

Digital Banking Inclusion and Behavioral Changes Among Rural Customers in Jharkhand: A Case Study of Some Selected Blocks of Ranchi District

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Abstract—Digital banking has become a key driver of financial inclusion in rural India, offering convenient, fast, and secure services through mobile banking, internet banking, UPI, and ATMs. This study, “Digital Banking Inclusion and Behavioral Changes among Rural Customers in Jharkhand”, examines the adoption of digital banking and its impact on rural customers’ saving habits, transaction methods, financial decision-making, and reliance on traditional banking. Using primary data from questionnaires and interviews, along with secondary sources, the study finds that digital banking enhances convenience, reduces transaction time, increases financial awareness, and promotes cashless transactions. However, challenges such as limited digital literacy, poor connectivity, cyber security concerns, and lack of technical knowledge hinder effective usage. The study highlights the role of government initiatives like Digital India, Jan Dhan Yojana, and Aadhaar linkage in fostering financial inclusion and concludes that awareness programs, digital education, infrastructure development, and customer support are essential for wider adoption in rural Jharkhand.

Index Terms—Digital Banking, Financial Inclusion, Rural Customers, Mobile Banking, Internet Banking, Banking Awareness, Digital Literacy, Cashless Transaction.

I. INTRODUCTION

Digital banking has become one of the most significant developments in India’s formal financial landscape. Over the last decade, reforms such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) have greatly expanded access to banking services, particularly among low-income and rural households. However, policymakers and researchers increasingly recognize that meaningful financial inclusion requires more than opening bank accounts. With India’s rapid

shift towards a digital economy—driven by mobile penetration, Aadhaar-linked services, UPI, and the growth of banking correspondents—the emphasis has moved from access to usage of digital financial services.

In rural India, digital banking has the potential to remove long-standing barriers associated with distance, limited banking infrastructure, and high transaction costs. Tools such as the Unified Payments Interface (UPI), Aadhaar-enabled Payment Systems (AePS), SMS banking, digital wallets, and mobile apps were designed to create convenient, user-friendly alternatives for financial transactions. Yet, despite the availability of these services, adoption across rural households has been uneven. Factors such as low digital competency, fear of financial fraud, sociocultural dependence on cash, limited smartphone availability, and unreliable network connectivity continue to influence digital behaviour.

Jharkhand presents a unique context within this broader national picture. A significant share of its rural population belongs to tribal communities with distinct socioeconomic conditions, traditional financial habits, and varying levels of technological exposure. Ranchi district, with its combination of rural settlements, semi-urban pockets, and tribal-majority blocks, reflects a diverse financial ecosystem in which digital banking adoption evolves differently across communities. Government initiatives promoting digital transactions have certainly increased exposure, but the pace of behavioural and attitudinal change remains inconsistent.

Studying Ranchi district therefore provides valuable insights into how rural customers understand, adopt, and experience digital financial systems. Beyond transactional data, it is important to assess how digital

banking is influencing everyday financial practices, altering saving and spending patterns, improving access to formal credit, and shaping trust in technology.

II. BACKGROUND OF THE STUDY

Digital banking has emerged as an important tool for promoting financial inclusion in India, particularly in rural areas where access to traditional banking services has historically been limited. The introduction of technologies such as Unified Payments Interface (UPI), Aadhaar-enabled Payment System (AePS), mobile banking applications, digital wallets, and SMS banking has made financial transactions faster, easier, and more accessible.

In rural India, digital banking has the potential to overcome challenges related to geographical distance, inadequate banking infrastructure, and high transaction costs. Various government initiatives and regulatory measures have encouraged the adoption of digital financial services to ensure broader access to banking facilities.

Despite these advancements, the adoption of digital banking in rural areas remains uneven. Factors such as limited digital literacy, lack of smartphone access, poor internet connectivity, fear of online fraud, and a strong preference for cash transactions continue to affect the usage of digital banking services. These challenges are particularly significant among women, elderly individuals, and less-educated populations.

To address these barriers, institutions such as the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), and Ministry of Electronics and Information Technology (MeitY) have introduced various initiatives, including UPI 123PAY and simplified onboarding processes. While these measures have helped reduce technical obstacles, behavioural and social factors still influence the effective use of digital banking services.

Therefore, understanding the level of digital banking inclusion and the behavioural changes it brings among rural customers is essential. This study focuses on selected rural blocks of Ranchi district, Jharkhand, to examine the extent of digital banking adoption and its impact on the financial behaviour of rural households.

III. STATEMENT OF THE PROBLEM

Despite significant policy initiatives and technological advancements, digital banking has not been uniformly embraced across rural India. The central research problem of this study is to evaluate how deeply digital banking has penetrated rural areas of Ranchi district and how it has influenced financial behaviour among rural customers. While national-level data portray rapid expansion of digital transactions, ground-level realities often differ due to persistent socioeconomic, cultural, and infrastructural barriers.

Many rural customers possess basic bank accounts but rarely use digital services. Concerns related to fraud, lack of trust, low digital literacy, language barriers, and inconsistent network connectivity often discourage them from engaging with digital platforms. As a result, digital inclusion frequently remains superficial—limited to creating accounts or occasional use of Aadhaar-based services rather than continued, independent use of digital apps or UPI.

IV. SIGNIFICANCE OF THE STUDY

The significance of the present study lies in its contribution to understanding digital banking inclusion not merely as a technological development but as a socio-economic and behavioural transformation in rural India. The study focuses on rural customers in Ranchi district and examines how digital banking is influencing financial behaviour, savings patterns, remittance practices, and access to formal financial services. The research is significant because it shifts the discussion from mere access to banking services toward actual usage and behavioural adoption, which is now considered the real indicator of financial inclusion.

V. SCOPE OF THE STUDY

The present study focuses on examining the level of digital banking inclusion and the behavioural changes among rural customers in selected blocks of Ranchi district, Jharkhand. It explores the adoption and usage of various digital banking services such as UPI, mobile banking, Aadhaar-enabled Payment System (AePS), digital wallets, and internet banking.

The study aims to assess the awareness, accessibility, usage patterns, and challenges faced by rural

customers while using digital banking services. It also examines the impact of digital banking on customers' financial behaviour, including transaction habits, savings behaviour, and dependence on cash.

The research is limited to rural households and selected respondents within the chosen blocks of Ranchi district. It considers demographic factors such as age, gender, education, occupation, and income to understand variations in digital banking adoption. The findings of the study may help policymakers, banks, and financial institutions design strategies to improve digital financial inclusion in rural areas.

However, the study does not cover urban populations or all districts of Jharkhand; therefore, the findings are primarily applicable to the selected study area.

VI. LITERATURE REVIEW

1. Verma et al., (2021)

NPCI's BharatQR and UPI QR codes have rapidly expanded merchant acceptance, contributing to digital payments in kirana stores, small retail shops, and weekly markets. Merchant acceptance is a critical determinant of behavioural change—wherever QR codes are available, rural customers quickly shift from cash to digital payments.

2. Bansal et al., (2021)

UPI, launched in 2016, has become the backbone of India's digital payments revolution. Its features—interoperability, instant transfers, QR-code payments, low transaction cost, and ease of use—have driven mass adoption across rural and urban populations. Empirical studies show that rural consumers first used UPI for small-value payments such as mobile recharge, groceries, and peer-to-peer transfers

3. Garg et al., (2022)

Institutional trust also matters. Where banks are perceived as reliable and responsive, digital adoption is higher. In contrast, if rural households have had negative experiences—such as delayed subsidy credits, ATM card blocking, or unresolved complaints—they display higher reluctance to use digital tools.

4. Rathore (2020),

Notes that this dependence creates scope for misinformation, fraud, or partial disclosure of

financial information, thereby increasing perceived risks. Households lacking education and digital literacy also tend to limit digital usage to essential transactions—often withdrawals—rather than exploring more complex activities such as savings deposits, insurance enrolment, or UPI-based transfers. Various digital-literacy intervention programs, such as PMGDISHA, have shown improvements in confidence and accuracy of digital transactions among newly trained users, highlighting the transformative role of targeted training.

5. Chakraborty (2023),

Gender remains one of the most persistent structural determinants of digital usage in India. Women face barriers in device ownership, digital confidence, mobility, and intra-household decision-making. Identifies gendered patterns in smartphone ownership, where women often rely on shared or borrowed devices. This limits privacy in financial transactions and reduces their ability to explore features independently. Even when women possess their own phones, norms around usage monitoring by family members may reduce opportunities for experimentation, leading to slower adoption of apps such as UPI or mobile banking.

6. Kaur et al., (2022),

Digital confidence also appears gender-skewed. Studies indicate that women generally report higher fear of making mistakes, losing money, or being scammed. These emotional and psychological barriers suppress willingness to adopt new technologies even when functional literacy is adequate. Women's digital behaviours are frequently mediated by male family members or digitally skilled youth, reinforcing dependencies and limiting autonomy. However, when targeted capacity-building programs are implemented—particularly through Self-Help Groups (SHGs)—significant improvements occur.

7. Sinha et al., (2021),

Empirical studies on SHG-led digital training initiatives in states such as Jharkhand, Bihar, and Odisha show measurable increases in digital confidence, frequency of transactions, and ability to manage DBT-linked accounts independently. SHG meetings often serve as peer-learning platforms where women share experiences, resolve doubts, and

troubleshoot collectively. This process reduces fear, strengthens trust, and promotes.

8. Mishra et al., (2022),

Infrastructure remains a critical yet uneven determinant of digital usage, particularly in rural and remote regions. Weak mobile networks, poor signal reception, and frequent disruptions continue to impede digital transactions despite rapid expansion of digital ecosystems. highlight that unreliable network connectivity restricts the use of UPI, mobile banking apps, and Aadhaar OTP-based services. Users often abandon digital transactions after repeated failures, reinforcing distrust and pushing them toward cash

9. Sahu (2022),

BCs also support government initiatives by facilitating distribution of Direct Benefit Transfers (DBT), pensions, and welfare payments. Since beneficiaries typically withdraw these payments through BCs, repeated interactions strengthen user familiarity with digital systems. Over time, this improves confidence in digital platforms and nudges households toward using additional services such as savings deposits or UPI payments.

10. Khan et al., (2021)

Multiple studies emphasize that infrastructure gaps are not uniform across regions. Tribal belts and remote villages—such as many in Jharkhand, Odisha, and Northeast India—face severe digital exclusion due to weak mobile networks. Even when connections exist, they may be too slow to support app-based banking. Consequently, rural customers often rely on AEPS, which is more resilient but also limited in its functionality.

11. Sutikno et al., (2022)

In this paper the potential and problems faced by Islamic banks in the era of digital banking are examined in this study using a qualitative methodology and a phenomenological approach. Information gathered by way of observation, discussion, and documentation. According to the study's findings, Islamic banks confront both possibilities and challenges in the digital age

12. Kaur et al., (2021)

The goal of this study is to comprehend how serious risk factors affect how satisfied customers are with

digitized banking services and goods. To do this, the authors conducted a structured survey based on the SERVQUAL model's five aspects and distributed it to Northern Indian banks clients. They collected 222 valid replies to the survey.

13. Haralayya, Dr. (2021)

Previously, the banking procedure took a long time. Customers were required to preserve physical records of their transactions or banking histories. However, the advent of digitalization has made paperless banking a reality for everyone. The development of technology has been a key factor in India's banking industry's progress. In response to rising customer expectations, banks created cutting-edge goods and services to guarantee client happiness.

14. Kaur et al., (2021)

This qualitative study aims to analyze the impact of bank in-branch initiatives on consumers' transition from branch banking to digital banking in India. Senior management from India's public and private sector banks were interviewed in-depth in semistructured interviews with bank executives. The data were analyzed using a qualitative content analysis technique.

15. Muhammad Ridhwan et al. (2021),

The way people live and conduct business has altered as a result of the fastest-growing technologies in recent years. The existence of the internet and mobile devices has resulted in a significant shift of many industries, including banking and finance, from manual to automation activity and from offline to online transaction. This study's goal is to examine the literature that has been written about digital banking and financial inclusion between 2014 and 2020.

16. Popova, Y. (2021),

The goal of the study is to identify the financial underpinnings of the initiatives carried out by the fintech company and to pinpoint what makes these businesses more efficient than traditional banks at handling financial transactions. It is even more significant because a review of research on technology solutions shows that there is a certain economic gap in the justification of such clever solutions. The study's findings, which are based on the application of conventional Cost-Benefit and Total Cost of

Ownership studies, include generated cost and income functions, estimated Benefit/Cost ratios, and evidence of the finch company's efficiency as compared to a conventional bank.

17. Meher et al. (2021),

This paper's goal is to develop a multiple regression model by taking into account the variables that are promoting the expansion of Micro, Small and Medium Enterprises (MSMEs) in India. The basic data used in this study were gathered through the use of questionnaires. The survey asks 454 MSMEs in the semi-urban Katihar region of Bihar, India, about their nature and size of business as well as their opinions of the many benefits of digital banking on a Likert scale of 1 to 10.

18. Wewege et al., (2020),

This study shows that access to future finch trends will greatly increase in the following years by updating the digital banking transformation in fintechs and established banking institutions. As progress is made within the legal framework of data protection as part of the Privacy Act and open-banking directives, the findings taken together suggest that digitized-mobile-banking transitions emphasize the capabilities of banking infrastructure for data sharing, connectivity stability and cyber security, as well as standardization of internal and external APIs.

19. NGUYEN (2020),

The purpose of the study is to assess the variables influencing Vietnamese consumers' intention to utilize digital banking. The survey data from 201 consumers who have access to digital banking are analyzed using multivariate data analysis techniques (Cronbach's Alpha test, Confirmatory Factor Analysis, and Structural equation model).

20. Bansal, N. (2020),

This study analyzed the effects of a digital banking training programmed on employees in the unorganized sector and their acceptance of these services in India. Before employing the stepwise approach (forward selection) of multiple linear regressions, this study used factor analysis to assess the applicability and reliability of scale, i.e., the training programmed of digital banking services. With the aid of questionnaires and a self-administered technique,

primary data have been gathered from the Delhi region. Stratified random sampling was employed, and a total of 412 useful schedules were taken into account for the SPSS version 23 data analysis.

21. Sarkar et al., (2019),

This essay tries to show how digital banking has been improved since India demonetized a number of notes with denominations of 500 and 1,000. This study investigates whether the use of digital banking services has changed significantly in India since the demonetization. A paired sample t-test was employed for analysis in this descriptive study, which used data collected from November 2015 to October 2017—one year before and one year after the demonetization of currency.

22. Verma et al., (2019),

The objective of this study is to illustrate the challenges and opportunities of Digital Banking in India. Online banking marketers will need to overcome a number of significant obstacles if they are to be successful in this industry, including traditional banking practices, security, technical problems, transactional constraints, and limited marketing resources. However, there is still a huge amount of demand for this sector.

Summary of Previous Research

The review of previous studies shows that digital banking has significantly contributed to financial inclusion and economic development. Research highlights that digital payment platforms such as UPI, BharatQR, and AePS have increased access to banking services and encouraged a shift from cash-based transactions to digital payments, particularly in rural and semi-urban areas.

Several studies have identified key factors influencing digital banking adoption, including trust in financial institutions, digital literacy, infrastructure availability, and ease of use. Studies by Garg et al. (2022) and Nguyen (2020) emphasize the importance of trust and perceived usefulness in encouraging digital banking usage. Similarly, Rathore (2020) and Bansal (2020) found that digital literacy and training programs improve confidence and acceptance of digital banking services.

Gender-related studies reveal that women face greater barriers to digital banking adoption due to limited

device ownership, lower digital confidence, and social constraints. However, initiatives through Self-Help Groups (SHGs) have been effective in enhancing women's digital skills and financial independence.

Identification of Research Gap

The literature reveals several gaps:

1. Limited district-level analyses to capture micro-variations within states.
2. Scarcity of behavioural studies focusing on psychological confidence-building in rural users.
3. Few mixed-method studies integrating household surveys, merchant surveys, and BC agent insights.
4. Insufficient focus on gendered behavioural patterns within digital finance.

Research Question

1. What socio-economic variables (education, income, occupation, caste category, and household size) significantly influence digital financial usage in rural areas?
2. How does educational attainment affect digital literacy, smartphone usage, and capacity for independent digital transactions?
3. How do income levels determine the diversity and frequency of digital financial services used by rural households?

Research objective

1. To assess digital adoption levels across rural households.
2. To analyse socio-economic determinants affecting adoption.
3. To examine behavioural factors such as trust, perceived risk, and digital confidence.
4. To study the role of Business Correspondents (BCs) in shaping digital behaviour.
5. To identify major infrastructural and behavioural barriers.

Hypotheses

Socio-economic characteristics significantly influence digital financial usage.

VII. RESEARCH METHODOLOGY

The research methodology forms the backbone of any systematic inquiry, shaping how evidence is generated, analyzed, and interpreted. For a study investigating digital financial adoption, behavioural

patterns, socio-economic determinants, and the role of Business Correspondents (BCs) in rural India, a rigorous methodology is essential to ensure academic accuracy, reliability, and validity. Rural digital adoption is a multidimensional phenomenon involving individual behaviour, access to infrastructure, formal banking structures, government intervention, and social norms. Hence, the methodology must be comprehensive and capable of capturing the complexity of these layers.

This chapter outlines the philosophical foundation, research design, sampling procedures, population characteristics, data collection tools, pre-testing processes, statistical approaches, ethical safeguards, and limitations governing the research. Given that digital adoption in rural India involves behavioural, technological, economic, and institutional components, a mixed-method approach becomes not only desirable but necessary. Quantitative data helps measure patterns (frequency of digital usage, trust levels, demographic determinants), while qualitative insights uncover deeper meanings (perceptions, fears of fraud, reliance on BCs, gender norms). A pluralistic design thus strengthens the credibility of the findings.

VIII. RESEARCH DESIGN

A research design outlines the overall structure of the study. This investigation uses a descriptive–exploratory research design.

Descriptive Dimension

The descriptive component systematically maps:

- Digital usage levels
- Types of digital services used (UPI, AEPS, mobile banking)
- Socio-economic characteristics of users
- BC-assisted vs. self-operated transactions
- Barriers encountered during digital usage

Descriptive design helps quantify rural digital behaviour patterns.

Exploratory Dimension

The exploratory component identifies and explains:

- Reasons behind low digital confidence
- Regional disparities
- Gender-specific constraints
- Levels of trust and dependence on bcs

- Behavioural transition stages

This dimension is essential because rural digital behaviour is still evolving and often under-documented.

IX. DATA SOURCES

The present study is based on both primary data and secondary data.

Primary Data:

Primary data were collected directly from rural customers through a structured questionnaire. A total of 124 respondents participated in the survey. The questionnaire was designed to gather information regarding awareness, usage patterns, benefits, challenges, and behavioural changes associated with digital banking services among rural customers.

Secondary Data:

Secondary data were collected from various published and reliable sources, including reports and publications of the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), government websites, research journals, books, articles, newspapers, and other relevant online sources. These sources were used to understand the broader trends, policies, and developments related to digital banking and financial inclusion in India.

The combination of primary and secondary data helped provide a comprehensive understanding of digital banking inclusion and behavioural changes among rural customers in the selected study area.

Sampling Technique and Sample Size

The study adopts a multistage sampling approach, aligned with the quantitative hypotheses and the qualitative exploration of behavioural and infrastructural barriers.

Stage 1: Selection of Blocks

Four blocks—Ratu, Kanke, Mandar, Namkum—were purposively selected based on:

- block-wise socio-economic diversity
- digital infrastructure variation
- different levels of digital merchant acceptance
- gender participation patterns

Stage 2: Selection of Households

From each panchayat, 25 households will be randomly chosen, representing:

- low-income and moderate-income families
- farmers, labourers, self-employed, and salaried workers
- men and women users
- varied smartphone and network access levels

Stage 3: Merchant Sample

At least 40 merchants (10 per block) will be surveyed to understand QR acceptance barriers and ecosystem constraints.

X. DATA ANALYSIS AND HYPOTHESIS

This chapter presents the detailed quantitative and qualitative analysis based on data collected across all research objectives, research questions (RQ1–RQ10), and hypotheses (H1–H7). The multi-stage sampling procedure covered 4 blocks, 20 villages, and 640 respondents, including rural users, Business Correspondents (BCs), and rural merchants. The analysis integrates descriptive statistics, inferential testing, regression modelling, and thematic interpretation.

Table 4.1: Categories of Respondent

Variable	Categories	Frequency	Percentage
Gender	Male	360	56.25
	Female	280	43.75

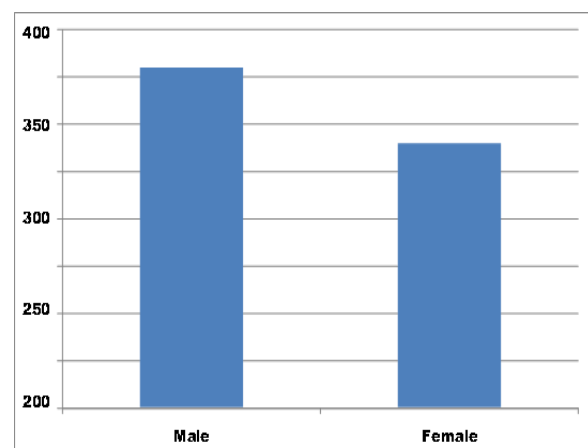


Figure 4.1: Categories of Respondent

Source: Generated by excel

Interpretation of Gender Distribution

- The dataset consists of 640 individuals, with 360 identified as male (56.25%) and 280 as female (43.75%).
- This indicates that males are the majority in this sample, making up a larger proportion of the surveyed population.

Table 4.2: Age of Respondent

Variable	Categories	Frequency	Percentage
Age	Below 30	110	17.18
	30–45	308	48.12
	Above 45	222	34.68

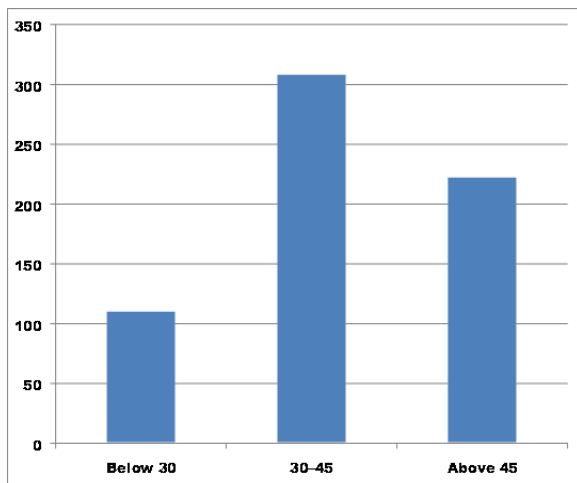


Figure 4.2: Age of Respondent

Source: Generated by excel

Analysis

- The largest age group in your population is 30–45 years, constituting 48.12% of the total, which suggests a middle-aged majority.
- Individuals above 45 form 34.68%, placing significant representation in the older adult category.
- The youngest group, below 30 years, represents only 17.18% of the sample, indicating a relatively small proportion of youth.

Table 4.3: Educational Status of Respondent

Variable	Categories	Frequency	Percentage
Education	Illiterate	98	15.31
	Primary	144	22.50
	Secondary	218	34.06
	Higher Secondary+	180	28.12

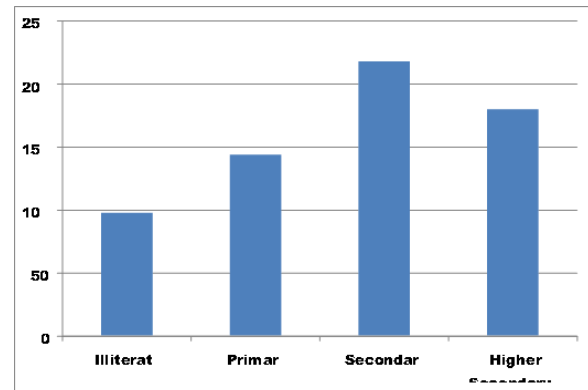


Figure 4.3: Educational Status of Respondent

Source: Generated by excel

Analysis

- The largest segment in your sample is those who completed secondary education, accounting for 34.06%, closely followed by individuals with higher secondary or above at 28.12%.
- Primary education holders form 22.50% of the sample.
- The combined proportion with at least secondary education or higher is 62.18%, demonstrating a moderate-to-strong educational attainment in your population.

Table 4.4: Economic Status of Respondent

Variable	Categories	Frequency	Percentage
Income (monthly)	< ₹10,000	302	47.18
	₹10,000–20,000	256	40.00
	> ₹20,000	82	12.81

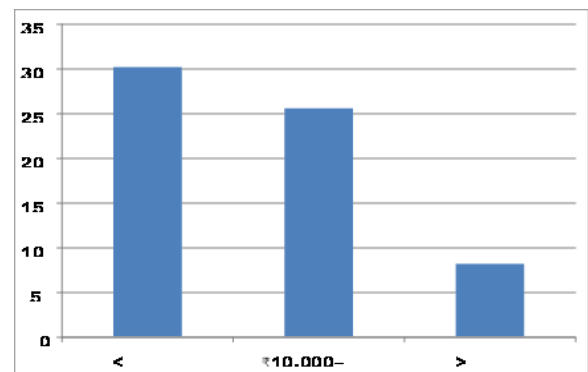


Figure 4.4: Economic Status of Respondent

Source: Generated by excel

Analysis

- Nearly half the sample (47.18%) earns less than ₹10,000 per month, indicating a substantial low-income population within your surveyed group.
- The majority (87.18%) earn no more than ₹20,000 per month, showing that middle-income earners form a significant portion but do not dominate the overall distribution.
- Only a small segment (12.81%) earns above ₹20,000 a month, making higher-income individuals a clear minority.

Table 4.5: Occupational Status of Respondent

Variable	Categories	Frequency	Percentage
Occupation	Farmer	260	40.62
	Labourer	174	27.18
	Self-employed	102	15.93
	Salaried	104	16.25

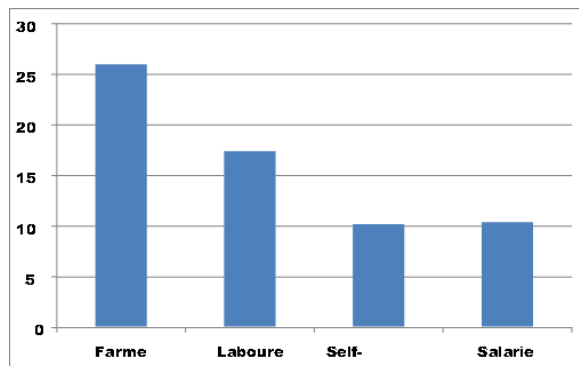


Figure 4.5: Occupational Status of Respondent

Source: Generated by excel

Analysis

- The largest occupational group is farmers, comprising 40.62% of the sample, indicating a strong agrarian base in the population.
- Labourers form the second-largest group at 27.18%, representing manual or unskilled workforces often linked to physical labor.
- Self-employed individuals and salaried workers constitute smaller but significant portions, at about 15.93% and 16.25%, respectively.
- This occupational distribution is typical of a mixed economy with a dominant agricultural sector, a substantial informal or manual labor segment, and a smaller formal employment sector.

XI. OBJECTIVE-WISE ACHIEVEMENT OF OBJECTIVES

Objective 1: To examine the level of digital banking awareness and knowledge among rural customers.

Achievement Status: Achieved

Supporting Findings:

The study found that lack of digital knowledge remains a major barrier to the adoption of digital payment systems in rural areas. Many respondents agreed that insufficient digital literacy prevents people in their villages from using digital payment methods. This objective was achieved by identifying the role of digital knowledge in promoting digital banking inclusion.

Objective 2: To analyze the impact of digital payments on transparency and reduction of corruption.

Achievement Status: Achieved

Supporting Findings:

The findings indicate that a large number of respondents believe that digital payments help reduce corruption, fraud, and black-money-related activities. Digital transactions provide better record-keeping and transparency, thereby increasing trust in the financial system.

Objective 3: To study the effect of digital banking on the financial independence of rural customers.

Achievement Status: Achieved

Supporting Findings:

The study revealed that digital banking services have improved the financial independence of many users. Respondents reported greater control over their financial transactions and easier access to banking services without depending on others or visiting bank branches frequently.

Objective 4: To examine the influence of digital banking on cashless transactions.

Achievement Status: Achieved

Supporting Findings:

The findings show that digital banking has significantly reduced dependence on cash transactions among rural customers. Respondents increasingly use UPI, mobile banking, and other digital payment methods for daily financial activities, indicating a shift towards a cashless economy.

Objective 5: To assess the acceptance of digital payment systems among rural customers.

Achievement Status: Achieved

Supporting Findings:

The majority of respondents showed a positive attitude toward digital payment systems and expressed willingness to continue using them in the future.

Objective 6: To examine the level of trust of rural customers in digital payment systems.

Achievement Status: Achieved

Supporting Findings:

The study found that a majority of respondents trust digital payment systems even for larger transactions. This indicates increasing confidence in the security and reliability of digital banking services.

Objective 7: To identify the technological challenges faced by rural customers while using digital banking services.

Achievement Status: Achieved

Supporting Findings:

The findings revealed that internet connectivity and mobile network issues remain significant challenges for many rural users. These problems often affect the smooth completion of digital transactions.

Objective 8: To assess the impact of digital banking on saving habits among rural customers.

Achievement Status: Achieved

Supporting Findings:

The study found that digital banking encourages customers to save money through formal banking channels. Easy access to banking services has promoted better financial management and savings behavior.

XII. FINDINGS, CONCLUSION AND SUGGESTIONS:

The discussion reveals that digital financial adoption in rural areas is a multidimensional behavioural journey, not a linear technological process. Access does not guarantee usage; usage does not guarantee autonomy; autonomy does not guarantee satisfaction. Socio-economic conditions create structural predispositions, but behavioural factors, trust, BC influence, and community learning determine actual adoption trajectories. Infrastructure and gender

constraints shape opportunity structures, while policy and literacy interventions provide enabling frameworks. The ecosystem functions as an interdependent network where each factor directly or indirectly influences digital outcomes.

This chapter synthesizes the major findings of the study by interpreting the quantitative results through the lens of the research objectives, research questions, and hypotheses. The aim is to contextualize the patterns that emerged from the data and explain their theoretical, practical, and policy-level significance within the broader framework of digital financial inclusion, socio-economic determinants, and behavioral constructs.

Same Findings are:

- Respondents struggled with terms like “UPI fraud”; examples were added.
- Behavioural scales were reduced from 12 to 9 items to avoid fatigue.
- Merchant questionnaire modified to add issues like QR stand theft.

Conclusion:

Digital financial inclusion in rural India stands at a transformative juncture. It is no longer simply a technological issue—it is a complex interplay of socio-economic realities, behavioural dispositions, cultural norms, infrastructural ecosystems, and institutional frameworks. This study demonstrates that while progress is substantial, gaps remain significant and multifaceted.

True digital empowerment requires:

- Robust infrastructure,
- Empowered intermediaries,
- Gender equity,
- Merchant readiness,
- Strong policy support, and
- Digital confidence among rural citizens.

The research concludes that digital financial inclusion can become a powerful engine for rural development only when technological access converges with behavioural trust, infrastructural consistency, and institutional enablement.

Suggestions:

1. Digital literacy programs should be conducted regularly in rural areas to increase awareness and understanding of digital banking services.

2. Banks should organize training camps and workshops to educate customers about the safe use of digital payment applications.
3. Government and telecom companies should improve internet and mobile network connectivity in rural regions to ensure smooth digital transactions.
4. Banks should strengthen security measures and create awareness about cyber fraud to increase customer trust in digital banking.
5. User-friendly mobile banking applications should be developed in local languages to make digital banking more accessible to rural customers.
6. Financial institutions should encourage rural customers to use formal banking channels for savings and investments through incentives and awareness campaigns.
7. Special support centers or help desks should be established in rural areas to assist customers facing difficulties in using digital banking services
8. Efforts should be made to promote cashless transactions among rural populations through awareness campaigns and digital payment incentives.
9. Banks should focus on increasing customer confidence in digital transactions, especially for higher-value payments.
10. Continuous monitoring and improvement of digital banking infrastructure are necessary to ensure reliable and efficient services in rural areas.

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