

Gig and Platform Workers: Vision 2047

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Dhanya M.B.



V.V. Giri National Labour Institute

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PREFACE

A crucial pillar of India's labour market, the gig and platform economy is changing the employment trends and have formed new types of work in recent years. The importance of this sector in creating jobs, economic mobility and social protection demands careful consideration as India moves closer to its Vision 2047—a plan for becoming a “Developed Nation”. With an emphasis on job patterns, working conditions, algorithmic governance, disparities in gender and the socioeconomic effects of digital platforms, this study attempts to critically examine the changing gig work and its future scenario in employment dynamics. Using a mixed-method approach, the study combines statistical methods, policy analysis and secondary research to offer evidence-based insights into the gig economy's prospects and shortcomings. Special emphasis has been put on the experiences of women and youth, and the regulatory context that shapes their rights and safeguards. The report also forecasts the future economic scenario of India and employment trends in the gig and platform economy and put forth policy recommendations for sustainable and equitable labour practices in India by 2047.

This study contributes to a better understanding of structural developments in the gig labour market by connecting academic research and policy discourse intending to support researchers, policymakers and stakeholders develop policies that assure social protection, decent work and equitable growth in the platform economy. As India strives to become a global leader, fostering a resilient and equitable gig workforce will be critical to establishing a decent and sustainable future of work.

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I sincerely appreciate the contribution of the Ministry of Labour & Employment Senior officials; Experts from various institutions including NCAER, NITI Aayog, OMI Foundation; Workers Association Representatives from Telangana Gig and Platform Workers Union(TGPWU), Working People’s Charter (WPC) Network, Jan Pahal etc. as well as workers from Uber, Blinkit, Urban Company for their valuable insights during the ‘Brainstorming Workshop on Gig and Platform Workers for Employees organisations’ conducted on 14th August 2023.

Furthermore, I also acknowledge the diligent efforts of my past and current research associates Mr. Ashish Thakur, Dr. Priyanka, Ms. Anjali Raj and Ms. Taramati, who made contributions to research through compilation of literature and statistical forecasting. I would also like to thank Mr. S K Varma, ALIO; Mr. Rajesh Karn and all faculties, officials and staff of VVGNLI administrative, accounts, programs, library and publication section. Last but not least, I gratefully acknowledge my son Aarjav and my parents for all their support throughout this report.





LIST OF ABBREVIATIONS

AI	Artificial Intelligence
CoSS	Code on Social Security
EPFO	Employees' Provident Fund Organization
ESIC	Employee State Insurance Corporation
EUS	Employment and Unemployment Survey
GDP	Gross Domestic Product
GNI	Gross National Income
IFAT	Indian Federation of App-based Transport Workers
ILO	International Labour Organization
ITF	International Transport Workers' Federation
MoLE	Ministry of Labour and Employment
MoSPI	Ministry of Statistics and Programming Implementation
MPCE	Monthly Per-capita Consumption Expenditure
NCO	National Classification of Occupation
OHS	Occupational Health and Security
PLFS	Periodic Labour Force Survey
UPI	Unified Payment Interface
WEF	World Economic Forum





CHAPTER 1: INTRODUCTION

1.1. Background

The Government of India has declared its ambitious vision for the country, by the year 2047, to achieve its goal of being a “Developed Nation” (PIB, 2023). It has outlined a road map to accomplish this aim, which was announced on India’s 75th anniversary of independence. By 2047, India must have stable incomes, eliminate all forms of poverty, be free of corruption and empower its vulnerable sections of the population, including women and youth. To accomplish all these objectives, it is crucial to create decent employment opportunities for millions of workers that will join labour force by the end of this decade. To take forward this vision of India to be a “Developed Nation” by 2047, there is an urgent need to provide an ecosystem for the changing world of work. The labour market is changing the face of working environment due to technological transformations such as the evolution of Artificial Intelligence (AI), Machine Learning, Robotics etc. resulting in new business models while demanding new skills.

At present, around 65 per cent of India’s population is under the age group of 15-64 years with a median age of 29 years which is likely to explode in the 2040s and will be around 1.6 billion (MoSPI, 2022). India’s workforce is everchanging as a result of growth in the platform economy and will significantly increase employment prospects shortly. To properly utilize the demographic dividend, the gig and platform economy can play a significant role in ensuring the employability of each person who is competent and willing to work since the sector will play a significant role in improving the standard of living particularly among women and youth workforce in the upcoming years.

1.2. Gig and Platform Economy

The gig and platform economy is broad, ambiguous and might incorporate a wide range of people who do not fit the standard definition of a “Worker”. Platform-based workers and non-platform-based workers can be generically categorized. Non-platform workers classically work in the traditional sectors as salaried, own-account or casual wage workers while the platform workers generally depend on digital platforms which consist of online software or applications. While web-based platforms allow workers to conduct online tasks for clients across the world, location-based platforms offer in-person labour at specified places, such as delivery or transportation (Kunkolienkar, 2022). The platform economy provides workers the freedom to work from a remote location according to their preferences. Anyone can connect to the global economy and meet their needs for a variety of services with the help of internet connectivity.

The term “gig” refers to temporary, short-term employment that started evolving in the 1990s when 10 per cent of the US workforce shifted to gig employment because they offered flexibility, and soon after with the introduction of Upwork-like platforms, the number of freelancers began to increase (Suryavanshi P., 2022). During the GFC-2008, gig work increased significantly as people were unable to find stable and regular employment, hence mostly dependent on self-employment (Cockett et al, 2023). Twelve years later, during the COVID-19 pandemic, an abundance of workers were once again shifted to remote or location-based jobs, hence, popularising the gig and platform economy. Further, a “platform worker” is recognized as a gig worker, where “a person engaged in or undertaking platform work, while platform work is ‘a work arrangement outside of a traditional employer-



employee relationship in which organisations or individuals use an online platform to access other organisations or individuals to solve specific problems or to provide specific services or any such other activities which may be notified by the Central Government, in exchange for payment” (MoLE, 2020). Platform workers use digital websites or applications like Ola, Uber, Zomato, Swiggy, Urban Company etc. to connect with their clients. These digital platforms have changed the nature of work and how work happens in the modern world of work.

There are two kinds of platforms; web-based and location-based. The web-based platforms allow flexibility to do work from any location with only the prerequisite of a smartphone and the Internet. The market for platform work that is carried out remotely through the Internet is known as the “online gig economy,” also known as the “online freelancing market” (Stephany et., al 2020). However, location-based platforms allow work from specific locations which includes carpooling, ride-sharing, food and groceries delivery, and other services (ILO, 2021). The other types of work on which the platform economy is based are micro-work and crowd-work (ILO, 2018). In the former, work is divided into small tasks as was advocated by the theory of division of labour by Adam Smith. These small tasks are performed by workers mostly located in emerging countries and may vary from simple unskilled tasks such as data entry, transcribing, checking ratings etc. to more complex tasks of software development, video editing and many more that require technical skills. Some platforms that provide these micro-works are Click Worker, People per Hour, Upwork etc. The Crowd-work functions as an intermediary to connect clients with the person who can complete the assigned task by fulfilling certain work and platform requirements. Some apps that allow crowd-work are Upwork, Amazon Mechanical Turk, click worker etc. (ibid).

1.3 Present Estimations and Future Forecasts

According to the International Monetary Fund, India’s GDP share (based on PPP) to the global GDP is 8.49 per cent and is expected to surge to around 9.66 per cent by 2029 (IMF, 2025). India has replaced UK to become the fifth-largest economy in the world and it is expected to be 4th largest economy by 2027 and 3rd largest economy in 2029 by surpassing Japan in terms of nominal GDP (Ghosh, 2022). Moreover, if India maintains real GDP growth rate of around 6-6.5 per cent annually, with exchange rate remain in control and inflation at 4 per cent, it is estimated to become an upper-middle income nation by 2047. Post that rate, it could attain upper-income status resulting in increased per capita and a higher share of the upper-income class population, significantly reducing low-income demographic (Ernst & Young, 2023). By 2030, India’s economy is expected to grow by 10 trillion dollars attributed to the country’s digital future (Bloomberg, 2019). Simultaneously, the analyst firm Morgan Stanley also anticipated that the first phase of development was influenced by demographics, reforms and globalization, but this position may be advanced by the combination of the digitalization of financial services and extensive fiscal and monetary reforms in India (Morgan Stanley, 2017).

In 2019–20, platform workers accounted for 6.8 million in India, which comprised 2.4 per cent of the non-farm workforce and 1.3 per cent of all workers in India with normal status, as per the NITI Aayog report on gig and platform economy. Further, it increased to 7.7 million in 2020–21, accounting 2.6 per cent of the non-agricultural workforce and 1.5 per cent of the nation’s overall employment. The gig economy has rapidly expanded in India and is expected to continue growing with projections indicating that it could constitute a



significant portion of the workforce. Business that serve the gig economy account for 56 per cent of all new jobs created in India, both for blue-and white-collar workers. Therefore, by the following decade, India's gig economy might see \$250 billion in transactions or 1.25 per cent of GDP. Initially rooted in areas like ride-sharing and food delivery, it has expanded into various sectors including healthcare, education, creative services, professional consulting etc. In 2020, over 3 million workers were employed by roughly eleven platform companies in India. Therefore, the growing importance of gig and platform workers must be acknowledged if India is to realise the full potential of this new generation of labour. Gig employment is growing and diversifying across sectors and occupations. More than 82.5 per cent of gig workers are informal employees, which is not surprising considering that over 90 per cent of India's workforce is informal (Kunkolienker, 2022).

1.4 Working Conditions and Challenges in the Gig Economy

The key advantage of working on digital labour platforms, particularly online web-based platforms, is the freedom it offers to workers, to prioritize the location and time to work, which is beneficial for workers with professional and personal duties. Those who need a non-traditional routine may find this flexibility extremely attractive. Platforms might also allow women workers break into the industries that are dominated by men. For instance, in India, companies like Urban Company, Ola and Uber dynamically assisting women in joining their services as driving partners or home based services. With the multitude of jobs and projects available in this sector, people can experiment with various career and business ventures too. However, the lack of job security is the key concern of this sector, as the gig economy doesn't provide long lasting employment because the whole business is reliant on a demand basis, hence, uncertain employment lacks the rights and social protection of workers. Sometimes, the workers may experience long working hours and other health safety issues as evidenced by COVID-19. These workers typically do not receive standard social protections as in traditional employment structure like health insurance, retirement plans, or paid time off, which can influence their financial stability. Moreover, the workers who stand against or raise voice against the platform about any unfair working conditions suffers several repercussions such as ID blocking (Bandhopadhyay O., 2024). Another barrier for employees, particularly among women, is lack of digital literacy such as browsing the internet, and accessing mobile devices and their applications, as women in India are 33 per cent less likely than men to use internet service and are 15 per cent less expected to own a mobile phone (ORF, 2021).

1.5 Women and Youth in the Gig Economy

The gig economy has emerged as a significant economic sector in recent years, providing flexible work opportunities, which can be particularly attractive to women and youth who may have other responsibilities. It allows them to create their own schedules and choose the type of work they engage in, providing a sense of independence. It allows individuals to enter different industries and access a variety of short-term or project-based work.

Despite several benefits, WEF report highlight the existence of wage gaps within the platform economy with youth, specifically women, often earning less than their male counterparts (WEF, 2022). Working from home on platforms keeps women juggling with jobs and taking care of the family at the same time. There are many reasons for this disparity, such as age and gender prejudices, difficulties in negotiating, and the kinds of jobs desired (Luis



Pinedo et al., 2021). While platform employment is gender-based, women typically work in lower-paying industries since they commonly utilize platforms for caregiving and home duties. According to ILO WESO report (2021), many web-based platform workers have faced discrimination, particularly women, from emerging countries. Almost 19 per cent of respondents on freelance platforms accept encountering with discrimination. The proportion was higher among females with 25 per cent in emerging countries than in developed i.e. 16 per cent (ibid). Women tend to be concentrated in certain sectors of the gig economy which are mostly considered feminine such as beauty work (Raval & Pal, 2019), cleaning and caregiving sector (Hunt & Samman, 2019) where pay rates may be lower compared to other sectors. This occupational isolation can limit their wage potential and career progression. Apart from this, women and youth gig workers often face lack of employment benefits and protections which are typically enjoyed by traditional employees including access to healthcare, retirement plans, paid leave, and protection against unfair practices etc. While flexibility is a noteworthy benefit, maintaining a healthy work-life balance can be challenging for women and youth in the gig economy. Juggling with multiple jobs, unbalanced schedules, and uncertain income streams may lead to stress and difficulties in their planning for the future. On the positive aspect, the gig economy empowers them by providing various opportunities for entrepreneurship and self-employment which enables them to develop their skills, make connections and gain experience. This potentially leads to long-term career growth.

To address the specific challenges faced by women and youth in the gig economy with a vision to oversee India becoming a developed country by 2047, there is a need to focus on implementing fair labour practices, improving access to social security benefits, fostering skill development, and promoting diversity and inclusion. This can help create a more inclusive and equitable gig economy for all.

1.6. Specific Objectives

1. To create a regulatory ecosystem that will enable the gig and platform sector to grow, and also carry out an exercise to estimate the scale of the gig and platform economy by 2047.
2. To make a vision on how a platform worker can be protected while encouraging employment opportunities in the platform sector.
3. To explore the main challenges and opportunities pertaining to the gig and platform workers in the Indian context to prepare a 2047 vision document.
4. To highlight the different areas of policy to ensure gig and platform workers protection.

1.7. Limitations of the study

There is no widely accepted database that estimates the number of platform-based gig workers in the country precisely. The estimation of gig and platform workers is difficult due to the heterogeneous nature of work performed, hence all the available studies have used indirect methods for estimating the number of gig and platform workers in the economy. Due to the emerging technologies, possibilities and other opportunities for the gig economy and even gig and platform work might be advancing at a rapid pace and this kind of advancement could not be investigated for future predictions. By 2047, the number of gig workers is likely to shoot up and many of the traditional 9–5 occupations may turn to ‘work anytime’ possibility opportunities.



As per NITI Aayog report, the number of gig workers is estimated by using the Periodic Labour Force Survey incorporating National Classification of Occupation (NCO, 2004) which may lead to underestimation or overestimation of the gig population.

NITI Aayog's report on gig workers has used EUS 2011-12 and Periodic Labour Force Survey data with few filtrations of the total workforce as follows 1) Age group of workers between 18-45 years, 2) Education level of person ranging between secondary school to graduation, 3) Workers belonging to the districts with top 100 cities of India according to Census, 2011, 4) Belongs to the non-agriculture sector, 5) MPCE of workers must be below the 75th percentile. Moreover, two more filters have been added from World Bank data i.e., the use of mobile phones and bank accounts as it is mandatory for workers who join gig jobs. With this method, NITI Aayog has shown positive and exponential trends of raising employment in the gig economy till 2030.

However, the above said filtration has wide ranging criticisms such as education level not at all mandatory for joining gig work. In reality, any individual with a secondary education or fewer, along with those having advanced degrees, may work as gig workers. Moreover, it examines the whole workforce, including usual-wage employees, however, gig workers may not fall under this criterion. With respect to age, NITI Aayog report considered 18-45 years age group while many beyond the age of 45 years also work in this field. Furthermore, the report has only looked at the district level, which covers both rural and urban regions. It has been assumed, that workers belonging to the districts with the top 100 cities (according to Census, 2011) are mostly captured gig workers. However, currently, the gig economy is mainly present in urban extent only.

To validate and find a better methodology, the researcher has made an attempt to estimate the numbers of gig workers from the recent PLFS dataset but the outcomes are a bit absurd. The researcher has tried the following filtration methods as an alternative method to verify through PLFS to estimate for gig and platform workers:

1. Workers who belong only to the urban sector (the existence of the platform economy is currently limited to it. However, it has now marginally started scattering across the agriculture farms in rural areas too.)
2. Excluding the regular salaried workers as they are majorly a part of the organized sector which has the employer-employee relation (same as NITI Aayog report).
3. Included sample of contracts i.e., no written contract for the identification of gig workers is considered for calculation.
4. Workers who do not receive any social security benefits or are not aware of them are considered as gig workers
5. 'It has no fixed workplace' is also incorporated.
6. Workers from the age group 15-64 years are included.
7. The last filtration is for workers whose MPCE is below the 75th percentile (same as the NITI Aayog report).

With these above filtrations, it is noted that this method is not accurate to estimate the gig and platform work. PLFS survey data shows the falling trend of employment in the platform-based gig economy with 2.83 million workers in 2018-19; 2.35 million workers in 2019-2020; 2.32 million workers in 2020-21 and 1.83 million workers in the year 2021-22 data. If we



further use another two-filtration of ownership of mobile phone and bank account that is used by NITI Aayog which is not covered under the PLFS survey then numbers will even fall further. Hence, we can say that the PLFS dataset needs methodological improvement to better represent the gig workers. However, considering the non-availability of national data, for the representation of gig-based platform economy, apart from the NITI Aayog calculation, the researcher could not find any other figure to represent gig and platform employment to extrapolate it to 2047. In this research, future forecast is undertaken by keeping a significant assumption that no exogenous shock will disturb the employment and output projections.

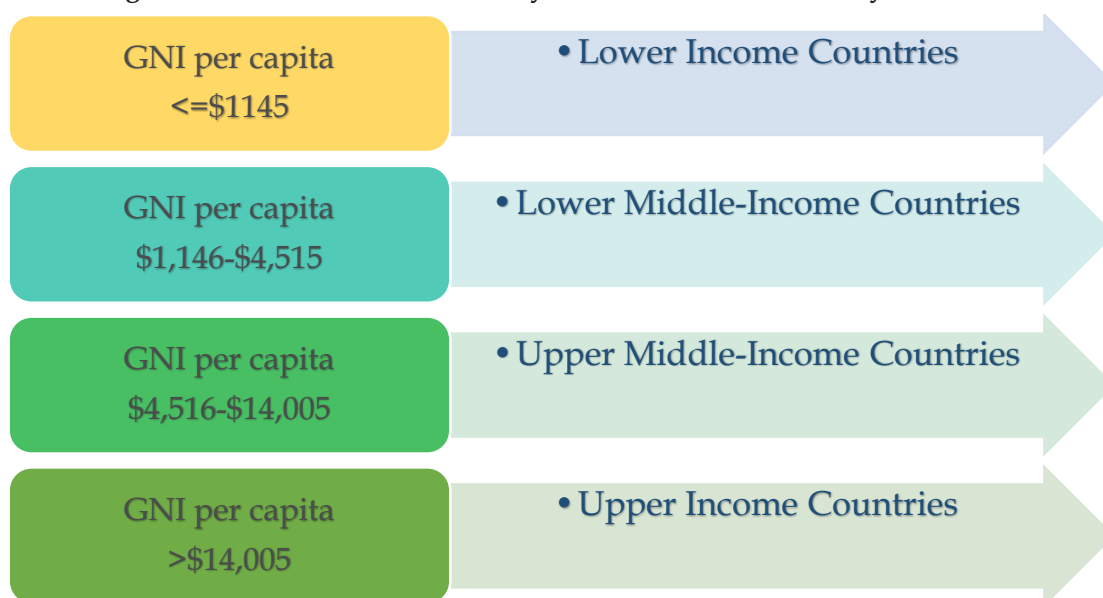
1.8. Methodology

To explore the policy imperatives and expected number of employments in the platform-based gig economy by 2047, this study used a mixed methodology that included both descriptive and quantitative research. The World Bank Indicator for India, NITI Aayog report on gig and platform workers and a variety of published government sources, such as journals, official documents, and government publications were the main sources of secondary data. Further, to study the development path of India from future perspective, the research applies the World Bank Atlas Method while considering Gross National Income (GNI) per capita at current prices from the MosPI press release, population data from UN World Population Prospects 2024, inflation rate of US and India to estimate the future adjusted exchange rate. Further projection has been made and created up to 2047 using three unique scenarios, discussed in the next chapter, each based on specific assumptions. This research also uses NITI Aayog's anticipated data for gig workers which have projected till 2030. Extending this projection to the next two decades, we have employed exponential smoothing ETS model to observe the trend of future employment in the gig and platform economy, commonly known as the "Future of Work" and to achieve the desired developed India Vision result. Additionally, the paper has also considered the Online Labour Observatory data to look at the India's share of the Gig workers supply in the world economy.

2.1. Background

Furthermore, World Bank atlas method has been incorporated to measure the “Developed Nation” status of India considering its classification by Gross National Income (GNI) per capita at current prices. From the current fiscal year 2025, low-income countries are defined as those earning GNI per capita of \$1145 or less. Further, Lower middle-income countries are defined as those earning GNI per capita between \$1,146 and \$4,515 whereas Upper middle-income countries earn GNI per capita between \$4,516 and \$14,005. Similarly, Higher Income status is provided to the countries with GNI per capita more than \$14,005 (World Bank).

Figure 1: Classification of Income by World Bank for the Fiscal year 2024-25.



¹ Exchange rate has been considered as on 2nd dec, 2024.

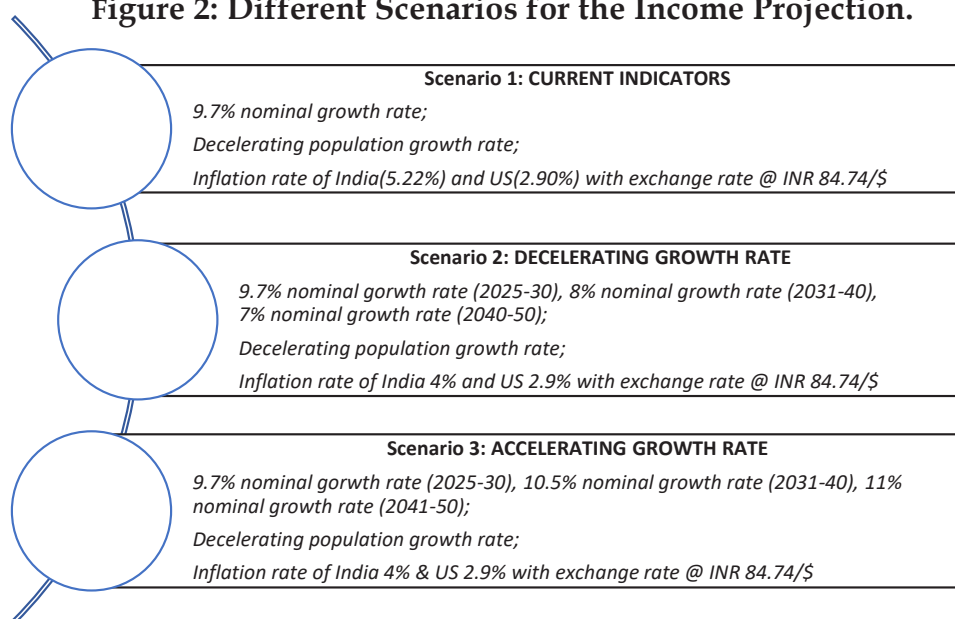
The current price GNI per capita of present fiscal year as a benchmark cannot be used to assess the situation in 2047. But, with the assumption that technological upgradation and innovation will lead to an increase in the standard of living, GNI per capita will change over the next years, hence, three scenarios have been developed in this study. The first scenario represents, with the current nominal growth rate i.e., 9.7 per cent, whether India will reach the goal of developed country and the other two scenarios have been assumed as pessimistic and optimistic scenarios where in the former, decelerating nominal growth rate has been assumed while accelerating nominal growth has been implicit in the later scenario. To forecast India as a developed nation, we have used GNI per capita income data from the Ministry of Statistical and Programming Implementation's latest press note release 2024-25 (MoSPI, 2025).

Furthermore, year on year inflation rates of India and United States i.e., 5.22 per cent and 2.9 per cent respectively, have been considered for the first scenario to project the future exchange rate.^{2 3} For the rest two scenarios (pessimist and optimist) India's retail inflation rate of 4 per cent has been carefully taken because of its target set by the Monetary Policy Framework. For the population rate, it is well known that the population growth decelerating in India but for the exact estimate, the growth rate of the medium variant population has been manually derived by the author from United Nations Population Prospectus 2024.

Extrapolated GNI per capita from the World Bank's Income Classification of Countries



Figure 2: Different Scenarios for the Income Projection.

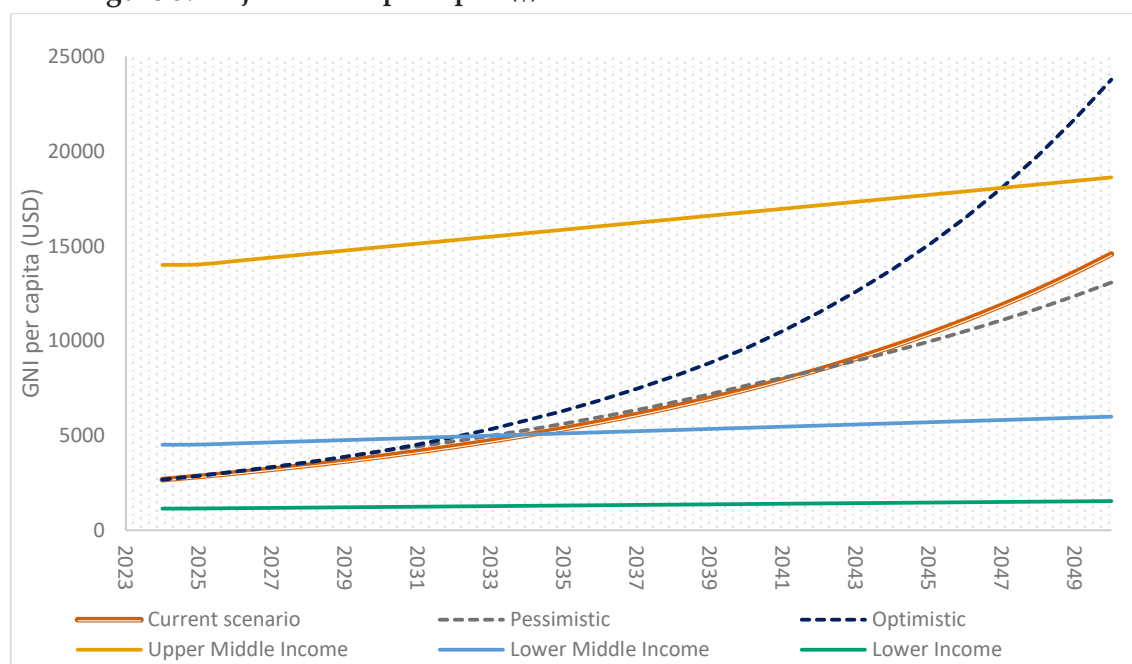


² https://www.mospi.gov.in/sites/default/files/press_release/PR_NAD_07012025_0.pdf

³ <https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category-line-chart.htm>

Figure 3 illustrates the forecast of Gross National Income per capita at current price of India under different scenario with certain assumptions and classification of different income group according to World Bank atlas method for financial year 2024-25. We have used a linear trend model to extend our income level forecast, based on preceding data. These estimates indicate that nations will be categorized as high income if their Gross National Income (GNI) per capita exceeds \$18071 threshold. Furthermore, countries that fall within the projection framework's blue and golden line will be classified as upper-middle income. Similarly, nations that fall between the blue and green lines will be classified as lower middle-income countries. Subsequently, under the current classification system, nations having a GNI per capita below the green line which currently set as \$1145 will be classified as lower income economies. These divisions offer an organized method for comprehending patterns in the distribution of income among the countries and evaluating their prospective economic shifts in the decades to come. To achieve the status of "Developed Nation", India will have to cross the golden line or achieve the GNI per capita \$18071 by 2047.

Figure 3: Projected GNI per capita (\$) for India under Different Growth Scenario



In this projection method, we have assumed a constant nominal growth rate of 9.7 per cent in the first scenario. Given the current macroeconomic indicators and the predicted income data (shown by the orange line), India's objective of becoming a "Developed Nation" by 2047 seems highly doubtful. The expected exchange rate for the year 2047 will be INR 140.90/USD, based on the current inflation rates of 2.90 percent in the US and 5.22 per cent in India. In these circumstances, India's gross national income (GNI) per capita is projected to reach \$11,878 by 2047, if the current nominal growth trajectory continues. This estimated amount is around \$6,000 less than the expected standard for industrialized countries in 2047. In addition, it fails to cross even current high-income threshold of \$14,006. Although India is expected to witness steady economic growth, the country's transition to high-income status within the anticipated timeframe is still uncertain due to the current growth dynamics. To reach this milestone, structural economic reforms, increased productivity and targeted

policy interventions to boost income growth are necessary; and the projections suggest that, even with continued economic progress, India may have significant challenges in reaching the high-income threshold by 2047 following the current trajectory.

Furthermore, in the second scenario, decelerating nominal growth rate has been assumed i.e., 9.7 per cent till 2030, 8 per cent from 2031-38 and 7 per cent from 2039-50. By assuming falling nominal growth rate and stable inflation rate of 4 per cent for India while considering other macroeconomic factors similar to the first scenario, India will not only fall short of its target to achieve a “Developed Nation” status but also will have a troublesome situation as compared to current scenario. With this growth rate, there is high probability that India may stuck into the Middle-income trap. The three different growth rates for different scenarios are based on certain assumptions that India will enjoy the benefits of cheap labour and high rates of investment initially and with time, their impact will decrease. Workers will start demanding higher wage and simultaneously, their standard of living will rise to the upper level. This will take away the cheap labour edge from the Indian economy (Nayyar, 2022) and growth will tend to slow down in the 2030s and 2040s. Till then, India will only reach \$10888 GNI per capita and will be in the middle-income trap. Many Latin American countries are caught in a similar trap and are unable to move up. India needs to achieve consistent high growth rates to reach high-income growth path.

An increased and sustained nominal growth trajectory has been projected in the third scenario, with an annual growth rate of 9.7% until 2032, 10.7% between 2033 and 2040, and 11% between 2041 and 2050. The positive estimates under these assumptions are mostly driven by the cumulative impact of the previous GNI per capita increase while keeping all other aspects consistent with the second scenario. It is anticipated that India will successfully achieve the designation of a “Developed Nation” by 2047 if this pattern of rapid growth continues throughout time. Significant structural changes, such as advancements in technology, a move toward highly skilled employment and increase in industrial productivity, are anticipated to accompany this economic trajectory. It is projected that these advancements will promote steady income growth and improve overall economic efficiency. The projected nominal growth rates will probably support India’s shift to an economy with high incomes and put the nation on an upward developmental trajectory in light of these fundamental dynamics. However, in order to guarantee long-term economic resilience and sustainability, reaching and sustaining such high growth levels would require proactive policy interventions, calculated investments in human capital, and institutional reforms.

2.2 Projections of Gig Economy by 2047

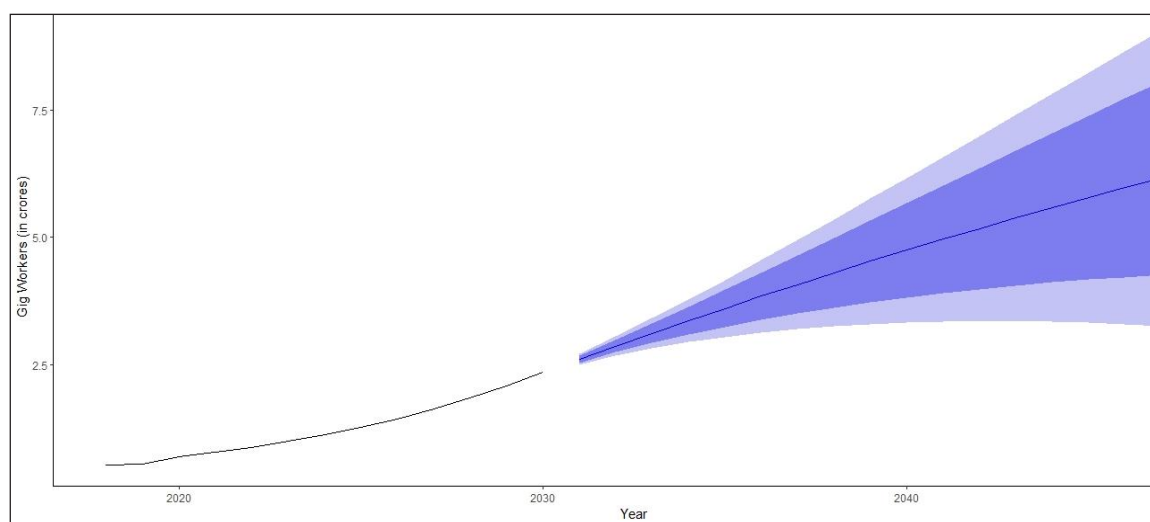
The gig and platform economy has offered new markets for businesses and more income-generating opportunities for workers in the last few years as it has the potential to shape the future of work. According to ILO’s World Employment Outlook report (2021), the number of web-based and location-based online platforms increased from 142 in 2010 to over 777 in 2020. Particularly, in the restaurant and retail industries, numerous small and medium-sized enterprises have started location-based platforms and are depending more and more on digital labour platforms. The gig and platform economy is booming at an exorbitant pace. Most of the studies observed that the web-based and location-based gig workers situated in urban and semi-urban areas to find jobs are mostly migrated from rural to urban areas (Dhanya MB, 2025) and are also increasingly used by educated rural youth. As a result of the technological penetration by the end of the decade, the share of workers participating in the gig economy in rural areas will rise as well as is the case with the developed countries.

According to the ILO report, around 73 per cent of the highly educated persons in developing countries work for online web-based services which is relatively high as compared to the developed countries, which may be due to the large population and less employment opportunities. The proportion of highly educated females working as freelancers is as high as 81 per cent in developing countries. The primary reason may be that women have to fulfil domestic duties as well. App-based and web-based work provide the flexibility in the job and people suffering from different kinds of ailments are able to participate owing to the flexibility of work by opting when to work and when not to. In developing countries, most of the people engaged in app-based taxi services are highly educated and then also prefer to do semi-skilled jobs. Moreover, these types of jobs are easy to get as they require fewer entry and skill barriers and provide equal opportunity to all irrespective of gender, caste and age. People belonging to the younger age group face difficulties in getting a suitable job that matches their skill set and level of education, therefore they have to select for employment in the gig economy to ensure income stability (ILO, 2021).

2.2.1 Forecasting Employment in Gig and Platform Economy

With the vision to achieve “Developed Nation” status by the year 2047, we have taken another method to predict the total employment in the Gig and Platform Economy. NITI Aayog in their report have forecasted the data till 2030. In this study, we have further used NITI Aayog data and projected it for the year 2047 to know the dimension of gig employment. In this analysis, the Exponential Smoothing ETS model (Error, Trend and Seasonality) is used to further forecast the trend as the method gives more weightage to recent observations.

Figure 4: Forecast of Employment in Gig and Platform Economy using ETS model



Source: NITI Aayog data Forecast

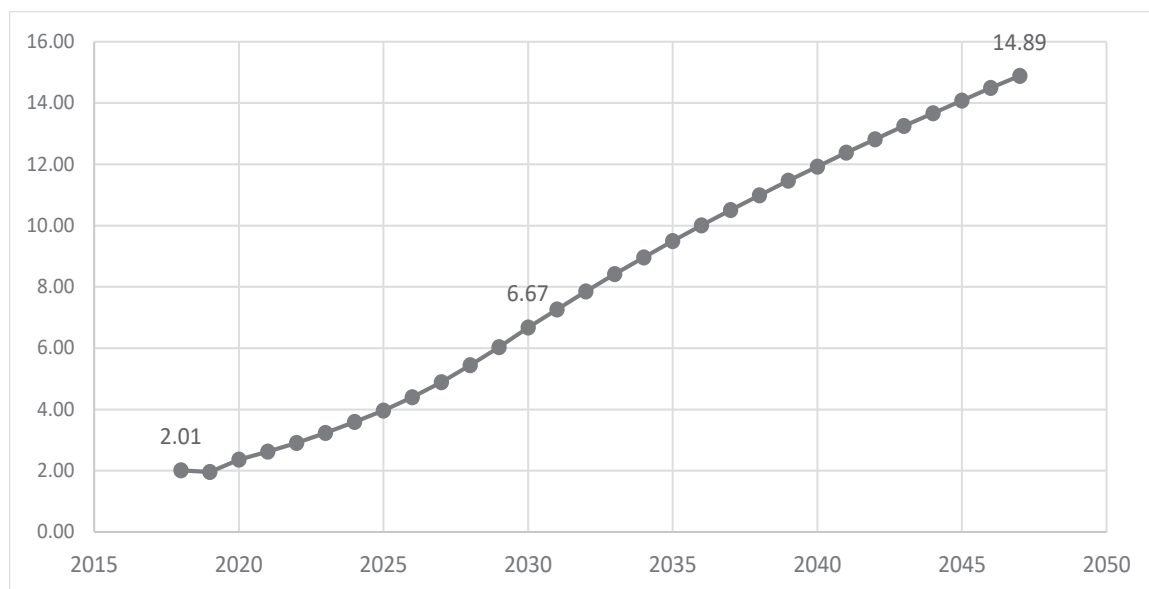
The estimate for gig employment shows a strong increasing trend in the number of gig workers in India, pointing out that the gig economy would expand dramatically (see Figure 4). The point estimate forecasts that number will grow to 6.16 crores by 2047. This constant growth indicates the rising importance of gig-based employment, which is being driven by technological improvements, shifting labour market choices and a need for flexible work arrangements. The estimate predicts a compounding growth pattern, with the number

of gig workers more than doubling over the next 17 years, indicating that the sector will significantly play an important role in employment generation in the Indian economy encompassing a wide range of jobs from freelancing to technology-based across different industries. The anticipated increase, however, has varied levels of confidence, as represented by the Lo 80/Hi 80 and Lo 95/Hi 95 ranges. The 80 per cent confidence intervals (darker region) indicate a narrower prediction range, but the 95 per cent confidence intervals (lighter region) show higher uncertainty. As the projection progresses deeper into the future, these gaps expand, indicating the growing complexity and unpredictability of long-term labour market forecasts. If assuming the aspirational trend, by 2047, the sector is capable enough to generate 9.08 crore of employment. On the other hand, under the pessimistic scenario, this trend can be as lower to 3.25 crore of jobs generated by the sector. This circumstance is considered under the several external factors like technological disruption or advancement, regulatory or policy changes, economic shocks or boom etc which might have a significant influence on the future magnitude of the gig workforce. With the upward trend in the sector and the employment points to a wider shift in the labour market dynamics, comprehensive measures and strategic interventions from the firms and policymakers will be required to ensure that workers and the economy as a whole prosper from this shift.

2.2.2 Share of Gig to Non-agriculture Workers:

As per the report of NITI Aayog on gig economy, the gig workers have increasing with a growth rate of 13 per cent per annum and the gig economy has grown to 4.1 per cent of the total livelihood in India and constitutes 6.67 per cent of the non-agricultural workforce by 2030. If we further extend this projection for employment in the non-agriculture sector and gig economy, using exponential smoothing average, India will have almost 6.16 crores of employment in the gig and platform economy with a point forecast which will constitute 14.89 per cent of the non-agricultural workforce in India by 2047 (see Figure 5).

Figure 5: Forecast of Percentage Share of Gig to Non-agriculture Workers:



Source: Forecast based on exponential smoothing of the projected data of NITI Aayog.

Figure 6: Share of Freelancers in Global Labour Supply (%)

Country	Cases per 100,000 people
China	1.37
Indonesia	1.61
Egypt	1.85
Ukraine	2.57
Russia	2.78
Philippines	3.26
United Kingdom	3.74
United States	5.48
Pakistan	12.16
Bangladesh	14.78
India	26.58

As we know, the exact data on the gig and platform economy is unavailable worldwide and the available numbers are only based on projections or extraction from national-level data using different methodologies that characterizes the gig and platform workers. However, the Online Labour Index, 2020—a joint project between the ILO and Oxford Labour Institute—released real time data on the supply and demand for online freelance workers from various Western and South Asian nations. According to it, India consist of around 27 per cent share of workers in the global gig/freelancing in 2024. As can be interpreted from the graph, the share of South Asian countries like India, Bangladesh and Pakistan is more than 10 per cent of the labour share worldwide stating that the most of gig and freelancing labours are supplied by only these lower middle-income and emerging countries whereas substantial gig/freelancers are demanded by the developed nations of the world. This implies that the needs of the global north especially from the United States, United Kingdom, Canada, Australia and Germany can be fulfilled by labour from the countries of the Global South. India can meet the demands of the world because of its large English-speaking workforce and high concentration of competent workers with backgrounds in technology and software development. Apart from this, there is a significant possibility for increasing the gig workforce in other various fields as well, such as creative multimedia, writing, translation services etc. India is anticipated to become the world's largest source of gig and platform workers by 2047, increasing both employment prospects and worldwide demand.



CHAPTER III: GIG AND PLATFORM WORKERS: CHALLENGES AND OPPORTUNITIES

In the evolving global market, the gig and platform economy has become a dynamic force changing the outdated employment pattern and providing immense opportunities for flexibility, creativity and entrepreneurship. It is crucial to assess the potentiality and challenges this sector carries as we project its path into 2047. On the one hand, the gig and platform economy promotes inclusive economy by filling gaps in traditional employment dynamics allowing work independence and unlimited opportunities to earn (Manyika et al, 2017). However, it rises concerns of workers rights, job security, social protection etc. as the gig and platform workers often work outside the boundaries of traditional workers protocols (De Stefano, 2016). In addition, the platform's essential algorithmic management and rapid digitalization present effective and ethical complications such as the possibility of algorithmic bias and data privacy concerns (Rosenblat et al, 2016). Hence, this chapter will explore these dualities of opportunities and challenges in a wide-ranging method and further examine how this sector might be used to promote sustainable development while addressing their fundamental limitations. Most of these arguments in this chapter arose from the National workshop conducted in August 2023 at V V Giri National Labour Institute.

3.1 Opportunities

1. Flexible Employment:

By enabling workers to be involved in remote work, on-demand and task-based arrangements that are usually different from traditional employer-employee relationships, the gig and platform markets encourage flexible scheduling. Employee autonomy and adaptability have been increased by this model, allowing people the freedom to determine their own working hours, choose activities that best suit their abilities and work on various platforms simultaneously. The International Labour Organization (ILO, 2021) maintains that digital labour platforms have changed employment structures by offering possibilities for flexible employment, especially for individuals who are less able to access conventional labour markets such as women, youth, physically abled and those from least developed countries. For instance, ride-sharing services like Uber and Ola, delivery services like Zomato and Zepto Instamart, and freelance platforms like Fiverr let professionals choose assignments according to their availability and level of experience. Berg et. al (2022) discovered that because platform employment enables workers to rapidly switch careers and enterprises, it is a significant source of revenue during economic downturns. Although the gig economy offers unparalleled independence, it also necessitates regulatory frameworks that address the precarious character of these employment.

2. Diversifying the Income Opportunities:

The gig and platform economies contribute significantly in expanding one's income by enabling workers to engage in a variety of revenue-generating activities outside of traditional employment. People could enhance their principal income, lower the risk of bankruptcy and strengthen their economic resilience since digital platforms provide a variety of work options (Berg et al., 2018). Particularly for those with limited traditional job options, the availability of gig work in sectors



like food delivery, ride-hailing and freelancing digital services helps workers overcome labour market constraints (Kalleberg and Dunn, 2016). Moreover, while gig work offers alternative revenue sources that accommodate personal needs and caregiving responsibilities, it is important for women, students, and marginalized communities (Schmidt, 2017). Empirical study indicates that working on multiple platforms or multi-apping, decreases income instability by increasing earnings diversification and decreasing dependence on a single employer (Rani and Furrer, 2021). However, platform-specific regulations, access to the Internet of Things and algorithmic control all affect the degree of income diversity (Wood et al., 2019). All things considered, the gig economy is essential for diversifying sources of income, particularly in nations where labour market upheavals are chronic.

3. Access to the Global Market:

Access to the global gig and platform economy has altered labour markets, providing millions with flexible job alternatives. Platforms such as Uber, Airbnb, Ola and Amazon, Porter connect workers and clients across regions, allowing for remote employment and income production. According to the International Labour Organization (ILO), the gig economy employs 154-435 million worker worldwide, with significant growth in developing nations. This growth is being fueled by digital connectivity, smartphone usage, and demand for on-demand services (World Bank, 2024).

4. Skill Development:

The gig and platform economies have altered the way humans work, forcing a shift in skill development to remain competitive. Workers in this industry must have a broad range of skills, such as digital literacy, adaptability and self-management. Digital skills are essential, as platforms frequently depend on technological advances for communication, task management and service delivery, for instance, proficiency in using apps, navigating online marketplaces etc. Furthermore, soft skills such as communication, problem-solving, and time management are essential, as gig workers frequently work autonomously and must effectively manage client relationships. According to the WEF, demand for these skills is rising as automation and digital platforms change labour markets. Continuous learning and upskilling are essential for remaining relevant in this dynamic world. Furthermore, the gig economy emphasizes skills in entrepreneurship because individuals frequently work as independent contractors. This needs financial literacy, marketing knowledge, and the ability to effectively brand oneself. According to McKinsey & Company (2021) study, gig workers who prioritize skill development get higher wages and are more satisfied with their jobs. However, many people continue to face barriers to accessing training and resources, particularly in emerging economies.

5. Micro-Entrepreneurship:

The gig and platform economies have transformed the way people work, creating previously unheard-of chances for microentrepreneurship. Platforms such as Airbnb, Amazon, Urban Company, and Uber have opened up market access, allowing people to monetise their skills, assets and time. These platforms remove traditional obstacles to entry, such as expensive startup costs and the necessity

for physical storefronts, allowing people to work as independent contractors or business owners. For example, an Uber driver can create their own schedules, while an Airbnb host can scale their business based on demand. This flexibility enables individuals to develop personalized business models that are adapted to their own circumstances, boosting creativity and self-reliance (Sundararajan, 2016). As micro-entrepreneurship becomes more popular, policymakers and platform operators must address the issues to promote long-term and equitable growth in the gig economy.

6. Remote Work:

Since the gig and platform economies have made remote job possible, people now able to offer their skills and services anywhere in the world without being restricted by geographical region. This has drastically changed the labour market. Many platforms allow workers to perform tasks remotely from any location with an internet connection by utilizing digital infrastructure. The COVID-19 pandemic has accelerated this change by emphasizing the necessity for remote work solutions and raising demand for digital services. Businesses benefit as well from the platform economy since it lowers overhead expenses, makes scalable workforce solutions possible, and allows them access to a worldwide labour pool. However, gig workers continue to suffer a number of challenges, such as mental health concerns, social isolation and poor cooperation. Considering these obstacles, the gig and platform economies are expanding, offering significant remote employment options and challenging conventional job models.

3.2 Challenges

1. Lack of Social Security:

Since the workers generally working self-regulating contractors in the gig and platform economies are not eligible for traditional employee benefits like paid leave, health insurance and pension plans. They are especially at risk during times of illness or unstable finances because they do not receive any social security. Although platforms frequently claim to offer insurance benefits to employees, empirical data indicates the opposite. There are serious loopholes in the occupational health and safety regulations for app-based transport workers, according to a 2019 poll by the Indian Federation of App-based Transport Workers (IFAT) and the International Transport Workers' Federation (ITF). The results depict that only a small fraction of respondents reported coverage for accidental insurance while the majority didn't have or were unaware of access to health, medical or accident insurance. This uncertain circumstances and vulnerabilities encountered by gig workers are highlighted by the lack of social protection safeguards and worker protections, highlighting institutional shortcomings in ensuring their welfare (IFAT, 2021).

2. Algorithmic Asymmetry:

In the framework of gig and platform economy, algorithmic asymmetry refers to the unevenness of control dynamics and information disparity created by the platform companies (ILO, 2022). Gig and platform workers often find jobs or tasks through online platforms that match with potential employers or clients. These platforms use algorithms to manage various aspects of the gig work, such



as matching workers with jobs, setting prices and rating workers' performance. However, reliance on algorithms can lead to certain imbalances as explained below:

- a) **Information Access:** Platform aggregators have broad access to their workers' personal information, including entire records of their order history, indicators of performance and user evaluations. Workers, on the other hand, frequently do not have access to the algorithms that control their work such as how performance assessments, compensation and assignments are allocated. This huge knowledge asymmetry creates an imbalance in authority, putting workers at a disadvantage in negotiations and reducing their ability to understand and create dispute with platform. As a result, workers are frequently left without redress or information about the factors driving their job conditions, accumulating their precarious position within the gig ecosystem (Rosenblat & Stark, 2021).
- b) **Rating and Ranking Systems:** Gig platforms usually apply rating and ranking structures, in which workers are evaluated based on consumer input and given a numerical score or rank. These indicators have a significant impact on a worker's access to future tasks or reservations, as they are frequently included into algorithmic decision-making processes that prioritize higher-rated workers. However, the algorithms guiding these evaluations are frequently transparent, concealing the particular criteria utilized to determine scores. This transparency hinders workers' ability to determine areas for progression or stand possibly biased or unfair calculations, deepening power disparities and reducing their ability to expand their standing on the platform.
- c) **Algorithmic Control:** In the gig and platform economy, algorithmic control affects assigning of labour and their accessibility, while usually deciding work schedules, task distribution and wage based on data. These structures may use worker priority and dynamic pricing policies, which result in flexible sources of income and influence labour market dynamics inside platform-based work setting (Kellogg et.al, 2020).
- d) **Bias and Discrimination:** Algorithmic decision-making procedures that involuntarily reinforce existing disparities in society can give rise to bias and discrimination on the gig platforms. It can strengthen partialities when they use historical data that represents previous unfair actions which could result in the unfair treatment of specific demographics. Partial assigning or task distribution of work or rating systems, for instance, can disproportionately impact marginalized workers, thereby sustaining systemic disparities. This problem, which is sometimes called algorithmic bias, emphasizes the necessity of thorough assesment and moral machine learning model designing in order to guarantee fairness and reduce discriminatory implications in platform-based labour marketplaces (Rahman, 2021).

3. Job Security:

Job security in gig work remain significant concern attribute of precarious nature of employment it offers. Sector often lacks stability and benefits associated with full time employment. Unlike the traditional jobs, workers in gig and platform

economy are more vulnerable mainly because they are considered as independent partners/freelancer instead to “Workers” and hence, they are excluded from the protections which usually accessible by the traditional workers. Another aspect which is detrimental for the gig workers is that the sector is heavily rely on market demand factor. Hence, even a small change in market may affect the jobs of gig workers. For instance, ride hailing services in the locality are influenced by multiple factors such as traffic situation, weather etc (Schor et.al, 2021). Furthermore, the competitive nature of the gig economy can result in a “race to the bottom,” in which workers fight for low-wage jobs with few or no benefits or job security.

4. Disparity in Pay:

The gig economy has changed labour markets by offering flexible, on-demand work arrangements. However, this change has revealed large salary differences between gig workers. Gursoy et al. (2024) investigated the relationship between job instability and job satisfaction among gig workers, and found that income and promotion chances considerably moderated this association. According to the findings, poor compensation exacerbates job instability, resulting in lower job satisfaction. This highlight the necessity of unbiased wages in ensuring gig workers’ well-being. In addition, the lack of established wage regulations in the gig economy permits platforms to set compensation rates independently, frequently resulting in income below minimum wage norms. According to a Fairwork India, around half of the gig workers received the statutory minimum wage after deducting work-related expenditures, with many having to job more than the typical 48-hour work-week to meet this requirement (Fair Work, 2021). These differences emphasize the need for policy changes to promote equal wage in the gig economy. Executing uniform wage frameworks, encouraging transparency in algorithms and addressing gender discrimination are all crucial steps toward minimalizing wage discrepancies for gig workers. Such policies would help to create a more equitable and sustainable gig economy by ensuring that all workers are fairly compensated for their efforts.

5. Lack of Employee and Employer Relationship:

The gig workers are not considered as either regular or contractual employees since they use digital platforms which modifies the traditional employer-employee dynamic. Their activity is not limited to a single control hence complicating their classification under current labour guidelines (Ria, 2020). In the gig and platform economy, outdated job arrangements are replaced by titles like independent contractors, freelancers or partners which enables platform-based companies to position itself as aggregators rather than employers, allowing them to avoid labour regulation and responsibilities. The lack of an explicitly specified employer further reduces their negotiating power, making them subject to unbalanced working circumstances and salary discrepancies. As the gig economy grows, resolving these authorized and regulatory gaps is critical to ensuring fair treatment and protection for workers on digital platforms.

6. Mental Health Concerns:

The flexibility in gig and platform work can have a considerable impact on employees’ work-life balance, distressing their sleep patterns and daily routines. The gig workers must be available whenever tasks arise, resulting in irregular schedules and persistent job-seeking attempts once an assignment is over. This ambiguity exercises enormous



pressure adding to increased mental stress (Sadia, 2023). The erratic nature of working hours worsens work-related stress, harming both mental and physical health. Additionally, gig workers sometimes take-on multiple duties across different jobs at the same time, making it difficult to efficiently manage their diverse responsibilities. Also, platforms sometimes restrict opportunities for social engagement, separating workers from larger social networks. The non-appearance of direct interaction with co-workers or a organized work environment limits their exposure to the outside world, which might have a negative influence on their psychological and emotional well-being (ADB, 2019). Given these difficulties, it is critical to monitor and address gig and platform workers' psychological health to ensure that it does not worsen, harming their productivity and general quality of life (Lee, 2020).

7. Health and Physical Safety Concerns:

The nature of the job exposes gig workers in ride-sharing, food delivery and transportation services to severe health and safety issues which frequently caused by extended exposure to road dangers such as accidents, traffic congestion and extreme weather situations. According to a study conducted by Chen et al. (2022), gig workers in these fields are excessively exposed to road-related injuries because of the burden to achieve tight delivery deadlines, which often leads to unsafe driving habits. Moreover, a lack of employer-provided safety training exacerbates these hazards, leaving workers unprepared to address roadside emergencies. The gig workers also frequently contact with new clients or consumers, which may sometimes expose them to physical damage or put in dangerous situations. The isolated and dispersed character of gig employment increases the likelihood of encountering sometimes aggressive individuals, leaving no alternative for protection or support which put in troubling situation for workers generally in ride-sharing services because the interactions usually take place in restricted areas (Woodcock & Graham, 2021).

8. Lack of Collective Bargaining Power:

The recent emergence of the platform and gig economy and the current uniqueness of the digital labour marketplace has not yet completely established the concept of collective bargaining according to the traditional definition. The degree to which collective bargaining is practiced may be correlated with how significant the gig economy is in the labour market. Despite considerable media coverage and ongoing conversations, gig and platform workers do not really enjoy the bargaining power with their aggregators for the fair wages, working hours or social protections. The labours are treated as independent workers or self-employed, lacking a traditional employee-employer relationship further curtailing their ability to form unions or association rendering the inability to do collective bargaining (Johnston and Kazlauskas, 2019).

9. Income Uncertainty:

A lack of job benefits, changing demand, and changeable pay rates all contribute to financial instability for gig workers, who are frequently hired through digital platforms (Woodcock & Graham, 2021). The lack of guaranteed minimum earnings, job security, and access to social protections—all of which are generally connected with traditional employment—exacerbates this uncertainty (Kalleberg & Dunn, 2021). The low-income workers who often depend on gig platforms

as their primary source of income are disproportionately impacted by income unpredictability in gig labour (Rahman & Thelen, 2021). Because the workers have minimal control over their work schedules, income and access to employment possibilities, platforms' algorithmic management strategies further exacerbate this uncertainty (Rosenblat & Stark, 2016). Additionally, the popularity of dynamic pricing schemes and ambiguous payment arrangements lead to uncertain revenue source (Rahman & Thelen, 2021).

10. Digital Divide and Limited Career Advancement:

The digital divide has a significant impact on career advancement in gig work, aggravating existing inequities. The digital gap is defined as the disparity in access to and effective use of digital technology, which is necessary for participation in the gig economy (Graham & Anwar, 2021). Workers with insufficient access to high-speed internet, digital devices, or digital literacy are frequently barred from higher-paying gig opportunities or platforms that need advanced technical abilities (Woodcock & Graham, 2021). This results in a divided labour market in which digitally privileged workers have better prospects while others are relegated to low-paying, uneven jobs. Furthermore, the gig economy's algorithmic management systems frequently reward workers who can improve their online engagement, further marginalizing people with imperfect digital access or abilities (Kässi & Lehdonvirta, 2021). This dynamic strengthens a loop of limited career growth for deprived individuals who are unable to use digital technologies for skill development or networking. Recent research indicates that interventions such as subsidized digital infrastructure and tailored digital literacy programs are critical for closing this gap (Choudhary & Bansal, 2022). Without such solutions, the digital divide would continue to deepen structural inequalities in gig employment, preventing egalitarian career advancement.

11. Unpredictable Workload and Overwork:

The gig economy's inherent flexibility frequently results in unpredictable workloads, with workers experiencing abrupt increases in demand followed by the periods of idleness. Managing these differences presents substantial financial and emotional issues, as inconsistencies in job prospects can result in uncertain income and increased stress levels. The freedom to choose work hours and locations, while seemingly promising can compromise the lines between professional and personal life, increasing the danger of overworking. This lack of explicit division might result in extended working hours, which contribute to physical and mental tiredness. According to Ali and Sivasubramanian (2024), lower employment flexibility exacerbates the negative relationship between technological stress and well-being, emphasizing the necessity of organizational methods to increase flexibility in addressing these difficulties. Furthermore, the obligation to be constantly accessible for future gigs entails frequent job searches, which increases stress and has a negative impact on mental health. The lack of a structured work environment, as well as the necessity to juggle various responsibilities, might make it tough to achieve a long-term work-life balance. As a result, gig workers are at an increased risk of stress, necessitating the introduction of supportive measures to protect their well-being.



CHAPTER IV: POLICY RECOMMENDATIONS

4.1 Background

Different estimates for the future of gig and platform economy indicates that there will be an increasing expansion of gig and platform workers in India. The sector offers opportunities mainly in transportation, delivery, retail, personal services and more. The flexibility makes it more attractive and any individual can be easily turn into a gig worker with using a digital devices with minimal entry barrier (Datta et. al, 2023). Such low entry barriers, along with the flexibility to hold multiple jobs, grant the platform economy an immense potential to leverage India's demographic dividend i.e., more than 400 million millennial (Morgan Stanley, 2017).

Indian two-wheelers, as an example, emerged as the growth engine for expanding the localization economy in India, the largest two-wheeler market in the world. Sharing resources like motorbikes or scooters (in the form of bike taxis) opens up potential earnings for millions of people while also enabling first and last-mile connectivity to public transport and a reasonably priced way for the general public to commute each day. OMI foundation estimates the bike taxi in India has the potential to generate over two million livelihood opportunities and revenue of USD 4-5 billion (OMI, 2020). Likewise, over the long term, the number of gig work in India could reach 90 million, with total transactions valued at more than \$250 billion. Hence, undoubtedly platform economy will flourish in near future in India (BCG, 2021).

However, similar to traditional workers, social security benefits like pensions, health and maternal benefits, sick leave should also be made available for platform workers in order to ensure their welfare (ILO, 2023). Establishing a statutory national registry for platform and gig workers, managed by both central and state governments, will help ensure that all of them have access to social security. The recent initiatives of e-shram portal, a centralized record for all platform workers with a unique code can help control and target assistance effectively. Moreover, policymakers need to keep a balance between social and economic goals while addressing social security issues in the gig economy. To address the challenges and seizing the opportunities for gig and platform workers in India requires collaboration between the government, platform companies, worker representatives, and other stakeholders. Platforms themselves can play a role by voluntarily improving worker benefits and well-being, recognizing the importance of work satisfied and stable workforce. Thus, the gig and platform work and working conditions have drawn the attention of policymakers, who are particularly interested in finding ways to guarantee employment and income security, access to social protection, overall career development, and rights to collective bargaining (OECD, 2020). In the previous chapters, it emphasized the need of creative policy solutions to raise the standard of these occupations and allow employees to seize new opportunities in the evolving work environment.

4.2 Shaping the future of work and employment by 2047

In the Indian context, future of work is expected to be again reshaped by technological advancement, automation and other factors by 2047 while playing major role in the global labour market. Some possible scenarios exist are:



The gig and platform economy is going to be significantly impacted by Machine Learnings and Artificial Intelligence, which will make it simpler and less expensive for businesses to outsource labour to independent contractors. This can result in the emergence of several different platforms for gigs that target particular markets or skill sets. Freelancers will work remotely for customers all around the world as the gig economy becomes more globalized. Due to this, it is also presenting opportunities for freelancers to reach new markets and clients. This may result in higher competition for employment and reduced earnings. Concerns about climate change and sustainability may spur the creation of new gig platforms as it helps in reducing GHGs and CO2 emission as the sector may emphasise more on green careers in the installation of renewable energy sources (Liu K et al., 2023). Freelancers may have the chance to work in developing sectors and contribute to environmental solutions as well. The gig economy may become more regulated as governments and labour groups push for more protections and benefits for gig workers. This might include new laws governing the minimum wage, health insurance and social safety net, (recent initiatives of Government of India connecting with Ayushman Bharat) as well as the creation of unions or cooperatives for gig workers. Women in the gig economy are key focus, as it is the platform work which can fill the gender gap with respect to equal pay and opportunities. But its effectiveness are highly based on the programming and algorithm used in platform by aggregators. Their safety and security are also major concerns which need to be rectified so the sector can absorb the large number of women workforce.

On the other hand, there has been a lot of attention paid to the difficulties posed by the gig economy, such as job instability, downward pay pressure, rejected pay due to lower ratings by customers, lack of opportunity, and hollowing-out of job possibilities for employees (ASSOCHAM, 2020). As the platform economy is advancing, policymakers are in debate how to guarantee the platform workers receive the same labour standards and protections as traditional employees because they aren't given any social protections or labour rights despite appearing to be self-employed. Labour norms, such as minimum wage, overtime pay, exploitation, and workplace safety regulations, are an important topic for policy development, particularly in the case of women gig workers. These might be considered together with the distinctive qualities of gig employment, namely the changing demand for services and the unpredictability of pay. Moreover, since gig job is flexible, it may necessitate a different calculation for overtime compensation than it does for typical workers (Katsnelson L et al., 2021).

4.2.1. Better Wage and Working Hours:

Due to the status of independent contractor, platform workers are not entitled to any of the benefits including minimum wages, overtime wages etc. A study shows that 60 per cent of platform workers work seven days a week while 47% of the workers work for more than 12 hours a day to earn additional income (TISS, 2020). Independent contractors face significant economic hindrances despite having complete control over how and when they work, greater flexibility due to being self-employed, and non-compulsions to report to the higher authority. This is particularly true for low-skilled jobs, which make up the majority of gig workers. As independent contractors, platform workers often lack the bargaining

power to obtain favourable financial terms with the employer and are thus likely to receive pay, benefits, and working environments that are significantly less favourable than those enjoyed by traditional workers with standard arrangements performing comparable work.

Fairwork study (2021) shows platform workers are reluctant to the minimum wage policy. In an interview with gig workers conducted in Bangalore (Woodcock, 2020), delivery partners noticed reducing payment per trip from 60rs/trip to 40rs/trip to 30rs/trip. They even did not receive a chance to negotiate their payment with the platform. There is a need to act on the minimum wage payment of the gig workers which does not force them to degrade their living standard (Woodcock & Graham, 2020). By the existing laws, workers who do not fall under the traditional jobs and are engaged as part-time workers are unregulated and insecure. The recent Social Security Code (2020) has considered the definition of gig and platform workers and many provisions to support their livelihood. By 2047, India should have a well-organized gig economy with higher income and shorter working hours. Even if they work for additional hours, gig workers should be compensated fairly and creating a more favourable atmosphere for gig workers may help attract more individuals to the gig economy.

4.2.2. Improved Digitalization

The emergence of the gig economy in the digital age has been facilitated by the widespread use of the internet, and digital devices, increased digital literacy. A framework for the digital world is gradually taking shape with these and last decade onwards, emerging countries like India have already initiated this digitization wave. The Fourth Industrial Revolution, or Industry 4.0, is being greatly influenced by four technological developments i.e., cloud technology AI, big data and high-speed internet that is resulting in the formation of creative tech-based jobs (McKinsey & Company, 2022). Fundamental technological abilities are still essential to unlock the full potential of gig markets, even while entry barriers to participation in the gig labour market are minimal, particularly in transportation digital platforms. Even as the number of women is increasing in the Indian gig labour force, knowledge of technology is still lagging behind them as compared to the male workforce (ORF, 2021). Not only in terms of technical knowledge, women labour force are even far behind in other mechanical skills that are required prominently in the gig economy such as two-wheeler or four-wheeler driving skills (Kochhar R., 2020). The future of the gig economy is likely to be optimistic as government initiatives like Skill India and Digital India across the country are going to help at the broadest level.

4.2.3. Safeguard from Inequalities

Inequality against gig workers has increased recently on the ground of caste-gender (Curran, 2021). Additionally, COVID-19 has made gig labours hired by numerous businesses even more miserable and vulnerable. Even in the IT infrastructure sector is considered as exacerbating discriminatory biases, demographic information, and reviews (Fernandes, 2018). For the vision of a developed India-2047, this needed to be correct by enforcing the strict laws against the discrimination, awareness and education among the citizen and also among the gig workers to know their rights and what can they do if they face any



discrimination at any point of time. Apart from this, aggregators must ensure the equal pay to all the gender and no inequalities would be take place among on account of payment. This will help women to get similar pay like men and increase their income independency.

4.2.4. Gender Responsive Platform

The representation of women in the gig economy has expanded from the previous decade due to the flexible way of working and higher freedom in working patterns (Silbermann, 2020). As mentioned earlier, people working in this sector choose the working hours according to their comfortability which suits their lifestyle to achieve higher work-life balance. In India, already the estimated representation of women in labour force participation is less as that of men (PLFS, 2023-24). In Indian society, women predominantly undertake the role of primary caregivers within their households. Consequently, even those with high or moderate skills often unrestraint their careers due to caregiving duties for the young and elderly. Traditional employment structures make it challenging to reconcile caregiving responsibilities with professional career. Gig and platform is one of the sectors that can provide stability in the life of working women as they can perform their work remotely (even staying at her home) with flexible timing while care-giving. However, this will also create hectic schedule and isolated work life balance for them (Warren T., 2021). Still, this will further be going to result increasing share of women in economic activities and acceleration in Labour Force Participation Rate among women in India.

But a study shows that the algorithms play a significant part in keeping workers on a strict schedule in platform work and that in order to earn a respectable income, workers are often overworked and exhausted (Wood A. et. al, 2018). The fundamental idea of “flexibility” is obviously what makes the gig work more “desirable” (Dhanya MB et al., 2025). It is also significant to point out that women continue to dominate the traditionally feminized fields of domestic and beauty labour even in platform economy. Their representation is comparatively very few in food delivery industry and often faces difficult to interact with other platform workers while avoiding the “hubs” since, it is dominated by male congregated (Bingquin, 2024). The endeavour to increase the number of female taxi drivers has been effective because of initiatives from various apps company, including Koala Kabs, and TaxShe. Consequently, over the past couple of years, platform workers have started to organize in opposition to the discriminatory rules of platforms. However, there were no specific organized groups for women employees, and their voices were entirely muted in these environments that were controlled by men.

To achieve Vision 2047 for Platform workers, a few effective policy changes is essential to be implemented for this kind of facilitation. The inclusion of platform workers under the Sexual Harrassment of Women at Workplace Act is also of vital importance. Women workers who report incidence of sexual harassment are being handled on an individual basis because there are currently no internal panel accessible to them. To protect and ensure safety of women at the workplace, few major steps such as providing an emergency button, installing dashcam, inclusion of harassment laws at the workplace etc. can be the few solutions. These limitations required to be followed up as soon as possible so that more platform economy can attract large number of women workers to achieve the vision of 2047.

Figure 7: Different Factors Requiring Strong Focus



4.3 Specific Policy Recommendation for Gig and Platform Workers in India

To ensure the gig workers protection mentioned in the below figure there is a need to outlines comprehensive policy recommendations that encompass worker classification, labour rights, collective bargaining, portable benefits, algorithmic accountability, data transparency, health and safety standards, training opportunities, dispute resolution mechanisms, data privacy, and market competition. These recommendations are grounded in the principles of inclusivity, fairness, and adaptability, with a focus on creating an environment in which gig and platform workers can thrive without compromising their fundamental rights and societal contributions.

Creating effective legislative proposals can aid in ensuring that gig and platform workers receive fair treatment, sufficient protection, and improved working circumstances. Here are some policy suggestions:

4.3.1 Clarity and Transparency

Implementing policy measures that require transparent and simple terms of service is essential for encouraging fair and open practises within the gig and platform economy. These agreements accomplish the relationships between platform workers and their platforms, but they frequently contain sophisticated legal terms that may be difficult for workers to understand clearly. These standards must be obvious about how tasks are assigned, completed and are ought to describe how the computer programme choose the assignments function. Promoting transparency in the fee structures and payment methods used by platforms is the cornerstone of a just and equitable gig and platform economy.



Platforms should also be required to give thorough breakdowns of all payments made to employees, including any deductions, taxes, and service fees. This transparency enables workers to gain a better understanding of their earnings and ensures they are fairly compensated for their efforts. Transparent fee structures and payments also contribute to building trust between workers and platforms.

4.3.2 Workers Social Protection

While labour relations continue to be a key component of labour protection, the Global Commission on the Future of Work (ILO, 2019) noted that there is a need to broaden the focus beyond just employment relationships. In order to ensure adequate social protection for workers in traditional employment, it is necessary to evaluate and maybe modify the applicability of laws and regulations. At the same time, it is important to work towards securing suitable protections for all workers, regardless of their contract type. These rights cover crucial elements including a fair salary, hourly wage restrictions, and the guarantee of safe and healthy workplaces. Collaborative approach involving various stake holders will facilitate to expand the reach and impact of social security programs. There is a diverse range of social security initiatives accessible to workers. As per the International Labour Organization's Convention 102 about Social Security, which covers nine different aspects. The Employee State Insurance Corporation (ESIC) and the Employees' Provident Fund Organization (EPFO), working together, meet all nine requirements for social security, benefiting all workers. Workers on the Aadhar and Mobile platforms can effortlessly combine insurance and liquid mutual funds with initiatives like the National Pension Scheme and Atal Pension Yojana by utilising platforms and tools like UPI, India Stack, and Jan Yojana. Educating employees about these government-supported initiatives is essential for widespread participation. It is very important to enrol quickly in initiatives like e-SHRAM, Aatmanirbhar Skilled Employee Employer Mapping, and Development of Enterprise and Service Hubs Stack. In order to accomplish this and efficiently broaden the coverage of social security programmes, platforms might collaborate with civil society organisations. There is a need to enhance portable benefits and make sure workers may access easily.

It is essential to figure out how many gig workers are currently using platforms and how many might join in the future. The goal is to get enough money to run social security programs as required by the ILO Convention 102 on Social Security. Getting 1-2 percent of the profits from the companies that bring workers together is the main source of funding, and it is correlated with how much the company makes. However, it raised concerns when tech companies recently disclosed losses. The amount of money required for social security may be harmed by this circumstance. Therefore, it could be a good idea to consider additional revenue streams. This could be an addition to the methods for funding social security programmes for platform workers to ensure these workers receive social security benefits for a very long time.

4.3.3. Algorithmic Accountability and Fair Task Allocation

To avoid unfair results, implement rules for assessing the algorithms that affect the assignments, wage and performance evaluations of employees. They must have easy access



to all of their data, including money received, any deductions, ratings, hours worked, overtime pay as well etc. Likewise, platforms must maintain records of any amendments, data searches, procedures of their software that links to other software etc. for at least 180 days to promote accountability and transparency. This will help to create believe among workers in the data and algorithmic system. If employee or groups that represent them detect any issue, labour departments or labour bureau should be legalized to check the data and functioning of algorithm. The rights of workers must be protected and treated fairly by the concerned authority.

4.3.4 Recognise the Rights to Collective Bargaining and Unionization

Collective Bargaining not only provide workers more negotiating power but it also offers better knowledge of the algorithm that platforms use to assign tasks and determine pay. The workers must be free to establish or join worker collectives or unions so they can bargain mutually for their better pay, insurance, and working conditions and more transparency inside the platform economy.

4.3.5 Promoting Inclusive Social Dialogue

Establishing a platform for active social dialogue including all stakeholders is essential. It urges the formation of guidelines that actively reassure and support social interaction among platform workers. Participants in these discussions should include platform aggregators, workers with their unions and governmental entities. On matters pertaining to workers' rights, wage, safety, and working conditions, it needs to act as a forum for open discussion, bargaining, and collaboration. Specific venues, both physical and digital, should be created in order to promote fruitful conversation and the sharing of ideas.

4.3.6 Clarifying workers classification

It is essential to establish specific criteria to differentiate between employees and independent contractors, taking into account elements like control over the work, financial dependency, and job security etc. It has been revealed that platform employees struggle with the distinction between “workers” and “independent contractors” on a universal scale. For them, to have access to the safeguards of labour laws and social safety networks, this differentiation is essential. Gig and Platform workers are recognized legally in a number of countries including the UK, Canada, Spain, Netherlands, France, Denmark, some U.S. states. However, in India, they are yet to be classified as workers to receive the benefits as similar to traditional workers. To address this issue, it is imperative to secure their recognition as workers, particularly for those who work full-time.

4.3.7 Addressing Exploitative Practices in the Gig Economy

It's critical to address the significant amount of earnings that gig and platform employees lose through a variety of methods, including credits, commissions, subscriptions, loans, fines, and fees, in order to combat the exploitation that these workers experience at the hands of aggregators. Workers are simultaneously burdened by expenses for administrative work, maintenance, travel, and product expenditures. A request is made for the creation



of a thorough set of regulations establishing best practises that cover the entire app-based service industry, including both providers and employees, in order to correct this. It is imperative to create honest and moral business standards, and application-based platforms must be effectively regulated.

4.3.8 Mandatory Occupational Health and Safety Standards

- a) Customized OHS Framework: Develop a comprehensive OHS framework specifically designed for gig and platform workers. This framework should consider the unique work conditions, including remote work, irregular hours, and varying task types.
- b) Safety Equipment: Depending on the nature of the company they operate, platform companies should supply or enable the provision of such equipment that can be access to appropriate safety equipment and gear. Workers performing physically demanding or possibly hazardous tasks should have the PPE they need. For worker safety, it is essential to guarantee that PPE is available and used correctly.
- c) Health Monitoring: Encourage gig workers to have regular medical evaluations and monitoring, especially for those doing physically demanding or hazardous duties.
- d) Workplace Injury Compensation: Create a mechanism for workers to receive compensation in case of work-related injuries or illnesses. This should include coverage for medical expenses, rehabilitation, and income replacement during recovery.
- e) Mental Health Support: It is critical to take proactive measures to protect lives and foster a more pleasant work atmosphere in light of the alarming instances of mental health issues, including suicides, among employees of app-based platforms. Owners of platforms should be required by law to set up a specific mental health support system and modify performance goals when warning signs of discomfort are found. The application of artificial intelligence to link concerned workers with clinical psychologists who specialise in offering assist could improve this support system even further.
- f) Health and Accident insurance: The gig and platform workers often operate without the traditional safety nets associated with traditional employment. To address this concern, we recommend the establishment of comprehensive health and accident insurance policies tailored specifically to the needs of gig and platform workers. These policies should offer accessible and affordable coverage for healthcare expenses and financial protection in the event of accidents or injuries sustained during work-related activities.

4.3.9 Maternal Benefits and Protection of Women Workers

Present significant difficulties for women, especially those who work gigs. Making sure that these women receive the same level of maternity benefits and workplace safety as regular employees is crucial. We advocate for the adoption of laws requiring platform firms to offer maternal benefits, including as paid maternity leave, lactation rooms, and flexible work schedules for gig workers who are expecting or nursing. To further safeguard women against harassment and abuse based on their gender in the gig economy, strict anti-discrimination and anti-harassment policies must be put into practise.



4.3.10 Empowering through Training and Up-skilling

The availability of upskilling or training for platform workers in India is not sufficiently supported by data. They would be able to realize and exercise their rights with respect to access and the processing of their personal data with the help of this training, particularly in the area of digital skills. Consequently, the government should put in place a comprehensive policy that supports education and career advancement for platform workers. Initiatives like easily or free available online courses, workshops for emerging skills and certification programmes designed to meet the particular requirements of the platform-based workforce should all be part of this approach. Platform companies should promote the workers' upskilling by offering various training prospects and recognizing these skills in their hiring or promotion processes. Notwithstanding, Government collaboration with different educational institutions and industry stakeholders can play an essential role in making these programs accessible and affordable. By prioritizing training and upskilling, platform workers must be trained with the tools to thrive in an ever-changing job market while fostering a more skilled and flexible workforce that benefits both workers and the platform economy as a whole.

4.3.11 Guaranteeing a Substantial Income and Fair Working Hours

Prioritising the financial security and rights of workers is essential in the rapidly changing gig and platform economy. In order to do this, there is a need to initiate the regulations that guarantee two essential elements: a sizable wage and equitable working hours. Firstly, establishing a minimum income guarantee is essential to lift workers and their families out of financial insecurity. All adult workers should be treated as family heads, responsible for not only themselves but also their dependents. As such, a minimum income guarantee must be maintained, and it should be periodically adjusted to account for inflation, safeguarding workers against the rising cost of living. Secondly, fair working hours are pivotal to protect the health and well-being of gig and platform workers. Excessive and irregular working hours, often exceeding 12 hours a day, pose serious risks to physical and mental health. Therefore, it is essential to enact regulations that ensure reasonable working hours while simultaneously guaranteeing a minimum wage to protect the livelihoods of these workers. This dual commitment to income and working hour standards is central to fostering a just and sustainable gig and platform economy that respects and supports its workforce.

4.3.12 Streamlining Grievance and Dispute Resolution

The platform companies or government should build the dispute resolution platforms or method to resolve issues arising in the gig economy. We advise putting in place a complete policy framework that places an emphasis on quick, open, and accessible dispute resolution procedures. The development of specialised dispute resolution platforms or organisations that are especially suited to the special difficulties and complexities of the gig economy is a key component of this strategy. These platforms need to provide alternative dispute resolution options so that disputes between platform companies and their employees can be settled quickly and affordably. Additionally, we advocate for the standardization of contracts, including clear provisions outlining dispute resolution processes, to ensure that all



parties are well-informed about their respective rights and responsibilities. By streamlining grievance and dispute resolution procedures, we aim to provide gig and platform workers with a more secure and predictable working environment, ultimately fostering a culture of fairness, trust, and mutual respect within the platform economy.

4.3.13 Government Data Ownership in the Gig and Platform Economy

Data Access and Control: Workers currently have no control over the vast quantities of data that aggregators have. This information includes details about an individual's identity, location, preferences, and behaviour. Aggregators frequently utilise this information for analytics, advertising, and profiling, which raises questions about privacy and control. Thus, policy requires ensuring that workers have access to complete worker data, including information on completed jobs and payments. All parties should concern, including employers, employees, and regulators, would benefit from this access to data in several of ways. It would ensure the welfare of gig and platform employees while facilitating the effective operation of the economy.

4.3.14 Data-Centric Regulatory Framework

The exclusive ownership of data by platforms introduces significant information asymmetry between the platform and other stakeholders. An adaptable and effective regulatory framework for platforms should revolve around data regulation, encompassing three key components: It is critical to close the knowledge gap between platforms and workers. This action will strengthen workers' bargaining power and shield them against information-based exploitation. Is crucial to avoid worker data lock-in, which occurs when all of a worker's reputational information is tied to a single platform. This practise limits an employee's capacity to switch to alternative platforms, which reduces their negotiating power. Platforms should collabourate with regulators by granting external access to their data. This access should be highly curated to alleviate concerns of exposing competitive advantages. Regulators and platform owners should work together to identify data that inform market behaviour without compromising the platform's competitiveness.

4.3.15 Establish a Robust Financial Mechanism

People who work as gig and platform workers need to manage their money in particular ways. This establishes regulations that assist these employees in having good financial instruments, such as bank accounts, retirement plans, and emergency funds. To make it simple for employees to use these services, the organisations that operate these apps need to work together with banks. Governments can also train these employees to handle money more responsibly. By doing this, it assists clients in good money management, future planning, and overcoming financial obstacles associated with their line of employment. This improves the security and stability of their financial status.

4.3.16 Balancing Employment Creation and Social Protection Incentives

In striving for a balanced gig and platform economy that both fosters job creation and guarantees social protection, there is a need to propose the implementation of policies that provide incentives to platform companies, workers, and regulators. These incentives should



encourage employment generation while ensuring the welfare of gig and platform workers. (a) Incentives for platform companies could be linked to the supply of benefits like health insurance, retirement plans, and competitive pay. Companies that actively support workers' social protection may receive tax incentives or subsidies. (b) Tax credits or deductions for workers participating in government-sponsored social security programmes or training courses could be used as incentives. These rewards are intended to encourage monetary stability and career advancement. (c) Creating a regulatory framework that promotes job creation and worker protection should be the main goal for regulators. For platform companies that adhere to specific labour laws and social protection duties, this may result in tax benefits.

4.3.17 Encourage Employees to Enrol in Government Welfare Schemes through Extensive Awareness Campaigns

There is a need to ensure that gig and platform workers are aware of available government assistance. It could achieve this by using applications, websites, and by attending events. The companies that run these platforms can make it easy for workers to sign up. To assist employees in understanding their options, government and platforms operators should also offer training. They can then decide how to seek assistance in the best possible way.

4.4 Conclusion

This study has focused on complete understanding of this dynamic workforce which range from gig workers' future possibilities in Vision-2047 to the exploration of obstacles and opportunities and, finally, a comprehensive policy and suggestion framework. It emphasizes the importance of platforms that are sensitive to gender-related issues and offer everyone equal opportunities. The report also highlights the need for steps to ensure safety and access to digital technology, as well as the need of professional roles that do not obey gender stereotypes. Using data from the World Bank, the study began by investigating the patterns in India's per capita income growth rate. Further, it projected these trends up to 2047 under different scenarios, each based on certain assumptions. Concurrently, the study attempted to project the possible employment situation in the gig and platform economies by 2047, taking into account several scenarios predicated on specific hypotheses. This has offered important new perspectives on India's path to becoming a developed country by 2047. An extensive analysis of the employment scenario in the platform economy evident the sector's enormous potential as a major source of revenue for the country. While the scenarios highlighted both challenges and opportunities, it is evident that India possesses the potential to achieve its vision. The path preferred, whether cautious or optimistic, will determine the speed and efficiency of this transformation. By 2047, India has the potential to become the world's largest supplier of platform workers, generating substantial employment opportunities for its citizens. The future is promising, and with strategic policy formulation and insistent efforts, India can indeed realize its dream of becoming a developed nation.

This report mainly highlights the revolutionary potential of the gig and platform economies in creating a future that is both secure and wealthy. Through policy proposals, it provides a



roadmap that can get us closer to that bright future of 2047, when gig and platform workers will have improved working conditions, increased well-being, and a more inclusive and equitable job market. These recommendations address many major areas, such as PF, algorithmic transparency, data privacy, health and accident insurance, sick leave, social security, women and maternal benefits, training for upskilling, collective bargaining and unionisation, pensions, and the clarity of workers classification. It highlights the difficulties they encounter, the opportunities they may seize, and above all, a road map for stakeholders and legislators to build a more equitable and safe future for these workers. India can fully realise the benefits of the gig economy for both workers and the country's economy by adopting creative policies and inclusive practices. All the stakeholders work together to guide the gig economy in the correct path as it begins its journey towards a more decent and prosperous future.



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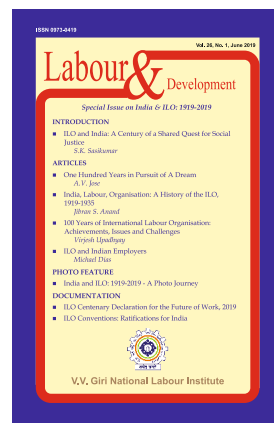
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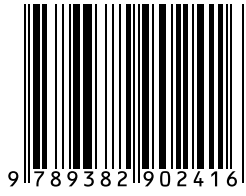
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