The Future of Work: Opportunities and Challenges in Gig Employment

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Abstract

Gig employment is a word used to describe short-term, flexible, and frequently freelance work arrangements in which people take on "gigs" or short-term projects in place of traditional full-time jobs. Gig work is made possible by digital platforms and mobile technologies, and it includes a wide range of activities, including freelance writing, design, consulting, technical development, and transportation and delivery. The primary aim of the study is to identify factors driving the rise of gig employment and their impact on Gig workers satisfaction, to identify opportunities and challenges faced by Gig Workers. Data are gathered by examining government databases, industry statistics, and previously published papers in order to contextualize findings and spot trends. By conducting surveys and interviews, primary data are collected from Uber, Ola, Swiggy, and Zomato. The study uses both quantitative and qualitative methodologies. The ability to choose their own hours and work numerous jobs is provided by gig employment, which is especially advantageous for people who need extra cash. The independence and freedom that come with gig employment, which enables individuals to balance other obligations like childcare or education, are praised by many gig workers. Income is frequently erratic, and many workers experience earnings volatility. Because of this income instability, gig workers may find it challenging to acquire traditional financial services like credit or loans and to plan for long-term financial security.

Categories: Labor Economics, Strategic Human Resource Management, Employee Relations & Labour Legislation Keywords: working hours, flexibility, benefits, workers, technology, employment, challenges, opportunities, policies, ola

Introduction

Significant structural changes have been brought about by the rise of gig work in a number of industries, most notably in food delivery, logistics, transportation, and freelancing services, all of which have a direct and indirect impact on national income. According to a 2022 report by NITI Aayog, India's gig economy is expected to expand to 23.5 million workers by 2030, up from 7.7 million in 2020-21. This growth is largely concentrated in platform-based work, especially in urban transportation (e.g., Ola, Uber) and last-mile delivery (e.g., Swiggy, Zomato, Dunzo). These sectors have enabled large-scale participation in economic activity, particularly among semi-skilled and previously underemployed populations.

In recent years, Gig employment has completely changed the Indian economy by giving people a lot of jobs and eventually increasing the GDP of the nation. Due to its convenience and flexibility, gig work is become so popular that people are deliberately selecting it over regular employment. Gig workers benefit from flexible work schedules, the chance to do what they enjoy, and the option to earn more money by taking on numerous gigs. Companies that hire gig workers save money on office space, equipment, and other expenses.

Gig jobs were already common before the pandemic, but after the COVID breakout, many people who lost their regular occupations have resorted to gigs because they are readily accessible and provide a great way to earn money. Because more companies are using gig workers instead of full-time employees, their operational strategies are changing. As a result, they may hire more people at a reduced cost.

The lack of comparative analysis was a prevalent flaw noted in several studies, which undermined the contextual basis of their findings (Omar and Jamil, 2025). For example, while studies such as "Caring in the Gig Economy" provided valuable insights, they may have been enhanced by integrating a more comprehensive analysis of earlier research.

The growth of e-commerce in recent years has increased demand for gig jobs. The number of workers in the gig economy has grown significantly, from 2.5 million in 2011-12 to about 13 million in the current fiscal year specifically pertain to platform-based gig workers, rather than the broader informal sector (Madan and Dubey, 2024).

 $Although \ the \ gig \ economy \ offers \ temporary \ labor \ and \ flexible \ digital \ employment \ options \ have \ emerged$

as a result of digitization, gig work can be for both highly and lowly qualified workers (Kurian, 2024). In this regard, the current study examined how obstacles and motivation affect the well-being, stress levels, and quality of life of gig workers that provide platform-based physical services.

The study by Nakka and Chintha (Nakka and Chintha, 2023) aims to determine how the gig economy's employment opportunities benefit the dependent workforce over the long term due to its lax or nonexistent regulatory environment. The hypothesis tested in this study leads to the conclusion that the gig economy will continue to be a source of employment creation for some time to come. Through this study, it is recommended that the creation of a strong policy be pursued to create a structured workplace for gig economy workers.

In the study (Sugumaran and Vishwanathan, 2023), given the variety of employer-employee relationships in India, the gig worker scenario is complicated and presents both opportunities and disadvantages. Even if gig labor is still one of the most flexible job arrangements, there are some serious drawbacks. It is crucial to establish a legal framework that ensures no one is left in danger while taking into consideration the financial standing of both gig workers and aggregators.

According to a study by Aggarwal (Aggarwal, 2023), the future of employment will change as a result of the quick advancements in technology. "Gig" labor would be more in demand and used more frequently. There will inevitably be a discrepancy between the supply and demand of labor in such a situation. For this reason, appropriate education and future-oriented employment planning are required.

The study (Schwab, 2023) highlights how crucial it is for businesses to develop policies that can effectively manage both contract and full-time workers. Digital platforms and technology are essential to the gig economy. Businesses need to invest in these platforms in order to interact with gig workers and manage their work efficiently.

Aloisi (Aloisi, 2022) assessed the development of EU legal tools and talked about the new domestic efforts and directives that have been put in place to protect platform workers. In order to reclassify workers and strengthen collective bargaining rights, the article highlights the significance of algorithmic transparency and cross-border legal coherence.

According to a study on the growth and difficulties faced by gig workers in India, pay equity, timely salary payments, and overtime compensation (Jacob and Shaikh, 2021).

Lifelong learning ensures that employees can modify their professions in response to evolving technological demands, fostering resilience, and adaptability. Additionally, studies demonstrate that in order to develop a workforce prepared for the challenges posed by automation and digitalization, educational systems and professional training programs must integrate digital and entrepreneurial competencies (Labanauskaitė et al., 2021).

Prior research examined the difficulties faced by digital workers in Southeast Asia and Sub-Saharan Africa, focusing on topics like bargaining power, economic and security policies, and a dearth of opportunities to advance their skills so they can contribute more successfully to the global gig economy supply chain (Roy and Shrivastava, 2020).

According to a study on gigs that polled women, they may generate money while maintaining a flexible home environment, which makes their jobs more comfortable. Individuals who have retired from their regular jobs are also using this opportunity to supplement their income (Jarrahi et al., 2020). Gig work lends itself to versatile and autonomous work, as the gig employees set their own working hours, packages/remunerations, job roles, as well as their own social groups and business associates, depending upon their individual cultural and sociological background.

By describing the many kinds of gig platforms, their features, and the risks that Indian businesses face while using these non-standard workers, Dey (Dey, 2022) investigates the causes of the gig worker boom.

The function of gig workers, their advantages for businesses and people, gig employment platforms, and their impact on the Indian economy were all covered by Kshatriya (Kshatriya, 2022). Additionally, it enumerated the problems gig workers had and offered potential fixes.

The entry obstacles for gig workers in the food delivery industry were demonstrated by Behl (Behl et al., 2022). Additionally, the study examines how entry obstacles and gig platforms interact and offers solutions to lower entry barriers in the gig economy.

Veluchamy (Veluchamy, 2021) investigates the relationship between employment stability and success rate, which helps employees maintain a healthy balance in their life and be more productive. This study

focuses on evaluating the effectiveness of gig workers, namely in the food and courier sectors, and examining the various elements that affect output.

Because revenue fluctuates so frequently, gig workers find it difficult to plan and stick to their budgets, which throws them off balance and causes financial anxiety (Chen and Hsieh, 2020).

A survey summary report by Bhattacharya (Bhattacharya, 2019) was published in the Economic Times. On June 20th, 2018, Times Jobs conducted a survey to examine the gig economy's rise in India. The study, which examined the replies of 2100 HR professionals from several verticals, shows that corporate operations have changed. Cost-saving viewpoints and competitive advantages are two perks of the gig economy. The conventional permanent employment model is being disrupted by the growing reliance on a "fluid workforce" across all sizes of organizations. The respondents stated that the media and communications, events, and IT and tech sectors are the biggest employers of freelancers.

According to a different study by De Ruyter and Brown (De Ruyter and Brown, 2019), there are little barriers to entry for the kinds of occupations that are available in this economy. The problems and difficulties related to "traditional labor markets" are discussed by the writers. The majority of gig workers seem to be young individuals who are either enrolled in school or actively looking for job. Therefore, until individuals have access to more standardized employment documents, gig work is more of a "temporary process."

India is the second-largest market for freelancers, according to a 2019 research by the Digital Future Society, and this app-based solution eliminates the middlemen. Allowing gig employment is also cost-effective from the recruiters' perspective. Gig workers typically do not receive the same benefits as full-time employees, such as paid time off and health insurance.

According to a different analysis by Salman and Varsha (Salman and Varsha, 2019) that was published in LiveMint, Delhi has surpassed Bangalore as the top destination for migrant workers joining the nation's tech-enabled gig economy. Together, the two app-based taxi services have hired about 1.3 million drivers in the past 8 years.

One of the first comparative analyses of working conditions across five major micro-task platforms with global operations is presented in this report. It is based on many qualitative polls and an ILO study that included 3,500 workers from 75 different countries. The study examines the pay rates, employment availability and intensity, social protection coverage, and work-life balance of employees on these microtask platforms (International Labour Organization, 2021).

Non-monetary aspects like autonomy and flexibility are more significant in the gig economy for some groups of gig workers (Berger et al., 2019).

While there is a discernible wage convergence, experience and abilities rarely result in higher compensation. Although service outsourcing, also known as microwork, through international internet markets opens up new job prospects for independent contractors worldwide, the fierce competition and built-in limitations of these marketplaces restrict the financial gains for the majority of contractors (Beerepoot and Lambregts, 2015).

Gig workers, and platform workers in particular, display traits that go beyond the formal-informal divide. Although gig employment is a broader idea, with a lot of unclear elements, platform work is increasingly significant. Thus, this study's worker viewpoint seeks to promote job prospects in the platform industry while illuminating the definition of a platform worker and how they might be protected. Anyone with a smartphone that can connect to the internet and has tangible or intangible assets can make money off of them whenever they choose to work as a platform worker in a platform economy (NITI Aayog Report, 2022).

Traditionally, face-to-face communication has been the mainstay of service production and delivery, necessitating the physical presence of a service provider on location. However, new opportunities to work remotely and produce job outcomes through information and communication technology networks have emerged in recent years due to growing digital connectivity and platforms, as well as other technological advancements. These days, employees can work online for corporations and organizations in one place while sitting in another. Freelancing platforms are the closest thing to a "global" labor market where people compete for jobs wherever they are in the world since they have less limits on where tasks may be completed (Korreck, 2021).

The study by Reddy (Reddy, 2022) suggests that collaboration between the government, employees, and educational institutions may turn challenges into possibilities. The extent of the gig economy in India will be greatly influenced by governmental policies and labor laws. People must also be prepared for lifelong learning because they will need to upgrade or reskill themselves in response to the changing environment.

In this paper, experts and leaders of organizations explore the issues that the average person faces as a result of gig labor and opportunities (Aeppeal, 2016). This sector talks about how gig working has grown quickly but is still a little part of the market because most people prefer it as a side or part-time employment. It also analyzes how the nature of labor has changed.

The potential and difficulties faced by gig workers in India are examined in this research (Banwari, 2018). The advantages and disadvantages of gig-wage systems, or the positive and negative aspects of this working arrangement, are fully covered in these studies. They also suggest ways that organizations and governments might affect them by providing opportunities to those in need of financial assistance.

Research gap

Despite the increasing scholarly focus on the gig economy, a significant research gap persists in understanding the lived experiences of platform-based gig workers in India, especially those associated with ride-hailing and food delivery services like Uber, Ola, Swiggy, and Zomato. Much of the existing literature emphasizes structural issues such as lack of social security, income instability, regulatory ambiguity, and worker misclassification. While these studies (Saraswathi, 2023), (Sugumaran and Vishwanathan, 2023), and (Woodcock and Graham, 2020) provide valuable macro-level insights, they often overlook the micro-level experiences and perceptions of gig workers themselves. Furthermore, limited research has captured the duality of gig work-offering both flexibility and economic vulnerability-through a mixed-method approach. The implications of gig work on job satisfaction, career progression, financial planning, and psychological well-being remain underexplored. This study aims to fill these gaps by collecting and analyzing primary data directly from gig workers, thus contributing empirical evidence to support more inclusive policy formulation and workforce planning in the Indian gig economy.

Objectives of the study

- \cdot To identify factors driving the rise of gig employment and their impact on gig workers satisfaction.
- · To identify opportunities and challenges faced by gig workers.
- · To identify the government initiatives to support gig workers.

Hypothesis

Ho1: There is no significant impact of driving factors on gig workers satisfaction.

Ho2: There is no significant relationship between opportunities and gig workers satisfaction.

Research Method

Methodology

Research Design

This study adopts a descriptive research design using both quantitative and qualitative approaches. Data were collected through a structured questionnaire and personal interviews to gain insights into the working conditions, challenges, and perceptions of gig workers employed by Uber, Ola, Swiggy, and Zomato.

Participants

The participants included active gig workers associated with major platform-based service providers-Uber, Ola, Swiggy, and Zomato-across selected urban areas.

A sample of 50 workers from each platform - Ola, Uber, Zomato, and Swiggy - was surveyed, interviewed, and data were collected, totaling 200 workers.

Inclusion Criteria

Individuals currently working with Uber, Ola, Swiggy, or Zomato.

Aged 18 years and above.

Willing to participate and provide informed consent.

Residing in Hyderabad.

Sampling Rationale and Geographic Scope

An equal number of participants were selected from each gig platform (e.g., Swiggy, Zomato, Ola, Uber, Urban Company) to ensure balanced representation and to facilitate comparative analysis across diverse gig work models. This approach helps in identifying platform-specific trends and commonalities in worker experiences. Hyderabad was chosen as the study location due to its status as a rapidly growing urban center with a significant concentration of gig economy activities and digital service adoption. While Hyderabad offers valuable insights into gig work in metropolitan settings, the findings may not be fully generalizable to rural or smaller urban areas where gig platforms operate differently. Future studies should consider multi-location sampling to enhance external validity and capture regional variations in gig work dynamics.

Sampling Technique

A convenience sampling method was used due to the mobile and flexible nature of the workforce. Participants were approached in public spaces, delivery zones, parking areas near restaurants, and taxi stands.

Data Collection Tools

Primary Data: Collected through a structured questionnaire consisting of close-ended questions covering job satisfaction, working hours, safety concerns, and platform policies.

Survey Instrument and Scale Design: To assess the satisfaction, opportunities, and challenges of gig workers, a structured questionnaire was developed based on previous literature and expert input. The final instrument consisted of 25 items distributed across key constructs such as satisfaction level, driving factors (technological, economic, policy/regulation), perceived opportunities, and challenges. A 5-point Likert scale was used for most items, ranging from 1 = Strongly Disagree to 5 = Strongly Agree, to capture the degree of agreement with various statements. The reliability and internal consistency of the scale were verified through a pilot test with a small sample (n = 30) of gig workers prior to full data collection. The internal consistency of the scale was validated using Cronbach's alpha, which exceeded the acceptable threshold of 0.70 for all major constructs, indicating good reliability.

Measurement Instrument

Measurement of Constructs: To assess the relationships between key constructs such as Opportunities and Gig Worker Satisfaction, a structured questionnaire was developed. The instrument was based on previous literature and adapted to suit the Indian platform economy context.

Opportunities were measured through the following three dimensions:

- 1. Flexibility and Autonomy (4 items)
- 2. Skill Development (3 items)
- 3. Diverse Income Streams (3 items)

Composite Score Calculation: For each construct, composite scores were calculated by averaging the item responses within that construct. This method was chosen to maintain consistency across constructs of varying item lengths and to retain the original scale interpretation (i.e., higher scores reflect greater presence of the construct).

Interviews: Semi-structured interviews were also conducted with selected participants to gather deeper qualitative insights.

Secondary Data: Relevant information was collected from published journals, reports, and online sources to support and contextualize the findings.

Data Analysis

Quantitative data were analyzed using descriptive statistics such as percentages, and regression analysis was used for data analysis.

Results

Satisfaction level of gig workers

Table 1 explains gig workers' satisfaction.

Satisfaction level	No. of respondents	Percentage of respondents	
Satisfied	55	27.5	
Neutral	82	41	
Not satisfied	63	31.5	

TABLE 1: Gig workers satisfaction

From Table $\it 1$ analysis, it is observed that 27.5% respondents are satisfied as a gig worker, 41% are neutral, and 31.5% are not satisfied as a gig worker.

Factors driving the rise of gig employment

From the study, it is observed that the following factors are driving the rise of gig employment.

Factors	Agree	Neutral	Disagree
Technological	75	60	65
Economic factors	67	70	63
Policy and regulatory	67	84	49

TABLE 2: Factors driving gig workers

Table 2 explains about the factors driving gig workers.

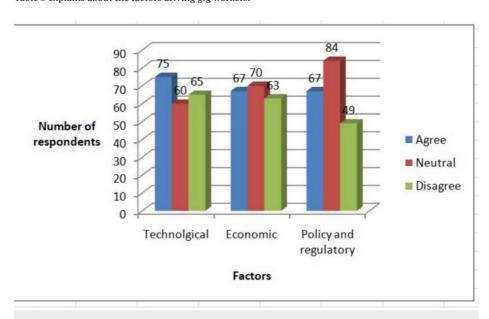


FIGURE 1: Factors driving gig workers

Figure 1 explains about factors driving gig workers. In Figure 1, the x-axis represents factors and the y-axis represents the number of respondents.

From Figure 1, it is observed that technological factors and economic factors drive the rise in gig employment.

Technological Factors: The agreement with technological factors is the highest among responses, with 75 respondents. Neutral responses account for 60, and 65 respondents disagree, indicating a fairly balanced

response.

Economic Factors: Responses are more evenly spread across the three categories. The Neutral response (70) is slightly higher than Agree (67) and Disagree (63), suggesting mixed perceptions about economic factors.

Policy and Regulatory Factors: Highest Neutral responses (84), suggesting that a majority of respondents do not have a strong opinion on these factors. Lowest Disagree responses (49), indicating that fewer people feel negatively about policies and regulations.

Technological Factors have the most agreement (75 responses), suggesting a positive perception of technological advancements.

Economic Factors have balanced responses, indicating no strong consensus.

Policy and Regulatory Factors show the highest neutrality (84), suggesting that many respondents either do not fully understand or do not have strong opinions on policies.

For Technological Factors, it is recommended to leverage the high agreement by investing further in technology.

For Economic Factors, since responses are mixed, further research or engagement is needed to understand concerns.

For Policy and Regulatory Factors, since many are neutral, awareness campaigns or policy clarifications could help.

From the interviews, the following factors are identified.

Technological factors

Digital platforms: Platforms like Uber and Swiggy have made it easier for workers and employers to connect. Widespread access to smartphones and affordable internet (e.g., Jio in India) enables gig workers to access platforms. Real-time tracking and route optimization powered by GPS and AI ensure faster deliveries.

Changing Work Preferences: Many workers prefer the autonomy of choosing when, where, and how much to work.

Economic Factors

Flexible gig roles in delivery services provide opportunities for low-skilled workers, often with minimal entry barriers. Surge pricing during peak hours or festivals offers higher earning potential. Growing cities have increased demand for services like ride-hailing, food delivery, and home services. Companies benefit from hiring gig workers to reduce overhead costs like salaries, benefits, and office spaces. On-demand services like 10-minute grocery deliveries (Zepto) are driven by consumer impatience and convenience.

Policy and Regulatory Developments

Policies aimed at fostering startups and digital businesses indirectly boost gig platforms. Initiatives like India's Code on Social Security, 2020, aim to formalize gig work and provide benefits.

Opportunities for gig workers

Opportunities	Agree	Neutral	Disagree
Flexibility and autonomy	90	50	60
Skill development	54	60	86
Diverse income	74	66	60

TABLE 3: Opportunities for gig workers

Table 3 explains about the opportunities of gig workers.

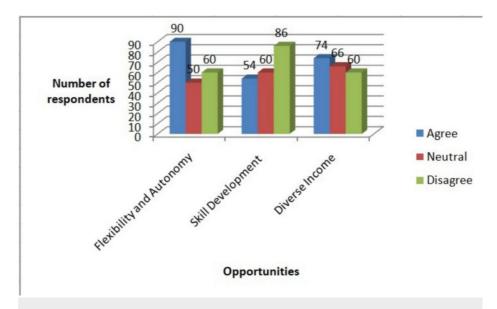


FIGURE 2: Opportunities for gig workers

Figure 2 explains about opportunities available to gig workers. In Figure 2, the x-axis represents opportunity and the y-axis represents the number of respondents.

From Table 3, it is observed that most of the gig workers opined that they have opportunities like flexibility, i.e., workers can often choose when, where, and how much they work, skill development opportunities, and diverse income streams. By interviewing the workers, it is also clear that gig work provides opportunities for those struggling to find traditional full-time jobs. Rise of nuclear families and dual-income households increases reliance on grocery and food delivery platforms. Platforms like Swiggy and Zomato provide accidental insurance and health benefits for delivery partners, aligning with the Code on Social Security, 2020. Platforms like Ola, Uber, Swiggy, and Zomato allow workers to choose their working hours and locations, enabling them to align work with personal responsibilities. Workers (e.g., private drivers, hotel staff) can use their existing skills to earn without needing significant reskilling. Urban Company's group health insurance covers all active partners. Companies partner with fintech startups to enable gig workers to save small amounts for emergencies or retirement. Example: Swiggy's tie-up with ICICI for flexible savings accounts.

Challenges faced by gig workers

Challenges	Agree	Neutral	Disagree
Irregular income	100	45	55
Lack of benefits	140	40	20
Long working hours	132	35	33
Lack of job security	150	20	30

TABLE 4: Challenges faced by gig workers

Table 4 explains about the challenges faced by gig workers.

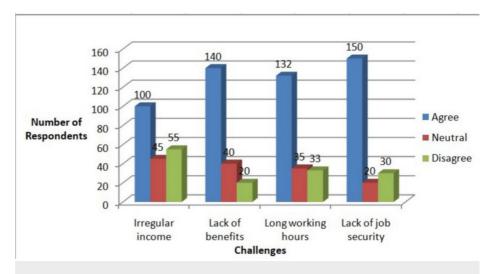


FIGURE 3: Challenges faced by gig workers

Figure 3 explains about the challenges faced by gig workers. In Figure 3, the x-axis represents challenges and y-axis represents number of respondents.

From Table 4, it is observed that irregular income, lack of benefits, long working hours, and lack of job security are the challenges faced by gig worker. Apart from these, by interviewing the gig workers, it clear that gig workers have no proper grievance redress system. Sweltering heat or pouring rain, people need to rush off and complete as many deliveries as possible in a day. There are thousands who have no option but to work outdoors to feed their families. Moreover, workers have to adapt to the schedules of customers based in cities, which can lead to unsocial hours that negatively impact their pursuit of work-life balance.

While platform jobs offer income opportunities, earnings are often inconsistent and influenced by demand fluctuations (e.g., low ride requests during off-peak hours or competition among delivery partners). Gig workers for Ola, Uber, Swiggy, and Zomato lack formal employment benefits such as health insurance, paid leave, or retirement funds. This is particularly challenging for those relying solely on gig work as their primary income source. The physically demanding nature of gig work (e.g., long driving or delivery hours) leads to health risks.

According to NITI Aayog Report (NITI Aayog Report, 2022), the following challenges are faced by the gig workers:

The availability of digital technologies and internet connections may be a barrier to employment in the gig and platform economy. Studies in the gig and platform business have identified a number of important issues, including irregular earnings, a lack of job security, and workers' ambiguous employment status. Employee stress and strain may rise as a result of the unpredictability of available employment and income. The contractual arrangement between the platform owner and the employee is classified as non-employment. The word "independent contractors" refers to platform laborers. Platform employees are therefore unable to take advantage of many employment rights and safeguards.

Government initiatives to support gig workers

According to the Social Security Code, 2020, aggregators (e.g., Swiggy, Uber) are required to make mandatory contributions toward social security funds for gig workers, and provide access to benefits like health insurance, maternity leave, and old-age protection.

e-Shram Portal: Registration provides workers with a unique ID and access to welfare schemes. Insurance coverage is provided under the Pradhan Mantri Suraksha Bima Yojana for accidental death and disability.

Startup India Initiative: Promotes entrepreneurship and startups, which often provide gig work opportunities.

Skill India Mission: Enhances employability of gig workers through skill training. Partnerships with platforms like Urban Company train gig workers in customer service, technical skills, and entrepreneurship.

Challenges in implementation

Difficulty in identifying and registering gig workers. There is resistance from platforms regarding contributions to worker benefits, and there is a need for awareness among workers about government schemes.

Hypothesis 1

Ho1: There is no significant impact of driving factors on gig workers satisfaction.

Regression analysis is used to test the hypothesis.

Regression output

Regression statis	tics							
Multiple R	0.798297							
R^2	0.637278							
Adjusted R ²	0.631726							
Standard error	0.468086							
Observations	200							
ANOVA								
	Degree of freedom	Sum of the squares	Mean sum of squares	F	Significance F			
Regression	3	75.45056	25.15019	114.7864	6.19E-43			
Residual	196	42.94444	0.219104					
Total	199	118.395						
	Coefficients	Standard error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.28783	0.11497	2.503534	0.013112	0.061094	0.514567	0.061094	0.514567
Technological 1	0.564155	0.048345	11.66933	3.11E-24	0.468811	0.659498	0.468811	0.659498
Economic	0.263479	0.057436	4.58736	8E-06	0.150207	0.37675	0.150207	0.37675
Policy and regulation	-0.01322	0.052746	-0.25056	0.802415	-0.11724	0.090807	-0.11724	0.090807

TABLE 5: Regression output

Table *5* explains about regression output. From Table *5*, it is observed that Multiple R (0.798) indicates a strong positive correlation between the independent variables (factors like technological, economic, policy, and regulation) and the dependent variable (gig workers' satisfaction).

 ${\bf R}^2$ (0.637): About 63.7% of the variation in the dependent variable is explained by the independent variables.

Adjusted \mathbb{R}^2 (0.632): Still high, meaning the model generalizes well to new data.

Standard Error (0.468): The average deviation of the actual values from the predicted values; a relatively low error.

Observations (200): The number of data points used for the analysis.

F-Statistic (114.79) and Significance F (6.19 \times 10⁻⁴³): The high F-statistic indicates the model is statistically significant. The extremely low p-value (<0.0001) confirms that the regression model as a whole is highly significant.

Technological factor (0.564, p < 0.0001): A highly significant predictor, meaning it strongly influences the dependent variable. A 1-unit increase in technology leads to a 0.564 increase in the gig worker satisfaction

Economical (0.263, p < 0.0001): Also statistically significant, meaning it has a positive effect. A 1-unit increase in economical factor increases the worker satisfaction by 0.263.

Rules and regulation (-0.013, p = 0.802): Not statistically significant (p > 0.05). Since its p-value is very high (0.802) and the coefficient is almost zero, rules and regulation does not contribute to the model.

Hypothesis 2

Ho2: There is no significant relationship between opportunities and gig workers satisfaction.

A Pearson correlation analysis was conducted to examine the relationship between different dimensions of opportunity and satisfaction level.

Opportunities	Satisfaction level coefficient
Flexibility and autonomy	0.552
Skill development	0.447
Diverse income	0.515

TABLE 6: Correlation analysis

Table 6 explains about correlation between opportunities and gig workers' satisfaction. From Table 6, it is observed that flexibility has the highest positive correlation with satisfaction levels, indicating that increasing flexibility and autonomy could most strongly enhance satisfaction. Diverse income opportunities are moderately correlated with satisfaction, suggesting that financial variety also plays a role in influencing satisfaction. While positively correlated, skill development opportunities have the weakest relationship among the three factors. However, improving skill development opportunities can still contribute to increased satisfaction.

Summary of findings

Based on the survey responses, it is observed that 27.5% of gig workers reported being satisfied, 41% were neutral, and 31.5% were not satisfied with their gig work. The identified key drivers are technological factors, which received the highest agreement (75 respondents), indicating the strongest influence on gig employment. The ease of accessing work via platforms and smartphone penetration are major contributors. Economic factors had mixed responses, reflecting diverse perceptions about earnings potential, flexibility, and job accessibility. Policy and regulatory factors had the highest neutrality (84 respondents), indicating low awareness or unclear impact on workers. Interview insights support platform ease-of-use, GPS tracking, and demand-based pricing as key technological enablers. Gig work is a low-barrier option for urban migrants and low-skilled individuals. Policies like India's Social Security Code (2020) are potential enablers but still lacking in implementation clarity.

From the data, it is found that Flexibility and Autonomy (90 agree) emerged as the most valued opportunity, followed by Diverse Income Sources (74 agree), and Skill Development (54 agree).

Interview responses also show that gig work helps those struggling to find traditional jobs. Workers value the ability to choose working hours and locations. Some platforms provide limited benefits (e.g., insurance) and partner with fintechs to enable savings.

The most challenges faced by gig workers include Lack of Job Security (150 agree), Lack of Benefits (140 agree), Long Working Hours (132 agree), and Irregular Income (100 agree).

Qualitative insights reveal that no formal grievance redressal system exists, adverse working conditions (e.g., extreme weather, unsocial hours), limited protection under current employment laws, and health and data privacy risks due to moonlighting and overwork are among the issues identified.

Government initiatives supporting gig workers include the Social Security Code, 2020, which mandates aggregator contributions to worker benefits; the e-Shram Portal, which provides IDs and access to welfare schemes; Skill India and Startup India programs to enhance employability; and insurance schemes under

the PM Suraksha Bima Yojana that support accidental coverage.

Challenges in implementation are difficulty in identifying and registering gig workers, resistance from platforms on benefit contributions, and lack of awareness among workers.

Hypothesis 1

Technological and economic factors positively and significantly influence gig worker satisfaction, while regulatory factors do not.

Hypothesis 2

Flexibility is the most critical driver of satisfaction, followed by financial variety and skill enhancement.

Discussion

Interpretation

Objective 1: Identify factors driving the rise of gig employment and their impact on Gig workers' satisfaction.

Majority of gig workers are either ambivalent or dissatisfied, suggesting that although gig work offers benefits like flexibility, significant structural issues (e.g., income instability, lack of benefits) affect overall job satisfaction.

The factors driving the rise of Gig employment:

Technological Factors have the most agreement (75 responses), suggesting a positive perception of technological advancements.

Economic Factors have balanced responses, indicating no strong consensus. Policy and Regulatory Factors show the highest neutrality (84), suggesting that many respondents either do not fully understand or do not have strong opinions on policies.

Hypothesis 1

Ho1: There is no significant impact of driving factors on Gig workers satisfaction.

Regression analysis strongly rejects the null hypothesis, with the following key results:

Technological factors show a strong, significant positive impact on satisfaction (β = 0.564, p < 0.0001). This aligns with the growing digital infrastructure that enables easy access to gig platforms and real-time work management.

Economic factors also show a moderate positive influence (β = 0.263, p < 0.0001), reflecting how flexible earnings and low entry barriers make gig work attractive to certain worker segments.

Policy and regulatory factors, however, have no significant effect (β = -0.013, p = 0.802), suggesting a disconnect between policy initiatives and their perceived or actual impact on workers.

These findings align with the NITI Aayog (NITI Aayog Report, 2022) report, which notes that despite the government's introduction of social protection frameworks, gig workers often remain unaware of or unable to access these provisions, rendering them ineffective in improving job satisfaction.

Objective 2: Opportunities and challenges faced by gig workers.

Survey and interview data identify three major opportunities:

Flexibility and autonomy are most valued (90 respondents agreed), enabling workers to choose their working hours and maintain better control over their schedules. Diverse income sources help workers engage in multiple gigs or tap into demand fluctuations. Skill development, while less influential, still contributes to satisfaction by offering pathways to upskill and improve employability.

Previous Fairwork India reports from 2020-2022 (Fairwork India, 2022) confirm that workers appreciate control over their schedules, but this is often limited by algorithmic management and incentive systems.

The current research findings complement this by showing how on-ground experiences differ based on individual circumstances.

Irregular income, lack of benefits, long working hours, and lack of job security are the challenges faced by gig workers. Apart from these, interviews with gig workers make it clear that gig workers have no proper grievance redress system. Sweltering heat or pouring rain, people need to rush off and complete as many deliveries as possible in a day. There are thousands who have no option but to work outdoors to feed their families.

These findings align with the ILO (International Labour Organization, 2021) report on digital labor platforms.

The International Labor Organization highlighted low and unpredictable income, long working hours, lack of access to social protection, and algorithmic control as key issues.

NITI Aayog report on India's gig economy (NITI Aayog Report, 2022) recognized the importance of gig work for employment, but also emphasized the need for policy-level changes like social protection coverage, regulation of working conditions, and ensuring income security.

The findings underscore these gaps, reinforcing the need for action.

Limitations

Limited Geographic Scope: The study is geographically confined (e.g., urban areas and specific regions like Hyderabad in India), which limits the generalizability of the findings to rural or semi-urban populations where gig economy dynamics might differ.

Data collected through surveys and interviews rely on workers' self-perceptions, which may introduce social desirability bias or recall bias. Respondents might overstate satisfaction or underreport negative experiences.

While the regression model includes key drivers (technological, economic, and policy), it may omit other influential factors such as work-life balance, platform algorithm fairness, customer behavior, and mental and physical health concerns.

Implications

Policy Development

Research findings can guide governments and policymakers to create regulations or social security schemes that address gig workers' needs, such as fair wages, healthcare, or pensions.

The neutral effect of policy and regulatory factors on gig worker satisfaction indicates a potential gap between regulatory intentions and ground realities. This suggests a need for policymakers to not only formulate inclusive gig economy regulations but also actively communicate and enforce these protections to ensure gig workers are aware of and benefit from them. Further, the findings highlight that gig worker satisfaction is currently driven more by direct work-related experiences (e.g., flexibility, income opportunities) than by institutional frameworks. Hence, future policy efforts should focus on bridging this awareness gap and aligning regulatory interventions more closely with the lived experiences of gig workers to enhance their satisfaction in a meaningful way.

Business Practices

Platforms can use the insights to adjust their models, improve worker satisfaction, and ensure sustainability by addressing key challenges like income stability, safety, and workload demands.

Socioeconomic Impact

The findings highlight the gig economy's role in providing employment, especially for those affected by layoffs or economic disruptions like COVID-19. This affects labor markets, family structures, and overall economic stability.

Worker Advocacy and Empowerment

Research draws attention to gig workers' struggles, empowering them to negotiate better working conditions, wages, and benefits through collective action or policy intervention.

Conclusions

The study highlights the various aspects of gig work, including worker satisfaction, driving factors, opportunities, challenges, and policy implications. The findings suggest that while gig employment offers

flexibility, autonomy, and diverse income opportunities, it also presents significant challenges, such as irregular income, lack of benefits, and job insecurity. Technological and economic factors significantly drive the rise of gig employment. Policy and regulatory factors have a neutral influence, indicating a lack of strong opinions or awareness among workers. Flexibility and autonomy emerge as the most valued aspects of gig work, followed by diverse income streams and skill development. Major issues include income instability, lack of benefits, long working hours, and job insecurity, as confirmed by both survey data and worker interviews. While policies such as the Social Security Code, 2020, and e-Shram portal aim to support gig workers, challenges remain in implementation, awareness, and enforcement.

Future research: Expanding the sample size and including workers from diverse backgrounds and regions could enhance understanding. The study can prompt further exploration into areas like algorithmic transparency, long-term impacts of gig work on workers' health and finances, or strategies to make gig work sustainable.

Appendices

Questionnaire

I am conducting a research study on the satisfaction, opportunities, and challenges of gig workers. Your participation is voluntary, and the information you provide will be kept confidential and used only for academic purposes. Your input will greatly contribute to the understanding of gig workers' experiences and help in recommending supportive policies.

Thank you for your valuable time and cooperation.

- 1. Age:
- a) Below 20 b) 21-30 c) 31-40 d) 41-50 e) Above 50
- 2. Gender:
- a) Male b) Female
- 3. Type of gig work:
- a) Ride-hailing (Ola, Uber)
- b) Food delivery (Swiggy, Zomato)
- c) Service-based
- d) Freelancing
- e) Others: _____
- 4. How satisfied are you overall as a gig worker?
- a) Satisfied b) Neutral c) Not Satisfied

(Please indicate your level of agreement for each statement) Scale: Agree/Neutral/Disagree

- 5. Technological factors (digital platforms, mobile apps, real-time tracking) are driving the rise of gig employment.
- a) Agree b) Neutral c) Disagree
- 6. Economic factors (surge pricing, flexible earning opportunities, cost reduction for companies) are encouraging gig employment.
- a) Agree b) Neutral c) Disagree
- 7. Policy and regulatory factors (government startup support, social security codes) play a role in gig employment.
- a) Agree b) Neutral c) Disagree

Please indicate your level of agreement

- 8. Gig work provides flexibility and autonomy
- a) Agree b) Neutral c) Disagree
- 9. Gig work provides opportunities for skill development (e.g., training, customer service, entrepreneurship)
- a) Agree b) Neutral c) Disagree

a) Agree b) Neutral c) Disagree 11. Irregular income is a major challenge. a) Agree b) Neutral c) Disagree 12. Lack of employment benefits (health insurance, retirement funds, paid leave) is a challenge. a) Agree b) Neutral c) Disagree 13. Gig work involves long working hours. a) Agree b) Neutral c) Disagree 14. Lack of job security is a major concern. a) Agree b) Neutral c) Disagree 15. There is no proper grievance redressal system for gig workers. a) Agree b) Neutral c) Disagree 16. Are you aware of the Social Security Code, 2020 for gig workers? a) Yes b) No 17. Are you aware of the e-Shram Portal for gig workers? a) Yes b) No 18. Are you aware of skill development programs like Skill India Mission? a) Yes b) No 19. What do you consider the biggest advantage of working in the gig economy? 20. What do you consider the biggest challenge of working in the gig economy?

10. Gig work provides diverse income sources (multiple platforms, surge pricing, side jobs).

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Nalini G

Acquisition, analysis, or interpretation of data: Nalini G

Drafting of the manuscript: Nalini G

Critical review of the manuscript for important intellectual content: Nalini G

21. What additional support or policies would improve your working conditions?

Supervision: Nalini G

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