



Digital transactions and their influence on the local economy in Chhattisgarh: An analysis of trends, impacts, and challenges

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Abstract

This research paper presents a comprehensive analysis of the proliferation and socio-economic impact of digital transactions on the local economy of Chhattisgarh, India. Against the backdrop of national digitization pushes post-demonetization and the COVID-19 pandemic, the study investigates the unique adoption patterns and challenges within a state characterized by a significant rural and tribal population. The introduction establishes the context, framing digital finance as a potential catalyst for formalization and inclusion in Chhattisgarh's agrarian and informal economic structure. The core objectives are to map the growth trends of digital payment modes from 2019-24, analyze urban-rural and sectoral disparities in adoption, evaluate impacts on financial inclusion, MSMEs, and agricultural value chains, and identify key implementation barriers. The methodology relies on descriptive and analytical research using secondary data from the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), and state government reports, synthesized into comparative data tables. The results and discussion reveal exponential UPI-led growth alongside a persistent digital divide, highlighting significant benefits in transparency and market access alongside constraints posed by infrastructure, literacy, and cybersecurity. The conclusion affirms that digital transactions are a transformative yet uneven force, and the paper culminates in targeted policy recommendations—including infrastructure development, digital literacy campaigns, and incentive structures—to foster a more inclusive and resilient digital economy across all regions of Chhattisgarh.

Keywords: Digital transactions, UPI, local economy, financial inclusion, Chhattisgarh, digital divide

Introduction

Chhattisgarh, a state carved out of Madhya Pradesh in 2000, presents a compelling paradox in India's contemporary economic narrative. It is a land of immense natural wealth, ranking among the top contributors to the nation's mineral and power resources, yet it grapples with significant developmental challenges, including a high incidence of poverty, a large tribal population (constituting over 30% of its residents), and an economy heavily dependent on agriculture and informal sector activities. This socio-economic fabric makes the state a critical case study for examining the penetration and impact of technological innovations like digital financial services.

The Indian economy's formalization and digitization received unprecedented momentum from two major shocks: the demonetization event of 2016 and the COVID-19 pandemic-induced lockdowns of 2020-21. These events acted as forceful catalysts, pushing millions of citizens and businesses towards digital payment mechanisms as a necessity rather than a choice. Nationally, platforms like the Unified Payments Interface (UPI) achieved exponential growth, positioning India as a global leader in real-time digital payments. However, this aggregate national story often masks the stark sub-national disparities in adoption, access, and impact.

Against this backdrop, this research paper investigates the specific trajectory and influence of digital transactions on the local economy of Chhattisgarh. The "local economy" here refers to the ecosystem of small and medium enterprises (MSMEs), agricultural value chains, retail markets, and consumer behavior within the state, distinct from the macro-level national trends. The core inquiry

revolves around whether the digital finance revolution is acting as a leveller, integrating Chhattisgarh into the mainstream digital economy, or as an amplifier, exacerbating existing divides between its urban corridors and its vast, often inaccessible, rural and tribal hinterlands.

The state government has launched initiatives like the "Chhattisgarh State Wide Area Network (CGSWAN)" and policies to promote e-governance, which provide a foundational layer for digital payment infrastructure. Furthermore, the high penetration of Direct Benefit Transfer (DBT) for state subsidies (e.g., in paddy procurement and social welfare schemes) has created a forced but critical on-ramp to formal banking for a large section of the population. This paper posits that digital transactions are not merely a financial tool in Chhattisgarh but a transformative force with profound implications for economic inclusion, transparency in governance, market access for local producers, and the very structure of its informal economy.

By analyzing available data and trends, this study seeks to move beyond the hype surrounding digital payments and provide a nuanced, evidence-based understanding of their real-world influence on the ground in a state that embodies both the opportunities and the formidable challenges of India's digital leap.

Review of Literature

The scholarly discourse on digital financial inclusion and its economic impacts provides a multi-layered foundation for this study. The literature can be thematically organized into global/national perspectives, regional/rural studies, and the identified gap concerning state-specific analyses of regions like Chhattisgarh.

Global and National Perspectives on Digital Finance

Seminal works in the field establish the theoretical and macro-economic rationale for digital transactions. Scholars like Gomber, Koch, & Siering (2017) conceptualize "Digital Finance" as an innovative confluence of technology and financial services, arguing that it enhances economic efficiency by drastically reducing information asymmetry and transaction costs. Their work provides a global framework for understanding how digital platforms can improve capital allocation and foster entrepreneurship.

In the Indian context, the literature robustly examines the catalytic events of demonetization and the COVID-19 pandemic. Singh & Chakraborty (2020), in their analysis published in the *Economic and Political Weekly*, empirically traced the link between the 2016 demonetization and the accelerated adoption of digital payments. They argued that while initially disruptive, the policy shock served to formalize a segment of cash transactions and expanded the user base for digital platforms, albeit with significant short-term costs for the informal sector. This aligns with the government's stated objectives of expanding the formal economy and the tax base.

The architectural success of India's digital payment infrastructure is often credited to the development of interoperable public platforms. The Report of the Committee on Deepening of Digital Payments (2019), chaired by Nandan Nilekani, is a cornerstone document. It systematically outlined the principles of designing a "less-cash" society, emphasizing the critical role of open-access infrastructure (like UPI and Aadhaar), affordable connectivity, and light-touch regulation. The report's recommendations have directly influenced policy, making it essential for understanding the intended design and scalability of India's digital payment ecosystem.

Regional, Rural, and Sectoral Studies

A growing body of literature shifts focus from national aggregates to sub-national realities, highlighting significant disparities. Research by Kumar & Sharma (2021) on digital payments in rural India identifies a "second-level digital divide." They contend that while physical access to banking (Jan Dhan accounts) and smartphones has increased, the effective use of digital financial services is constrained by low digital literacy, linguistic barriers, and a lack of contextual relevance. Their findings warn against equating access with adoption, a crucial consideration for a state like Chhattisgarh with diverse linguistic and literacy profiles.

The impact on specific economic sectors has also been explored. Patel (2022, studying agricultural supply chains in western India, demonstrated that direct digital payments for crop procurement led to timely income for farmers, reduced reliance on informal creditors, and stimulated localized demand cycles. This research underscores the potential of digital transactions to reform traditional, exploitative value chains, a highly relevant insight for Chhattisgarh's paddy-dominated agrarian economy. Concurrently, studies on MSMEs, such as those by IGP (Institute for Global Prosperity) (2021), highlight that digital transaction records can serve as alternative credit histories, helping small businesses access formal loans and integrate into e-commerce platforms, thus enhancing their market reach and resilience.

The Identified Gap: The Chhattisgarh Context

Despite this rich scholarly landscape, a conspicuous gap exists in state-specific, granular analyses of digital finance in regions with distinct socio-economic and geographical characteristics. Most national studies and reports cluster states into broad categories (e.g., "low-performing states"), which homogenizes the unique challenges faced by states like Chhattisgarh, with its dense forest cover, significant Scheduled Tribe population, and legacy of left-wing extremism in certain districts.

Existing literature on Chhattisgarh often focuses on its resource politics, agrarian distress, or administrative reforms, with digital finance treated as a peripheral topic. There is a lack of comprehensive research that:

1. Quantifies the growth trends of different digital payment modes specifically within Chhattisgarh.
2. Qualitatively analyzes the sectoral adoption patterns across urban, semi-urban, and rural/tribal markets.
3. Investigates the causal links between digital payment adoption and changes in local economic indicators, such as informal sector formalization, credit access for MSMEs, or efficiency in state-led procurement.
4. Systematically documents the lived experiences, barriers, and perceived benefits from the perspectives of local merchants, farmers, and consumers in the state.

This paper aims to directly address this gap. It synthesizes the macro-frameworks from national literature with the micro-level concerns highlighted in rural and sectoral studies, applying them to the under-researched context of Chhattisgarh. By doing so, it seeks to contribute a nuanced case study that can inform both academic understanding and targeted policymaking for inclusive digital financial inclusion in geographically and socially complex regions of India.

Objectives: The primary objectives of this research are:

1. To map the growth and trends of various digital transaction modes in Chhattisgarh from 2019-20 to 2023-24.
2. To analyze the urban-rural and sectoral disparities in the adoption of digital payment systems.
3. To identify the key challenges and constraints hindering universal and equitable adoption of digital payments in the state.

Methodology

This study employs a descriptive and analytical research design based on secondary data. Data has been collated from:

- Reserve Bank of India (RBI) bulletins and databases.
- National Payments Corporation of India (NPCI) reports on UPI and other digital platforms.
- Economic Survey of Chhattisgarh and State Budget documents.
- Reports from the Ministry of Electronics and Information Technology (MeitY).
- Published scholarly articles and news reports. Data has been synthesized to create comparative tables and analyze trends from the fiscal year 2019-20 to 2023-24.

Results and Data Presentation

Table 1: Growth of Key Digital Payment Modes in Chhattisgarh (Volume in Lakhs)

Financial Year	UPI Volume	Mobile Banking Volume	Debit/Card POS Volume	Total Digital Transaction Value (₹ in Crore, Estimate)
2019-20	45.2	12.5	8.7	12,500
2020-21	122.7	18.3	6.1	18,200
2021-22	305.8	22.1	7.8	32,400
2022-23	598.4	25.4	9.2	52,100
2023-24	950.0	28.0	10.5	78,000

Source: Compiled from NPCI Dashboards and RBI State-wise Data; *Projected based on H1 trends*

Table 2: Sectoral Adoption of Digital Payments among Merchants in Major Urban vs. Rural Districts (Survey Based Estimate, 2023)

Sector	Raipur (Urban) % of Merchants Accepting Digital Pay	Bastar (Rural) % of Merchants Accepting Digital Pay
Retail & FMCG	92%	38%
Food & Beverages	88%	28%
Transport & Fuel	95%	45%
Agriculture Input/Output Dealers	65%	22%
Healthcare Services	85%	32%

Source: Inferences from State IT Department Surveys and Field Study Reports

Discussion

The presented data leads to several critical discussions that align with and expand upon the reviewed literature.

Exponential Growth and the UPI Phenomenon: As seen in Table 1, UPI volume in Chhattisgarh has grown by over 2000% in five years. This aligns with national trends and validates the findings of Nilekani (2019) on the power of interoperable platforms. The pandemic (2020-21) served as a forced accelerator, shifting even traditionally cash-dependent behaviors towards digital solutions. However, the plateauing growth of mobile banking and card payments suggests UPI is not just leading but *substituting* other digital channels in many use cases.

The Persistent Urban-Rural Divide: Table 2 starkly illustrates the digital chasm, a finding that resonates with Kumar & Sharma's (2021) concept of a "divide within digitization." While Raipur exhibits adoption rates comparable to metros, rural Bastar lags severely, especially in agriculture—the core of Chhattisgarh's local economy. This divide threatens to create a dual economy where urban businesses gain efficiency and access to formal credit, while rural enterprises remain cash-constrained and informal.

Impact on the Local Economy

- **Financial Inclusion and DBT:** The interoperability of UPI with Jan Dhan accounts has significantly advanced financial inclusion. The direct transfer of subsidies (e.g., for paddy procurement) has reduced leakages, increased local disposable income, and stimulated rural demand, as noted in studies like Patel's (2022).
- **MSME Formalization and Access:** Digital transactions provide a verifiable financial history, helping local MSMEs and artisans access formal credit. The electronic trail also nudges businesses towards GST compliance, broadening the state's tax base—a step towards formalization highlighted by Singh & Chakraborty (2020).
- **Agricultural Value Chain Efficiency:** Digital payments for crop procurement by state agencies have

minimized delays and rent-seeking, ensuring timely income for farmers. This injection of liquidity directly into rural bank accounts supports local spending and savings.

Confronting the Challenges: The results underscore that growth is not synonymous with universal inclusion. The low adoption in rural sectors points to infrastructural deficits (poor internet), human capital barriers (low digital literacy), and economic disincentives (perceived cost of transactions). Furthermore, rising cybersecurity threats could undermine trust, particularly among new users.

Conclusion and Recommendations

This study concludes that digital transactions are a powerful, transformative force in Chhattisgarh's local economy, driving inclusion, transparency, and efficiency. The growth trajectory, led by UPI, is remarkable. However, the benefits are geographically and sectorally skewed, risking the reinforcement of existing inequalities. The transformative potential for the agrarian and tribal economy remains partially untapped due to structural barriers.

To harness digital finance for equitable and sustainable local economic development, the following recommendations are proposed:

1. **Targeted Infrastructure Development:** Prioritize BharatNet completion and promote community-based internet solutions (e.g., Wi-Fi Choupals) in tribal blocks. Encourage the deployment of low-power, offline-capable payment devices for rural merchants.
2. **Massive Digital Financial Literacy Campaigns:** Launch "Digi-Saksham Abhiyan" in local dialects, using grassroots institutions like SHGs, Farmer Producer Organizations (FPOs), and Panchayats. Focus on "how-to" skills and building trust in digital systems.
3. **Incentive Structures for Rural Adoption:** Provide time-bound MDR (Merchant Discount Rate) subsidies for rural merchants and micro-entrepreneurs. Offer tax benefits or easier access to government schemes for businesses that demonstrate high digital transaction volumes.

4. **Promotion of Localized Fintech Solutions:** Support the development and promotion of voice-based UPI and SMS-based payment solutions that cater to low-literacy users and areas with poor data connectivity.
5. **Strengthening the Cybersecurity Ecosystem:** Establish a dedicated state-level cyber cell for financial fraud and mandate regular, simple awareness campaigns on safe digital practices through all banking correspondents and common service centers.

By implementing this multi-dimensional strategy, Chhattisgarh can ensure that the digital transaction revolution becomes a cornerstone not just for economic growth, but for inclusive and resilient local development, truly empowering all sections of its society.

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