



Digital Financial Inclusion and Economic Empowerment of Rural Informal Workers

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ABSTRACT

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Financial inclusion is increasingly recognized as a catalyst for socio-economic empowerment, especially in developing countries. In India, the rural informal workforce remains one of the most vulnerable segments, often excluded from formal financial services. With the advent of digital technology, innovative platforms such as mobile banking, digital payment systems, and government-driven schemes like Jan Dhan Yojana, UPI, and Aadhaar-enabled services have transformed financial access for the unbanked. This paper examines how digital financial inclusion impacts the economic empowerment of rural informal workers in India. Based on a mixed-method study conducted in selected villages, the research highlights the benefits, barriers, and policy implications of digital financial services for informal workers. The findings indicate that while digital inclusion has improved access, savings, and risk resilience, persistent issues like digital illiteracy, connectivity gaps, and lack of trust hinder its full potential. The paper concludes with policy suggestions to strengthen digital financial inclusion as a tool for sustainable rural development

INTRODUCTION

India's informal sector constitutes over 80% of its total workforce and significantly contributes to the rural economy. Informal workers, including agricultural laborers, daily wage earners, and micro-entrepreneurs, often face irregular incomes, inadequate social protection, and limited bargaining power. Traditionally, their access to formal banking has been constrained due to factors such as low literacy, geographic isolation, and lack of collateral.

The emergence of digital financial services has introduced transformative potential to bridge this gap. Government initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY), the Unified Payments Interface (UPI), Aadhaar-enabled Payment Systems (AePS), and proliferation of mobile wallets have redefined financial inclusion pathways. However, the extent to which these digital tools translate into genuine economic empowerment for rural informal workers needs systematic exploration.

This study investigates how digital financial inclusion affects economic outcomes for rural informal workers, identifies the challenges faced, and provides recommendations for inclusive digital finance policies..

LITERATURE REVIEW

Financial Inclusion and Economic Empowerment

Financial inclusion is defined as the process of ensuring access to appropriate financial products and services needed by vulnerable groups at an affordable cost (RBI, 2015). It is linked to poverty reduction, women's empowerment, and community resilience (Beck et al., 2007; Demirgüç-Kunt et al., 2018).

Digital Financial Services

Digital finance includes mobile banking, online payments, micro-insurance, and other fintech innovations that lower transaction costs and overcome physical barriers (World Bank, 2020). Studies by Suri & Jack (2016) in Kenya and Chattopadhyay (2020) in India show positive effects on household savings and entrepreneurship.

Rural Informal Sector in India

Rural informal workers largely depend on cash-based transactions, informal credit, and community lending. They face vulnerability due to income shocks, lack of social security, and high borrowing costs (ILO, 2018). Digital finance promises to formalize financial flows and empower these workers by offering secure savings, quick transfers, and micro-loans.

Gaps in Existing Research

While there is literature on the general impact of financial inclusion, focused empirical studies assessing the depth of digital financial inclusion for rural informal workers in India are limited. This research addresses this gap by combining quantitative and qualitative insights.

Objectives of the Study

1. To assess the extent of adoption of digital financial services among rural informal workers.
2. To analyze the impact of digital financial inclusion on income stability, savings, and economic decision-making.

3. To identify barriers to effective utilization of digital financial tools.
4. To provide policy recommendations for enhancing digital financial inclusion in rural informal settings

METHODOLOGY

Research Design

A mixed-method approach was adopted, combining surveys and in-depth interviews.

Sampling

The study covered 150 informal workers in Pollachi, Tamilnadu. Participants included farm laborers, construction workers, domestic helpers, and small vendors.

Data Collection

Primary data were collected through:

1. Structured questionnaires covering digital financial usage, income, savings, and perceived benefits.
2. Focus group discussions to understand lived experiences and barriers.

Secondary data were sourced from government reports, RBI publications, and relevant research articles.

Data Analysis

Quantitative data were analyzed using descriptive statistics and simple correlation analysis to see links between digital finance usage and economic variables. Qualitative data were thematically coded.

RESULT

Profile of Respondents

This table shows a basic socio-demographic breakdown, illustrating a majority of women, high illiteracy, and low bank account ownership before digital initiatives.

Table 1. Profile of Respondents.

Demographic Variable	Frequency (N=150)	Percentage (%)
Gender: Male	60	40%
Gender: Female	90	60%
Age: Below 30 years	45	30%
Age: 31-50 years	75	50%
Age: Above 50 years	30	20%
Literacy: Literate	52	35%
Literacy: Illiterate	98	65%
Previous Bank Account (Before 2015)	30	20%
Jan Dhan Account Holder	143	95%

Out of 150 respondents, 60% were women; 80% had no formal banking experience before 2015. Most had low literacy levels.

Adoption of Digital Financial Services

This table highlights the penetration of different digital financial services among respondents.

Table 2. Adoption of Digital Financial Services

Service Type	Users (N=150)	Percentage (%)
Jan Dhan Account	143	95%
Mobile Wallet/UPI Usage	108	72%
ATM/Debit Card Usage	98	65%
Online Remittance/Transfer	105	70%
Aadhaar-Enabled Payment System	80	53%
Micro-Insurance Subscription	35	23%

- Account ownership: 95% had Jan Dhan accounts.
- Usage: 72% used mobile wallets or UPI for transactions.
- Savings behavior: 67% reported increased ability to save regularly.
- Remittances: Digital tools reduced cost and time to receive money from migrant family members.

Economic Empowerment Indicators

This table summarizes self-reported positive outcomes from using digital financial tools.

- Income stability: Respondents noted easier access to emergency funds and reduced reliance on local moneylenders.
- Decision-making: 45% of women reported greater say in household financial decisions due to personal accounts and digital wallets.
- Risk mitigation: Use of micro-insurance schemes was low but growing.

Table 3. Reported Benefits of Digital Financial Inclusion

Benefit	Agree (N)	Percentage (%)
Increased Ability to Save Regularly	100	67%
Faster Remittance from Relatives	110	73%
Reduced Dependence on Moneylenders	92	61%
Improved Decision-Making Power (esp. women)	68	45%
Easier Access to Emergency Funds	95	63%

Barriers Identified

This table summarizes Barriers to Effective Digital Financial Usage.

Table 4. Barriers to Effective Digital Financial Usage

Barrier	Respondents Affected (N)	Percentage (%)
Need for Assistance to Use Digital Tools	87	58%
Poor Internet/Network Connectivity	78	52%
Fear of Fraud/Misinformation	65	43%
Limited Phone Ownership (esp. women)	45	30%

- Digital literacy: 58% needed assistance for digital transactions.
- Network/connectivity issues: Poor signal in remote villages affected real-time payments.
- Trust issues: Fear of fraud and misinformation discouraged usage.

- Gender gap: Women faced higher hurdles due to lower phone ownership and social norms

DISCUSSION

The findings align with national trends indicating that while access to digital financial services has expanded dramatically, meaningful usage and empowerment require complementary interventions. The study reinforces that digital infrastructure alone is insufficient without capacity building and trust.

CONCLUSION AND RECOMMENDATION

Digital financial inclusion holds promise for transforming the economic lives of rural informal workers by enabling secure transactions, promoting savings, and reducing exploitative lending. However, empowerment is not automatic; it depends on sustained efforts to build digital skills, ensure reliable connectivity, and design user-friendly interfaces.

Key recommendations include:

- Digital literacy campaigns tailored for informal workers.
- Strengthening rural digital infrastructure.
- Encouraging community-based digital facilitators or banking correspondents.
- Policy push for gender-inclusive digital finance solutions.
- Promoting awareness about digital fraud prevention.

By addressing these areas, policymakers and practitioners can unlock the full potential of digital financial inclusion as a pillar for rural economic resilience and empowerment.

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