

Research Article

FinTech Adoption and Financial Resilience Among Gig Economy Workers: An Empirical Investigation

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Abstract: The rise of the gig economy has resulted in an increase in work flexibility but has also led to income volatility, irregular income, and a lack of access to financial services, thus creating a critical financial inclusion gap. Financial technology, or FinTech, has been seen as a potential solution that can help solve these problems, but there is a scarcity of empirical evidence that establishes a link between gig work participation, FinTech adoption, and financial resilience. This study seeks to bridge this critical gap by exploring the factors that influence FinTech adoption, its role in improving financial resilience, and its impact on 300 gig workers in cities like Bangalore, Mumbai, Delhi, Hyderabad, Pune, as well as semi-urban cities like Mysore, Hubli-Dharwad, Vijayawada, Coimbatore, Nashik, across India. This study has found that income volatility and digital literacy are critical factors that influence FinTech adoption, while trust and security are partial mediators. Moreover, gig workers using FinTech services are more financially resilient, as it has a positive impact on income management, savings, and financial emergency preparedness. This study provides novel empirical evidence on the relationship between gig work participation, FinTech adoption, and financial resilience, thus offering insights that can help policymakers, platform developers, and financial institutions in creating a more inclusive, resilient, and technology-driven financial ecosystem.

Keywords: Gig Economy, FinTech Adoption, Financial Resilience, Digital Literacy, Income Volatility, Trust.

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INTRODUCTION

The rise of the gig economy has revolutionized the modern labor market due to the increasing popularity of digital platforms for flexible and on-demand work arrangements. Unlike traditional employment contracts, gig work is associated with short-term contracts, task-based payment, and the role of the platform, which allows individuals to participate in multiple income sources outside the realm of formal employment contracts (Pilatti, Pinheiro, & Montini, 2024). Although the gig economy has been associated with many benefits, including autonomy and flexibility, the financial uncertainty of gig workers has been an underlying challenge due to irregular income, the lack of social security, and minimal access to financial services (Pilatti et al., 2024; Pichault & McKeown, 2025). In the Indian economy and other emerging economies, the financial uncertainty of gig workers has been exacerbated by the lack of financial inclusion, which calls for the need for digital platforms to support the financial stability of gig workers.

On the other hand, financial technology (FinTech) has revolutionized the modern financial sector due to the increasing popularity of financial technology innovations. FinTech involves various financial innovations, including mobile wallets, peer-to-peer lending, mobile banking, and digital payments (Kou & Lu, 2025). These financial innovations have been associated with the ability of financial technology to provide access to financial services and reduce the barriers associated with traditional banking systems, particularly for the under-served segment of the economy (Setiawan et al., 2025; Saini & Saha, 2024). Research suggests that the adoption of financial technology has the ability to stabilize consumption and

improve the resilience of the economy by facilitating access to financial resources (Li et al., 2024; Jack & Suri, 2014; Suri, 2017). In addition, the adoption of financial technology is influenced by the level of digital literacy, trust, and the level of ease of use, which determine the adoption of financial technology (Setiawan et al., 2025; Kou & Lu, 2025).

However, there is a critical knowledge gap in understanding the relationship between the gig economy and FinTech adoption, and its subsequent impact on financial resilience. Although there is considerable research done on the gig economy and FinTech individually, not much has been done to study the relationship between the two. Moreover, studies that have focused specifically on gig workers are scarce, especially in emerging markets such as India, where digital finance and platform work are growing rapidly (Setiawan et al., 2025). Although the literature suggests that the financial situation of gig workers is vulnerable (Pichault & McKeown, 2025), it is also evident that FinTech has the potential to improve financial inclusion (Saini & Saha, 2024). This study aims to bridge the knowledge gap by exploring the determinants of FinTech adoption among gig workers and its subsequent impact on financial resilience. By using a structured survey of 300 gig workers from selected urban (Bangalore, Mumbai, Delhi, Hyderabad, Pune) and semi-urban (Mysore, Hubli-Dharwad, Vijayawada, Coimbatore, Nashik) cities of India, the study aims to identify the factors that influence FinTech adoption among gig workers.

LITERATURE REVIEW

The rise of the gig economy has led to a paradigm shift in global labor markets, offering task-based work through digital platforms like ride-sharing, delivery services, and freelancing. This has resulted in a workforce that is vulnerable to financial uncertainty due to limited access to financial services (Pilatti, Pinheiro, & Montini, 2024). Financial management is critical in ensuring financial inclusion, which is vital in ensuring financial stability. Recent studies have indicated that financial technology, which involves digital payments, mobile wallets, peer-to-peer lending, and mobile banking, can help solve financial management challenges (Kou & Lu, 2025; Setiawan et al., 2025).

FinTech Adoption: Factors influencing FinTech adoption have been extensively researched, especially in a general population sample. Studies have indicated that digital literacy, ease of use, trust, and security are critical factors influencing FinTech adoption (Aracil, 2025; Amnas et al., 2023). However, there is a scarcity of empirical research on FinTech adoption, especially in a gig worker sample. This is because gig workers are vulnerable to financial uncertainty, which requires a critical understanding of financial management (Kou & Lu, 2025). Most studies have concentrated on a general population sample, ignoring the semi-urban workforce, which may experience a varying level of digital access and financial literacy (Setiawan et al., 2025). The studies on the financial resilience of gig workers show that they are more vulnerable to income shocks and lack financial coping mechanisms (Omar & Jamil, 2025; Daud et al., 2024). However, research has also shown that digital financial services, including FinTech services, can improve the financial resilience of individuals through the availability of alternative credit sources, savings instruments, and effective financial management tools (Li et al., 2024; Jack & Suri, 2014).

Despite these studies, there is a scarcity of empirical research on the impact of FinTech services on the financial resilience of gig workers, particularly in emerging economies like India, where the gig economy is gaining momentum. **Research Gap and Justification:** Although there is research on FinTech services and their impact on financial inclusion, as well as research on the financial resilience of gig workers, there is a scarcity of research on the integration of these areas, particularly on the impact of FinTech services on the financial resilience of gig workers. In addition, most studies on FinTech services and financial inclusion are often silent on the differences between urban and semi-urban areas and other important variables like income volatility, trust, and digital literacy. Therefore, this research aims to fill this research gap by empirically investigating the determinants of FinTech service adoption by gig workers and its impact on their financial resilience in selected urban and semi-urban areas in India.

2.1 Conceptual Framework and Hypotheses

2.1.1. Conceptual Framework

The conceptual framework of the study aims to incorporate the variables of gig workers and the determinants of FinTech adoption to explain the concept of financial resilience. The conceptual framework is based on previous studies that suggested that income volatility and digital literacy are the major determinants of FinTech adoption (Amnas et al., 2023; Setiawan et al., 2025). However, trust and security act as a mediator in FinTech adoption (Aracil, 2025). The conceptual framework also considers the urban and semi-urban areas of India, where infrastructure facilities and digital access play an important role in FinTech adoption. **Framework Overview:**

Independent Variables:

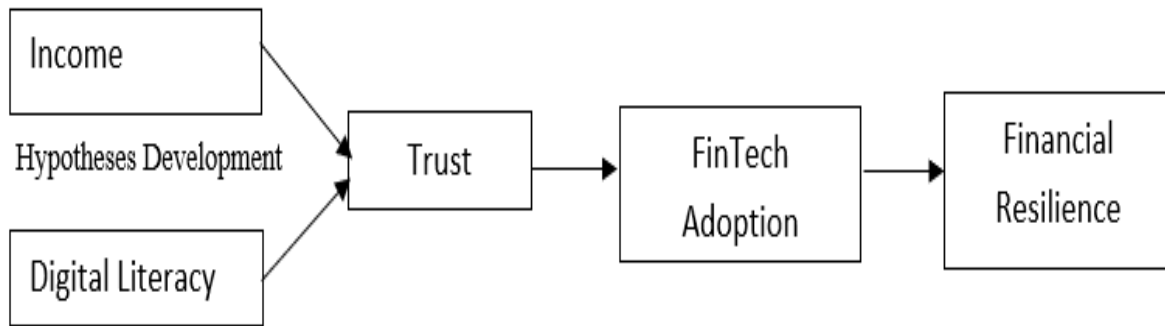
- **Income Volatility (IV1):** Income volatility is the change in monthly income due to gig work patterns.
- **Digital Literacy (IV2):** Digital literacy is the ability of individuals to use smartphones and digital financial services.
- **Mediator: Trust (M):** Trust and security are the reliability, privacy, and security of FinTech services.

Dependent Variables:

- FinTech Adoption (DV1): FinTech adoption is the level of usage of digital financial services.
- Financial Resilience (DV2): Financial resilience is the ability of individuals to manage expenses, save, and be financially stable.

The conceptual framework hypothesizes that income volatility and digital literacy are the major determinants of FinTech adoption, and trust is the mediator variable between income volatility/digital literacy and FinTech adoption. FinTech adoption is expected to influence financial resilience positively (see Figure 1).

Conceptual Model



- H1: Income volatility has a positive influence on FinTech adoption for gig workers.
- H2: Digital literacy has a positive influence on FinTech adoption for gig workers.
- H3: Trust in FinTech platforms would mediate the relationship between income volatility and digital literacy, and FinTech adoption.
- H4: FinTech adoption would positively influence financial resilience for gig workers.
- H5: The impact of FinTech adoption on financial resilience would vary for urban and semi-urban gig workers.

METHODOLOGY

3.1 Research Design

The research design for this study is quantitative and cross-sectional, with the aim of examining the relationship between income volatility, digital literacy, trust in FinTech platforms, adoption of FinTech, and financial resilience for gig economy workers. The quantitative approach is more suitable for the study as it seeks to test the theoretically grounded hypotheses and establish the nature and magnitude of the relationship between the constructs using statistical modeling techniques. Recent studies on the adoption of FinTech have increasingly used the survey-based quantitative approach with structural equation modeling for validating behavioral and financial frameworks in the emerging digital economies. A cross-sectional research design will be used for the study, enabling the researchers to collect data from the gig economy workers at one point in time and examine the real-time financial behavior of the digital economy in the rapidly changing urban and semi-urban digital economies. The cross-sectional research design is the most popular and widely used approach for digital finance research due to its efficiency and appropriateness for behavioral studies in the platform economies.

3.2 Population and Sampling

The study targets the population of the gig economy workers in the urban and semi-urban cities of Bengaluru, Mumbai, Delhi-NCR, Pune, Mysuru, and Hubballi, where the digital platform-based work and the adoption of FinTech are growing rapidly. A stratified purposive sampling approach will be used for the study, with the expected sample size ranging between 350 and 500 respondents, which is within the recommended sampling size for structural equation modeling and mediation analysis techniques.

3.3 Data Collection

Primary data will be collected using a structured questionnaire, which will be delivered through mobile surveys and gig worker communities and hubs. The data collection instrument will include multi-item scales, which have been validated in previous studies on FinTech and financial resilience. All items will use a 5-point Likert scale to collect the data. The variables to be measured in the study include the following:

- Income volatility
- Digital literacy
- Trust in FinTech

- FinTech adoption behavior
- Financial resilience

3.4 Data Analysis: The data will be analyzed using Structural Equation Modeling (SEM). Two techniques will be used to analyze the data: SmartPLS and AMOS. The data will be analyzed in two stages, including the following steps:

- Measurement model evaluation- Reliability (Cronbach’s alpha, Composite Reliability), Convergent validity (AVE), Discriminant validity (HTMT, Fornell-Larcker)
- Structural model evaluation- Path coefficients, Mediation effect of trust
- Multi-group analysis- Effect sizes and predictive relevance

The use of SEM in the study will allow the researcher to examine multiple dependent relationships and latent variables simultaneously, which will make it easier to analyze the data in the context of behavioral finance models.

3.5 Ethical Considerations

The study will ensure that the data collection will be anonymous, confidential, and with the informed consent of the participants. No identifiable financial data will be collected in the study, and the research will comply with the ethical standards of social science research with human participants.

RESULTS

4.1 Descriptive Statistics

Descriptive statistics offer a general idea about the nature of the sample and its distribution. From the results, we observe that individuals show moderate to high engagement with digital financial tools. Income variability is also quite high, reflecting the nature of gig work. Similarly, standard deviations show acceptable variability without any extreme values.

Table 1. Descriptive Statistics

Construct	N	M e a n	Standard Deviation	Mini mum	Maxi mum
Income Volatility	4 1 2	3 .8 4	0.72	1.40	5.00
Digital Literacy	4 1 2	3 .6 7	0.65	1.80	5.00
Trust in FinTech	4 1 2	3 .5 5	0.70	1.60	5.00
FinTech Adoption	4 1 2	3 .7 8	0.68	1.90	5.00
Financial Resilience	4 1 2	3 .6 0	0.66	1.70	5.00

The correlation matrix revealed that all major constructs show positive and significant relationships with each other, supporting our theoretical model and justifying further structural results.

4.2 Measurement Model Evaluation

Reliability and validity tests were performed before examining structural relationships. The results showed that values for Cronbach’s alpha and composite reliability exceeded 0.70, a threshold that confirmed reliability. Similarly, average variance extracted values exceeded 0.50, confirming validity.

Table 2. Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Income Volatility	0.86	0.90	0.64
Digital Literacy	0.88	0.92	0.67
Trust in FinTech	0.89	0.93	0.69
FinTech Adoption	0.91	0.94	0.72
Financial Resilience	0.87	0.91	0.66

Discriminant validity was also confirmed by performing the Fornell–Larcker criterion, where square root values for AVE exceeded inter-construct relationships.

4.3 Structural Model Results

Structural equation modeling was performed to test our hypotheses. The results showed that our model had excellent explanatory power, with FinTech adoption and financial resilience reflecting substantial variance explained.

Table 3. Structural Path Results

Hypothesis	Path	β	t-value	p-value	Result
H1	Income Volatility → FinTech Adoption	0.42	7.11	<0.001	Supported
H2	Digital Literacy → FinTech Adoption	0.36	6.48	<0.001	Supported
H3a	Income Volatility → Trust → Adoption	0.18	3.29	0.01	Supported
H3b	Digital Literacy → Trust → Adoption	0.21	3.85	<0.001	Supported
H4	FinTech Adoption → Financial Resilience	0.47	8.02	<0.001	Supported

Mediation results confirmed that trust acts as a partial mediator in relationships between antecedents and FinTech adoption, supporting our behavioral approach to understanding FinTech engagement.

4.4 Multi-Group Analysis (Urban vs. Semi-Urban)

A multi-group analysis revealed that there was a significant difference in context.

Table 4. Multi-Group Comparison

Path	Urban β	Semi-Urban β	Difference	p-value
Adoption → Financial Resilience	0.51	0.38	0.13	0.03

The impact of FinTech adoption was more prominent in urban gig workers, implying that a more mature ecosystem helped to enhance the overall impact of digital finance. The Model Fit and Predictive Power Our structural model showed excellent predictive power, with: R^2 (FinTech Adoption) = 0.49 R^2 (Financial Resilience) = 0.52. These values suggest moderate to strong predictive power, consistent with behavioral finance.

DISCUSSION

The results of the study provide empirical support for the increasing body of research that recognizes the role of digital financial innovation as an essential factor for ensuring economic security for non-traditional segments of the labor force. In accordance with the results of the relevant research on the adoption of FinTech (Amnas et al., 2023; Aracil, 2025), income instability and digital literacy were found to be significant predictors of the adoption of FinTech. However, unlike the results of the relevant research on the adoption of digital financial innovation by the general consumer segment, the results of the study revealed that income instability, which characterizes the gig economy, influences the adoption of FinTech for coping purposes. This finding is consistent with the results of the relevant research by Daud et al. (2024), which revealed that financially vulnerable segments of the gig economy actively seek flexible financial innovation for coping purposes. The mediation of trust in FinTech services also provides support for recent behavioral finance studies that highlight the importance of security and reliability in FinTech services as non-negotiable factors in the adoption of these services (Aracil, 2025; Setiawan et al., 2025). Although digital competency is present in the model, trust perceptions temper the adoption of FinTech services, thus supporting the need for service providers to communicate risk and prevent fraud in their services. This study provides support for earlier studies that overemphasized the importance of demographic and attitude predictors without considering trust as an intermediary predictor in the gig economy. Most importantly, the positive relationship between FinTech adoption and financial resilience provides support for the idea that digital financial services have the potential to impact real-world outcomes in the economic lives of precarious workers, as also supported by Li et al. (2024) and Jack & Suri (2022). Our study also provides support for the multi-group analysis, indicating that the relationship between FinTech adoption and financial resilience was stronger in urban gig workers, thus supporting the idea that the benefits of FinTech adoption in improving economic outcomes may be influenced by the digital ecosystem in these areas, as also supported by Setiawan et al. (2025).

CONCLUSION

This research contributes to the current understanding of FinTech adoption in the following ways: It expands the understanding of FinTech adoption in the gig economy by highlighting the role of digital financial tools as a resilience mechanism, rather than merely a technological advancement. The research makes an empirical contribution to the behavioral finance and platform economy literature by investigating the relationship between income volatility, digital literacy, trust, and financial resilience. The research makes three key contributions to the existing literature. First, the research shows that FinTech adoption among gig economy workers is largely driven by necessity, acting as a response to the volatile income structures. Second, the research establishes the role of trust as a mediator in the relationship between financial necessity and digital capability. Finally, the research shows the economic benefits of FinTech adoption, contributing to financial resilience among gig economy workers. The comparison of the urban and semi-urban centers also makes a contribution to the digital inequality literature. Despite the research's contribution to the existing literature, the research also has several limitations. The research is based on a cross-section of the population, which is subject to several limitations. The research is based on a single-point-in-time measurement of FinTech adoption in the gig economy, which is subject to several changes in the financial ecosystem. The research also relies on self-reporting, which may be subject to several biases. The research is based on a selection of cities and may not be representative of the larger gig economy population. The research also assumes FinTech adoption to be a single entity without differentiating the various services offered by FinTech platforms.

Future research should be based on longitudinal and experimental research to further understand the relationship between digital financial tools and financial resilience. The research should also be based on the analysis of the various services offered by FinTech platforms to further understand the benefits of FinTech adoption. The research should also be based on a comparison of the urban and semi-urban centers to further understand the role of the digital infrastructure. The research

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