrastructures are essential for ensuring interoperability, security and settlement efficiency.

Achord, Chan, Collier, Nardani and Rochemont. (2017) in their interim paper a cashless society benefits, risks and issues highlighted the key benefits of cashless system including reduced costs of cash handling, improved the transparency and financial inclusion through digital payment channels. They have emphasized on significant risks and challenges such cybersecurity threats, data privacy concern and overdependence on digital infrastructure.

2.3. Case Study Background

2.3.1. APS (Afghanistan Payment System)

APS is the national electronic payment switch of Afghanistan, which is operating under the central bank of Afghanistan DAB (Da Afghanistan bank). It is central financial infrastructure that connects banks, EMIs, PIs, which enable secure, fast and interoperability between financial institution across the country.

2.3.2. Key Objectives

- Facilitate Secure and efficient electronic payments.
- Promote interoperability among banks and financial institutions.
- Support the development of digital financial services.
- Reduce dependency on cash transactions.
- Enhance financial inclusion across Afghanistan.

2.3.3. Core Functions

Transaction routing and switching: APS get payment requests from member and routes transactions to the appropriate issuing or receiving institution.

Interoperability: allows customers of one bank to access services through another bank's channels, including: ATM, POS and Mobile Wallet

National Payment Infrastructure: Provides the central platform connecting: Commercial Banks, Electronic Money Institutions (EMIs), Payment Service Providers (PSPs), Other authorized financial institutions

Services Supported by APS are: AfPay Card Transactions, ATM Interoperability, POS Transactions, Cash Withdrawal, Balance Inquiry, Mini Statement, Interbank Card-Based Transactions and USSD

2.3.4. Benefits of APS

For Banks

- National interoperability
- Centralized transaction routing
- Reduced integration complexity
- Expanded customer reach

2.3.5. For Customers

- Access to banking services through multiple banks' channels
- Increased convenience and accessibility
- Improved payment experience

2.3.6. For the Financial Sector

- Supports digital transformation
- Encourages cashless payments
- Strengthens the national payment ecosystem

2.3.7. Current Challenges Observed by Member Institutions

- APS primarily supports card-based transactions.
- Limited support for API-based digital payment services.
- Lack of interoperability for some wallet-to-bank and bank-to-wallet transactions.
- Limited support for advanced digital services such as:
 - QR payments

- Instant payments
- E-commerce acquiring
- Open API banking
- Member institutions may require more frequent communication regarding system enhancements, new services, and technical updates.

Future Enhancements Recommended

- National Instant Payment System (IPS)
- Standardized API Framework (ISO 20022)
- National QR Payment Platform
- Real-Time Settlement
- Wallet-to-Bank and Bank-to-Wallet Interoperability
- Government Payment Integration
- USSD-Based Financial Services
- Offline Payment Support for Remote Areas

2.4. Azizi Bank Digital Banking Products & Services

Azizi Bank is a commercial bank which was founded in 2006, it has presence across all provinces and districts across the country through its branches (60), ATMs (104), agency banking (POS devices) (1000+). Mobile banking (300K+ users) and other digital services. Azizi Bank has suite of digital banking solutions that these solutions support individual customers, corporate clients, government entities, humanitarian organizations, and development partners these channels will definitely help the country toward cashless economy:

2.4.1. Card Solutions

International Cards: (MasterCard Debit, Credit and Prepaid)

National Card Scheme: AfPay Debit Card

Closed-Loop Prepaid Cards

2.4.2. ATM Banking Services

Available Services: Cash Withdrawal, Balance Inquiry, Mini Statement, PIN Change, Card-to-Card Transfer, Account-to-Account Transfer, Bill Payment, Mobile Recharge, NFC Transactions, Card-less Banking and Other value added services

2.4.3. *POS & Merchant Acquiring Services*

Sale, Void & Refund, QR Payments, Cash-In / Cash-Out, Bill Payments, Government Collections, One-Time Payments and Transportation Payments (Planned)

2.4.4. *AziPay Mobile Wallet*

It is an open APP, is a secure and convenient mobile wallet that enables users both customers and non-customers to make seamless digital transactions anytime, anywhere.

Wallet Services: Add Money, Wallet Statement, Wallet Activity and Recent Transactions, Fund Transfers, Wallet to Wallet (W2W), Wallet to Account (W2A), Account to Wallet (A2W), Account to Account (A2A) and NFC Transfers

Banking Services: ATM Cash-Out, Send Money, Request Money, Add & Manage Cards, Beneficiary Management, E-KYC and Digital Account Opening

Payments: QR Payments (Scan & Pay), Utility Bill Payments, Mobile Recharge, Airline Ticket Booking, Food & Grocery Payments and Fee Collection Services

Support Features: Multilingual Support (Dari, Pashto, English), Branch & ATM Locator, Exchange Rates, Promotions & Offers, Customer Support and Biometric Login

2.4.5. *Internet Banking*

Individual Internet Banking

- Account Balance Inquiry
- Statements
- Beneficiary Management
- Own Account Transfer
- Internal Transfers
- OTP Authentication

Corporate Internet Banking (CIB)

- Bulk Transfers
- Payroll Processing
- Domestic Transfers

-
- International TT
 - Multi-Level Authorization
 - Transaction Monitoring
 - Account Reporting

Offline Payment Solutions: It is for limited and no network areas.

2.4.6. Upcoming Solutions

- AziPay USSD Wallet
- Restaurant Payments
- Taxi Payments
- Bus Payments
- Enhanced QR Ecosystem
- Instant Payment Services

3. METHODOLOGY

3.1. Research Design

This study employed a descriptive and explanatory cross sectional research design method to examine the roles of banks and Electronic Money Institutions in advancing the cashless economy in Afghanistan, with a particular focus on Azizi Bank and the Afghanistan Payment System. The cross sectional research design was adopted due to data were collected from respondents at single point in time, making it suitable for examining current perception and relationship among the study variable.

3.2. Research Approach

This study adopted a quantitative research method because it enables the collection and statistical analysis of numerical data to test hypotheses and examine relationships between variables. The quantitative approach was considered proper for measuring respondents' perceptions regarding digital payment services and evaluating the influence of banks, EMIs and APS on the advancement of cashless economy.

3.3. Study Area

This study was conducted in Afghanistan focusing on the country's digital financial ecosystem. The research examined Azizi Bank and APS. Azizi bank was selected due to its extensive digital banking solutions and APS because of its role in supporting interoperability and financial inclusion.

3.4. Population of the Study

The target population consisted of staff of banks, EMIs, APS, DAB and other financial institutions who are involved in digital payment services in the country.

3.5. Sampling Technique

For this study, a convenience sampling / purposive sampling technique was employed to select participants who are accessible and willing to provide information. Convenience sampling is widely used in social science research when the population is large and geographically dispersed, as in the case of Afghanistan. Primary data were collected through a structured questionnaire distributed electronically (google forms) to respondents working within Afghanistan's financial sector.

3.6. Sample Size Determination

Due to the lack of publicly available information regarding the exact size of this population, the total study population could not be accurately determined. Therefore, the sample size was estimated using Cochran's (1977) formula to determine the sample size using a 95% confidence level and a 5% margin of error, resulting in a minimum required sample size of 384 respondents.

$$n_0 = \frac{z^2 \times p(1 - p)}{e^2}$$

Where

n_0 : Required Sample Size

Z: Standard Normal value at 95% confidence level (1.96)

P: Estimated population proportion (0.5)

E: Margin of error (0.05)

Calculation:

$$n_0 = \frac{1.96^2 \times 0.5 \times 0.5}{0.005^2} = \frac{3.8416 \times 0.25}{0.0025} = 384.16$$

To improve the reliability of the findings, a total of 396 valid responses were collected through an online questionnaire between February and April 2026.

3.7. Validity and Reliability

Validity and reliability were carefully examined, to ensure the quality of the instrument. The reliability of the study instrument was assessed using Cronbach's alpha. All variables reliability coefficient was 0.99 which

indicating excellent internal consistency. Microsoft excel was used for data analysis. Correlation, multiple regression and means analysis were used to examine the relationships among the study variables.

Table 3: Validity and Reliability

Construct	Number of Items	Cronbach's Alpha	Interpretation
Banks	4	0.986	Excellent
EMIs	4	0.987	Excellent
APS & Azizi Bank	4	0.987	Excellent
Cashless Economy	4	0.987	Excellent

The Cronbach's Alpha coefficients exceeded the widely accepted threshold of .70, which indicates high internal consistency, as shown in Table 1, thus confirming the reliability of the instrument for measuring the perceived advantages and disadvantages of smartphone usage on academic performance.

4. RESULTS AND DISCUSSION

Table 4: Variables

Section	Variable Type	Purpose
A	Demographics	Respondent background
B	Perception	Importance of cashless economy
C	Independent Variable (IV)	Role of Banks
D	Independent Variable (IV)	Role of EMIs
E	Independent Variable (IV)	APS + Azizi Bank Case Study
F	Dependent Variable (DV)	Advancement of Cashless Economy
G	Moderating/ Barrier Factors	Adoption challenges
H	Qualitative	Expert insights

Source: Developed by the researcher

Table 5: Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	363	91.9
	Female	32	8.1
Age	18–25	70	17.6

	26–35	215	54.2
	36–45	102	25.7
	Above 45	10	2.5
Education	Bachelor	263	66.3
	Master	99	24.9
	Others	35	8.8

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

Table 5 represent that the most of respondents were male, most respondents were between 26 and 35 years of age and held a bachelor's degree. Overall the respondents were with their prime working age, well-educated and professional in the digital banking sector.

Table 6: Institutional Representation and Professional Experience

Variable	Category	Frequency	Percentage (%)
Institution Type	Commercial Bank	284	73.0
	EMI	38	9.8
	APS	25	6.4
Experience	Less than Two Years	44	11.1
	2 to 5 years	80	20.2
	6 to 10 years	161	40.7
	More than ten years	111	28.0

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

Table 6 indicates that the largest proportion of respondents were from commercial bank as it includes professionals directly involved in the financial ecosystem.

Table 7: Involvement in Digital Payment Services

Response	Frequency	Percentage (%)
Yes	314	80.3
No	77	19.7

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

Table 7 shows that the responses are highly relevant and well informed.

Table 8: Importance of a Cashless Economy

Response	Frequency	Percentage (%)
Very Important	313	78.64
Important	65	16.33
Moderately Important	18	4.52
Not Important	2	0.50

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

Table 8 indicates that almost all respondents considered the transition toward a cashless economy is very important and important which reflects a high level of awareness among financial sector professionals regarding the importance of cashless economy.

Table 9: Mean Scores of Study Variables

Variable	Mean Score	Interpretation
Banks	4.25	High
EMIs	4.26	High
APS and Azizi Bank	4.38	High
Cashless Economy	4.14	High

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

Table 9 represent that the mean score for all variables were more than 4 which indicates a high level of agreement among the respondents.

Table 10: Barriers Affecting Cashless Economy Adoption

Barrier	Frequency	Percentage (%)
Low Financial Literacy	286	72.2
Limited Digital & Internet Infrastructure	279	70.5
Lack of Trust in Digital Systems	268	67.7
Security Concerns	225	56.8
Regulatory Constraints	217	54.8

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

The table 10 shows that low financial literacy and limited digital and internet infrastructure are the most commonly identified barriers to the adoption of a cashless economy.

Table 11: Enabling Factors Supporting Cashless Economy Adoption

Enabler	Frequency	Percentage (%)
Government and Central Bank Support	311	78.7
High Mobile Phone Penetration	265	67.1
Growing Demand for Fintech Services	263	66.6
Donor-Supported Digital Projects	224	56.7

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

The table 11 indicates that government support, Da Afghanistan Bank (DAB), and mobile phone penetration are the strongest factors contributing to the advancement of a cashless economy.

Table 12: Correlation between Banks, EMIs, and Cashless Economy

Variables	Correlation (r)
Banks and EMIs → Cashless Economy	0.528

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

The table 12 presents a positive and statistically significant relationship between banks, Electronic Money Institutions (EMIs), and the advancement of the cashless economy. This indicates that improvements in digital financial services provided by the banks and EMIs are associated with increased adoption of digital payments systems in Afghanistan.

The correlation results have several practical suggestions for policy makers and financial institutions:

- First, banks should continue expanding digital banking services to improve customer access to digital banking services.
- Second, EMIs should expand the mobile wallet services and digital payment solutions, particularly in rural areas.
- Third Da Afghanistan Bank should continue strengthening the national payment ecosystem by promoting the interoperability through APS.

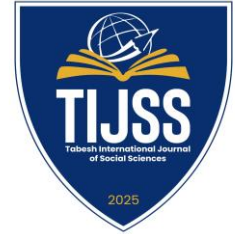


Table 13: Regression Results for Banks and EMIs

Variable	Coefficient (β)	p-value
Banks	0.180	<0.001
EMIs	0.307	<0.001

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

Model Statistics:

- $R^2 = 0.283$
- $F = 77.38$
- $p < 0.001$

This table 13 shows that both banks and EMIs significantly influence the advancement of a cashless economy.

Table 14: Regression Results for APS and Azizi Bank

Variable	Coefficient (β)	p-value
APS	0.397	<0.001
Azizi Bank	0.236	<0.001

Source: Field Data, 2026/ Author's computation based on primary survey data, 2026.

Model Statistics:

- $R^2 = 0.437$
- $F = 152.71$
- $p < 0.001$

The table 14 indicate that both the Afghanistan Payment System (APS) and Electronic Money Institutions (EMIs) have a statistically significant contribution to the advancement of a cashless economy.

4.1. Hypothesis

4.1.1. Hypothesis 1 (H1)

H1: The development of cashless economy depends on the availability of digital payment infrastructure, supportive regulations, and widespread adoption of electronic financial services.

The result shows that most of respondents considered the transition toward a cashless economy very important or important, also low financial literacy, limited digital infrastructure, lack of trust, security concern and regulatory constraints were identified as major barriers. The findings support the proposition that infrastructure, regulation and adoption factors influence the development of cashless economy hence H1 is supported.

4.1.2. Hypothesis 2 (H2)

H2: The presence of licensed banks and EMIs with digital payment capabilities positively contributed to the growth of electronic transactions in Afghanistan.

The analysis of correlation showed a moderate positive relationship between banks, EMIs and Cashless economy variables ($r = 0.528$), therefore H2 is supported

4.1.3. Hypothesis 3a (H3a)

H3a: Bank's digital banking services meaningfully contribute to the advancement of a cashless economy.

As per result there was 0.471 correlation coefficient between banks and cashless economy which is indicating a moderate positive relationship, hence H3a is supported.

4.1.4. Hypothesis 3b (H3b)

H3b: EMIs services significantly increase the adoption of electronic payments.

As per finding there was 0.509 correlation coefficient between EMIs and cashless economy which is indicating a moderate positive relationship, hence H3b is supported.

4.1.5. Hypothesis 4 (H4)

H4: Azizi Bank and APS have significantly contributed to the adoption of digital financial services in the Afghanistan.

APS and Azizi Bank mean score was 4.38 which indicates a high level of agreement among the respondents, there is H4 is support.

4.1.6. Hypothesis 5a (H5a)

H5a: Financial literacy, infrastructure, trust, security and regulatory constraints negatively affect the adoption of cashless payments.

Low financial literacy and limited digital and internet infrastructure are the most identified barrier in cashless economy adoption hence H51 is supported.

4.1.7. Hypothesis 5b (H5b)

H5b: Mobile penetration, government support, donor projects and fintech demand positively influence the advancement of a cashless economy

It is found that government, DAB and mobile phone penetration are identified as the strongest factor hence the H5b is supported.

Table 15: Summary of Hypothesis Testing

Hypothesis	Result
H1	Supported
H2	Supported
H3a	Supported
H3b	Supported
H4	Supported
H5a	Supported
H5b	Supported

Source: Developed by the researcher

This table summarized the hypothesis testing result that all of them are supported and null hypotheses are rejected.

4.2. Discussion

The results of this study show that banks, Electronic Money Institutions (EMIs) and digital payment infrastructure are one of the most important actors toward the development of cashless economy in Afghanistan. The results reveal a high level of agreement among the respondents about the significance of moving towards a cashless economy, with a mean score of 4.14. This discovery reflects the awareness of stakeholders in the financial sector on the significance of digital payment systems in economic modernization, financial inclusion, and making transactions more efficient. World Bank (2021), too, highlighted that digital financial services help to foster financial inclusion by enhancing access to formal financial systems, especially in developing economies.

Demographic data indicate that the majority of respondents were young and were highly educated, and involved in financial institutions in terms of their professional activity. This suggests that the data collected are from individuals who have a good understanding and experience with digital banking services and electronic

payments. Past studies have noted that the financial literacy, human capital and digital awareness are significant factors that shape digital payment adoption. The IFC (n.d.) found that technological infrastructure is not the only factor that determines the success of alternative delivery channels; users also need to understand and properly use digital financial services.

The study results show that the banks give a considerable positive contribution in the development of cashless economy ($\beta = 0.180$, $p < 0.001$). This outcome is consistent with the fact that commercial banks are still playing a crucial role in digital financial transformation in the arena of Internet banking, mobile banking, ATM network and card based payment mechanisms. Arvidsson (2018) also identified evidence that banks play a pivotal role in the development of a cashless society as they facilitate secure payment systems and promote electronic payments over cash payments in an attempt to incentivize customers to move away from physical cash and towards electronic payment systems. Similarly, Boston Consulting Group (2019) found that cashless payment systems are more effective at cutting down on transaction costs, thereby boosting economic efficiency, and transparency.

The results also show that EMIs have the higher effect than banks ($\beta = 0.307$, $p < 0.001$). This underscores the increasing relevance of mobile money and fintech-based solutions in boosting digital payments, particularly in countries with constrained access to traditional banking services. The discovery is in line with the results of the Global Findex Database where mobile financial services have emerged as a significant means to enhancing financial inclusion in developing nations (World Bank, 2021). Likewise, mobile money solutions like M-Paisa and MyMoney have played a role in increasing electronic transactions in Afghanistan by offering a convenient payment mechanism for the people who may not be able to use conventional banking services (Roshan, n.d.; MyMoney, n.d.).

The correlation analysis revealed a moderate positive correlation among banks, EMIs and cashless economy ($r = 0.528$). This means that better financial institutions' digital system is linked to more use of electronic payment systems. The results indicate the need for cooperation between financial institutions, regulators, technology providers and consumers, which is what Achord et al. (2017) suggested in their argument for a cashless society. If these stakeholders do not coordinate, the digital payment system can encounter some problems regarding ease of use, security and public acceptance.

The study also revealed that APS and Azizi Bank are playing a significant role in strengthening the digital financial services. Based on the regression results, it can be concluded that APS ($\beta = 0.397$) and Azizi Bank ($\beta = 0.236$) have a statistically significant effect on the advancement of cashless economy. This finding suggests

that national payment infrastructure and commercial banking innovations are important pillars of digital transformation in Afghanistan. Financial institutions are more interoperable than ever, and this is especially critical for the role APS plays, as it enables financial transactions to be made across the financial institutions' platforms. UNCDF and UNDP (2023) also suggested the need for interoperability between financial service providers to build an efficient and inclusive digital financial services ecosystem in Afghanistan.

The results on the barriers show that the main challenges to the use of the cashless economy are limited financial literacy (72.2%) and limited digital and internet infrastructure (70.5%). The findings are in line with the previous studies, which identified digital skills, the availability of the internet, and consumer trust as being of significant importance in relation to the adoption of electronic payments. In addition, Da Afghanistan Bank (2020) identified financial literacy and development of digital infrastructure as key priorities of Afghanistan's National Financial Inclusion Strategy. Also, security issues and distrust are significant obstacles as people are more inclined to use any digital payment system if they feel their financial information and transactions are secure (Achord et al., 2017).

The study results also indicate several enabling factors such as government support, Da Afghanistan Bank's role, mobile phone penetration, and the rising demand for fintech services. The findings show that institutional support and technological preparedness are crucial for boosting the uptake of digital payments. Governments' efforts and regulatory measures play a crucial role in building successful digital payment ecosystems (Monetary Authority of Singapore, n.d.). In the same way, Riksbank (2023) noted that collaboration between governments, financial institutions and technology companies is required to realize a sustainable transition to less cash dependence.

The results of the hypothesis testing support all of the hypotheses that were proposed. The results show that a combination of factors such as digital infrastructure, regulatory support, financial institutions and consumer readiness impacts the advancement of cashless economy in Afghanistan. This confirms earlier studies that have argued that cashless transformation is a socio-economic shift, in addition to a technological shift that demands institutional capacity, financial awareness, and public trust (Arvidsson, 2018; World Economic Forum, 2023).

The study reveals that there is great scope for Afghanistan to further take steps towards a cashless society by enhancing digital banking services, expanding EMI services, boosting the level of financial education and strengthening the level of interoperability between payment systems. But overcoming obstacles such as inadequate infrastructure, cybersecurity threats and weak digital literacy are still critical. Hence, coordinated efforts are needed at the policy level, with both Da Afghanistan Bank and commercial banks, and between the

government and the fintech ecosystem, to facilitate the provision of inclusive, secure and accessible digital financial services.

5. CONCLUSIONS

This study examines the role of banks and EMIs in advancing of cashless economy in Afghanistan, using Azizi Bank and APS as case study. It is found that Banks and EMIs play a vital role in advancing a cashless economy in Afghanistan. The finding reveals that the successful development of a cashless economy extends beyond the technological infrastructure. financial literacy and limited digital, internet infrastructure and public trust are the most identified barrier in cashless economy adoption.

The correlation and regression analysis confirmed the positive and statistically significant relationship between banks, Electronic Money Institutions (EMIs), and the advancement of the cashless economy. This indicates that improvements in digital financial services provided by the banks and EMIs are associated with increased with increased adoption of digital payments systems in Afghanistan.

The previous studies deliver valuable insights into specific components of the digital financial ecosystem rather than examining the combined roles of banks, Electronic Money Institutions (EMIs), and APS. Few studies have focused on how these institutions collectively contribute to the cashless economy in Afghanistan.

This study indicates that there is need for coordinated efforts among regulators, banks and EMIs. Investment in financial literacy programs, digital infrastructures, Public trust building are very essential for accelerating digital payments adoption and reducing dependence on cash transactions.

Based on these findings the study recommend that policymakers and financial institution should continue expanding and strengthening digital banking services to improve customer access to digital banking services, enhance cybersecurity and consumer protection, expand the mobile wallet services and digital payment solutions, particularly in rural areas and should continue strengthening the national payment ecosystem by promoting the interoperability through APS.

Overall the study concludes that the advancement of cashless economy in the country either achievable and necessary for financial modernization and economic development.

5.1. Suggestions

Future reach may change the scope of this by including larger and more diverse sample of respondent from different provinces of Afghanistan for improving the generalizability of finding and researcher may contact comparative studies between Afghanistan and other countries to understand and identify the best practices and

successful tools in digital banking. Researchers may focus on customer behaviour, technology acceptance on customer trust in the digital banking solutions and finally the researchers may examine the emerging technologies such as digital currencies, artificial intelligence and instant payment with their roles in accelerating the transition toward a cashless economy in the country.

5.2. Recommendations

Based on the findings of this study, the following recommendations are proposed to support and advance the cashless economy in Afghanistan:

5.2.1. For Da Afghanistan Bank (DAB)

- Strengthen regulatory frameworks governing digital financial services.
- Promote interoperability among banks, EMIs, and payment service providers.
- Support financial literacy and consumer protection initiatives.
- Encourage innovation while ensuring payment system security and stability.

5.2.2. For Afghanistan Payments System (APS)

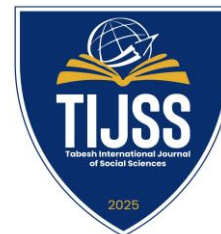
- Expand interoperability beyond card-based services.
- Develop a national QR payment ecosystem.
- Introduce instant payment capabilities and API-based integration services.
- Improve transaction processing, reconciliation, reporting, and dispute management mechanisms.

5.2.3. For Commercial Banks

- Expand digital banking channels and payment acceptance infrastructure.
- Increase deployment of ATMs, POS terminals, and QR-based payment solutions.
- Invest in customer awareness and digital financial literacy programs.
- Enhance cybersecurity and customer trust in digital banking services.

5.2.4. For Electronic Money Institutions (EMIs)

- Expand mobile wallet services to underserved and rural communities.
- Improve wallet-to-bank and bank-to-wallet interoperability.
- Develop innovative and affordable digital payment solutions.
- Strengthen customer support and user experience.



5.3. Conflict of Interest:

I confirm that there is not conflict of interest regarding the publication of this research and this study was contacted independently with no financial, commercial or personal relationships influenced at any part of this research.

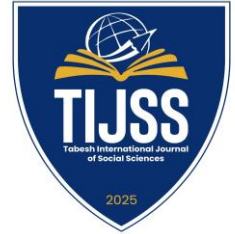
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