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ABSTRACT

An often discussed but less researched dimension of youth unemployment is the aspirations associated with jobs, and the voluntary unemployment caused by mismatch between employment aspirations and the opportunities in the labour market. In this paper, we attempt to explore the misalignment between employment aspirations and the jobs in the labour market as a factor responsible for higher incidence of unemployment among youth. Following the framework of socially determined aspirations, we build a measure of relative occupational aspirations based on the premise that aspirations are shaped by the socio-economic context and educational attainment of an individual. Our analysis provides empirical evidence of the gap between employment aspirations of youth and the availability of jobs. Relative occupational aspirations gap is highest among youth with tertiary education levels and female youth have higher aspirations gap compared to males. The probit regression results show that youth with higher aspirations gap are more likely to be unemployed. We argue that increasing educational levels raise job-related expectations and aspirations. The lack of quality employment opportunities matching the aspirations could be partly responsible for higher unemployment among youth. An effective policy approach requires creation of better quality jobs that match the aspirations of young, educated labour force.

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Introduction

India is currently at a crucial advantageous phase of bulge in working age population which can have significant impact on economic growth, a phenomenon characterized as 'Demographic Dividend'. The increasingly large number of youth entering working-age population can effectively contribute to the growth of an economy if desired employment opportunities are available in the labor market and young people participate in workforce. India has historically had low and stable unemployment rates. Generally, unemployment is considered as a consequence of high reservation wages (Jones, 1989). Due to widespread poverty and lack of unemployment benefits, the reservation wages remain low which resulted in low and stable unemployment rates. However, unemployment that is mainly concentrated among educated youth has shown a significant increase recently (State of Working India, 2018). Unemployment among educated youth in developing countries has different characteristics compared to general unemployment. It is argued that educated youth in developing countries are unemployed because they have higher aspirations relative to employment opportunities available, and they can afford to remain unemployed compared to uneducated people who often belong to poorer households (Tenjo, 1990; OECD, 2017). As such, part of unemployment among educated youth is explained by the discrepancy between desired and available employment opportunities. Therefore, the often discussed but less researched dimension of unemployment among educated youth is the lack of opportunities in the labour market that match the aspirations of youth. In this paper, we attempt to explore the role of higher relative aspirations in explaining the incidence of unemployment among youth.

According to National Youth Policy (2014), youth belonging to the age-group of 15-29 constitute 27.5% of the total Indian population and contribute to 34% of India's Gross National Income. The total youth (15-29) population of India as per Census 2011 was more than 333 million. The challenge in harnessing the potential of youth bulge in India is related to labor market entry of youth, as young people face difficulties to find and maintain a decent job. According to ILO (2018), youth (those below age 25) have three times higher chances to be unemployed compared to adults globally.

Enrolment in schools and colleges has been increasing in India and overall education levels have increased among youth over time (ASER 2018; AISHE 2019)[4]. Various theories contend that education has positive impact on labour market outcomes such as employment and earnings[5]. Individuals with higher formal education and higher human capital have greater chances of finding employment and lower durations of unemployment (Bloch and Smith, 1977). Therefore, by standard theory, less educated are more vulnerable to unemployment compared to high educated.

4 According to All India Survey on Higher Education (AISHE), Gross Enrolment Ratio (GER), the ratio of enrolment in higher education to the total population in eligible age group 18-23 years, has registered an improvement from 19.4% in 2010-11 to 26.3% in 2018-19.

5 Human Capital Theory (Becker 1964; Schultz 1961) posits that education enhances the skill levels in a person that makes an individual more productive. The higher productivity ensures better employment opportunities and higher wages for an individual.
Signaling Theory (Spence, 1973) contends that educational credentials send signal about the ability of an individual to the prospective employer. This theory also suggests that educational attainment raises the employment opportunities and earnings of an individual in the labour market.

However, situation is different in many developing countries including India. With the rising proportion of educated youth in the labour force, youth unemployment has increased. Youth aged 15-29 who were illiterate or educated up to primary level recorded unemployment rate of 7.6% while tertiary educated youth had unemployment rate of 34.4% in 2018-19[6]. Educated youth in India are more likely to be unemployed than uneducated whereas in Europe it is the other way around (Schmid, 2015).

There are different narratives in literature regarding higher incidence of unemployment among educated youth. There are studies showing that 'jobless growth' in India is a key factor for rising unemployment in India (Abraham, 2017; 2019; Kannan and Raveendran, 2020). Several reports including reports from private employer firms and government agencies highlight that there is a growing mismatch between skills and jobs in the market with the expansion of education[7]. Therefore, low employability among educated youth due to lack of required skills is seen as a major concern in India (Khare, 2014; Unni, 2016). However, there is other literature that points towards possibility of aspirations mismatch causing higher incidence of unemployment among educated youth. Unemployment in India is essentially reflective of queuing of educated youth from relatively well-off households for jobs in the modern sector, because poor and uneducated often belong to low-income households and cannot afford to remain unemployed for a long period of time (Ghose, 2019; Mitra and Verick, 2013). Educated people are not willing to join low-quality jobs while there are not enough well-paying

6 Own calculation based on PLFS 2018-19

7 NASSCOM Future Skills survey 2019, Industry – Academia Convergence "Bridging the Skill Gap (FICCI and NMIMS), India Skill Report 2022, India Higher Education Report 2020

regular salaried jobs available (Bairagya, 2018). As such, many highly educated youth report non-availability of jobs matching their skills as a reason for their unemployment (State of Working India, 2018).

Higher aspirations with respect to the existing jobs and wage rates are responsible for a significant proportion of unemployed youth in developing countries (Tenjo, 1990). OECD (2017), based on School to Work Transition Surveys and ILO's employment projections in 32 developing countries find that about 60% of the students aspiring to work in high skilled occupations will be unlikely to fulfill their aspirations. This points to the high level of misalignment in employment preferences of youth and the reality of labour markets in developing countries. In case of India, Dhar (2019) based on a survey of more than 6000 youth finds that an overwhelming majority of Indian youth aspire for a job in government sector. The preference is particularly high in rural India and increases with the increase in educational level. Since the public sector has very limited jobs to offer, educated youth spend time as unemployed, preparing and waiting for these jobs. These studies show that unemployment among educated youth is not entirely about the employability problem but the mismatch between aspirations and the availability of jobs is one of the important correlates of labour market outcomes. Given the evidence from literature, the present study tries to fill the gap in the literature on youth unemployment by looking at the relationship between aspirations mismatch and unemployment. We attempt to examine whether high unemployment among youth in India is due to aspirations associated with higher education level, and the mismatch between employment aspirations and the jobs available.

Using the framework of socially determined aspirations, we argue that aspirations are partially exogenous and are product of a particular socio-economic setup a person lives in (Ray, 2006; Appadurai, 2004; Mani and Riley, 2019; Bogliacino and Ortoleva, 2013). The basic premise is that the achievements of people related to a person spatially, economically, and socially shape her own aspirations. It is the aspirations gap existing in the labour market that makes people put in effort and spend some time as unemployed to find employment meeting their aspirations. We build a measure of relative occupational aspirations based on the premise that aspirations of an individual are shaped by the socio-economic context as an exogenous factor and educational attainment as an endogenous factor. We argue that given people's socioeconomic contexts, increasing education raises job-related expectations and aspirations. Using nationally representative large scale data from Periodic Labour Force Survey (PLFS) 2018-19, we find the evidence of the existence of gap between employment aspirations of individuals and the reality of labour market. Relative occupational aspirations gap is higher among youth with more education levels. Using probit regression, we find the relative occupational aspirations gap as an important factor determining unemployment among youth. Therefore, the misalignment between aspirations and the opportunities available is one of major concerns about youth unemployment in India. We contribute to the literature by attempting to build a measure of aspirations gap and provide empirical evidence to the existence of discrepancy between aspirations and available the employment opportunities as a factor responsible for unemployment among educated youth.

The rest of the paper is as follows. Section 2 discusses the conceptual framework of aspirations and unemployment.

The measure of relative occupational aspirations gap is built in Section 3. Section 4 discusses the data source and methodology. The distribution of relative occupational aspirations gap across different groups is shown in section 5. Econometric estimation and results are discussed in section 6 followed by conclusion in section 7.

2. Aspirations and Unemployment: Conceptual Framework

Gardiner and Goedhuys (2020) defines aspirations as follows, "Aspirations capture the personal desires of individuals, their beliefs about the opportunities available to them in society and their expectations about what can be achieved through their own effort in an uncertain future". Appadurai (2004) defines aspirations as 'capability', that is the 'navigational capacity' which depends on the circumstances in which an individual is born. Thus, according to these definitions, aspirations are aligned with the circumstances in which an individual lives and the sense of realistic opportunities which, a person believes, can be achieved. Appadurai (2004) and Ray (2006) developed frameworks about how aspirations are formed and how they affect the lives of individuals. The basic premise underlying their frameworks is that the individual's aspirations do not exist in a vacuum but are formed in a social context. As such, the capacity to aspire is not uniform in society. Appadurai brings the notion of socially determined aspirations and argues that aspirations are never individual but are formed due to interaction and the involvement in social life (Appadurai, 2004, p 67). According to him, poor or less privileged have the limited capacity to aspire due to the limited social frame within which they explore the possible opportunities for themselves, compared to rich or privileged.

Ray (2006) develops the idea of an 'aspirations window'. An individual's 'aspirations window' is populated by people who are similar to her spatially, economically, and socially and whose outcomes she finds achievable. The idea is that the lives and achievements of people, who a person can relate with, determine her own expectations and aspirations. People view the possibilities for themselves existing within their social sphere through the same aspirations window. Therefore, aspirations are not evenly distributed and vary according to the context in which people live (Ray, 2006).006). The aspirations of an individual are influenced by her socioeconomic conditions and social network (Bogliacino and Ortoleva, 2013; Mani and Riley, 2019). Socioeconomic status encompasses income, educational attainment, and social class. Social network of a person is composed of those people with whom a person has close ties, like kiths, kins and other caste members or friends of friends and acquaintances (Mani and Riley, 2019). There is a social influence in a person's aspirations, that the achievements and experiences of people around shape her own goals and desires (Genicot and Ray, 2020). Building the notion of group-based aspirations, Genicot and Ray (2017) argue that the aspirations window is determined by factors like occupation, caste, religion, geography, and income distribution.

Apart from the external factors as discussed above, aspirations are also shaped by an endogenous factor such as educational attainment of an individual. The occupational achievements of the people in her window give an individual a sense of opportunity in the labour market. Therefore, the achievements of similar people living around a person defines the set of opportunities existing for that person. However, it is the capabilities of a person as argued by Amartya Sen, which define the freedom and ability to

achieve from the opportunity sets (Sen, 1987 p. 20)[8]. The opportunities set become visible and attainable for a person when she has the capabilities. As such, the endogenous factor shaping aspirations is the capabilities, and education is considered as a key factor that broadens the capabilities of a person. According to Sen's approach, education plays a role in both expansion of capabilities and the expansion in opportunities (Saito, 2003). For example, given a particular socioeconomic context, a person who has studied upto primary level education has lesser capabilities to aspire and lesser opportunities than the graduate person in the same socioeconomic context. As such, educational attainment is an important endogenous factor determining the aspirations of an individual. Therefore, while aspirations of individuals are influenced by their socio-economic context, education raises the expectations and aspirations in youth, and they aim for better quality employment opportunities (Mishra et al., 2018; OECD, 2017).

Ray (2006) argued that it is the aspirations gap, not the aspirations per se that affects the individual's behavior. The aspirations gap is defined as the difference between the individual's aspirations and the present condition of a person. The extent of aspirations gap determines the effort on part of an individual to meet the aspirations (Genicot and Ray, 2017). The relationship between aspirations and action is considered U-shaped (Ray, 2006). Too little or too high a gap between present condition and aspirations will not yield effort whereas a reasonable aspiration gap will motivate an individual to fulfill aspirations. Therefore, aspirations that are not too far provide the best incentive for

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8 Capability refers to 'freedom— the range of options a person has in deciding what kind of a life to lead' (Dre`ze and Sen, 1995, p. 10).

people to invest their time or effort to achieve. According to Tenjo (1990), unemployment among educated youth is partly explained by the discrepancy between desired and available employment opportunities. A person does not take the unattractive employment available but waits and strives for the one matching her aspirations. As such, the misalignment between aspired employment and the available employment opportunities makes the job search harder for a person and causes unemployment.

3. Measuring Relative Occupational Aspirations

The intuition of the concept of "aspirations window" and "aspiration-gap" as given by Ray (2006) guide the measure of relative occupational-aspirations gap that we build in this section. We start from the idea that aspirations are partially exogenous, and the employment aspirations of an individual are shaped by the people living in the same area with similar characteristics. In other words, aspirations are partially an outcome of a person's socio-economic setup. The achievements of the people with whom a person can relate shape one's own aspirations. How far are the person's expectations from the average achievements of the people she relates with, form the person's relative occupational aspirations gap (ROAG). To calculate the ROAG, we need to identify the people related to each other and estimate the individual's aspired occupation relative to the occupations that other people in her aspirations window are engaged in.

People living in a similar socio-economic context constitute a cohort. We identify these cohorts based on the concept that people relevant to each other in a society spatially, economically, and socially populate the 'aspirations window' for each other (Ray, 2006; Genicot and Ray, 2017). We use five variables gender, sector (rural/urban), district,

social group and income quintile to identify the groups of people based on similar socio-economic characteristics. For instance, Scheduled Caste females belonging to higher income group living in rural areas in a particular district form aspiration window for each other and have thus been identified as one cohort. Similarly, other cohorts of people are identified based on the same five variables. Each of these five variables used for identifying the cohorts are important exogenous factors shaping the aspirations of an individual. Group identities based on race, gender, or wealth influence people's conceptions about themselves, and affect their behavior (Akerlof and Kranton, 2010, p.332). Gender and caste remain the salient markers of social identity in India and both these identities affect the aspirations and real outcomes in life (Mukherjee, 2015; Sarkar et. al, 2020). Appadurai (2004) also posits that the social identity of a person shapes one's beliefs, aspirations, and the outcomes in life. Indian caste system is a historical social hierarchy based on the division of occupations. We are using four categories of social groups in our analysis; Scheduled Tribes (ST), Scheduled Castes (SC), Other Backward Castes (OBC) and General category. Sector (rural/urban) is also an important factor shaping the employment preference in India (Dhar, 2019). It is argued that sector (rural/urban) has a marked effect on job preference as youth in villages prioritize a permanent job compared to youth in cities where higher income job has greater importance.

Since the poor consider that the gap between rich and poor is large and unattainable, and there is a lack of connectedness between the two, poor do not have riches in their cognitive aspirations window (Ray, 2006). As such, wealth of an individual is taken as a crucial factor that shapes the aspirations for future (Genicot and Ray, 2017). We have taken monthly per-capita consumption expenditure

(MPCE) as a proxy for income. We have used quintiles to rank the individuals by income distribution and identify cohorts of people based on their income levels. We already discussed that 'aspirations window' refers to the person's cognitive world, zone of similar attainable individuals. Therefore, physical proximity within a neighborhood is a starting point for people to get exposed to similar ones, which will influence their beliefs and aspirations (Mani and Riley, 2019). We take district as a variable to identify people living in the same neighborhood.

Table 1: Variables used in cohort identification

Districts	Gender	Sector	Social Group	Income Quintile Group
71 districts	Male	Rural	Scheduled Tribe	1
	Female	Urban	Scheduled Caste	2
			Other Backward Class	3
			General	4

The variables discussed above are all exogenous factors, and we argued that they influence in shaping a person's aspirations. So, we identified people based on these characteristics (variables) to identify the cohorts of similar people. However, we do not take aspirations as completely exogenous in our measure. Educational attainment as an endogenous factor increases one's aspirations as well as opportunities in the labour market. We calculate mean

education level[9] for each gender-sector-district-social-income cohort. Therefore, given the characteristics of the cohort, an individual with higher education level will aspire for a better occupation. The ordering of the occupations based on the characteristics of work performed and the skills involved in the occupation is done in our analysis by using National Classification of Occupations (NCO). NCO (2004) aggregation at one digit classification level gives the hierarchical classification of occupations in terms of the kind of work performed and the skills required in the performance of occupation. The skill-based hierarchical classification of occupations at one digit code has nine occupational divisions and each division is a combination of homogenous groups of occupations, arranged in a descending order from 1 to 9. Each person in the workforce has an NCO one digit code from 1 to 9 based on the occupation a person is engaged in. We have reversed the order and taken the occupations in an increasing order of hierarchy from 1 to 9. Now, all employed persons will have an 'occupational score' from 1 to 9 based on the increasing order of hierarchy of occupations. From the distribution of workforce by the occupational score, we calculate mean occupation score in each cohort[10].

The occupational score of unemployed people remains invisible in the data as they are not employed. Our task is to assign an occupational score that a person is expected to aspire for. Given the characteristics of a cohort, average education level has led to an average occupation score of the cohort. Thus, an unemployed person's relative education

9 We use level of general education in an increasing order as given in the data from 1 to 13.
10 Since the range of educational level and occupation levels are different in this case, we standardize both by dividing a person's education level by 13 and occupation level by 9.

level (her educational level with respect to the average education level) should ideally lead to a person's relative occupation level (her occupational score with respect to the average occupation score). The intuition is that the average education level that has led to an average occupation score in a cohort gives the set of opportunities available for a person. A person will aspire for an occupation score based on the set of opportunities prevalent. So, an unemployed person of a particular cohort will aspire for an occupation score based on the jobs of people in her cohort with various education levels.

$$\frac{e_i}{\overline{e}} \rightarrow \frac{o_i}{\overline{O}} \qquad \text{…................. (1)}$$

e_i : *education level of the ith individual*

$O_{i:}$ *aspired occupation score of the ith individual*

$\overline{e}$: *mean education level of the cohort individual i belongs to. The average education level is calculated from the education levels of all the people in the cohort.*

$\overline{O}$: *mean occupation score of the cohort individual i belongs to. The average occupation score of the cohort is calculated from only those who are employed and therefore whose occupation score can be observed.*

We use the following unitary method formula to assign the aspired occupation score to individual *i*.

$$o_i = \frac{(\overline{o} * e_i)}{\overline{e}} \qquad \text{…................ (2)}$$

In a cohort with some average occupation score and education level, a person with education level higher than average education level of the cohort will have aspired occupation score higher than average occupation score of the cohort.

Now we have the observed occupational score of those who are employed and assigned occupation score of those who are not employed. We define the relative aspiration-occupation gap of an individual i as the difference between O_i and $\overline{O}$

Relative occupational Aspirations Gap (ROAG) = O_i - $\overline{O}$ ....(3)

O_i denotes the *aspired* occupational score of those who are not employed while it represents the *observed* occupational score of employed people. The ROAG denotes the distance between either the aspired occupational score or the observed occupational score and the average occupation score in the cohort. Intuitively, we submit that a person belonging to a cohort will aspire for an occupation matching with the average occupation of that cohort. However this aspiration is conditioned by her own level of education and the average level of education of the cohort that she belongs to. Measuring this, the *aspired* occupational score is the score assigned to an unemployed person that represents her aspired occupational level. We have assigned an aspired occupation score to an unemployed person based on her own education level and the average education level and occupation score of her cohort. This is done by using equation (2). On the other hand, *observed* occupational score is the actual occupational score of a working person (not unemployed) based on the occupation she is engaged in. We have calculated ROAG for both observed and aspired occupation scores. Since our concept of aspiration

is based on socially determined aspirations, we contend that the people who a person can identify with socially, economically, and spatially shape her own aspirations. As such, we argue that a person's own job aspirations are influenced by the kind of jobs the people in one's cohort are engaged in. Therefore, the average occupational score of the cohort matters for those also 'who are already working'. If a person has a lower occupation than the average occupation score in her cohort, it could be the case of aspirations gap. Following this intuition, we have calculated ROAG for both employed and unemployed people.

An alternative way to interpret the ROAG is the distance between the individual's aspired or observed occupational score and the prevalent condition of labour market. The range of ROAG is between -1 and +1. If ROAG<0, the observed or aspired occupational score is lower than the average occupation score of the cohort. If ROAG>0, the person's aspired or observed occupational score is higher than the average occupation score of the cohort. Our measure of aspirations gap is in a relative sense, given a person's aspired occupation score is with respect to the average occupation score of the cohort.

One of the main challenges in our study is the empirical measurement of aspirations. There are no direct questions in the periodic labour force survey asked to respondents about what they aspire to do. Aspiration is a multi-dimensional concept and could be a result of subjective individual experiences. Our approach relies on the premise that individual's aspirations are largely shaped by one's reference group. Yet, personal experiences also shape the aspirations of an individual which we are not able to take into account in our measure. Since aspirations are not directly observable and are perception based, self-

reported indicators of aspirations that indicate the personal preferences of individuals also suffer from limitations like lack of interpersonal comparability of responses (Bernard and Taffesse, 2012 for discussion). We believe that our indirect measure of aspirations, despite its limitations, brings some advantages. It defines that aspirations are not all the random beliefs and desires of an individual but are only those beliefs and wishes that are conditioned by the social circumstances of the person. These realistic aspirations are the ones that motivate the behavior of an individual to act in order to attain the goals. We do not attempt to examine an individual's desired occupation in ideal circumstances. We quantify the occupational aspirations in relative terms rather than absolute ones to show the individual's aspirations with respect to the achievements of the people in her cohort. As such, our measure of aspirations by virtue of it being in relative sense makes interpersonal comparability more plausible.

4. Data and Methodology

We have used the unit-level data from the Periodic Labour Force Survey (PLFS) 2018-19 conducted by National Sample Survey Organization (NSSO). NSSO survey data is considered most comprehensive data in India to evaluate employment and unemployment situation (Himanshu, 2011). The present study uses the definition of youth according to the National Youth Policy 2014 as those aged 15-29. We use descriptive statistics to examine the distribution of the relative occupational aspirations gap across age-groups, gender, social groups, and educational categories. To analyze the relationship between Relative Occupational Aspirations Gap (ROAG) and unemployment among youth, both multinomial and binomial probit models have been used. Throughout the study, unemployment rate

has been estimated based on Usual Principal and Subsidiary Status (UPSS)[11].

Table 2: Summary Statistics of the cohorts formed

|	
Total Number of Cohorts	3683
Maximum number of individuals in a cohort	1632
Minimum number of individuals in a cohort	1
Average (Mean) number of individuals in each cohort	353
Standard Deviation	267.5

Based on PLFS 2018-19

5. Distribution of Relative Occupational Aspirations Gap

We plot the density histograms of the distribution of ROAG between youth and adults in figure 1 and between male and female youth in figure 2. The effect of outliers has been reduced by limiting the extreme values in the data using winsorization technique. We find that observations are predominantly concentrated on the right side of 0 for youth, implying that youth have higher positive ROAG compared to adults. In other words, the extent of unfulfilled aspirations is greater among youth. It is possibly because levels of educational attainment are increasing among youth, so they aspire for occupations better than the ones people, on average, in their cohort are engaged in.

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11 Usual Status approach takes reference period of 365 days to measure unemployment. A person is classified as unemployed according to UPSS if he/she has been unemployed and looking for work for more than half period of the year. It, however excludes those who have worked for at least 30 days as subsidiary worker.

Figure 1: ROAG among youth versus adults
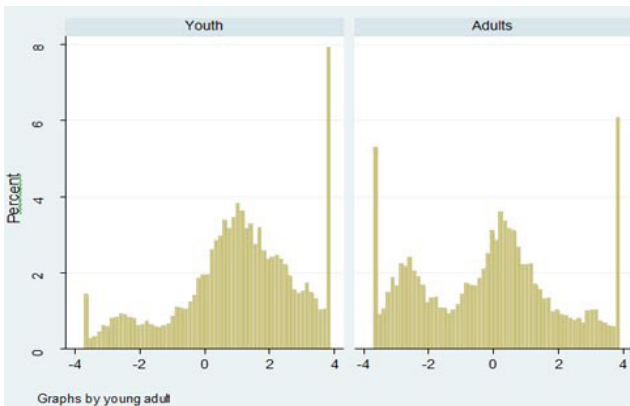
Note: Youth: 15-29, Adults: 30-65. Own estimation based on PLFS 2018-19

Figure 2: Aspiration gap among youth in 2018-19
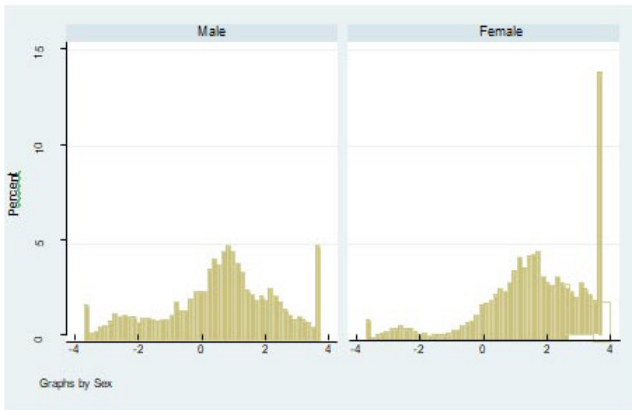
Note: Own estimation based on PLFS 2018-19

Similarly, from figure 2, female youth have greater extent of positive aspirations gap, compared to males. In other words, higher percentage of female youth aspires for occupations better than the average occupation in their

cohorts. Despite growing education levels, female worker population ratio is much lower in India, and those in workforce are concentrated in low-quality employment (Sundari, 2020). The low female participation in labour force and lower average occupational status of women is symptomatic of the hindrances and the lack of opportunities for females in the labour market. Due to lack of quality jobs available despite growing education levels, the gap between aspirations and the opportunities available for females is larger. Therefore, the divergence between growing education levels among youth and the lower-quality of jobs among employed females drives the ROAG higher among female youth compared to males. Wicht et al. (2020), in the case of Germany, found that female youth have higher occupational aspirations because, for girls entering labour market, job environment and content of job also matters. These things are of a relatively lesser concern for males which makes large number of jobs available for men compared to women. OECD (2017) also suggests that young women have higher aspirations gap than young men. Females have higher occupational aspirations and are more likely to have to experience aspiration-attainment gap, which reflects the structural inequalities and barriers existing for them (Gutman and Akerman, 2008). In India, Chatterjee et al. (2018) finds that most of the white-collar jobs are occupied by men, and women are found in a very less proportion in these jobs. Klasen and Pieters (2015) also find that employment growth in India has mainly occurred in Construction and low-skilled services which are not preferred by educated women while the expansion of white-collar services jobs has been happening at a slow pace. Therefore, increasing education levels along with lack of suitable jobs for women could be a key factor behind higher ROAG among females compared to male youth.

The value of ROAG ranges between -1 and +1. We categorize the ROAG scores into six ranks as given below.

ROAG score	Rank
ROAG≤ 0	0
0<ROAG≤0.1	1
0.1<ROAG≤0.2	2
0.2<ROAG≤0.3	3
0.3<ROAG≤0.4	4
ROAG>0.4	5

We give the rank 0 to those who have ROAG score less than or equal to 0. As such, 0 represents those who have zero or negative ROAG while rank 1 to 5 represent the extent of positive aspirations gap in an increasing order.

We now test whether removing gender as one of the variables used for identifying the cohorts of individuals makes any differences in the aspirations gap. In order to see the extent to which gender matters in forming the aspirations gap, we estimate the levels of ROAG among youth by removing the gender as one of the factors in individual's cohort identification. Of the five variables (gender, sector, district, social group and income) that we used for identifying the individual's cohort, we remove gender. Removing gender as one cohort identification factor implies that individual has both males and females in her cognitive zone of similar individuals, and thus gender does not matter in determination of aspirations of an individual. Now, males and females populate the aspirations window for each other and will both be in the same cohorts if the other four characteristics such as district, sector, social group, and income group match. For instance, both male and female scheduled caste people belonging to lowest income

quintile in a particular district will form one cohort. We have already discussed that the cohort represents the group of similar people, and their achievements represent the possibilities and opportunities for an individual belonging to the cohort. As such, the achievements of both males and females relevant to an individual in a cohort will determine one's occupational aspirations. Calculating the relative occupational aspirations gap by removing the gender in cohort identification, we compare the results with the levels of ROAG when gender was not removed.

Table 3: Percentage of youth by levels of ROAG
(with and without gender as an identification variable in cohort formation)

ROAG rank	with gender as one identification factor		without gender as one identification factor	
	Male	Female	Male	Female
0	33.37	17.87	31.28	20.05
1	25.04	13.71	18.68	21.29
2	18.25	23.42	21.32	25.5
3	12.2	16.91	12.44	14.77
4	6.14	12.26	8.57	10.49
5	5.01	15.84	7.7	7.9
Total	100	100	100	100

Note: Own estimation based on PLFS 2018-19

Table 3 shows that females have greater extent of positive aspirations gap both when gender is removed in one case and not removed in another case as a cohort identification characteristic. However, the extent of positive ROAG decreases among female youth when gender is removed as a variable to identify cohorts. It implies that if females form their occupational aspirations by considering the achievements of males also, the positive gap between their aspirations and the average occupation level of the cohort decreases. Removing gender as an identification variable in this case meant that gender does not matter in forming the aspirations and females consider the achievements of both males and females as possible opportunities for them. In such a case, the gap between the aspirations and the potential opportunities will decline for females. In the rest of the paper, estimation of ROAG has been done with all the five characteristics used for identification of the cohorts.

Table 4: ROAG for youth across different educational categories in 2018-19

ROAG Rank	Illiterate & upto primary	Upto higher secondary	Above higher secondary
0	58.97	19.64	10.51
1	17.86	11.49	3.91
2	14.2	18.48	4.38
3	5.57	22.16	8.04
4	0.94	16.42	20.23
5	2.46	11.81	52.93
Total	100	100	100

Note: Own estimation based on PLFS 2018-19

It is clear from Table 4 that ROAG among youth varies strongly by level of educational attainment. Youth with higher education levels have higher ROAG while low educated youth have lower ROAG. The aspirations gap is found to be highest for tertiary educated youth. It suggests that there is a high gap between career aspirations and the opportunities available for tertiary-educated youth. OECD (2017) finds the aspirations-employment gap lower in developed countries where high skilled employment opportunities are greater. The developing countries have smaller high-skilled employment sectors that result in larger gaps between career aspirations and jobs available for educated youth. In line with this, we also find aspirations-gap higher among tertiary educated youth.

Figure 3: Unemployment Rate among youth (15-29) with different ROAG levels
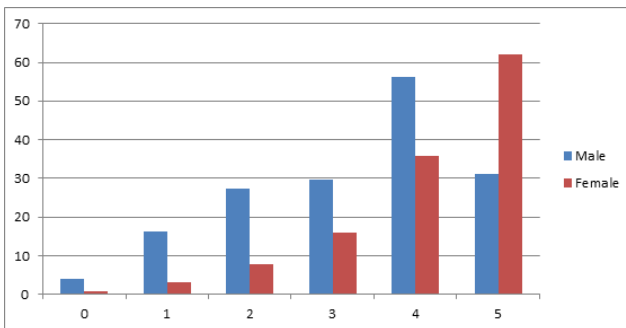
Note: Own estimation based on PLFS 2018-19

Figure 3 shows that there is a strong association between ROAG and open unemployment rates. Unemployment rate increases with increase in ROAG. For both males and females, youth with ROAG rank 0 have the lowest unemployment rate and the unemployment rate increases with increase in the ROAG rank. It indicates that open

unemployment is lowest among youth when there is a lower mismatch between aspirations and the opportunities available. The unemployment rate increases as the relative aspirations gap widens. However, unemployment shows a decline at the highest ROAG rank for males, which is not the case with females. It seems that male youth with large occupational-aspirations gap either find suitable jobs or tend to take up available employment. Females, on the contrary, continue looking for employment that matches their aspirations even when the aspirations gap is too wide. The reason for this difference between male and female youth could be as follows. The Gross Enrollment Ratio[12] according to All India Survey on Higher Education (AISHE) 2019-20 is higher for females than males, which means that more women compared to men are attending tertiary education in India. Moreover, women at the higher end of education levels have higher labour force participation rates and they tend to look for better quality jobs (Chatterjee et al., 2018). However, there are limited appropriate jobs available for increasing number of educated women in India. High educated women often belong to richer households and are thus less constrained by family circumstances to take up low quality employment (Klasen and Pieters, 2015). Therefore, they will continue looking for a job matching their aspirations even if opportunities are limited and the aspirations gap is higher. As such, the unavailability of quality and suitable jobs for high educated women and the unwillingness to take up any available employment could also be the reason that, unlike males, unemployment rate for female youth does not decline at ROAG rank 5.

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12 GER is the percentage of population attending college and university out of the total eligible population aged 18 to 23.

Table 5: Unemployment rates for youth at different ROAG levels across social groups

ROAG rank	General	ST	SC	OBC
0	3.54	2.55	4.51	3.21
1	16.87	7	26.75	9.74
2	22.61	23.54	23.38	23.76
3	28.22	26.69	26.44	26.53
4	40.78	58.89	57.38	57.35
5	39.79	49.77	34.16	43.33
Total	17.66	12.85	18.29	17.97

Note: Own estimation based on PLFS 2018-19

In table 5, we find the similar pattern between ROAG and unemployment rates among youth across different social groups. At ROAG level 4 and 5, ST youth have the highest unemployment rate among all social groups. We observe that unemployment rate declines at ROAG level 5 for all social groups. However, there has been low decline for General category youth while the decline is higher for youth belonging to other social groups. The decline is highest for Scheduled Caste youth from 57.4% unemployment rate at ROAG rank 4 to 34.2% unemployment rate at ROAG rank 5. It suggests that when the aspiration gap is too wide, a significant percentage of SC youth tend to take up employment. At ROAG rank 4, General category youth has much lower unemployment rate compared to other social groups. The unemployment rate declines marginally from rank 4 to rank 5 for General category youth suggesting that widening aspirations gap has comparatively smaller effect

on incidence of unemployment for General category youth. They tend to find employment before their aspirations gap widens too large.

Table 6: Unemployment rates for youth at different levels of aspirational gap across educational categories

Aspirations Mismatch	Illiterate & upto primary	Upto higher secondary	Above higher secondary
0	7.16	1.88	0.08
1	13.83	14.81	1.81
2	3.81	33.77	5.53
3	0.94	37.19	16.09
4	4.93	54.44	52.81
5	0.65	10.31	59.86
Total	7.58	14.51	34.4

Note: Own estimation based on PLFS 2018-19

We found in Table 4 that low educated youth have lower ROAG which increases with the increase in education level. In table 6, we find that the unemployment rate is lowest among low-educated youth while tertiary educated youth have the highest unemployment rate. While 7.6% of youth who are illiterate or educated upto primary level were unemployed, tertiary educated youth registered unemployment rate of 34.4%. Low-educated youth (Illiterate & upto primary level) who have lower aspiration-gap also have the lowest unemployment rates. However, we do not find any specific pattern in table 6 between ROAG rank and unemployment rates for low-educated youth. It suggests that aspirations-gap may not be the factor explaining unemployment among

low-educated youth. Less educated youth often belong to low-income households, cannot afford to be unemployed for long, and are more likely to work in low-quality jobs (Mitra and Verick, 2013; ILO, 2013). As such, low educated youth are likely to take available employment readily due to the narrow gap between the aspirations and the opportunities, lowering their incidence of unemployment. However, for youth educated above primary and upto higher secondary level, unemployment rate increases with increase in the ROAG rank expect at rank 5 where unemployment rate decreases. As the aspirations gap widens and becomes too large, medium educated youth tend to take up available employment. Tertiary educated youth, who have the highest unemployment rates, follow the consistent pattern of increase in unemployment rate with increasing rank of ROAG. We can say that education raises the occupational aspirations of youth. However, lack of jobs to fulfill these aspirations leads to widening gap between the aspirations and the reality of labour market. Youth with higher aspirations gap remain unemployed while looking for suitable employment that matches their aspirations. Due to lack of better-quality jobs available particularly for high educated youth, young people spend time searching and preparing for these jobs which increases their incidence of unemployment. On similar lines, Mains (2012) finds that youth in Ethiopia aspire for decent jobs in the public sector that result in unemployment because there are limited job opportunities in the public sector.

6. ROAG and Youth Unemployment: Econometric Technique

In this section, we attempt to examine ROAG as a determinant of youth labour market outcomes in India. The main youth labour market outcomes considered in the

analysis are unemployment, employment and inactive[13]. We estimate how ROAG influences the probability of a particular labour market outcome using probit regression. Since we have three discrete outcomes to estimate in the model, Multinomial Probit Model (MNP) is used. The use of MNP gives a certain advantage over multinomial logit model in this analysis. The Independence of Irrelevant Alternatives (IIA) restriction built into multinomial logit model is relaxed in MNP (Greene, 2003). The IIA property infers that the probability of one status that the outcome variable takes is independent of other alternatives available. However, in the case of young people, labour market decisions are not independent of each other but are mostly interdependent (Domadenik and Pastore, 2004). A person may choose to continue further education if better jobs are not available in the labour market at present. Some people choosing to be out of labour force may also be driven by poor employment prospects in the market. Therefore, IIA property is unsatisfactory if choices of labour market status are not purely independent. Moreover, the calculated marginal effects given in the probit estimates are straightforward, easier to interpret and understand than the odds ratio given in logit estimates (Verdú, 2008).

Each alternative gives utility to every individual in multinomial probit model. Following Jepsen (2008) and Bairagya (2018), the model can be described as follows: If individual i gets utility from alternative j, the multinomial probit equation will be

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13 Inactive are those who are neither in labour force nor in education. Most of them are attending domestic duties.

$$Y_{ij} = \alpha_j\,U_i{'} + \beta_j\,V_i{''} + \mu_j\,W_i{''} + \varepsilon_{ij}$$

For dependent variable, utility of only the final labour market outcome is observed for an individual among all three alternatives. Independent variable may take three values, employed, unemployed and inactive status. The youth who are still pursuing education have been excluded from the sample in the model. We use other factors as control variables in our model based on studies in different countries that have looked at determining factors causing unemployment among youth (Msigwa (2013) in Tanzania; Arif and Chaudhry (2008) in Pakistan; Bairagya (2018) in India). U is the vector of individual characteristics like age, marital status, gender, education level, vocational education and ROAG. V is the vector of household characteristics like household size and monthly per-capita expenditure (MPCE), and W is the vector of regional and social characteristics such as rural/urban, caste and religion. Of the final outcomes, employed status has been kept as base outcome. The state level variations have been controlled by state dummies in the estimation. We also use binomial probit (BNP) model where the dependent variable takes only two values, employed and unemployed. In BNP model we take the sample of only those youth who are either employed or unemployed. Those who are not part of labour force such as ones attending domestic duties are excluded from the sample in BNP. We use individual level PLFS (2018-19) data and only youth belonging to age group 15 to 29 are considered in the model. The summary statistics of the variables used in the model are given in the appendix.

7.Results and Discussion

Table 7 presents the marginal effects of variables obtained from multinomial probit model and binomial probit model for youth (15-29) in 2018-19. The sample in binomial probit model is restricted to only those who are in labour force.

Table 7: Marginal effects from Multinomial Probit and Binomial Probit model for youth (15-29) in 2018-19

	Multinomial Probit			Binomial Probit
	Employed	Unemployed	Inactive	Unemployed
Relative Occupational Aspirations Gap	**-0.070***	**0.039***	**0.031***	**0.068***
	(0.001)	**(0.001)**	**(0.001)**	**(0.001)**
Sex (Ref Male)				
Female	-0.449***	-0.118***	0.567***	-0.001
	(0.004)	(0.003)	(0.003)	(0.004)
Sector (Ref Rural)				
Urban	-0.050***	0.024***	0.026***	0.039***
	(0.003)	(0.002)	(0.003)	(0.004)
Age-groups (Ref: 15-19)				
20-24	0.081***	-0.017***	-0.064***	-0.063***
	(0.004)	(0.003)	(0.004)	(0.005)
25-29	0.154***	-0.058***	-0.096***	-0.137***
	(0.004)	(0.003)	(0.004)	(0.006)
Religion (Ref: Hindus)				
Islam	-0.022***	-0.001	0.023***	0.002
	(0.004)	(0.003)	(0.003)	(0.005)
Others	-0.006	0.009**	-0.003	0.013*
	(0.006)	(0.004)	(0.005)	(0.007)

Social Groups (Ref: General)				
ST	0.039***	0.002	-0.042***	-0.002
	(0.006)	(0.004)	(0.005)	(0.007)
SC	0.023***	-0.001	-0.022***	-0.010*
	(0.004)	(0.003)	(0.004)	(0.005)
OBC	0.025***	-0.004	-0.021***	-0.013***
	(0.004)	(0.003)	(0.003)	(0.004)
Marital Status (Ref: Single)				
Married	0.008**	-0.118***	0.109***	-0.137***
	(0.003)	(0.003)	(0.003)	(0.004)
Vocational Training (Ref: No VT)				
Received VT	0.200***	-0.042***	-0.158***	-0.096***
	(0.005)	(0.003)	(0.004)	(0.004)
Log MPC	-0.011***	-0.005**	0.016***	-0.012***
	(0.003)	(0.002)	(0.003)	(0.004)
Household size	-0.004***	0.001	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Educational Attainment (Ref: Illiterate & upto primary)				
above primary upto hr sec	0.078***	0.006**	-0.084***	0.001
	(0.004)	(0.003)	(0.003)	(0.005)
above higher sec	0.175***	0.060***	-0.235***	0.037***
	(0.006)	(0.005)	(0.005)	(0.007)
Observations	72,596	72,596	72,596	44,391

Note: Own estimation based on PLFS 2018-19

Relative Occupational Aspirations Gap has a negative and significant effect on the employment status in MNP model. It indicates that youth with higher ROAG are less likely to be in employment. On the other hand, ROAG has a positive

and significant effect on unemployment status in both MNP and BNP. As such, youth with higher ROAG are more likely to be unemployed. It seems that those with higher ROAG spend more time in labour market trying to find a job that matches their aspiration. Moreover, the probability of a young person to be inactive also increases as ROAG increases.

The marginal effects of other control variables indicate that females are found less likely to be unemployed compared to males in MNP. However, the result is insignificant in BNP. This is possibly because males are more likely to search for employment when they are not employed. Females, on the other hand, withdraw themselves from the labour market as reflected by positive and significant marginal effect of being female on inactive status. Vocational training has a strong positive impact on the probability of being employed. This is in line with Ryan (2001) that finds from cross country evidence that vocational training raises the chances of a person working early in life. Youth with better levels of education are less likely to be inactive, and tertiary educated have the least probability of being inactive.

We found that females have higher chances of being inactive or out of labour force. Being female in India is one of the main factors limiting access to labour market. In this regard, there is a need to analyze the impact of ROAG on labour market outcomes separately for male and female youth. By dividing the sample of youth based on gender, separate analysis has been carried for male and female youth. Table 9 presents the marginal effects of multinomial probit model estimated for male and female youth separately. In this analysis, we use ROAG ranks in place of ROAG values to estimate the impact of ROAG on youth labour market outcomes. The estimated marginal effects of all the control variables except for ROAG are given in appendix.

Table 8: Marginal Effects from Multinomial Probit Model for
Males and Females Separately in 2018-19

ROAG Rank	Male			Female		
	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive
1	-0.131***	0.116***	0.015***	-0.127***	0.017***	0.111***
	(0.006)	(0.005)	(0.003)	(0.009)	(0.003)	(0.009)
2	-0.208***	0.173***	0.036***	-0.307***	0.029***	0.278***
	(0.007)	(0.006)	(0.004)	(0.008)	(0.003)	(0.008)
3	-0.268***	0.245***	0.023***	-0.424***	0.034***	0.389***
	(0.008)	(0.008)	(0.004)	(0.007)	(0.003)	(0.007)
4	-0.450***	0.407***	0.043***	-0.444***	0.059***	0.385***
	(0.009)	(0.009)	(0.006)	(0.007)	(0.003)	(0.007)
5	-0.251***	0.247***	0.004	-0.505***	0.109***	0.397***
	(0.008)	(0.008)	(0.004)	(0.006)	(0.003)	(0.007)

Note: Own estimation based on PLFS 2018-19

The estimated marginal effects of ROAG are interpreted with respect to ROAG rank 0 that represents those who have zero or negative ROAG. While ROAG has positive and significant effect on unemployment for both male and female youth, the effect is stronger among males than females. On the other hand, positive effect of ROAG on inactive status is higher among females. ROAG affects both unemployed and inactive status among females positively and significantly. As such, the effect of ROAG is distributed for unemployed and inactive status among females. It suggests that while both male and female youth with higher aspirations gap have higher chances to be unemployed, higher aspiration gap makes female youth more likely to be inactive. In other words, tendency of male youth to search for employment when there is gap between aspirations and the opportunities available is higher compared to females. It is possible that female youth with higher aspirations gap withdraw from labour market when the job opportunities matching their aspirations are not available. The probability of unemployment for male youth declines at ROAG rank 5 while the probability increases with increase in each ROAG rank for females. The results are similar to our finding in figure 3.

Since educational attainment is an important variable that affects the labour market outcomes of an individual, we examine whether impact of ROAG varies between people with different educational levels. We divide the sample of youth in labour force based on educational attainment into two groups, those who are educated up to higher secondary (including illiterates) and those who have studied above higher secondary. Table 9 presents the results of marginal effects of unemployment from BNP for youth divided on the basis of educational attainment.

Table 9: Marginal Effects of Unemployment from Probit Model for youth categorized on the basis of educational attainment in 2018-19

	Illiterate & educated upto hr sec	above hr sec
ROAG	0.048***	0.164***
	(0.001)	(0.003)

Note: Own estimation based on PLFS 2018-19

We find that the effect of ROAG on unemployed status is much stronger for tertiary educated youth. As such, aspirations gap increases the likelihood of unemployment for youth who are tertiary educated. This is in line with the findings of OECD (2017) arguing that the school-to-work-transition is harder for young people in developing countries due to the mismatch between employment aspirations and the condition of labour market. While 80% of students aspire for a high-skilled occupation in developing countries, only 20% of young workers are engaged in high-skilled jobs (OECD, 2017). This is consistent with our findings that tertiary educated youth have higher ROAG and this gap increases their chances of unemployment more than less-educated youth.

7. Conclusion

Our analysis, based on a novel measure of aspirations, provides empirical evidence of the gap between employment aspirations of youth and the availability of jobs. We found that existing jobs do not match the employment aspirations of youth and the misalignment between their aspirations and the available employment could be partly responsible for the high unemployment. Higher relative occupational aspirations gap among youth compared to adults indicates that young people who are more educated than their elders aspire for better jobs than the existing ones. Female youth have larger aspirations gap and the gap increases their chances of unemployment and being out of labour force. The misalignment/ gap between employment aspirations and the available employment opportunities persists mainly among tertiary educated youth. In the last few years, the focus of attention has shifted towards skilling as means to address the challenge of employment in India. It is believed that educated youth entering labour force lack the required skills. We argue through this study that skill mismatch may not be the whole story. With increasing educational levels, young people aspire for employment opportunities better than the ones people with the similar socio-economic context are engaged in. The lack of such better-quality jobs make the job search harder for educated youth which increases the incidence of unemployment for these youth. Therefore, alongside skilling the young educated people, addressing their aspirations is equally important. We argue that it is the lack of high-skilled jobs causing aspirations mismatch which increases the incidence of unemployment. An effective policy approach requires the creation of better quality jobs that match the aspirations of an increasingly educated young labour force.

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Appendix

Table A1: Summary Statistics of Youth (excluding those who are in education) in 2018-19

		Number	Percentage
Labour Market Status	Employed	35331	48.35
	Unemployed	7439	10.18
	Inactive	30308	41.47
Sex	Male	35365	48.39
	Female	37698	51.59
Sector	Rural	51052	69.86
	Urban	22026	30.14
Age groups	15-19	11841	16.2
	20-24	28266	38.68
	25-29	32971	45.12
Religion	Hinduism	58256	79.72
	Islam	11132	15.23
	Others	3690	5.05
Social Group	General	17741	24.28
	Scheduled Tribe	7261	9.94
	Scheduled Caste	16118	22.06
	Other Backward Class	31958	43.73
Marital Status	Married	40050	54.8
	Not married	33028	45.2
Vocational training	No VT	63898	87.44
	Received VT	9180	12.56
ROAG	0	26033	35.62
	1	8712	11.92
	2	9146	12.52
	3	9477	12.97
	4	7468	10.22
	5	12241	16.75

Educational Level	Illiterate & upto primary	20294	27.77
	Above primary upty higher sec	39139	53.56
	Above Higher Sec	13600	18.61
Household Size	Continuous variable	73,078	Mean=5.0, SD=2.18
Log MPCE	Continuous variable	73,078	Mean= 7.4, SD=0 .57
Total		73,078	

Table A2: Marginal Effects from Multinomial Probit Model for Males and Females Separately in 2018-19

	Male			Female		
	Emp	Unemp	Inactive	Emp	Unemp	Inactive
Sector (Ref Rural)						
Urban	-0.030***	0.027***	0.003	-0.072***	0.016***	0.056***
	(0.004)	(0.004)	(0.002)	(0.004)	(0.002)	(0.004)
Age-groups (Ref: 15-19)						
20-24	0.083***	-0.040***	-0.043***	0.055***	0.003	-0.058***
	(0.006)	(0.006)	(0.004)	(0.005)	(0.004)	(0.005)
25-29	0.151***	-0.107***	-0.045***	0.113***	-0.009**	-0.104***
	(0.006)	(0.006)	(0.004)	(0.005)	(0.004)	(0.006)
Religion (Ref: Hindus)						
Islam	-0.002	0.009*	-0.007**	-0.054***	-0.006*	0.060***
	(0.006)	(0.005)	(0.003)	(0.005)	(0.003)	(0.005)
Others	-0.015*	0.017**	-0.002	0.002	0.000	-0.002
	(0.008)	(0.008)	(0.004)	(0.007)	(0.004)	(0.008)
Social Groups (Ref: General)						
ST	0.006	-0.003	-0.003	0.051***	0.005	-0.057***
	(0.008)	(0.007)	(0.004)	(0.007)	(0.005)	(0.008)
SC	0.010*	-0.003	-0.007**	0.036***	-0.003	-0.033***
	(0.006)	(0.006)	(0.003)	(0.006)	(0.004)	(0.006)
OBC	0.010**	-0.006	-0.004	0.038***	-0.002	-0.036***
	(0.005)	(0.005)	(0.003)	(0.005)	(0.003)	(0.005)

Marital Status (Ref: Single)						
Married	0.177***	-0.144***	-0.032***	-0.145***	-0.102***	0.248***
	(0.004)	(0.004)	(0.002)	(0.005)	(0.003)	(0.005)
Vocational Training (Ref: No VT)						
Received VT	0.125***	-0.092***	-0.033***	0.216***	0.004	-0.220***
	(0.004)	(0.004)	(0.002)	(0.008)	(0.004)	(0.008)
ROAG Rank (Ref: Rank 0)						
1	-0.131***	0.116***	0.015***	-0.127***	0.017***	0.111***
	(0.006)	(0.005)	(0.003)	(0.009)	(0.003)	(0.009)
2	-0.208***	0.173***	0.036***	-0.307***	0.029***	0.278***
	(0.007)	(0.006)	(0.004)	(0.008)	(0.003)	(0.008)
3	-0.268***	0.245***	0.023***	-0.424***	0.034***	0.389***
	(0.008)	(0.008)	(0.004)	(0.007)	(0.003)	(0.007)
4	-0.450***	0.407***	0.043***	-0.444***	0.059***	0.385***
	(0.009)	(0.009)	(0.006)	(0.007)	(0.003)	(0.007)
5	-0.251***	0.247***	0.004	-0.505***	0.109***	0.397***
	(0.008)	(0.008)	(0.004)	(0.006)	(0.003)	(0.007)
Log Monthly per-capita expenditure						
log_mpc	0.016***	-0.026***	0.011***	-0.042***	0.013***	0.028***
	(0.004)	(0.004)	(0.002)	(0.004)	(0.002)	(0.004)
Household size						
Household size	-0.004***	0.002**	0.002***	-0.005***	0.000	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Educational Attainment (Ref: Illiterate & upto primary)						
above primary upto hr sec	0.068***	-0.003	-0.065***	0.098***	0.013***	-0.111***
	(0.006)	(0.006)	(0.005)	(0.004)	(0.004)	(0.005)
above higher sec	0.028***	0.057***	-0.085***	0.364***	0.051***	-0.415***
	(0.008)	(0.008)	(0.005)	(0.008)	(0.005)	(0.009)
Observations	35,957	35,957	35,957	37,052	37,052	37,052

PUBLICATIONS

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The Working Papers published after January 2020 are listed below:

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W.P. 503 **SRIKANTA KUNDU, AMARTYA PAUL,** *Effect of Economic Policy Uncertainty on Stock Market Return and Volatility under Heterogeneous Market Characteristics.* August 2021

W.P. 502 **CHIDAMBARAN G. IYER**, *Mobile Phone Manufacturing in India: A Study of few Characteristics.* February 2021

W.P. 501 **SUSAMA HANSDAH, ABHILASH T,** *Scheduled Tribes and School Education: Analysis of a Household Survey in Mayurbhanj District of Odisha.* December 2020.

W.P. 500 **TIRTHA CHATTERJEE, THIAGU RANGANATHAN**, *Did Reservation in Higher Education Change The Prospects For OBCs in Getting Better Jobs? A Study Using Periodic Labour Force Survey (PLFS) in India.* October 2020.

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