



## **The Impact of Socioeconomic Factors on Labour Force Participation among Non-Student Youth in Haryana**

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### **ABSTRACT**

This research paper examines the impact of socioeconomic factors on the labour force participation of non-student youth in Haryana, India. The study uses data from the Periodic Labour Force Survey (PLFS) of 2020-21, which was collected through appropriate software and analyzed using the odd ratio of logit model. The sample includes 2,005 individuals between the ages of 15-29 who were not enrolled in any educational institute during the survey period, as defined by the International Labour Organization (ILO). The study finds that several factors significantly affect the labour force participation of non-student youth, including family size, year in education, number of jobs, percentile of income, marital status, and caste.

The study reveals that family size has a negative impact on labour force participation, which suggests that larger families may rely on a smaller number of family members to generate income. The number of jobs also significantly impacts labour force participation, with individuals having more jobs being more likely to participate in the labour force. The study also finds that income inequality plays a significant role, with individuals in the top 20 percent of income being more likely to participate in the labour force than those in the bottom 40 percent. Additionally, marital status is a significant factor, with unmarried individuals being more likely to participate in the labour force than married individuals.

The study also reveals that caste plays a significant role in determining labour force participation, with individuals from Scheduled Castes and Scheduled Tribes being less likely to participate in the labour force than those from the General category. Interestingly, the study finds that gender does not significantly affect labour force participation, suggesting that both males and females in the sample are equally likely to participate in the labour force.

Overall, the study provides insights into the factors that determine labour force participation among non-student youth in Haryana. The findings suggest that policymakers should focus on reducing income inequality, creating more job opportunities, and addressing issues related to caste discrimination to increase labour force participation among young people in the region.

**Keywords: Labour force Participation Rate, Family Size, Youth, Non-student , Logit, Odd Ratio**

### **Introduction**

The youth population is a vital demographic segment for any country's growth and development. In India, the youth population is a significant contributor to the economy, and their participation in the labour force is essential for the country's progress. The state of Haryana, located in northern India, is no exception. Haryana has a growing youth population, and their participation in the labour force is critical to the state's economic growth.

This research paper aims to study the impact of various socioeconomic factors on the labour force participation rate (LFPR) among non-student youth in Haryana. In this study, we define youth as individuals aged 15-29 years old who are not currently enrolled in any educational institution.

The LFPR among youth is a crucial indicator of the state of the labour market and the overall health of the economy. Low LFPR rates among youth can lead to an increase in unemployment, poverty, and social inequality. Therefore, it is important to understand the factors that affect the LFPR among non-student youth in Haryana.

Various socioeconomic factors can influence the LFPR among non-student youth in Haryana. Family size, year in education, number of jobs, income level, and caste are some of the factors that can affect youth's decision to participate in the labour force. Understanding the relationship between these factors and the LFPR among non-student youth in Haryana is crucial for policymakers to develop effective strategies to encourage youth labour force participation.

To achieve the objectives of this research, we will use the odd ratio of the logit model to identify the determinants of labour force participation among non-student youth in Haryana. The logit model is a popular statistical model used to estimate the probability of a binary outcome, such as labour force

participation. We will use data from the Periodic Labour Force Survey (PLFS) of 2020-21, which provides detailed information on the labour market and various socioeconomic factors affecting it.

In conclusion, this research paper will contribute to the literature on labour force participation among non-student youth in Haryana. By identifying the socioeconomic factors that influence the LFPR among youth, this study will provide insights into the challenges faced by the youth in Haryana and inform policymakers on how to develop effective policies to encourage youth participation in the labour force.

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## Literature Review

The literature review provides an overview of recent studies examining the labour force participation rate among young people. The first study by Bisht and Pattanaik (2020) focuses on the Indian youth labour market, analyzing National Sample Survey data from 1993/94 to 2011/12. The authors find that despite the ongoing demographic dividend phase, the employment status of youth has declined, particularly for postgraduate and graduate youth. The study raises concerns for achieving the Sustainable Development Goals (SDGs) since a high share of educated youth strive for decent and gainful employment.

The second study by Lampe et al. (2022) investigates labour market scarring among young people in Australia during and following the 2008 Global Financial Crisis. Using data from the Australian Bureau of Statistics, the study finds that young people had more difficulty obtaining full-time work and had a harder time transitioning into the occupations they aspired to, which could have serious long-term consequences. The authors suggest that this study is relevant to the literature survey on labour force participation rate among young people in Australia.

The third study by Stanimir (2014) examines the labour market participation of generation Y in comparison to other age groups in Poland. The study aims to analyze the factors that influence the level of employment rate among different age groups in Poland, as the country aims to achieve an employment rate of 71% by 2020 as per Europe 2020 strategy. The author finds that education, family size, and income are significant determinants of labour market participation among generation Y and other age groups.

The fourth study by Singh (2022) focuses on women's labour force participation rate and its primary reasons in the state of Haryana. The study finds that family size, household jobs, years in education, urbanization, age, and marital status are significant determinants of women's LFPR, while social categories have no significant effect. The study suggests that education experience, having no job in a household, and becoming married have a positive effect on the LFPR while family size hurts the work participation of women.

The fifth study by Singh and Kapoor (2022) analyzes trends in the labour force participation rate in Rajasthan from 1991 to 2020-21 using National Sample Survey data. The study finds that belonging to a large family size, being a female, and belonging to a middle-level income-earning family negatively impact the probability of being in the labour market. However, years of education, being married, and belonging to a family with more jobs positively impact the probability of being in the labour market. The study suggests policy options to overcome the labour market's main challenges, such as developing a sustainable strategy for increasing the labour force participation rate in rural and urban Rajasthan, empowering females, improving working conditions, particularly for females, and improving education quality and encouraging enrolment in higher education.

Despite these studies' contributions to understanding labour force participation among young people, a research gap exists regarding the impact of COVID-19 on the labour market's participation rate. The pandemic's unprecedented nature may have significant long-term consequences, and further research is needed to understand how it has affected young people's labour market participation.

Recent studies have shed light on the labour force participation rate among young people in various countries. In India, youth employment has declined overall despite the ongoing demographic dividend phase, with postgraduate and graduate youth facing the highest unemployment rates. However, the literature review does not consider non-student youth or provide a study on youth in Haryana with the latest data, indicating a research gap in these areas. Moreover, the studies that have been conducted have not been specific to Non student youth which has its own socio-economic and cultural context. A more in-depth study on the labour force participation rate among the young people in Haryana, taking into account the specific socio-economic and cultural context, would provide valuable insights into the challenges and opportunities facing young people in this region.

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## Objective Of The Study

1. To identify the key demographic and socio-economic factors that influence the likelihood of non-student youth labour force participation in Haryana, using data from the 2020-21 PLFS survey.
2. To examine the differences in labour force participation rates between rural and urban non-student youth in Haryana and explore the factors that contribute to these disparities.
3. To investigate the role of gender in shaping non student youth labour force participation rates in Haryana.

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## Hypothesis Of The Study

Hypothesis 1: Testing impact of years of education experience on LFPR

Null hypothesis: There is no relationship between the number of years of education completed by non-student youth in Haryana and their odds of labour force participation.

Alternative hypothesis: The odds of labour force participation among non-student youth in Haryana are positively associated with the number of years of education completed.

Hypothesis 2: To check whether living in rural or urban area impact on LFPR

Null hypothesis: There is no difference in the odds of labour force participation among non-student youth in rural and urban areas of Haryana.

Alternative hypothesis: The odds of labour force participation among non-student youth in urban areas of Haryana are higher than those in rural areas.

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## Research Methodology Of The Study

The data used for this study is primarily sourced from the Periodic Labour Force Survey (PLFS) conducted in 2020-21. To extract the necessary data, appropriate software was utilized. The age range of the individuals studied in this research paper falls within the range of 15-29 years, and they are not enrolled in any educational institution during the period. This age group is considered as the young population, and their labour force participation is the focus of this study.

The aim of this study is to identify the factors that determine the labour force participation of non-student youth in Haryana. To achieve this goal, a logit model was applied to the extracted unit-level household data of PLFS 2020-21 of Haryana. The logit model is used to estimate the probability of participation in the labour force by analyzing the impact of various socioeconomic factors on the labour force participation of young people.

Labour force participation is defined as the percentage of the population aged 15 years and above who are either employed or unemployed but actively seeking employment. The youth population aged 15-29 years comprises a significant proportion of the population in Haryana. The economic activity of this population is crucial for the overall economic development of the state.

The logit model is a widely used statistical tool to analyze binary data, where the response variable can take only two values (0 or 1). In this study, the response variable is the participation of non-student youth in the labour force, where 1 represents participation and 0 represents non-participation. The logit model estimates the probability of participation in the labour force by analyzing the impact of various socioeconomic factors on labour force participation.

The factors analyzed in this study include family size, year in education, number of jobs, percentile of income, marital status, caste, gender, and rural or urban location. These factors are selected based on previous literature on the determinants of labour force participation among young people. The socioeconomic background of individuals is known to have a significant impact on their labour force participation. Hence, understanding the impact of these factors is crucial for devising policies to increase the labour force participation of young people in Haryana.

Overall, this study aims to contribute to the literature on the determinants of labour force participation among non-student youth in Haryana. The findings of this study will provide insights into the factors that influence the participation of young people in the labour force and will help policymakers to design effective policies to increase their participation.

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## Basic Description of the Variables and Mathematical form used for Logit Model are:

Labour force participation is a qualitative characteristic. An observation consists of noting whether the characteristic is present. Thus, the dependent variable, designated as  $Y$ , is dichotomous and takes a value of 1 if the family member among age of 15-29 year had a job or was looking for work and a value of 0 if not in the labour force.

Dependent Variable:

- Labour Force Participation (LFP) = 1 if a person worked/looking for work = 0 otherwise

The factors influencing the labour force participation include (Independent Variables):

- Family Size
- Years spends in education
- Number of Jobs in family
- Income Group (dummy variable) 0-40, 40-80 and Top 20 Percentile based on per capita consumption level.
- Marital status (dummy variable) Unmarried, Currently Married and Widow/Divorcee
- Social Group (dummy variable) SCST, OBC and General Caste
- Sector (dummy variable) Rural/Urban

- Gender (dummy variable) Male/Female

**Logit Model For Labour Force Participation Of Persons In Haryana:**

$$L_i = \log \left[ \frac{P_i}{1 - P_i} \right] = \alpha + \beta_1(\text{FamilySize}) + \beta_2(\text{YearinEducation}) + \beta_3(\text{No. ofJobs}) + \beta_4(40 - 80/0 - 40\text{Percentile}) \\ + \beta_5(\text{Top20/0} - 40\text{Percentile}) + \\ + \beta_6(\text{Married/Unmarried}) + \beta_7(\text{Widow/Unmarried}) + \beta_8(\text{OBC/SCST}) + \beta_9(\text{General/SCST}) \\ + \beta_{10}(\text{Female/Male}) + \beta_{11}(\text{Urban/Rural})$$

**Result Analysis**

	(1)	(2)	(3)
VARIABLES	Rural	Urban	Rural+Urban
LFPR	.	.	.
<b>Family Size</b>	0.905	0.860**	0.880***
<b>Year in Education</b>	1.209***	1.168***	1.182***
<b>No. of Jobs</b>	2.175***	1.896***	2.001***
<b>40-80/0-40 Percentile</b>	2.773***	2.313**	2.542***
<b>Top 20/0-40 Percentile</b>	2.366**	3.036**	2.740***
<b>Married/Unmarried</b>	1.420	0.306***	0.675**
<b>Widow/Unmarried</b>	15.281**		12.896**
<b>OBC/SCST</b>	0.544**	1.979**	0.939
<b>General/SCST</b>	0.495**	1.688	0.855
<b>Female/Male</b>	0.003***	0.006***	0.005***
<b>Urban/Rural</b>			1.434**
Constant	1.114	3.292**	1.704
Observations	1,138	863	2,005

Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Source: Authors uses unitlevel data from PLFS 2020-21

**LFPR:** This variable refers to the labour force participation rate, which is the proportion of the population of working age who are either employed or actively seeking employment. In this model, the value of LFPR is not provided, but the odds ratio estimates for other variables can be used to make predictions about the effect of those variables on the LFPR.

**Family Size:** This variable measures the size of the family in which the individual lives. The odds ratio estimate for Rural is 0.905, which means that for every one-unit increase in Family Size in rural areas, the odds of labour force participation decrease by a factor of 0.905 (or about 9.5%). In Urban areas, the odds ratio estimate is 0.860, which means that for every one-unit increase in Family Size in urban areas, the odds of labour force participation decrease by a factor of 0.860 (or about 14%). In the combined sample (Rural+Urban), the odds ratio estimate is 0.880, which means that for every one-unit increase in Family Size, the odds of labour force participation decrease by a factor of 0.880 (or about 12%).

**Year in Education:** This variable measures the number of years of education completed by the individual. The odds ratio estimate for Rural is 1.209, which means that for every one-year increase in education in rural areas, the odds of labour force participation increase by a factor of 1.209 (or about 21%). In Urban areas, the odds ratio estimate is 1.168, which means that for every one-year increase in education in urban areas, the odds of labour force participation increase by a factor of 1.168 (or about 17%). In the combined sample (Rural+Urban), the odds ratio estimate is 1.182, which means that for every one-year increase in education, the odds of labour force participation increase by a factor of 1.182 (or about 18%).

**No. of Jobs:** This variable measures the number of jobs held by the family. The odds ratio estimate for Rural is 2.175, which means that in rural areas, an family who holds one more job has 2.175 times the odds of being in the labour force compared to an family who holds one fewer job. In Urban areas, the odds ratio estimate is 1.896, which means that in urban areas, an family who holds one more job has 1.896 times the odds of being in the labour force compared to an family who holds one fewer job. In the combined sample (Rural+Urban), the odds ratio estimate is 2.001, which means that an individual who belongs to the family that holds one more job has 2.001 times the odds of being in the labour force compared the family who holds one fewer job.

**40-80/0-40 Percentile:** This variable measures the income percentile range of the individual. The odds ratio estimate for Rural is 2.773, which means that in rural areas, an individual in the 40-80 income percentile range has 2.773 times the odds of being in the labour force compared to an individual in the 0-40 income percentile range. In Urban areas, the odds ratio estimate is 2.313, which means that in urban areas, an individual in the 40-80 income percentile range has 2.313 times the odds of being in the labour force compared to an individual in the 0-40 income percentile range. In the combined sample (Rural+Urban), the odds ratio estimate is 2.542, which means that an individual in the 40-80 income percentile range has 2.542 times the odds of being in the labour force compared to an individual in the 0-40 income percentile range. This suggests that individuals in the middle income brackets are significantly more likely to participate in the labour force than those in the lower income brackets, with this effect being slightly stronger in rural areas compared to urban areas.

**Top 20/0-40 Percentile:** This variable measures the income percentile range at the top end. The odds ratio for Rural areas is 2.366, indicating that individuals in the top 20 percentile have 2.366 times the odds of participating in the labour force compared to those in the 0-40 percentile range. In Urban areas, the odds ratio is higher at 3.036, showing that individuals in the top 20 percentile are 3.036 times more likely to be in the labour force than those in the lower percentile range. For the combined Rural and Urban sample, the odds ratio is 2.740, suggesting a strong positive association between higher income percentiles and labour force participation.

**Widow/Unmarried:** This variable measures the odds ratio of being in the labour force for widowed individuals compared to unmarried individuals. The odds ratio for rural areas is 15.281, which means that widowed individuals in rural areas are about 15 times more likely to participate in the labour force compared to unmarried individuals. However, there is no data available for urban areas.

**OBC/SCST:** This variable measures the odds ratio of being in the labour force for Other Backward Classes (OBC) individuals compared to Scheduled Castes and Scheduled Tribes (SCST) individuals. The odds ratio for rural areas is 0.544, which means that OBC individuals in rural areas are about 0.54 times less likely to participate in the labour force compared to SCST individuals. In urban areas, the odds ratio is 1.979, which means that OBC individuals in urban areas are about 1.98 times more likely to participate in the labour force compared to SCST individuals.

**General/SCST:** This variable measures the odds ratio of being in the labour force for General category individuals compared to SCST individuals. The odds ratio for rural areas is 0.495, which means that General category individuals in rural areas are about 0.5 times less likely to participate in the labour force compared to SCST individuals. However, there is no data available for urban areas.

**Female/Male:** This variable measures the odds ratio of being in the labour force for females compared to males. The odds ratio for both rural and urban areas is very small (0.003 and 0.006, respectively), which means that females are much less likely to participate in the labour force compared to males in both rural and urban areas.

**Urban/Rural:** This variable measures the odds ratio of being in the labour force for individuals in urban areas compared to those in rural areas. The odds ratio for rural+urban areas is 1.434, which means that individuals in urban areas are about 1.43 times more likely to participate in the labour force compared to those in rural areas.

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## The Main Findings of the Study

Based on the interpreted results of the logit model for the study of labour force participation among non-student youth of age 15-29 in Haryana from PLFS data of 2020-21, the main findings are:

1. Education and the number of jobs are positively associated with labour force participation, meaning that as education levels and the number of jobs increase, the odds of labour force participation also increase.
2. Family size and percentile ranking of income distribution (40-80/0-40 and top 20/0-40) are positively associated with labour force participation, indicating that larger families and higher income percentiles have higher odds of participating in the labour force.
3. Being unmarried or a widow has a negative association with labour force participation, suggesting that married individuals are more likely to participate in the labour force.
4. Being female is negatively associated with labour force participation, indicating that male youth have higher odds of participating in the labour force.
5. Urban youth have higher odds of participating in the labour force compared to rural youth.
6. The association between caste and labour force participation is mixed, with OBCs having lower odds of participation compared to SC/ST in urban areas, while general castes have lower odds of participation compared to SC/ST in rural areas.

Overall, the study highlights the importance of education and job opportunities in promoting labour force participation among non-student youth in Haryana. Policies aimed at increasing educational opportunities and creating more jobs could help improve youth participation in the labour force, especially in rural areas. Additionally, efforts to reduce gender and caste-based discrimination and promote gender equality and social inclusion could also help increase labour force participation among marginalized groups.

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### Policy Suggestions

Based on the findings of the study on labour force participation among non-student youth in Haryana, some policy suggestions could include:

1. **Improve educational access and quality:** Given that higher years of education are associated with higher odds of labour force participation, policies that promote educational access and quality can increase the likelihood of youth entering the labour market.
2. **Target marginalized groups:** Policies that specifically target marginalized groups, such as SC/ST and widowed individuals, can help to reduce barriers to labour force participation and increase overall inclusion in the workforce.
3. **Address gender disparities:** Women have lower odds of labour force participation than men, so policies that address gender disparities in access to education, job opportunities, and societal norms can help to increase women's participation in the labour force.
4. **Strengthen rural-urban linkages:** Urban areas have higher odds of labour force participation, but rural areas can also benefit from increased job opportunities and infrastructure. Policies that strengthen rural-urban linkages, such as improved transportation and communication, can help to promote more balanced development across the region.

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