



“Working Conditions of Delivery Employees in Gig-Based Unicorn Startups: Evidence from Bengaluru”

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Abstract: Unicorn platforms in the gig economy—particularly Zomato and Swiggy—have transformed the food-delivery landscape in Bengaluru, yet growing concerns persist regarding the working conditions of delivery personnel. This study empirically examines the lived experiences of gig workers associated with these platform-based unicorns. Primary data were collected from 107 delivery employees using a structured questionnaire that captured key dimensions such as working hours, earnings and incentives, job security, occupational safety, algorithmic control, customer interactions, physical and psychological stress, and overall job satisfaction. The responses were analysed using descriptive statistics, cross-tabulations, and reliability assessments.

The findings suggest that although gig work offers flexibility and minimal entry barriers, most delivery workers face long and irregular working hours, unstable and fluctuating incomes, high work pressure, and substantial physical strain resulting from prolonged riding and time-sensitive deliveries. Key concerns raised by respondents include income volatility, lack of insurance coverage, rising fuel and vehicle maintenance costs, and inadequate support during breakdowns. The study further highlights the impact of algorithmic management—specifically order allocation systems, performance ratings, and penalty mechanisms—which contributes to heightened stress and dissatisfaction. Safety risks related to traffic exposure, accidents, and occasional customer hostility also negatively affect the well-being of workers. Overall, the study concludes that despite their integration into technologically advanced unicorn platforms, gig workers continue to experience precarious and vulnerable working conditions. The results emphasise the need for policy reforms, fair compensation structures, improved safety and welfare measures, and strengthened worker representation to ensure more sustainable, equitable, and dignified gig work in metropolitan cities such as Bengaluru. These insights carry significant implications for platform management, regulatory frameworks, and academic research focused on the future of gig work.

Keywords: Gig economy; Unicorn startups, Food-delivery platforms, Working conditions, Delivery employees, Zomato; Swiggy, Job satisfaction; Work stress; Platform-based employment; Bengaluru; Workforce well-being; Incentive structure; Occupational safety.

I. INTRODUCTION

The gig economy has become one of the biggest catalysts for flexible employment opportunities in India, more so in major cities like Bengaluru. To this end, companies like Zomato and Swiggy have transformed the food delivery industry with their massive on-demand work made possible by mobile app-mediated algorithmic systems. Academic debate suggests that the platform economy has reconfigured traditional work structures which used to be based on fixed-term contracts through turning workers into independent contractors, in turn generating flexibility and precarity in labour relations (**Kässi & Lehdonvirta, 2018**). So-called food delivery unicorn startups, in the process, have grown at break-neck speeds employing lakhs of delivery partners who form the execution engine of these digital platforms.

Whilst the gig economy proposes a greater sense of freedom along with new sources of income, scholars also point to concerns about indecent earning levels, poor labour power and lack of employee protection within the gig economy (**Wood et al., 2019**). In India's unicorn platforms delivery personnel often work under the dictation of algorithms, when order timings and customer ratings are decided through machine learning (**Rosenblat & Stark, 2016**). This type of algorithmic management frequently intensifies work pressure and decreases workers' schedule control, which is linked



with job satisfaction and psychological health (Mehrotra et al., 2021). Research on Indian platform workers has found that they experienced an elevated degree of physical challenge associated with uninterrupted riding, dangerous traffic and environmental elements (Narayan & Chacko, 2022).

The city of Bengaluru, the country's tech capital, is a large market for platform-based food delivery and has high density of gig workers. City's all-time active consumer base, rapidly changing lifestyle and technological adoption lead to massive demand for food e-commerce brands. Yet, some empirical studies suggest that delivery partners in Bengaluru encounter payment uncertainty, rising cost of fuel, absence of insurance cover and weak grievance redressal mechanism (Thomas & Babu, 2020). And while unicorn startups have tried to implement incentive structures and safety measures, many still view the work environment as unstable and physically taxing (Bajpai & Hall, 2021).

In this context, it is crucial to learn about the working conditions of delivery workers at unicorn startups as a means to devise equitable labour policies and more effectively regulate platform– worker relations. This research aims to explore the lived experiences of delivery workers working at leading Gig-based Unicorns in Bengaluru. The research offers novel insights into the experiences of platform work by examining remuneration, hours, stress, safety, customer interaction level, algorithmic management and job satisfaction. Recommendations are made to inform policy, platform management and future research in this developing area of discussion surrounding gig labour.

II. REVIEW OF LITERATURE

Early research defined the gig economy as a move toward digitally mediated on-demand work that dissolved the lines between employment and self-employment. De Stefano (2015) contended that where platform work is concerned, what emerges is a “just-in-time” workforce with low job protections. Research on the international dimensions of digital labour demonstrated that platform work offers a means to increase income while also increasing precarity (Graham et al., 2017; Heeks, 2017). Studies on ride-hailing and delivery platforms have shown that flexible hours are correlated with unequal wages and job insecurity (Codagnone et al., 2016; D'Cruz & Noronha, 2016). Ethnographic examinations showed how gig workers grapple with customer demands, time-pushes, and algorithmic tracking as they work (Raval & Dourish, 2016; Rosenblat & Stark, 2016).

Studies beginning in 2018 looked at how algorithmic systems manage gig workers. (Wood et al. 2019) that platform workers have a high degree of autonomy in selecting which tasks to undertake, but are subjected to significant levels of digitally mediated control associated with ratings systems, automated evaluation and task assignment. Algorithmic surveillance and non-transparent arbitration were shown to undermine workers' bargaining power and reinforce managerial asymmetry (Cruz & Muntanyola-Saura, 2023; Popan, 2024). Cross-country comparisons reported that agents experienced similar patterns of earnings, lack of freedom and social isolation of their working life, together with little voice about the organisation in which they work (Urzi Brancati et al., 2020; Newlands, 2021; Cornelissen et al., 2021). Other researchers focused on worker protests and the birth of labour movements which opposed unilateral cuts to incentives and onboarding in platforms (Cant, 2020; Woodcock, 2022; López & Vogl, 2023).

There is a strong international literature on food-delivery couriers. Long work hours, road-related risks, and strenuous labor have been found from studies in Europe and Asia among riders who often rely on deliveries as a main source of income (Aguiléra et al., 2022; Peng, 2022). Studies of rider protests in Belgium, the Netherlands and Italy illustrated how food-delivery workers formed collective resistance against falling pay and growing algorithmic control (Vandaele, 2024;

Tassinari & Maccarrone, 2020). Occupational health research reporting higher risks of MSDs, fatigue, weather exposure and time pressure (Yoo et al., 2024; Asadullah, 2024; Panumasvivat et al., 2025). Ethnographic research theorised couriers as an ‘embodied precariat’ involved in moving in urban spaces under intensive algorithmic surveillance (Popan, 2024).

Both in journalism and academic scholarship, India is turning its attention to gig work within the larger informal sector. National-level assessments highlighted that platform work is devoid of minimum wage, insurance and grievance mechanisms (ILO, 2020; NITI Aayog, 2022). Bengaluru-based studies by NLSIU found that the casual workers of the platform often work in excess of 8 hours a day, yet earn at or close to minimum wages set out for the city (Nair et al., 2020). Qualitative studies have revealed financial insecurity, debt traps and fluctuating incentive structures as key issues amongst gig workers (Datta, 2019; Gairola 2020). Another labour institutes -based policy analysis in India highlighted the lack of strong regulatory reform on determining social security and employment classification (Dhanya, 2025; V.V. Giri NLI, 2025).

Dedicated research on India's food delivery workers began to proliferate around 2020. A comprehensive report by the Digital Empowerment Foundation discusses Swiggy and Zomato riders being incentivised into a corner, exploited for long hours of work, deprived of labour rights (Iqubbal 2021). Research during COVID-19 revealed drastic fall in earnings, increased health vulnerabilities and growing reliance on platform-based reviews (Ranjan & Parwez, 2021; Singh, 2022). The legal and human rights angles focused on risks around caste and class, and the lack of safety nets for drivers (Biju, 2021). Heavy physical exertion, time pressure, poor family life and mental stress were identified as issues



among the delivery drivers by studies from Puducherry and Coimbatore (**Sathish & Sudha, 2023; Sakthivel & Santhanakrishnan, 2025**).

Platformized work has received significant, albeit confined, academic attention in Bengaluru a key center of platform-centered operations. An ethnographic study found that food-delivery workers in Bengaluru carry debt burdens, work under severe time constraints and endure severe insecurity about their jobs as they struggle to fulfill platform drives (**Medappa 2022**). According to the research of NLSIU, over 70% workers of food-delivery work for more than 10 hours a day and they earn on incentives based (**Nair et al., 2020**). Financial diaries findings also demonstrated that delivery workers have unstable daily incomes, limited access to formal borrowing and heavily rely digital ratings (**Ponnathpur et al., 2023**). Labour-movement research has written about endogenous gig-worker unions in Bengaluru that have developed as a reaction to incentive cuts and algorithmic penalisation (**Ranjan, 2021; Worker Resistance Report, 2025**). Nevertheless, these studies are primarily qualitative and seldom present organized quantitative measurements of working conditions a deficiency in the context of research.

The psychosocial aspects of gig work have been spotlighted in numerous studies. Studies on work-life balance among delivery riders reported that long working hours, non-standard shifts and stress to family and relations (**Neethi et al., 2023; Sharma, 2021**). Research conducted in Indian cities highlighted that delivery partners suffer anxiety, fatigue and burnout as a consequence

of unforeseeable work shifts and punitive systems (**Sakthivel & Santhanakrishnan 2025**). Quality of work life research reported low job security, no paid leave and weak welfare facilities although perceived flexible (**Neethi et al., 2025**). Contemporary policy debates on social security codes also draw attention to implementation gaps and the necessity of state-level welfarism (**Government of Karnataka, 2025; V.V. Giri NLI, 2025**). There are studies conducted in cities such as Delhi, Hyderabad, Coimbatore and Puducherry; however no quantitative comprehensive structured questionnaire study is reported in the literature that covers aspect of income, stress, safety, work pressure and job satisfaction among taxi drivers in Bengaluru. Current Bengaluru research is largely small-sample, ethnographic and financial diary (**Nair et al., 2020; Medappa, 2022; Ponnathpur et al.; 2023**).

Objectives of the Study

1. To analyse the demographic and work-related profile of delivery employees working in gigbased unicorn food-delivery platforms in Bengaluru.
2. To examine the earning patterns, incentive systems, and overall financial stability of delivery employees engaged with unicorn startups such as Zomato and Swiggy.
3. To examine the relationship between work-life balance and overall job satisfaction of delivery employees.

III. HYPOTHESES FOR THE STUDY

Hypothesis 1

H₀: Incentive structure does not significantly influence income satisfaction among delivery employees.

H₁: Incentive structure significantly influences income satisfaction among delivery employees.

Hypothesis 2

H₀: Working hours have no significant effect on perceived work pressure among delivery employees.

H₁: Working hours have a significant effect on perceived work pressure among delivery employees.

Hypothesis 3

H₀: Work-life balance has no significant relationship with job satisfaction.

H₁: Work-life balance has a significant relationship with job satisfaction.

IV. RESEARCH METHODOLOGY

4.1 Research Design

The study is based on the descriptive and analytical research design, focussing on the working environment, salary, job satisfaction and level of stress among delivery persons employed in gigworking unicorn platforms (e.g. Zomato and Swiggy) in Bengaluru city. Descriptive statistics and inferential statistical approaches were used to analyze the responses.

4.2 Study Area

The study was carried out in Bengaluru, one of the country's largest markets for platform-based food delivery. The city has a heavy concentration of Zomato and Swiggy delivery staff, rendering it an appropriate setting to observe the conditions of gig work.

**4.3 Population and Sample Size**

The study participants are delivery staff with unicorn food delivery platforms in Bengaluru. Respondents The convenience sample of 107 delivery workers was recruited, as is common in gig-economy field research studies, given the mobile and dispersed nature of workers.

4.4 Data Collection Method**Primary Data**

A structured, face to face questionnaire was used to collect primary data from delivery boys at restaurants, traffic signals, parking areas and delivery hotspots.

V. DATA ANALYSIS AND INTERPRETATION

Analysis and interpretation of the 107 core data collected from delivery boys in unicorns food delivery platforms – Zomato, Swiggy etc. in Bengaluru has been given below in this section. The analysis is structured according to the study objectives with a view of characterizing demographic profile, income dynamics; work conditions and job satisfaction levels among delivery workers. Descriptive and inferential statistics was employed to analyze the responses. The respondents' demographic and work-related characteristics were summarised through descriptive statistics (frequency, percentage, mean, and standard deviation). To test the hypotheses regarding earnings, working hours, work pressure and job-satisfaction were applied inferential statistical techniques like correlation and regression analysis.

Presentation of Interpretation The interpretation of the findings is explained in a serial order, describing the respondent first and then other objectives. A short gloss is presented for both, tables and figures to present the results of what can be learned from the data. Subsequent to the analysis, results help understand on-ground perspectives of delivery workers in Bengaluru's burgeoning gig-economy.

Table 1: Demographic Profile of Delivery Employees (N = 107)

Variable	Category	Frequency (N)	Percentage (%)
1. Age	18–25 years	41	38.3
	26–35 years	40	37.4
	36–45 years	15	14.0
	Above 45 years	11	10.3
2. Gender	Male	96	89.7
	Female	11	10.3
3. Education	Up to 12th / PUC	50	46.7
	Graduate	42	39.3
	Postgraduate	9	8.4
	Other	6	5.6
4. Years of Experience as Delivery Partner	Less than 1 year	26	24.3
	1–3 years	41	38.3
	3–5 years	16	15.0
	More than 5 years	24	22.4
5. Average Daily Working Hours	Below 4 hours	9	8.4
	4–6 hours	44	41.1
	6–8 hours	37	34.6
	More than 8 hours	17	15.9
6. Type of Engagement	Part-time	25	23.4
	Full-time	32	29.9
	Other (flexible/dual platforms)	50	46.7



The age-profile data reveal that a very high proportion of young users are engaged between the ages below 25 years (43.3% and those in the range of 26–35 years (52%), revealing the fact that food- delivery platforms appeal to a predominantly younger work force inclined to earn flexible instant income. Twenty-four percent of them are above 35, and only a few (10.3%) are over 45 years, indicating poor participation in physically demanding delivery work from the older workers.

The workforce is overwhelmingly male (89.7 per cent) in line with the wider gig economy, where fears of safety risks and long riding hours and late runs put off women from becoming delivery partners. In educational terms, the majority of respondents (46.7%) have studied up to 12th/PUC and.% are graduates, which means that even educated people with moderate to higher education tend to be attracted by platform-based work due to its ease of entry and lack of formal job opportunities demonstrably existent.

In terms of experience, about 38.3% need 1-3 year of delivery experiences and 24.3% are juniors with less than one year experience in this work. This suggests a combined mix of long-term delivery partners and gig economy entrants. In terms of hours worked, most spent 4–6 h (41.1%) or 6–8 h (34.6%) working per day although a sizeable proportion work over 8 h (15.9%), underscoring the strenuous nature food-delivery riding during peak times.

The patterns for the type of engagement are heterogeneous: as many as 46.7% consider themselves “other engagement mode” (dual-platform usage or flexible work), while 29.9% work full-time and 23.4% part-time. This underscores the fluid and non-standard nature of gig work, in which workers use a wide array of apps (or migrate between part-time and full-time as needed) to earn money.

The overall demographic profile indicates that the Bengaluru food delivery gig workforce is young, male-centric, moderately-educated and marked by flexible and diverse work patterns. And these traits are impacting how they get paid, how much pressure they feel on the job, whether or not they like what they do and so forth when working in the gig economy.

Objective 1: To examine earning patterns, incentive structures and financial satisfaction.

Hypothesis:

H_0 : Incentive structure does not significantly influence income satisfaction.

H_1 : Incentive structure significantly influences income satisfaction.

Table 2: Regression Analysis – Incentive Motivation and Income Satisfaction (N = 107)

Statistic	Value
R	0.067
R ²	0.004
Statistic	Value
Adjusted R ²	-0.005
F-value	0.472
Sig. (p-value)	0.494

Table 3: Coefficients

Predictor	B	Std. Error	Beta	t	Sig.
Constant	3.025	0.365	—	8.286	0.000
Incentive Motivation	0.073	0.106	0.067	0.687	0.494

Interpretation:

The regression analysis was conducted to examine whether incentive motivation influences the overall income satisfaction of delivery employees. The results show a very weak positive correlation between incentive motivation and remuneration satisfaction ($r = 0.067$, $p = 0.247$), indicating that incentives have almost no linear relationship with income satisfaction. The regression model was not statistically significant ($F(1,105) = 0.472$, $p = 0.494$), and incentives explained only 0.4% of the variance in income satisfaction ($R^2 = 0.004$). The coefficient analysis further revealed that incentive motivation did not significantly predict satisfaction with remuneration ($\beta = 0.067$, $t = 0.687$, $p = 0.494$). Therefore, the null hypothesis is accepted. This suggests that incentives alone are not a substantial factor influencing income satisfaction



among delivery employees working in unicorn food-delivery platforms in Bengaluru. Instead, employees' satisfaction with earnings may depend more on fixed pay, fuel expenses, allowances, order volume, and other payment components rather than incentives alone.

Objective 2: To assess the working conditions of delivery employees in terms of working hours, workload, and occupational safety.

Hypothesis 2

H₀: Working hours have no significant effect on perceived work pressure.

H₁: Working hours have a significant effect on perceived work pressure.

Table 4: Table: ANOVA – Effect of Working Hours on Work Pressure (N = 107)

Source	SS	df	MS	F	Sig.
Between Groups	14.361	3	4.787	3.987	0.010
Within Groups	123.657	103	1.201	—	—
Total	138.019	106	—	—	—

Interpretation:

A one-way ANOVA was conducted to examine whether work pressure varied across different categories of daily working hours. Descriptive results indicated that delivery employees working 4–6 hours per day reported the highest work pressure ($M = 3.68$), followed by those working more than 8 hours ($M = 3.29$). Workers in the 6–8 hour category experienced comparatively lower pressure ($M = 2.84$). Levene's test confirmed homogeneity of variances ($p = 0.763$), validating the use of ANOVA. The ANOVA results revealed a significant effect of working hours on work pressure, $F(3,103) = 3.987$, $p = 0.010$. This indicates that the number of hours worked per day significantly influences perceived delivery pressure. Therefore, the null hypothesis was rejected, confirming that working hours have a significant impact on work pressure among delivery employees in Bengaluru.

Objective 3: To examine the relationship between work–life balance and job satisfaction among delivery employees

Hypothesis 3

H₀: Work–life balance has no significant relationship with job satisfaction.

H₁: Work–life balance has a significant relationship with job satisfaction.

Table 5: Correlation Between Work–Life Balance And Job Satisfaction (N = 107)

Variables	1	2
1. Job Satisfaction	1	.288**
2. Work–Life Balance	.288**	1

Interpretation:

A Pearson correlation test was performed to understand the association in between work–life battle and Job Satisfaction among supply workers working with gig-based unicorn platforms located in Bengaluru. Results showed that work–life balance was positively and significantly correlated with job satisfaction ($r = 0.288$, $p < 0.01$). This implies that delivery partners who perceive better work-life balance are more likely to report higher satisfaction with the overall compensation system. The means also indicate that the respondents are moderately satisfied with their job ($M = 3.26$) and work–life balance ($M = 3.02$). These results indicate that managing own time, workload management and work schedule control significantly contribute to employees' job satisfaction in the gig economy. Hence, we reject the null hypothesis; work–life balance has a positive and significant impact on job satisfaction.

VI. FINDINGS

The study's results offer insights into the earnings, work environment and job satisfaction of delivery persons working in unicorn-based food-delivery platforms in Bengaluru. Objective 1: Determinants of Overall Income Satisfaction The Regression Analysis Results for the determinant of overall income satisfaction among delivery partners showed that incentive-based earnings does not have a significant effect on overall income satisfaction. The relationship of incentive motivation with the satisfaction of the remuneration could be considered almost negligible as workers do not consider incentives to be regular income. Their financial satisfaction seems determined instead by structural features such as fixed pay, order availability, delivery radius and fuel and cost allowances. Regarding Objective 2, ANOVA analysis showed



that working time has a relevant effect on perceived pressure at work. 4 – 6 hours workers felt the most pressure, which is probably because of peak-hour density and 6 – 8 hour workers felt lesser pressure. But, again, there was pressure on people working for a period in excess of 8 hours on account of sheer physical exhaustion, traffic congestions and need to rush customer in order to save time. This is an indication that the effect of work pressure differs according to field hours. Under Objective 3, a significant and positive association was emerged between work-life balance and job satisfaction. Those employees who were able to successfully balance their personal plans with those of the company reported having a greater job satisfaction. The findings emphasize the importance of flexibility, schedule control and personal well-being in explaining job satisfaction in a gig-economy context. In general, the results indicate that financial satisfaction, work stress and job satisfaction vary in combination of structural, work-based and individual determinants across platform work.

VII. CONCLUSION

The developed ambivalent jobs framework on which this study builds has demonstrated that gig workers of food-delivery platforms are indeed confronted with competing levels of satisfaction and vary work circumstances according to regulation imposed by algorithms and related employment structs. The results indicate that despite platforms' heavy promotion of incentives, they do not positively influence workers' income satisfaction rate in a statistically significant way, which was interpreted as indicating workers opting for stable predictable income streams versus on-demand wage supplemented with variable incentive-based compensation. Work hours had a significant influence on workload, where not only short but also long work shifts lead to higher strain as the amount of order changed during regular volumes and physical effort. A balanced work schedule and it seems stress decreases and performance increases. Meanwhile, work-life balance was identified as one of the significant factors for job satisfaction, suggesting that delivery workers place a high value on flexible and self-authorized time. Their satisfaction is higher when they're able to balance their personal responsibilities with their work requirements. Taken together, the findings suggest that fiscal freedom in terms of income and work intensity, as well as well-organized integration of work to life would help enhance the good-being and job satisfaction of delivery partners in Bengaluru's burgeoning gig economy.

VIII. SUGGESTIONS

According to the results, we suggest some recommendations in order to enhance the working condition and job-satisfaction of delivery workers in unicorn food-delivery platforms. 1, platforms should focus on stability, by coming up with guarantees for minimum pay and fair incentives. Deduction for fuel, mobile data and upkeep could also ease pressure on the workers. Second, workload control should be optimized with better algorithm-based routing, even workload distribution between services and enforcement of relaxation policy letting workers delay tasks during heavy traffic periods without penalties. Third, platforms should seek to promote work-life balance by offering flexible shifts, and avoiding overreliance on late-night deliveries for riders to get a suitable rest. Ensuring occupational safety through offering protective equipment, emergency interventions, and specified safe delivery zones is also an imperative. Stronger resolution system should also be put in place to address cases on pay cuts, customer behaviour and getting unfair treatment. Lastly, 'long-term' worker participation could be enhanced by rewards based on recognition of work done so far, skill upgradation programmes and access to financial services including insurance and loan assistance. These proposals seek to make the world of gig working more sustainable and worker-friendly.

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