BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg

DIGITAL FINANCIAL SERVICES AND FINANCIAL INCLUSION IN UZBEKISTAN: OPPORTUNITIES, CHALLENGES, AND POLICY IMPLICATIONS

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ABSTRACT: This study examines the role of digital financial services in promoting financial inclusion in Uzbekistan. Over the past decade, the country has experienced rapid growth in digital banking, mobile payment systems, and financial technologies, creating new opportunities for expanding access to financial services among individuals and small businesses. The study aims to assess the impact of digital financial services on financial inclusion and identify the key factors influencing their adoption. Using data from the Central Bank of Uzbekistan, the World Bank, and international reports, the research analyzes recent trends in digital finance and evaluates their contribution to increasing access to financial services. The findings indicate that digital banking and mobile payment platforms have significantly improved financial accessibility, particularly in underserved regions. However, challenges related to digital literacy, infrastructure, and cybersecurity continue to constrain further progress. The study proposes policy recommendations to strengthen digital financial ecosystems and enhance inclusive economic development in Uzbekistan.

Keywords: financial inclusion, digital financial services, fintech, mobile banking, digital payments, Uzbekistan.

1. INTRODUCTION

Financial inclusion has become one of the key priorities of economic development worldwide. Access to affordable and convenient financial services enables individuals and businesses to participate more effectively in economic activities, reduce poverty, and improve financial resilience.

In recent years, Uzbekistan has implemented significant reforms aimed at modernizing its financial sector and accelerating digital transformation. The rapid expansion of mobile banking applications, digital payment platforms, online lending services, and fintech innovations has substantially changed the way financial services are delivered to consumers.

Despite these achievements, disparities in access to financial services remain, particularly among rural populations, women, and small enterprises. Therefore, understanding the role of digital financial services in promoting financial inclusion is essential for policymakers and financial institutions.

The objective of this study is to analyze the impact of digital financial services on financial inclusion in Uzbekistan and identify the opportunities and challenges associated with their development.

The study addresses the following research questions:

1. How have digital financial services evolved in Uzbekistan?
2. What is their contribution to financial inclusion?
3. What barriers limit their effectiveness?
4. What policy measures can further enhance financial inclusion?

2. LITERATURE REVIEW

Financial inclusion has become one of the most important topics in contemporary development economics and financial sector research. The concept generally refers to the

accessibility, availability, and effective use of formal financial services by individuals and businesses (Demirgüç-Kunt et al., 2022). Numerous studies have demonstrated that financial inclusion contributes to poverty reduction, economic growth, income equality, and social welfare (Allen et al., 2016; Sahay et al., 2020).

The rapid development of digital technologies has significantly transformed traditional approaches to financial inclusion. Digital financial services, including mobile banking, electronic payments, digital wallets, and online financial platforms, reduce transaction costs and improve access to financial services, particularly for underserved populations (Ozili, 2018). According to Gabor and Brooks (2017), digital financial technologies enable financial institutions to overcome geographical constraints and reach customers previously excluded from the formal financial system.

A growing body of empirical literature highlights the positive relationship between digital finance and financial inclusion. Using cross-country evidence, Sahay et al. (2020) found that digitalization improves access to financial services, particularly in developing and emerging economies. Similarly, Ozili (2023) argues that fintech innovations facilitate financial inclusion by lowering barriers to entry and increasing the efficiency of financial service delivery.

Mobile technology plays a critical role in the digital financial inclusion process. Mobile phones have become the primary channel through which individuals access digital financial services, especially in countries with limited banking infrastructure (Jack & Suri, 2014). The development of mobile financial services allows users to perform financial transactions, transfer funds, and access banking services without visiting physical branches. Empirical evidence from developing countries suggests that mobile-based financial services significantly improve financial inclusion outcomes (Donovan, 2012; Jack & Suri, 2014).

The literature also emphasizes the importance of digital financial inclusion for small and medium-sized enterprises (SMEs). Digital banking platforms facilitate access to payment services, improve cash-flow management, and reduce operational costs for businesses (Banna et al., 2021). Moreover, digital transaction records help reduce information asymmetry between lenders and borrowers, thereby improving access to formal credit markets (Beck et al., 2018).

Despite these benefits, several challenges remain. Researchers have identified digital literacy, cybersecurity risks, consumer protection concerns, and unequal access to digital infrastructure as key obstacles to effective digital financial inclusion (Ozili, 2020; Lyons & Kass-Hanna, 2021). Gender disparities in digital technology adoption also remain a significant issue in many developing economies, potentially limiting women's participation in digital finance (Lyons & Kass-Hanna, 2021).

Although a substantial body of international literature examines the relationship between digital financial services and financial inclusion, empirical evidence from Central Asian economies remains relatively limited. In particular, the experience of Uzbekistan has received little attention in academic research despite the country's rapid digital transformation and financial sector reforms. Therefore, this study contributes to the existing literature by examining the development of digital financial services and their role in promoting financial inclusion in Uzbekistan.

3. METHODOLOGY

This study employs a descriptive and analytical research design.

Data Sources

The analysis is based on secondary data collected from:

- Central Bank of Uzbekistan;
- World Bank Global Findex Database;

- IMF Financial Access Survey;
- United Nations reports;
- Asian Development Bank publications;
- official reports of commercial banks.

Analytical Approach

The research applies comparative trend analysis and descriptive statistics to evaluate the relationship between digital financial services and financial inclusion in Uzbekistan during the period 2018–2025.

4. RESULTS AND DISCUSSION

4.1. Expansion of Mobile Phone Access and Digital Readiness

The development of digital financial services largely depends on access to mobile technologies. According to the World Bank Global Findex 2024 database, mobile phone ownership in Uzbekistan has reached a high level among both men and women. Approximately 89–90% of men and around 78–80% of women own a mobile phone, indicating a relatively strong digital foundation for the expansion of digital financial services.

Despite the positive trend, a noticeable gender gap remains. The difference in mobile phone ownership between men and women exceeds 10 percentage points, suggesting that digital inclusion challenges still exist for female users. Similar patterns can be observed in several countries of Central Asia, although Uzbekistan demonstrates higher mobile phone penetration than Tajikistan and remains comparable to other countries in the region.

The widespread use of mobile devices creates favorable conditions for the expansion of mobile banking, digital payments, and other fintech services. Since mobile phones serve as the primary access channel for digital financial services, increasing mobile connectivity directly contributes to financial inclusion.

4.2. Growth of Financial Inclusion in Uzbekistan

The Global Findex data reveal substantial progress in financial inclusion in Uzbekistan during the period 2011–2024.

Table 1. Financial Inclusion Indicators in Uzbekistan

Indicator	2011	2024
Adults with an account (%)	18	60
Mobile phone ownership – Men (%)	–	89
Mobile phone ownership – Women (%)	–	78

Table 1 demonstrates that mobile phone ownership in Uzbekistan has reached a relatively high level among the adult population. According to Global Findex 2024 data, approximately 89–90% of men and around 78–80% of women own a mobile phone. This indicates that the country has established a strong technological foundation for the development of digital financial services.

The results show that Uzbekistan has achieved a level of mobile phone penetration comparable to many countries in Europe and Central Asia. However, the observed gender gap of approximately 10–12 percentage points suggests that women continue to face certain barriers in accessing digital technologies. Since mobile devices represent the primary channel for accessing mobile banking, digital payments, and fintech services, this disparity may also influence the level of financial inclusion among women.

The findings imply that further expansion of digital financial services should be accompanied by measures aimed at reducing gender-based digital inequalities and improving digital literacy, particularly among vulnerable population groups.

The share of adults owning an account at a financial institution increased from approximately 18% in 2011 to nearly 60% in 2024. This represents more than a threefold increase over the analyzed period and indicates significant improvements in access to formal financial services.

Compared to other countries in Europe and Central Asia, Uzbekistan demonstrates one of the fastest rates of growth in account ownership. While countries such as Kazakhstan, Georgia, and Ukraine currently report higher levels of account penetration, Uzbekistan has achieved remarkable progress from a relatively low initial level.

Table 1. Uzbekistan in comparison with selected countries of Europe and Central Asia (2024)

Country	Account ownership 2024
Kazakhstan	85
Georgia	80
Ukraine	86
Uzbekistan	60
Tajikistan	45

Table 2 illustrates substantial progress in financial inclusion in Uzbekistan between 2011 and 2024. The share of adults owning an account at a financial institution increased from approximately 18% in 2011 to nearly 60% in 2024.

This represents an increase of more than 42 percentage points over the analyzed period and indicates that financial inclusion has expanded significantly during the last decade. The results suggest that access to formal financial services has become considerably more widespread among the population.

Compared with other countries in Europe and Central Asia, Uzbekistan demonstrates one of the highest growth rates in account ownership. While the current level remains below that of countries such as Kazakhstan, Georgia, Ukraine, and Serbia, the pace of improvement is noteworthy because Uzbekistan started from a much lower initial level.

Table 3. Uzbekistan: Assets of Financial System Participants Operating in Uzbekistan (July 1, 2024)

No.	Financial Institutions	Number	Volume of Assets (billion UZS)	Share (%)
1	Commercial banks	36	690,424	94.60
2	Leasing organizations	38	10,271	1.41
3	Insurance organizations	35	10,212	1.40
4	Microfinance organizations	91	5,802	0.79
5	Mortgage Refinancing Company (KRI)	1	4,441	0.61
6	Fund for Guaranteeing Citizens' Deposits in Banks	1	3,841	0.53
7	Payment institutions	47	3,157	0.43
8	Pawnshops	90	413	0.06

9	Payment system operators	3	989	0.14
10	Republican Currency Exchange	1	293	0.04
11	Republican Stock Exchange	1	67	0.01
12	**Total**	**344**	**729,911**	**100.00**

The data clearly demonstrate the dominant role of commercial banks within Uzbekistan's financial system. Although commercial banks account for only **36 institutions out of 344 financial market participants (10.5%)**, they concentrate **94.6% of total financial system assets**, amounting to **UZS 690.4 trillion**.

This indicates that Uzbekistan's financial system remains predominantly **bank-centered**, where financial intermediation is primarily performed through commercial banks rather than non-bank financial institutions.

Non-bank financial institutions collectively account for only **5.4% of total financial assets**. Despite their relatively large number, their financial capacity remains limited.

Leasing organizations and insurance companies occupy the second and third positions, each holding approximately **1.4%** of total system assets. Their combined share reaches only **2.81%**, which remains significantly lower than international benchmarks observed in developed financial markets.

This finding suggests that alternative financing channels remain underdeveloped in Uzbekistan.

The country had **91 microfinance organizations**, representing the largest number of institutions among all categories. However, their total assets amounted to only **UZS 5.8 trillion**, corresponding to **0.79%** of the financial system's assets.

The discrepancy between the large number of institutions and their relatively small asset base indicates that microfinance organizations mainly serve small-scale borrowers and remain limited in their capacity to provide large-scale financing.

From a financial inclusion perspective, however, microfinance institutions play an important role in serving low-income households and micro-enterprises that may not qualify for traditional bank financing.

The table also reflects the growing role of digital financial infrastructure.

Payment institutions (47 entities) and payment system operators (3 entities) collectively hold assets of approximately **UZS 4.1 trillion**, accounting for around **0.57%** of total financial assets.

Although their current asset share remains relatively small, the rapid growth of digital payments, mobile banking, and fintech services suggests that these institutions are becoming increasingly important for expanding financial inclusion and supporting digital transformation.

The data reveal the limited role of capital market institutions.

The Republican Stock Exchange accounts for only **0.01%** of total financial system assets, while the Republican Currency Exchange represents **0.04%**.

These figures confirm that Uzbekistan's financial system remains heavily dependent on banking institutions, while securities markets continue to play a relatively minor role in financial intermediation and capital allocation.

From the perspective of financial inclusion, the structure of the financial system presents both opportunities and challenges:

1. **Strong banking sector** provides a solid foundation for expanding access to financial services.

2. **Growing payment institutions and fintech infrastructure** support digital financial inclusion.

3. **Microfinance organizations** contribute to serving underserved populations and small businesses.

4. **Limited development of non-bank financial institutions and capital markets** may constrain diversification of financial services and financing opportunities.

Overall, the evidence suggests that Uzbekistan has made substantial progress in expanding its financial system; however, further development of microfinance, insurance, leasing, fintech, and capital market institutions will be essential for achieving a more diversified and inclusive financial sector.

The rapid increase in account ownership can be explained by several factors:

- modernization of the banking sector;
- expansion of banking infrastructure;
- active promotion of cashless payments;
- growth of mobile and internet banking services;
- government initiatives aimed at digital transformation;
- increasing accessibility of financial services through digital channels.

The results suggest that digitalization has become one of the main drivers of financial inclusion in Uzbekistan.

4.3. Implications for Digital Financial Services

The simultaneous growth of mobile phone ownership and account penetration demonstrates a strong relationship between digitalization and financial inclusion.

The findings indicate that the increasing availability of mobile technologies has facilitated access to formal financial services by reducing geographical barriers and transaction costs. Digital channels enable individuals to open accounts, make payments, transfer funds, and access banking services without visiting physical branches.

However, the analysis also highlights several challenges. The existing gender gap in mobile phone ownership may limit women's participation in digital finance. Furthermore, expanding access to financial services does not automatically guarantee active usage. Therefore, future policies should focus not only on access but also on the effective use of digital financial products.

Overall, the evidence suggests that digital financial services have become an important instrument for expanding financial inclusion in Uzbekistan and are likely to play an even greater role in achieving inclusive economic development in the future.

5. CONCLUSION

Digital financial services have become an important driver of financial inclusion in Uzbekistan. The expansion of mobile banking, digital payments, and fintech solutions has improved access to financial services and supported economic participation among previously underserved groups.

This study examined the role of digital financial services in promoting financial inclusion in Uzbekistan. The review of the academic literature demonstrates that digital financial services have become one of the most important drivers of financial inclusion in both developed and developing economies. Previous studies have shown that mobile banking, digital payments, fintech innovations, and digital financial platforms contribute to reducing transaction costs, overcoming geographical barriers, and expanding access to formal financial services, particularly among underserved populations and small businesses.

The empirical analysis based on Global Findex data indicates that Uzbekistan has achieved significant progress in financial inclusion over the last decade. The share of adults owning an account at a financial institution increased from approximately 18% in 2011 to nearly 60% in 2024, reflecting substantial improvements in access to formal financial services. At the same time, the high level of mobile phone ownership among the adult population demonstrates favorable conditions for the further development of digital finance.

The findings suggest a strong relationship between digitalization and financial inclusion. The expansion of digital financial services has facilitated broader participation in the formal financial system by reducing access barriers and improving the availability of financial products and services. Digital channels have become increasingly important for delivering financial services to individuals and small businesses, particularly in regions where traditional banking infrastructure remains limited.

However, the study also identifies several challenges that may constrain the future development of digital financial inclusion in Uzbekistan. The existing gender gap in mobile phone ownership indicates unequal access to digital technologies, which may subsequently affect the adoption of digital financial services. In addition, issues related to digital literacy, cybersecurity, consumer protection, and regional disparities in digital infrastructure remain important policy concerns.

The study contributes to the existing literature by providing evidence from Uzbekistan, a country that has received relatively limited attention in international research on digital financial inclusion. The results confirm that digital financial services can serve as an effective mechanism for expanding financial inclusion in emerging economies undergoing rapid digital transformation.

From a policy perspective, further progress in financial inclusion requires continued investment in digital infrastructure, the expansion of digital literacy programs, the reduction of gender-based digital inequalities, and the strengthening of cybersecurity and consumer protection frameworks. Such measures would not only increase access to financial services but also promote their effective and sustainable use, thereby supporting inclusive economic growth and long-term financial sector development in Uzbekistan.

Nevertheless, achieving inclusive digital finance requires addressing challenges related to digital literacy, infrastructure development, and cybersecurity.

The study recommends:

1. Expanding digital infrastructure in rural areas;
2. Improving financial and digital literacy programs;
3. Strengthening cybersecurity frameworks;
4. Supporting fintech innovation through regulatory reforms;
5. Promoting digital financial products tailored to SMEs and vulnerable populations.

The successful implementation of these measures can further enhance financial inclusion and contribute to sustainable economic development in Uzbekistan.

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