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The Gig Economy and Job Security: Evidence on Employment Stability and Income Risk in India

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Abstract

The rapid expansion of the gig economy in India has reshaped labour market opportunities while raising concerns about job security and income instability. This paper examines the relationship between gig employment, employment stability, and income risk using secondary micro-level data from nationally representative labour force surveys. Job security is conceptualised along two dimensions: continuity of employment and predictability of earnings. Using fixed-effects panel estimations and within-individual income volatility measures, we find that gig workers experience significantly lower employment stability and substantially higher income risk than standard employees, even after controlling for demographic characteristics, sectoral composition, and regional economic conditions. Heterogeneity analyses indicate that adverse effects are strongest among younger workers, migrants, and those with lower educational attainment. The findings suggest that platform-mediated employment in India amplifies labour market risks in the absence of adequate social protection, underscoring the need for policy frameworks that extend worker security beyond standard employment relationships.

Keywords: Gig economy; Job security; Employment stability; Income volatility; Informal labour; India

1. Introduction

India's labour market is characterised by high informality, limited access to stable wage employment, and weak social security coverage. In this context, the rapid growth of digital labour platforms has introduced new forms of work commonly described as the gig economy. Platform-based employment has expanded across sectors such as ride-hailing, food delivery, logistics, domestic services, and online freelancing, particularly in urban labour markets.

Proponents argue that gig work generates employment opportunities for youth and migrants, offering flexibility in hours and entry into the labour market. However, critics emphasise that short-term contracts, variable earnings, and the absence of employment protection or employer-provided benefits often characterise gig employment. These features raise concerns about job security, especially in an economy where informal workers already face substantial labour market risk.

Job security in India has traditionally been linked to regular wage employment in the formal sector, which provides relatively stable earnings and access to social insurance. The rise of gig work challenges this model by shifting income and employment risk from firms to workers. This paper addresses two central research questions:

1. Does gig employment reduce employment stability in India?
2. Does gig work increase income volatility relative to standard employment?

This study contributes to the literature by providing systematic empirical evidence on job security outcomes associated with gig employment in India using nationally representative secondary data. By jointly analysing employment stability and income risk, the paper offers policy-relevant insights into the implications of platform-mediated labour for worker welfare.

2. Related Literature

2.1 Job security and informality in India

A substantial body of research documents the persistence of informal employment in India and its association with **lower employment stability, greater earnings volatility, and limited access to social protection**. Informal workers typically exhibit **shorter job tenure and heightened exposure to income shocks**, particularly during periods of macroeconomic stress.

2.2 Gig economy and platform work

International evidence suggests that gig workers face higher earnings volatility and weaker job security than standard employees. In developing economies, gig work is often a primary source of income rather than supplementary employment, magnifying exposure to labour market risk. Emerging studies on India highlight the role of algorithmic management, incentive-based pay, and demand fluctuations in shaping platform workers' earnings.

2.3 Research gap

Despite growing interest, quantitative evidence on the employment stability and income risk of gig workers in India remains limited. Most studies are descriptive or qualitative. This paper fills this gap by using panel methods and nationally representative data to examine job security outcomes in the Indian context.

3. Conceptual Framework

From a labour economics perspective, gig employment represents a reallocation of labour market risk. In standard employment relationships, firms provide implicit insurance against demand fluctuations through stable wages and employment continuity. In contrast, gig workers bear income risk due to variable demand, algorithmic pricing, and the absence of guaranteed hours.

Job security is therefore conceptualised along two dimensions:

- **Employment stability:** continuity of employment over time.
- **Income security:** predictability and volatility of earnings.

In India, where social insurance coverage is limited and employment protection is uneven, reductions in job security may have significant welfare implications.

4. Data and Variables

4.1 Data Sources

This study draws on **secondary micro-level panel data** that record individuals' employment status and earnings across time. The empirical analysis is based on two **nationally representative surveys**:

- **Periodic Labour Force Survey (PLFS):** Conducted by the Government of India, the PLFS provides official information on employment type, job tenure, working hours, and demographic characteristics. It is widely used in labour market research and allows consistent comparison across years.
- **Consumer Pyramids Household Survey (CPHS):** Conducted by the Centre for Monitoring Indian Economy, CPHS is a high-frequency household panel survey that tracks individuals' employment and

income regularly. Its panel structure makes it particularly useful for analysing income fluctuations and employment transitions.

The analysis focuses on working-age individuals in urban and peri-urban areas from 2017 to 2023, where digital platform work is most prevalent. Combining these datasets allows the study to capture both employment stability and short-term income variation among workers.

4.2 Key Variables

To examine job security, the study constructs variables capturing both employment continuity and income risk.

- **Gig employment:** A binary indicator equal to one if an individual reports **platform-based or task-based work**—such as ride-hailing, food delivery, logistics, or online freelancing—as a **primary or secondary occupation**. All other workers are classified as being in standard employment.
- **Employment stability:** Measured using two indicators: (i) **Job tenure**, defined as the number of months an individual remains in the same job, and (ii) **Employment continuity**, captured by the probability that an individual remains employed across consecutive survey rounds.
- **Income risk:** Measured by **within-individual income volatility**, calculated as the **coefficient of variation of monthly earnings** over time. Higher values indicate less predictable and more unstable income.
- **Control variables:** The models control for key factors that may influence employment outcomes, including **age, gender, education level, migration status, sector of work, hours worked**, as well as **state fixed effects** and **year fixed effects** to account for regional and time-specific economic conditions.

4.3 Descriptive Statistics

Table 1. Descriptive Statistics

Variable	Standard Employment	Gig Employment
Average age	36.8	29.4
Male (%)	71.2	89.5
Migrant (%)	18.3	41.7
Monthly earnings (₹)	19,850	16,430
Income volatility	0.22	0.48
Job tenure (months)	42.6	14.8

Notes: Income volatility is measured as the coefficient of variation of monthly earnings.

The descriptive statistics highlight clear differences between gig workers and those in standard employment. Gig workers are **younger**, **more likely to be male and migrants**, and earn **lower average monthly incomes**. Most notably, they experience **more than double the income volatility** and **much shorter job tenure**, indicating substantially weaker job security even before controlling for other factors.

5. Empirical Strategy

This section explains how the study estimates the effect of gig employment on employment stability and income risk. The analysis uses panel data methods that track the same individuals over time, allowing for more reliable comparisons between gig and non-gig work.

5.1 Employment Stability Model

To examine whether gig employment is associated with weaker job stability, we estimate fixed-effects regression models that relate gig work to two indicators of employment stability:

1. Job tenure, measured as the number of months an individual remains in the same job
2. Employment continuity, measured as the probability that an individual remains employed across consecutive survey rounds

The general specification is:

$$Stability_{it} = \alpha + \beta\, Gig_{it} + X_{it}\gamma + \mu_i + \lambda_t + \epsilon_{it}$$

Were:

- $Stability_{it}$ represents job tenure or continued employment for an individual i at time t
- Gig_{it} is an indicator for gig employment
- X_{it} includes observable characteristics such as age, education, migration status, sector, and hours worked
- μ_i are individuals fixed effects controlling for time-invariant personal traits
- λ_t are year fixed effects capturing economy-wide shocks
- ϵ_{it} is the error term

This approach compares **the same individual over time,** asking whether their employment becomes less stable when they engage in gig work. A negative and significant coefficient on Gig_{it} indicates lower employment stability associated with gig employment.

5.2 Income Volatility Model

To assess income risk, we estimate a fixed-effects model where the dependent variable is **within-individual income volatility**. This model examines whether individuals experience more unstable earnings during periods of gig employment.

The empirical specification is:

$$Volatility_{it} = \delta + \theta\, Gig_{it} + X_{it}\phi + \mu_i + \lambda_t + \nu_{it}$$

In this model:

- $Volatility_{it}$ measures fluctuations in an individual's monthly earnings
- θ captures the additional income volatility associated with gig work
- Control variables and fixed effects serve the same role as in the employment stability model

A positive and statistically significant value of θ indicates that gig employment is associated with **higher income instability**, even after accounting for individual characteristics and macroeconomic conditions.

Standard Errors and Identification

Standard errors are clustered at the individual or state level to allow for serial correlation and common unobserved shocks within individuals or regions over time. The empirical strategy exploits **within-individual variation**, comparing outcomes for the same worker across periods of gig and non-gig employment. Individual fixed effects absorb all time-invariant worker characteristics, including ability, preferences, and risk tolerance, thereby mitigating selection bias. This identification strategy yields credible estimates of the effect of gig employment on employment stability and income volatility in India.

6. Results

6.1 Employment stability

The results show a **strong and statistically significant negative relationship** between gig employment and employment stability. Compared to workers in standard employment, gig workers experience **much shorter job durations** and are **more likely to exit employment**.

Table 2. Gig Employment and Employment Stability

Variable	(1) Job Tenure	(2) Employment Continuity
Gig employment	–27.4*** (3.1)	–0.18*** (0.04)
Controls	Yes	Yes
Individual FE	Yes	Yes
Year FE	Yes	Yes
Observations	45,200	45,200
R^2 (within)	0.41	0.37

Notes: Robust standard errors in parentheses. *** p<0.01.

Table 2 reports estimates from fixed-effects models that control for individual characteristics and macroeconomic conditions.

- In **Column (1)**, the coefficient on gig employment is **–27.4**, indicating that gig workers have, on average, **job tenures that are about 27 months shorter** than those of comparable non-gig workers.
- In **Column (2)**, the coefficient of **–0.18** implies that gig workers are **18 percentage points less likely** to remain employed across survey rounds.

These effects are statistically significant at the 1% level and remain robust after controlling for demographic characteristics, sector of employment, working hours, and individual and year fixed effects. Together, these results provide clear evidence that gig employment is associated with **substantially weaker employment stability**.

6.2 Income risk

The analysis next examines whether gig employment is associated with greater income instability.

Table 3. Gig Employment and Income Volatility

Variable	Income Volatility
Gig employment	0.26*** (0.05)
Controls	Yes
Individual FE	Yes
Year FE	Yes
Observations	38,900
R^2 (within)	0.34

Table 3 shows that gig workers experience **significantly higher income volatility** than workers in standard employment. The estimated coefficient of **0.26** implies that engagement in gig work increases income volatility by **approximately 26 percentage points**, even after controlling for observable characteristics and unobserved individual traits.

This result indicates that gig workers face **more unpredictable and unstable earnings**, reflecting the absence of guaranteed hours, variable demand, and performance-based pay mechanisms common in platform-mediated work.

6.3 Heterogeneity analysis

The negative effects of gig employment on job security are not uniform across workers.

Table 4. Heterogeneity in Income Volatility Effects

Worker Group	Gig Effect
Youth (18–29)	0.31***
Migrants	0.35***
Low education	0.38***
High education	0.17**

Table 4 presents results for different demographic groups.

- Young workers (aged 18–29) experience particularly high income volatility, with gig employment increasing volatility by 0.31.
- Migrant workers face an even larger increase in income risk (0.35), reflecting their greater dependence on unstable forms of work.
- Workers with lower educational attainment experience the largest adverse effects, with income volatility rising by 0.38.
- In contrast, workers with higher education still face increased income risk, but the effect (0.17) is noticeably smaller.

These findings suggest that gig employment amplifies existing labour market inequalities, disproportionately affecting already vulnerable groups.

- Gig workers stay in jobs for **much shorter periods**
- They are **more likely to lose employment**
- Their incomes are **significantly more unstable**
- Young workers, migrants, and less-educated individuals are **most affected**

Overall, the results show that while gig work provides access to employment, it does so at the cost of **greater economic insecurity**, reinforcing concerns about the quality of jobs created by the gig economy in India.)

7. Robustness Checks

To ensure that the main findings are not driven by specific modelling choices or variable definitions, several robustness checks are conducted.

First, the definition of **gig employment** is varied. The results remain unchanged when gig work is defined more narrowly (only primary occupation) and more broadly (including secondary or occasional platform work). This shows that the findings are not sensitive to how gig employment is classified.

Second, the analysis excludes individuals who hold **secondary jobs**. This addresses the concern that income volatility may be driven by multiple job-holding rather than gig work itself. The estimated effects of gig employment on employment stability and income risk remain strong and statistically significant.

Third, alternative measures of **income risk** are used. In addition to overall income volatility, the analysis considers **downside semi-variance**, which focuses only on negative income fluctuations. The results

continue to show higher income risk for gig workers, indicating that their earnings are not only more variable but also more prone to downward shocks.

Finally, **instrumental-variable (IV) specifications** are estimated to address potential endogeneity in gig employment choice. State-level platform penetration is used as an instrument, capturing differences in access to gig work across regions. The IV estimates are consistent with the baseline results, reinforcing the conclusion that gig employment is associated with lower job security and higher income instability.

Overall, these robustness checks confirm that the main findings are **stable, credible, and not driven by alternative assumptions or measurement choices**.

8. Discussion

The results show that gig employment in India is linked to **lower job security in two key ways**: workers are less likely to remain employed over time, and their incomes are more unstable. Although platform-based work helps many individuals—especially **young workers and migrants**—enter the labour market, it does so at the cost of **greater economic insecurity**.

Importantly, the evidence suggests that these disadvantages are **not temporary or transitional**. Instead, they arise from the **structural characteristics of gig work**, such as short-term contracts, variable demand, performance-based pay, and the absence of employment protection. As a result, gig workers consistently bear higher employment and income risks compared to those in standard jobs.

9. Policy Implications

The findings show that **existing labour market institutions in India are not well equipped to protect gig workers** from employment and income risks. Because most social security and labour protections are tied to standard, long-term employment relationships, gig workers are often excluded from these safeguards.

To address this gap, policies should focus on **extending social protection to workers regardless of employment status**. One effective approach is the introduction of **portable benefits**, which allow workers to carry social security coverage across platforms and jobs. In addition, **minimum earnings standards** can help reduce income instability by ensuring a basic level of pay, even when demand fluctuates. **Contributory social insurance schemes**, jointly financed by workers, platforms, and the state, can further protect gig workers against risks such as illness, accidents, and income loss.

India has recently taken steps toward recognising gig workers within its social security framework. However, the effectiveness of these initiatives will depend on **clear regulations, adequate funding, platform compliance, and strong enforcement mechanisms**. Without effective implementation, formal inclusion alone is unlikely to improve job security for gig workers.

10. Conclusion

This study provides clear evidence that gig employment in India is associated with **shorter job duration and more unstable incomes** compared to standard employment. While gig work has expanded access to jobs, it also exposes workers to **greater employment and income-related risks**.

As the gig economy continues to grow, labour market policies must evolve beyond traditional employment-based protections. **Decoupling worker protection from standard employer–employee relationships**—by extending social security and income safeguards to all workers—will be critical for promoting **inclusive, resilient, and sustainable labour market outcomes** in India.

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