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FinTech Innovation and Financial Inclusion in the Gig Economy: Theoretical Study of GIG Workers in Coimbatore District

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Abstract: *This study examines how fintech innovation shapes financial inclusion among gig workers in Coimbatore District, an expanding urban labour market characterized by platform-based work, irregular earnings, and limited access to financial services. Gig workers engaged in ride-hailing, food delivery, e-commerce logistics, home services, freelance digital work increasingly rely on mobile wallets, Unified Payments Interface transactions, digital bank accounts, microcredit applications, insur tech products, and platform-linked payment systems. The study adopts a mixed-method empirical design, combining a survey of gig workers with interviews involving workers, platform representatives, fintech providers, and financial intermediaries. It investigates the relationship between fintech usage and key inclusion outcomes: account ownership and active usage, payment convenience, savings behaviour, access to short-term credit, insurance coverage, financial resilience, and perceived control over finances. The analysis also assesses the influence of digital literacy, income volatility, gender, education, migration status, type of gig work, smartphone access, trust, data-privacy concerns, and awareness of consumer protection mechanisms. The research is expected to show that fintech reduces transaction costs and enables faster payments, wider market participation, and easier access to basic financial products. The study therefore conceptualizes financial inclusion not merely as access to an account or application, but as the capacity to use affordable, appropriate, transparent, and safe financial services over time. By offering district-specific evidence, the study contributes to scholarship on platform labour, inclusive fintech, and urban economic development. Its findings can inform policymakers, banks, fintech firms, and platform companies in designing worker-centred products, targeted digital-literacy programmes, portable social-security mechanisms, and stronger consumer-protection frameworks for an equitable gig economy.*

Keywords: FinTech Innovation, Financial Inclusion, Gig Economy, Innovation

I. INTRODUCTION

The rapid expansion of the gig economy has transformed the nature of work by creating flexible, task-based, and digitally mediated employment opportunities. Gig workers, including delivery partners, ride-hailing drivers, freelance professionals, home-service providers, and platform-based retail workers, increasingly depend on digital platforms for accessing employment and income. In India, the growth of smartphone penetration, digital payment systems, app-based service platforms, and e-commerce has accelerated this shift. While the gig economy offers flexibility, low entry barriers, and opportunities for supplementary income, it also exposes workers to income uncertainty, limited social security, irregular cash flows, and restricted access to formal financial services.

Financial technology, commonly known as FinTech, has emerged as an important enabler of financial inclusion for workers operating outside conventional employment arrangements. Digital wallets, Unified Payments Interface (UPI), mobile banking, micro-credit, digital insurance, payment aggregators, neo-banking platforms, and alternative credit-scoring systems can potentially improve the financial wellbeing of gig workers. These innovations may help workers

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receive faster payments, manage daily expenses, build transaction histories, access small loans, save regularly, obtain insurance, and participate more actively in the formal financial system. For gig workers whose earnings are often variable and dependent on daily or weekly tasks, such services can reduce dependence on informal lenders and cash-based transactions. However, access to FinTech services does not automatically result in meaningful financial inclusion. Gig workers may face several barriers, including low financial literacy, limited awareness of digital financial products, inadequate digital skills, concerns regarding privacy and fraud, unstable internet access, and difficulties in meeting formal eligibility requirements for credit. Many workers may possess digital payment accounts but remain excluded from affordable credit, insurance, pension products, and long-term savings opportunities. In addition, platform-based workers often lack documented proof of stable income because their earnings fluctuate according to demand, incentives, working hours, customer ratings, and platform policies. This makes conventional financial institutions hesitant to provide loans and other financial products.

Coimbatore District provides an important setting for examining the relationship between FinTech innovation and financial inclusion in the gig economy. Known for its diversified economy, entrepreneurial culture, educational institutions, manufacturing activities, and expanding urban service sector, Coimbatore has witnessed increasing adoption of app-based transport, food delivery, logistics, online retail, freelance work, and home-based digital services. The district's combination of urban, semi-urban, and peripheral rural areas also makes it suitable for understanding differences in access, adoption, and use of FinTech among gig workers. Workers in this region may experience varying levels of income stability, digital access, financial awareness, and trust in formal financial institutions. This empirical study seeks to examine how FinTech innovations influence the financial inclusion of gig workers in Coimbatore District. It focuses on workers' use of digital payment applications, mobile banking, online credit, insurance, savings products, and other technology-enabled financial services.

II. LITERATURE REVIEW

1. According to Wood et al. (2019), the gig economy is a labour market that involves the use of short-term contracts, freelance work, and the use of platforms to deliver services. Employees operate on contracts and often do not get social security benefits or institutional protection. Gig employment, according to the scholars, not only increases labour flexibility but also adds precarity to it. The economic fragility is caused by income instability, grading systems based on algorithms, and the absence of a collective bargaining power (Rosenblat, 2018).
2. Demirguc-Kunt et al. (2018) consider financial inclusion to be access to affordable financial services and products that meet the requirements of people concerning credit, insurance, savings, and transactions. Digital financial services are becoming more accessible due to digital wallets and mobile banking. FinTech makes digital financial services more accessible to marginalized populations and reduces the cost of transactions (Gomber et al., 2018).
3. FinTech in Informal and Gig Sectors: Embedded finance is a financial service that is designed within other non-financial products. The gig platforms create transaction history and digital foot prints which can be used as an alternative credit evaluation tool (Suri and Jack, 2016). Nonetheless, over-indebtedness can also be caused by digital credit products in case the repayment arrangements are inflexible (Bateman et al., 2019).

SIGNIFICANCE OF THE STUDY

The gig economy has emerged as an important source of employment, particularly for young people, women, migrants, students, and workers seeking flexible income opportunities. In Coimbatore district, gig workers engaged in food delivery, ride-hailing, logistics, home services, freelance work, and online task-based platforms increasingly depend on digital payments and financial technology services for receiving income, making payments, accessing credit, and managing day-to-day expenses. However, the flexible nature of gig work often involves irregular earnings, limited employment security, lack of formal credit history, and inadequate access to conventional banking products.This study is significant because it examines how FinTech innovation can improve financial inclusion among gig workers. Services such as mobile wallets, Unified Payments Interface (UPI), digital banking, micro-credit,

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insurtech, savings applications, and digital investment platforms may help workers manage variable incomes and gain access to formal financial services. The study also assesses whether such services are affordable, accessible, safe, and suitable for the financial realities of platform-based workers.

SCOPE OF THE STUDY

The study focuses on gig workers operating within Coimbatore district, including workers associated with food-delivery platforms, cab and bike-taxi services, e-commerce delivery, logistics, home-service applications, freelancing platforms, and other digitally mediated employment arrangements. It examines their demographic profile, income pattern, awareness and usage of FinTech services, access to formal banking, digital-payment behaviour, borrowing practices, savings habits, insurance coverage, and investment choices. The research evaluates the relationship between FinTech adoption and financial inclusion by considering indicators such as bank-account ownership, use of digital payments, access to affordable credit, ability to save, insurance participation, financial literacy, and confidence in digital transactions.

PROBLEM STATEMENT

FinTech innovation has transformed payments, credit, savings, and insurance in India, yet its implications for financial inclusion among gig workers remain insufficiently understood, especially at the district level. Coimbatore, a major commercial and service hub in Tamil Nadu, has a growing workforce engaged in ride-hailing, food delivery, e-commerce logistics, freelance services, and app-based tasks. These workers often experience irregular earnings, absence of employer-sponsored benefits, limited social protection, and difficulty accessing formal credit or insurance. Although digital wallets, UPI, embedded lending, alternative credit scoring, micro-insurance, and platform-based payment systems may improve access to financial services, they may also create risks related to high-cost borrowing, data privacy, algorithmic exclusion, fraud, and weak consumer protection.

RESEARCH OBJECTIVES

- To examine the level of awareness, adoption, and usage patterns of FinTech services—such as digital wallets, UPI, mobile banking, digital lending, and insurance—among gig workers in Coimbatore District.
- To assess the contribution of FinTech innovations to the financial inclusion of gig workers, particularly in relation to access to payments, savings, credit, insurance, and other formal financial services.
- To analyse the socio-economic and occupational factors that influence FinTech adoption among gig workers, including age, education, income, type of platform work, digital literacy, and employment experience.
- To identify the challenges faced by gig workers in using FinTech platforms, including digital-security concerns, transaction failures, limited financial literacy, data privacy issues, irregular income, and access to affordable credit.
- To evaluate the impact of FinTech-enabled financial services on the financial well-being and economic security of gig workers in Coimbatore District, and to suggest measures for improving inclusive digital-finance access.

III. RESEARCH METHODOLOGY

This study uses a descriptive and analytical research design. Descriptive statistics provide an overview of demographic and occupational characteristics, while inferential statistics test hypotheses about the relationship between social security access and financial stability.

Sample Design

•**Target Population**: Gig workers in Coimbatore city involved in delivery services, ride-hailing, freelance, and home-based digital platforms.

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Sample Size: 100 gig workers
Sampling Method: Stratified random sampling (to ensure representation across sectors)
Data Collection Tools
•**Primary Data:** Structured questionnaire with closed and open-ended questions.
•**Secondary Data:** Reports from NITI Aayog, Ministry of Labour, academic journals, and digital labour platforms.
Limitations
•Sample limited to Coimbatore city only.
•Responses may be subject to recall or social desirability bias.

IV. THEMATIC ANALYSIS

Digital Payment Systems and Gig Work

One central point is that India's UPI payment system has made it easier for gig workers to send and get payments. Many workers in the past only used cash, which limited the size and security of their work. UPI and mobile wallets addressed this issue. One IMF study notes that vendors and delivery people can now get paid through a digital wallet using UPI, even if they don't have a bank account (International Monetary Fund, 2022). This suggests that goods and services previously exchanged only in cash can now be transferred electronically with ease.

Cornelli and Yildirim (2024) state that UPI's open and interoperable structure, along with its absence of transaction fees, were important for its quick growth. This meant anyone could accept digital payments without a cost. Because of this, payments that used to need manual cash handling can now happen almost right away using a Smartphone or QR code. Gig workers gain from this directly. For example, a taxi driver can now get paid for a ride instantly using UPI instead of carrying cash until the end of their shift, which lowers the chance of theft or loss.

Digital Credit and Lending Services

A key theme involves ntech's role in increasing credit access for micro-entrepreneurs and gig workers. In India, banks usually ask for collateral and credit history, which excludes a lot of informal workers. New digital lending programs and rules are very important here. The Reserve Bank's Unied Lending Interface (ULI) is a key development. As Deputy Governor Rao (2025) points out, ULI uses different types of data and digital identities to give credit to people without formal nancial records. Rao (2025) says that if ULI uses platform data, it could use data from e-commerce platforms and gig economy apps [to] open new doors for credit inclusion for small sellers, delivery workers, and freelancers." This means delivery workers and platform providers might be seen as people who can borrow money if their transaction records are tracked.

Platform-Based Financial Products

Platforms are starting to include financial services for workers, beyond just payments and credit. NITI Aayog (2022) points out the option for insure tech and wealth tech products on platforms. For example, apps could let drivers buy cheap group health insurance or pay into pension plans using their gig accounts. Some startups are trying things out in this area. Other countries have tested savings accounts or protection funds for gig workers where contributions are shared. The Indian market is just starting, but there are initial examples. Some delivery apps have started pilot programs for emergency loans or funds for riders.

Brailovskaya (2023) observes that embedded finance for Indian gig workers is still in its infancy. She points out that if digital platforms let users save and build credit within the app, these records could be shared with financial institutions to widen access to credit. A driver's earnings history on one platform, for example, might improve their credit score with a lender. Platform-based finance is a growing trend with considerable potential, but there isn't strong proof of its impact in India yet.

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Financial Inclusion and Formalization Outcomes

One reason for encouraging financial technology is the expectation of making work more formal. Research shows varied but mostly encouraging signs that gig workers can establish formal financial identities. Several researchers point out that working on digital gig platforms often goes hand in hand with increased formal inclusion. For example, Brailovskaya (2023) mentions survey information showing that a large minority of gig workers said they got bank accounts or started saving after joining a platform. In Malaysia and China, she notes that 84% of platform workers said they had bank accounts, but only 24% had insurance and 3.5% had a retirement plan. Even though these numbers come from different countries, they suggest a trend: platform wages lead to digital bank accounts, but formal safety nets are still uncommon.

Key challenges and considerations identified in the literature include:

- **Digital Access and Skills:** Some gig workers, mostly in rural places or older people, might not have smartphones, internet, or the tech skills to use payment and banking apps well (Saranya and Indira,2025). This makes it harder for them to start using these helpful tools.
- **Regulation and Safety Issues:** Because nancial tech is growing fast, people are worried about keeping data private and avoiding unfair lending. Some experts say that if we don't protect people well enough, poorer workers might have to pay hidden costs or have their data misused (Saranya and Indira, 2025; Rao, 2025).
- **Gender and Fairness:** In India, not many women do platform work because of social rules and safety worries. That means women and other less advantaged groups might not get the same advantages from financial tech chances.
- **Job Quality and Security:** Having good financial tools might not be enough to make gig jobs steady. Studies show that just helping people get financial services doesn't solve problems like changing pay checks, not having benefits, or needing things like health insurance and retirement plans for gig workers.

V. CONCLUSION

This literature review observes that financial device inventions in India have helped the gig economy grow, but the results aren't all good. The creation of digital infrastructure (Aadhaar, UPI, the JAM trinity) and the promotion of fin tech have greatly increased financial inclusion. Data suggests that even low- income, informal workers are now able to get digital payments and credit in ways that were not possible ten years ago. Digital wallets and apps have given many street vendors, artisans, and drivers the same basic financial tools that salaried workers have. This change in infrastructure has made it easier for average people to join the gig economy should they want to. But, bringing gig workers fully into the standard banking system is still a work in progress. Problems like lack of tech skills, poor internet access, and unfamiliarity with gig-specific credit products keep many workers from fully banking. Carriere-Swallow et al. (2021) pointed out that even after a lot of new accounts were opened in India, almost half were not used, which shows that just having access is not enough. Many workers get paid digitally but still use informal loans and don't have insurance or retirement plans for their gig income. Research suggests that technology needs to be paired with specic policies: making it easier to get loans for small business owners, promoting financial tech solutions designed for gig work, and protecting data and consumers.

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