

**Original Article**

# An empirical study on Socio-economic factors affecting participation agricultural labourers and farmers of rural Pune in Gig Work within Pune Metropolitan Area

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## Abstract

The gig economy, characterized by its short-term and flexible jobs, has flooded various industries in the urban metropolitan areas. Ola, Uber, Urban company, bookmybai.com to name a few, all are the prominent examples of gig economy of urban Pune. However, its influence in agriculture, particularly for rural labourers and farmers, remains largely unexplored. The major problem with the farming business is that it employs the labourers seasonally, even the requirement of number of labourers during the crop cycle is also uneven, this leaves a large section of the farmers and farm labourers unemployed for a large period in a year. With the increasing skills, awareness, education etc among rural youth and growing digital infrastructure in rural areas, this problem can be converted into opportunities by working as gig workers in Pune metropolitan areas seasonally. This study delves into the potential challenges and opportunities for agricultural labourers and farmers of rural Pune to participate as gig workers in Pune metropolitan areas. A convenient nonprobability sampling is used to understand the perception, awareness, socioeconomic factors governing participation of farm labourers as gig workers which in turn reveal the potential challenges and opportunities faced by them.

**Keywords:** Gig Economy, Seasonal employment, gig workers, freelancing, socio-economic factors.

## Introduction

The rise of the gig economy has revolutionized employment patterns worldwide, offering flexible and short-term work arrangements. Companies such as Ola, Uber, Urban Company, and BookMyBai.com have become prominent players in the gig sector, reshaping traditional labor markets (Kalleberg, 2011). However, while urban centers have adapted rapidly to this transformation, rural regions, particularly those dependent on agriculture, remain largely unexplored in terms of gig work adoption (Sundararajan, 2016). Agriculture in India means the employment of farmers and their workers, but most of them remain underemployed for at least 6-7 months in a year during non-harvesting season (Chandrasekhar & Mehrotra, 2016). Farm employees can now access more developed digital platform coupled with increased awareness to engage in gig work in urban areas as a source of additional income. There were several factors that would limit agricultural workers from being part of this gig economy such as lack of skills, poor or no transport, poor digital skills among others (Bremann, 2019). A research study evaluates the prospects of gig work as an alternative employment opportunity for rural agricultural workers based in Pune. A structured methodology will be utilized to examine why farmers adopt gig work by evaluating socio-economic factors together with their awareness and infrastructure limitations. This research addresses these issues which leads to policy suggestions for closing the employment gap between urban and rural populations.

## Objectives

The study investigates how well rural farmers and agricultural laborers in Pune know about different work possibilities available through the gig economy.

1. To determine which socio-economic factors along with demographic characteristics, drive people to consider the gig work options.

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2. To examine the challenges (e.g., digital literacy, transportation issues, financial constraints) faced by agricultural laborers in transitioning to gig work.
3. To explore the potential opportunities (e.g., skill training, expected income, preferred gig jobs) for agricultural laborers in gig work.
4. To assess the relationship between education level and willingness to participate in gig work.
5. To evaluate whether income level significantly impacts the interest in gig work.
6. To determine if lack of skills and digital literacy issues act as significant barriers to gig work adoption.

## **Theoretical Background**

### **1. Dual Labor Market Theory**

The Dual Labor Market Theory, introduced by Doeringer and Piore (1971), categorizes employment into two segments: the primary market, offering stable jobs with high wages, and the secondary market, characterized by temporary, low-paid employment. Agricultural laborers typically fall into the secondary market, but gig work presents a new form of employment that blurs these boundaries (Standing, 2011). Understanding whether gig work offers long-term sustainability or remains a precarious option for rural laborers is a crucial aspect of this study.

### **2. Human Capital Theory**

Human Capital Theory, proposed by Becker (1964), suggests that investments in education and skills enhance workforce productivity. Digital literacy and specialized skills are necessary for participation in the gig economy, yet rural laborers often lack formal training (Autor, 2019). This research examines whether training programs can facilitate gig work adoption among agricultural workers in Pune.

### **3. Push-Pull Migration Theory**

Lee's (1966) is well-known the Push-Pull theory of migration that is a theory of labor migration and it indicate factors pushing migration such as unemployment, low income and the factors which attract migration such as better wages, jobs offer. It is also useful for explaining why rural wage labour can engage in gig work in the urban areas given the issues of infrastructural developments and polly towels (Harris & Todaro, 1970).

### **4. Technology Adoption Model (TAM)**

Davis (1989) therefore proposed the Technology Adoption Model (TAM) that contains theory that explains users' adoption of technologies. Various authors have also found that the essential prerequisites for services in the gig economy are the availability of mobile apps and internet connection (Venkatesh & Davis, 2000). This paper thus aims at analyzing the preparedness of agricultural laborers in rural Pune for availing online job platforms.

## **Literature Review**

### **1. The Gig Economy and Employment Trends**

The gig work is relatively new phenomena that are slowly revolutionizing onset labour markets patterns (De Stefano, 2016). Though the gig economy has widely adopted in urban India, the rural participation is still missing due to digital inaccessibility and shortage of skill set (Chakraborty, 2020). Kalleberg (2018)'s research work revealed that on one hand gig work allows income instability while on the other hand it does not guarantee employment protection and social security.

### **2. Agricultural Labor Market Challenges**

Agricultural trade continues to promote seasonal employment resulting to instability of the workers especially those who are from rural areas (Reddy et al., 2014). This has been stated earlier that underemployment is prevalent in Indian agriculture and a secondary source of income is required by the farmers (Chandrasekhar and Mehrotra, 2016).

### **3. Socioeconomic Barriers to Gig Work Adoption**

Research by Breman (2019) emphasizes digital illiteracy as a key barrier to gig work participation in rural areas. Furthermore, transportation limitations and financial constraints hinder access to urban gig opportunities (Mehrotra & Parida, 2019). Addressing these challenges through policy interventions and skill training programs could enhance rural workforce participation.

### **4. Opportunities for Rural Laborers in the Gig Economy**

Despite challenges, gig work presents a viable alternative for seasonal agricultural laborers. Studies suggest that platform-based work, such as delivery services and domestic work, aligns well with rural skillsets (Standing, 2011). Training programs have been successful in enhancing employability in urban gig sectors (Autor, 2019), suggesting similar potential for rural workers.

## **Research Methodology**

### **1. Research Design**

This study follows a quantitative survey approach.

### **2. Sampling Method and Size**

A convenient non-probability sampling method is used to survey 300 respondents from rural Pune. The sample includes farm laborers and small-scale farmers, ensuring diverse representation.

### 3. Data Collection Tools

- **Structured Questionnaire:** Covers demographics, employment details, gig work awareness, challenges, and opportunities.

#### Variables for Analysis

1. **Demographic Factors:** Age, Gender, Education, Income.
2. **Agricultural Employment Details:** Farm Size, Seasonal Work Duration.
3. **Gig Work Awareness & Participation.**
4. **Challenges Faced:** Digital Literacy, Skills Deficiency, Transportation Issues.
5. **Opportunities Explored:** Preferred Gig Jobs, Income Expectations, Training Needs.

#### Statistical Techniques

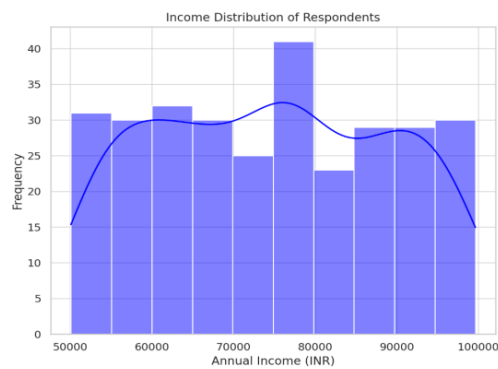
- **Descriptive Statistics:** Frequency distributions, mean values.
- **Reliability Analysis:** Cronbach's Alpha for survey consistency.
- **Inferential Statistics:** Chi-square tests, logistic regression for participation determinants.

#### Ethical Considerations

Participants are informed about the study's objectives, and confidentiality is ensured. Informed consent is obtained prior to data collection.

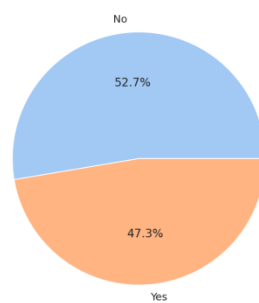
#### Data Analysis

Descriptive statistics and Data visualization based on survey data



Income from farm activities for all the agricultural level irrespective of other factor does not differ too widely.

Gig Work Awareness Levels among Agricultural Laborers



Roughly there are equal numbers of respondents who are aware of the gig work and who are not aware of. Percentage of respondents who are not aware of gig work is a little higher than 50%.

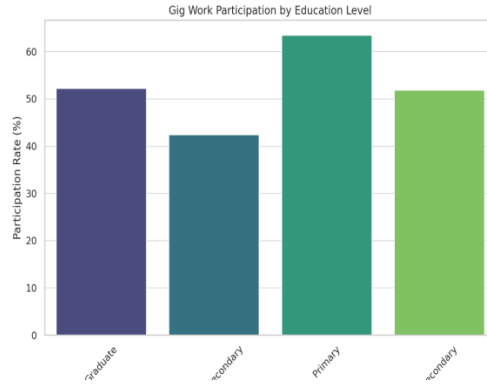
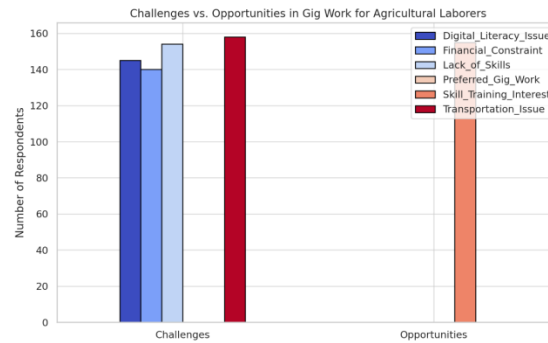


Diagram showing Gig participation of farm labourers



Challenges are more than opportunities.

## Inferential analysis of empirical data

### Hypotheses

#### 1. Hypothesis 1

**H01:** There is no association between awareness of gig work and educational level

**H1:** Awareness of gig work is significantly associated with education level.

- **Test used: Chi-square test for independence**
- **Result-** p-value= 0.01664, The null hypothesis is rejected at 5% level of significance.

#### 2. Hypothesis 2

**H02:** Willingness to participate in gig work is independent of educational levels.

**H2:** Willingness to participate in gig work differs across different education levels.

- **Test used: Chi-square test for independence**
- **Result-** P-value= 0.004568, The null hypothesis is rejected at 5% level of significance.

#### 3. Hypothesis 3

**H03:** Income level does not influence the willingness to participate in gig work.

**H3:** Income level significantly influences willingness to participate in gig work.

- **Test used: Chi-square test**
- **Result-** P-Value= 0.08972, The null hypothesis is rejected at 5% level of significance.

#### 4. Hypothesis 4

**H04:** Lack of skills and digital literacy issues does not reduce the willingness to participate in gig work.

**H4:** Lack of skills and digital literacy issues significantly reduce willingness to participate in gig work.

- **Test used: Logistic Regression**
- **P-value=** 0.002398, The null hypothesis is rejected at 5% level of significance.

#### 5. Hypothesis 5

**H05** Expected income from gig work is same across different education levels.

**H5:** Expected income from gig work is significantly different across different education levels.

- **Test used: ANOVA**
- P-value= 0.9523, failed to reject null hypothesis.

### **Interpretation results and Findings**

The null hypothesis 'There is no association between awareness of gig work and educational level' is rejected at 5% level of significance, the result is found significant, there is a strong evident that the awareness related to Gig work is positively associated with educational level of the people. The government therefore should endeavour to create awareness about the Gig work availability among the rural masses especially the farmers.

Further, the willingness to participate in Gig work is also found to be positively associated with the educational level at 5% level of significance, this may be linked to the inertia and hesitation due to lack of education which is stopping them from participating in the gig work.

The income level and willingness to participate in the gig work is found to be significantly associated at 5% level of significance, which indicates that people with lower income are willing to participate in the gig work.

Also lack of skills and digital illiteracy found to be a major impediment in willingness to participate in the Gig work when tested at 5% level of significance, which shows that people who are using smartphones, internet facilities are willing to participate in this kind of work but those who lack digital skills and literacy are not willing to participate.

Expected income from gig work and education levels found to be independent, the result failed to reject the null hypothesis at 5% level of significance.

### **Conclusion**

The government should create awareness about gig work availability among rural population who do not get round the year employment from their farming activities. The government should also create the necessary institutional arrangement for gig work facilitation to safeguard the interest of the workers. This should also involve regulation and control of gig platforms.

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### **Conflicts of interest**

There are no conflicts of interest.

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