

Impact of Digital Financial Services on Financial Inclusion Among Young Adults in Nagpur City: An Empirical Study

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Abstract

Digital financial services have become an important channel for expanding access to formal financial services. Mobile banking, Unified Payments Interface (UPI), internet banking, digital wallets, Aadhaar-enabled services, and other technology-enabled financial products can reduce transaction costs and improve convenience. This paper examines the proposed relationship between the use of digital financial services and financial inclusion among young adults in Nagpur City. The study focuses on access, frequency of use, awareness, perceived convenience, security, affordability, and use of formal financial products such as savings, payments, credit and insurance. The research adopts a descriptive and empirical design using a structured questionnaire for young adults in Nagpur. Secondary information is drawn from authoritative publications of the Reserve Bank of India and the World Bank. The paper develops a framework for examining whether greater use of digital financial services is associated with broader participation in formal financial services. The final empirical results should be populated from the actual respondent dataset collected for the study; no artificial respondent data are presented in this draft.

Keywords—digital financial services, financial inclusion, young adults, UPI, mobile banking, digital payments, Nagpur City

I. INTRODUCTION

Financial inclusion refers to the availability and effective use of affordable, convenient and appropriate financial products and services by individuals and businesses. Access to a bank account is an important foundation, but inclusion also involves meaningful use of payments, savings, credit, insurance and other financial services. Digital technology has changed the way these services are delivered by allowing customers to transact through mobile phones, internet platforms, payment applications and other electronic channels.

In India, the growth of digital payments has been closely connected with improvements in payment infrastructure and the expansion of technology-enabled financial services. The Reserve Bank of India has identified digitalisation and the payment revolution as important developments affecting the reach, convenience and cost of payment services. The RBI has also continued initiatives aimed at

deepening financial inclusion and expanding the digital payments ecosystem. Its 2024–25 Annual Report notes that the Financial Inclusion Index increased to 64.2 in March 2024, with improvement across its sub-indices. [1]

Young adults represent an important group for studying digital financial services because they are often active users of smartphones, internet services and digital payment applications. At the same time, digital access alone does not automatically guarantee effective financial inclusion. Awareness, trust, financial literacy, affordability, digital skills, privacy and perceived security can influence how individuals use financial services. The World Bank's Global Findex research similarly treats digital payments as an important pathway through which account ownership can lead to broader use of financial services. [2], [3]

Nagpur is a major urban centre in Maharashtra with a diverse population of students, salaried employees, self-employed persons,

entrepreneurs and other young adults. Studying this group can provide useful evidence about how digital financial services are being used at the city level and whether such usage is associated with broader engagement with formal financial services.

II. REVIEW OF LITERATURE

The literature on financial inclusion increasingly recognises digital financial services as an important mechanism for reducing barriers to financial access. The following review summarises selected institutional evidence relevant to the present study.

Demirgüç-Kunt et al. in the Global Findex 2021 report examined account ownership, digital payments, saving, borrowing and financial resilience across economies. The report highlights that digital payments can create an entry point for greater use of financial services, while barriers such as lack of money, distance and documentation can continue to affect excluded groups. [2]

The World Bank's analysis of Global Findex 2021 reports substantial growth in digital payment use and notes that digital payments can provide a pathway from an account to other financial activities. In India, more than 80 million adults made their first digital merchant payment after the start of the COVID-19 pandemic, illustrating the scale of change in payment behaviour during that period. [3]

The Reserve Bank of India's work on digitalisation and the payment revolution in India describes how technological advances, banking penetration, formalisation and younger cohorts influence digital payment adoption. It also identifies UPI as a major development in India's retail payment landscape and discusses both the inclusion opportunities and policy challenges created by digitalisation. [4]

RBI's Annual Report 2024–25 describes continuing efforts to deepen financial inclusion, strengthen digital payment infrastructure, improve financial literacy and expand the reach of banking services. The report also notes the expanding role of financial literacy initiatives, including programmes directed toward students and young graduates. [1]

The reviewed literature therefore suggests that digital financial services may influence financial inclusion through greater convenience, lower transaction barriers and increased use of formal

accounts. However, the actual relationship among digital usage, awareness, trust and financial inclusion needs to be examined in specific local populations. This study addresses that gap by focusing on young adults in Nagpur City.

III. RESEARCH GAP

Much of the available evidence on digital financial inclusion is national or cross-country in scope. Such evidence is useful for understanding broad trends, but city-level populations can have different patterns of adoption depending on education, occupation, income, access to smartphones and internet connectivity. There is therefore value in examining young adults in a specific urban setting. The present study is designed to assess digital financial service usage and its association with indicators of financial inclusion among young adults in Nagpur City.

IV. OBJECTIVES OF THE STUDY

- To examine the level of awareness and usage of digital financial services among young adults in Nagpur City.
- To identify the major digital financial services used by young adults, including UPI, mobile banking, internet banking and digital wallets.
- To examine the perceived benefits of digital financial services in terms of convenience, accessibility, affordability and speed.
- To assess the perceived role of digital financial services in encouraging the use of formal financial products and services.
- To identify major barriers and concerns related to digital financial services, including security, fraud, privacy, technical problems and lack of awareness.
- To provide suggestions for strengthening digital financial inclusion among young adults.

V. RESEARCH METHODOLOGY

Research design: The study follows a descriptive and empirical research design. It is intended to combine primary survey information with secondary information from reliable institutional sources.

Study area: The geographical scope of the proposed primary survey is Nagpur City, Maharashtra, India.

Target population: The target population consists of young adults residing, studying or working in Nagpur City. For the primary survey, the researcher may define young adults as respondents aged 18–35 years, subject to the approved research protocol.

Sampling: A convenient or purposive sampling approach may be used when probability sampling is not feasible. The final paper should state the actual sample size, sampling period and respondent-selection procedure used by the researcher.

Data collection instrument: A structured questionnaire is proposed. It contains questions on demographic profile, digital financial service usage, frequency of digital transactions, awareness, perceived benefits, trust and security, and indicators of financial inclusion.

Data analysis: Descriptive statistics such as frequency, percentage, mean and standard deviation may be used. Cross-tabulation can examine differences across age, gender, occupation and income groups. Where the dataset is adequate, chi-square tests, correlation or regression analysis may be applied to examine associations between digital financial service usage and financial inclusion indicators.

Ethical considerations: Respondents should be informed about the purpose of the study. Participation should be voluntary, and personally identifying information should not be disclosed in the research paper. Survey responses should be used only for the stated academic/research purpose.

VI. CONCEPTUAL FRAMEWORK

The study proposes that digital financial service usage may contribute to financial inclusion through several channels. Digital access can reduce the time and cost required to make payments, increase the convenience of account usage, and potentially encourage regular interaction with formal financial institutions. However, these effects may depend on digital literacy, financial literacy, trust, security perceptions, affordability and access to smartphones and internet services.

Digital Financial Service Factors	Possible Mechanism	Financial Inclusion Indicators
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UPI and digital payments	Convenience and lower transaction barriers	Regular formal payments
Mobile / internet banking	Remote access to banking	Account usage and savings
Digital wallets / apps	Ease of small-value transactions	Digital transaction participation
Digital credit / financial products	Improved product access	Use of formal credit/insurance
Financial and digital literacy	Better awareness and confidence	Effective and informed usage

VII. PROPOSED HYPOTHESES

- H1: There is a significant association between the level of digital financial service usage and financial inclusion among young adults in Nagpur City.
- H2: Awareness of digital financial services is significantly associated with their frequency of use.
- H3: Perceived convenience of digital financial services is positively associated with regular use of formal financial services.
- H4: Security and trust concerns are significantly associated with the level of digital financial service usage.

VIII. QUESTIONNAIRE FOR PRIMARY SURVEY

The following questionnaire can be used for collecting the actual primary data required to complete the empirical analysis.

- 1. Age: 18–21 / 22–25 / 26–30 / 31–35
- 2. Gender: Male / Female / Other / Prefer not to say
- 3. Occupation: Student / Salaried / Self-employed / Business / Other
- 4. Monthly personal income: No income / Below ₹20,000 / ₹20,001–₹40,000 / Above ₹40,000
- 5. Do you have a bank account? Yes / No
- 6. Which digital financial services do you use? UPI / Mobile banking / Internet banking /

Wallet / ATM/debit card / Digital investment / Other

- 7. How frequently do you use digital payments? Daily / Several times a week / Weekly / Occasionally / Never
- 8. Main purpose of digital financial services: Shopping / Bills / Money transfer / Education / Travel / Investments / Other
- 9. How would you rate your awareness of digital financial services? Very low / Low / Moderate / High / Very high
- 10. Digital financial services save time and effort. Strongly disagree to Strongly agree (5-point scale).
- 11. Digital financial services make financial transactions more convenient. 5-point scale.
- 12. Digital financial services improve access to formal financial services. 5-point scale.
- 13. I feel confident using digital financial services. 5-point scale.
- 14. I am concerned about online fraud and cyber security. 5-point scale.
- 15. I trust banks/payment systems to protect my digital transactions. 5-point scale.
- 16. Have digital services encouraged you to use other formal financial products such as savings, insurance or investments? Yes / No / Not sure
- 17. What is the biggest barrier to digital financial service usage? Security / Lack of knowledge / Internet / Technical problems / Cost / Privacy / No major barrier / Other
- 18. Overall, how would you rate the contribution of digital financial services to your financial inclusion? Very low / Low / Moderate / High / Very high
- 19. What one improvement would encourage you to use digital financial services more?

IX. DATA ANALYSIS FRAMEWORK

Because the actual respondent dataset was not supplied with this draft, numerical findings are intentionally not fabricated. After data collection, the following tables can be populated directly from the questionnaire responses.

Table	Variable	Suggested Measure	Purpose
I	Age / gender / occupation	Frequency & %	Describe respondents

II	Digital service used	Frequency & %	Identify adoption pattern
III	Usage frequency	Frequency & %	Measure intensity of use
IV	Perceived benefits	Mean / SD	Assess perceived value
V	Security and trust	Mean / SD	Assess barriers
VI	Financial inclusion indicators	Frequency / mean	Assess inclusion
VII	Digital usage vs inclusion	Chi-square / correlation	Test association

X. EXPECTED AREAS OF FINDINGS

The final findings should be based only on the collected responses. The analysis is expected to examine whether young adults who use digital financial services more frequently also report greater access to and use of formal financial services. Particular attention should be given to the relationship between digital payment usage and the use of savings, credit, insurance and investment products.

The study should also identify whether security concerns, fraud awareness, privacy concerns, technical difficulties or limited financial literacy act as barriers. Differences across respondent groups may provide additional insight into which segments require more targeted financial education or digital support.

XI. DISCUSSION

The conceptual expectation of the study is consistent with institutional evidence that digital payments can be an entry point into wider financial service usage. The World Bank reports that account holders who receive payments digitally can use their accounts for other activities such as storing and saving money, indicating that digital transaction behaviour can connect with broader financial participation. [2]

In India, the policy environment has increasingly supported digital payment infrastructure and financial inclusion. RBI's work describes UPI and other digital payment developments as part

of the transformation of India's retail payment landscape. At the same time, digitalisation introduces challenges relating to consumer protection, fraud, financial literacy and safe usage. [4]

For young adults in Nagpur, the research therefore needs to consider both sides of the digital financial inclusion process: access and convenience on one side, and trust, security, awareness and effective usage on the other. The empirical survey will determine which factors are most strongly associated with financial inclusion in the selected sample.

XII. SUGGESTIONS

- Banks and financial service providers should strengthen digital financial literacy programmes targeted at young adults.
- Educational institutions can conduct practical awareness sessions covering UPI safety, secure authentication, fraud prevention and responsible digital finance.
- Digital financial service providers should communicate security practices and grievance-redressal procedures in simple language.
- Financial inclusion initiatives should focus not only on account ownership but also on regular, informed and safe use of formal financial products.
- Young users should be encouraged to use strong authentication, avoid sharing OTPs/PINs and verify payment requests before authorising transactions.
- Future research can compare students, salaried employees, self-employed persons and other groups to identify differences in digital financial inclusion.

XIII. LIMITATIONS OF THE STUDY

- The primary empirical results depend on the size and representativeness of the survey sample.
- If non-probability sampling is used, the findings may not be generalisable to all young adults in Nagpur City.
- Self-reported responses may contain recall or response bias.
- Digital financial services and payment practices change rapidly; therefore, findings reflect the period of data collection.

- This draft does not report numerical survey findings because the actual respondent dataset has not been provided.

XIV. CONCLUSION

Digital financial services have the potential to strengthen financial inclusion by making financial transactions more accessible, convenient and efficient. Institutional evidence from the RBI and World Bank indicates that digitalisation and digital payments are important components of the broader financial inclusion ecosystem. [1]–[4] However, meaningful financial inclusion requires more than access to a digital payment application. Users also need financial awareness, digital skills, trust, security and access to suitable formal financial products.

This study provides a structured framework for examining the impact of digital financial services on financial inclusion among young adults in Nagpur City. The proposed questionnaire and analytical framework can be used to collect primary data and test the stated hypotheses. Once the actual survey dataset is available, descriptive statistics and appropriate inferential tests can be added to establish the empirical findings of the study.

REFERENCES

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