

RESEARCH ARTICLE

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# Gender disparity in occupational segregation among the Tripuris in Mandai block, Tripura

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## ABSTRACT

The study examines the occupational patterns of the Scheduled Tribe (ST) population in Mandai Block, West Tripura, with special focus on the role of education, income, and gender in shaping occupational opportunities. The study seeks to identify the major occupations of men and women in the study area, and it also analyses whether gender roles and education contribute to occupational segregation and income levels among the ST population. Although several studies have discussed gender wage gaps and occupational segregation, most of them have analysed these issues separately. Very few studies have examined how education, occupation, and rural differences together influence gender inequality, especially in tribal rural areas. Earlier studies mostly relied on secondary data and paid limited attention to the social and structural barriers that continue to restrict women's occupational opportunities. To address these gaps, the present study uses both the primary and secondary data. The Duncan Index of Dissimilarity has been applied to measure the educational and income level disparity and the simple percentage method has been used to analyse the occupational segregation. The findings reveals that both men and women are engaged in several occupational activities with women mainly concentrated in lower-paying and less secure jobs. The study further shows that education alone is not enough to ensure gender equality in occupation and income. It highlights how deep-rooted structural, socio-economic and cultural barriers continue to hold back and limit women's opportunities and also men to some extent. There are exceptions in a few occupations like rubber trading business, tuition teacher, pharmacy assistant, constable, market gardener, and water supply operator, where equal participation of men and women is observed. In occupations like weaving, which is considered a female-oriented job, male participation is noticeable, while in carpentry, which is considered a male-oriented job, women's participation is seen. This indicates a gradual shift in traditional gender roles, but several high-paying and stable occupations within the study area are still dominated by males. The study highlights the need for more female-focused occupational opportunities, the reduction of gender stereotypes, and the creation of conditions to achieve gender equality in the study area.

**Keywords:** Gender income disparity, occupational segregation, women workers, main working population, educational disparity

## Introduction

The ILO (2008) defines occupation as a set of jobs whose main tasks and duties are characterised by a high degree of similarity. A person may be associated with an occupation through the main job currently held, a subsidiary occupation, or a job previously held. In lay language, “occupation” is understood as paid work (Brown & Hollis, 2013). Despite the growing importance

of women in economic development, significant gender disparity continues to exist in workforce as well as in occupational opportunities. According to the Census of India (2011), three-fourths of India's working populations are males, whereas women comprise only a quarter of the workforce. The case of Tripura is even more alarming; the total working population is 40 percent, with 23.57 and 55.77 percent among the females and males respectively, clearly reflecting gender disparity in work participation. The inequality is not only visible in workforce participation but also in the kind of jobs women are able to access. In comparison to males, females are less likely to hold high-level jobs that pay well (Biltagy M, 2019). Anker et al. (2003) observed that gender-based occupational segregation persists and is often linked with lower earnings, fewer opportunities, and less favorable conditions of employment for women. Agarwal and Yadav (2025) noted that despite better access to education and infrastructure, many urban women still faces challenges such as limited access to flexible job options, safety concerns, and household responsibilities that keep them out of the workforce. In rural areas, female labour participation is strongly related to agriculture and related activities, which are generally low-paid occupations (Biswas S, 2018; Ray S. & Debnath M. 2019).

The majority of Mandai Block's villages are rural and mostly dominated by the Scheduled Tribe (ST) population (92.2 percent). In this block, work participation continues to show a clear difference between men and women. The overall WPR is 49.71 percent, with male WPR at 55.64 percent and female WPR at 43.60 percent. Among the ST population in this block, a similar pattern is observed, with an overall WPR of 49.82 percent, 54.91 percent for male WPR, and 44.66 percent for female WPR. While these highlight that women's participation in the workforce is lower than men's, it does not show what kind of work women and men are engaged in. In these rural areas, women are mostly involved in low-paying agricultural and casual labour. Even though they contribute to households and economic activities, their participation in the main workforce with stable pay is still limited and often goes unrecognised. The purpose of this study is to look at the region's main occupation sector and the factors that influence gender disparities. It also aims to examine whether education and gender roles play a role in contributing to its development. Furthermore, the study seeks to add to current knowledge by comparing women's employment participation to that of males, with a goal of obtaining a greater understanding of the ST population's economic activity across several occupational categories within the study area.

### Study Area

The study area, Mandai Block, is located in the Sardar Sub-division of West Tripura District, Tripura. It is surrounded by Hezamara Block in the north, Teliamura Block and Kalyanpur Block in the east, Mohanpur Block in the west, and Jirania Block in the South. The geographical coordinates of the block lie between 23° 50' 00" N, 23° 55' 00" N latitude and 91° 20' 00" E, 91° 35' 00" E longitude. Out of the total population in Mandai Block 50.73 percent are males, and 49.26 percent are females. The Scheduled Tribe (ST) population constitutes the largest share of the population, with 92.20 percent of them: 50.36 percent males and 49.63 percent females.

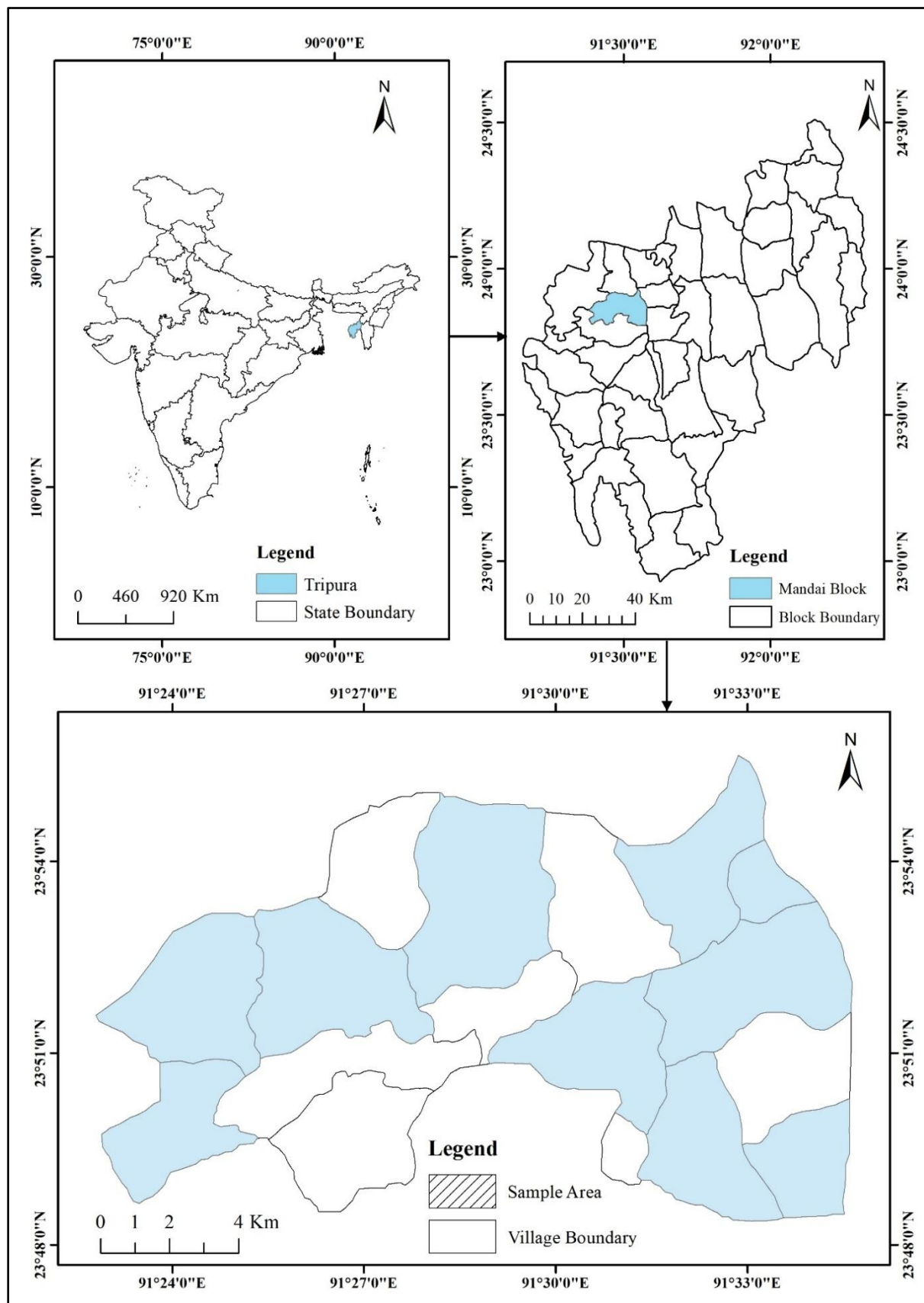


Figure: 1. Locational Map

## Objectives

The present study seeks to answer the following objectives

- I. To examine the occupational pattern of the Scheduled Tribe (ST) population in Mandai Block.
- II. To investigate whether gender roles contribute to occupational segregation within the Mandai block.
- III. To understand the factors and processes leading to the occupational pattern of the ST population in the study area.

## Research Questions

The present study seeks to answer the following research questions

- I. What are the main occupations of men and women in the study area?
- II. How has gender roles attributed to occupational segregation within the Mandai block?
- III. How has education influenced the type of occupation and income level of the people?

## Literature Review

The literature on the present paper has been organized in the following heads and subheads

### Causes of gender disparity

#### 1.1. Gender Roles:

Anker et al. (2003) in their work “Gender-based occupational segregation in the 1990s” tried to study the types, causes, and impacts of occupational sex segregation and to examine global trends in horizontal and vertical segregation using secondary data of a cross-country sample of 15 countries drawn from the ILO SEGREGAT and Index of Dissimilarity (ID). The study reveals that occupational sex segregation remains a major and persistent form of gender inequality worldwide. While some regions saw improvement in the 1990s, segregation levels continue to be high, and social and cultural factors strongly shape labour market outcomes.

Ariane Hegewisch et al. (2010), in *Separate and Not Equal? Gender segregation in the Labour Market and Gender Wage Gap* examines the role of occupational segregation in explaining the gender pay gap in the United States. Using national labour market data and the Index of Dissimilarity, the study finds that women remain concentrated in lower-paying occupations. It concludes that occupational segregation significantly contributes to wage inequality, even when the abilities are equivalent, female-dominated occupations usually pay less.

Hegewisch A. & Hartmann H. (2014), In their work “Occupational segregation and the Gender wage gap: A Job half done,” they tried to examine long-term trends in occupational segregation and their relationship with wage inequality, highlighting stalled integration, persistent pay penalties in female-dominated occupations, using secondary time series data (U.S. Bureau of Survey) and Index of Occupational Dissimilarity (Duncan & Duncan, 1955). The results show that there is persistent occupational segregation, and gender pay gaps exist even within the same skill levels. Progress towards occupational integration has stagnated, and women still face pay inequalities in female-dominated jobs.

Vishnu P. & Maheshwar P. (2017) in their research titled “Variations in the Occupational Structure and Gender Segregation in India and the States: Analysis based on Census of India 2001 and 2011,” researched gender-based occupational segregation across Indian states. The authors used a variety of methods to measure the extent of segregation, including the Duncan and Duncan Index of Dissimilarity, the Entropy of Diversity Index, the Karmel–MacLachlan Index, the Index of Occupational Differentiation, and the Concentration Index. The data reveal

that, while the occupational composition among Indian states is reasonably comparable, significant gender-based segregation within occupations continues to exist.

Herzberg-Druker E. & Haya S. (2026) examined the gender gaps in access to professional occupations of 20 European countries using three-level logistic regression models with EU-LFS data. The study reveals that women's concentration in certain fields widened inequality from 2004 to 2005; female-dominated fields reduced professional employment chances for both genders, though men still had an advantage. Gender gaps in the labour market are narrowing as demand for skilled and proficient workers continues to grow.

## 1.2. Social Factors:

Rammohan (2017) conducted a study titled "Occupational Segregation by Caste and Gender in India." The methodology used was the Index,  $\Gamma$ , proposed by Del Río and Alonso-Villar (2015); the data used were occupations and wages from the 68th Round of the National Sample Survey's Employment and Unemployment Survey (EUS 2011-12). The study found that occupational segregation in India disproportionately disadvantages women from SC, ST, and Muslim groups, leading to significant wage losses; in contrast, women from socially advanced groups benefit from segregation through access to better-paid jobs.

## 1.3. Educational Qualification:

Randall et al. (1980) in their work "Incorporating Occupational Attainment in Studies of Male-Female Earnings Differentials," tried to integrate occupational segregation and wage discrimination to explain male-female wage differentials better using a multinomial logit model to predict occupational attainment and estimate occupation-specific wage regressions based on productivity characteristics. The results show that only 14–17 percent of the wage gap is due to differences in education, skills, and experience. In contrast, most of the remaining difference occurs between men and women working in the same occupations rather than in different ones.

Lex B. & Loek G. (1999) tried to study occupational and educational segregation between men and women in the Dutch labour force. It divides occupational segregation into pre-sorting, post-sorting, and reintegration. The findings show that although educational segregation increased between 1979 and 1993–94, occupational segregation decreased, mainly due to changes in education patterns and some reintegration in occupations.

## 1.4. Location:

Dolado et al. (2002) in their work "Recent trends in occupational segregation by gender: a look across the Atlantic" they tried to study the recent patterns of gender occupational segregation in the Europe vis-à-vis the U.S. using Duncan and Duncan's (1955) Index of Segregation, wage data from the European House Panel survey (1996), and the Current Population Survey (1998). The study reveals that gender segregation among female graduates has declined across age cohorts but remains stable for less-educated women, with higher levels in the EU than in the US. Segregation is linked to part-time work and, to a lesser extent, to the gender wage gap, especially when excluding Scandinavian countries.

Agrawal T. & Agrawal A. (2015) carried out an analysis on trends in occupational segregation by gender in the Indian labour market separately for the rural and urban sectors using four quinquennial national employment - unemployment household surveys (1987-88 to 2004-05), Index of Dissimilarity, Gini, and square root indices. The results show rising occupational segregation in India, higher in urban than in rural areas, driven by changes in both the occupation mix and the sex composition.

Sharma H. (2018) carried out an analysis of Gender occupational segregation in India separately for main and marginal workers in rural and urban sectors using Dissimilarity (ID), Karmel and MacLachlan (IP), and Moir and Selby-Smith (WE) indices. The result shows that occupational

segregation in India showed a slight decline among main workers between 2001 and 2011, but increased among marginal workers across both the rural and urban areas. Urban areas exhibit higher segregation among main workers than rural areas.

### 1.5. Structural Inequalities:

Strawinski et al. (2018) examine occupational gender segregation in Poland within the context of the labour market transformation, using labour force data, the Index of Dissimilarity, and decomposition analysis. The study finds that segregation remains significant, with women mainly in public and service sectors and men in technical occupations. The authors conclude that structural labour market factors play a more decisive role than education in sustaining gender inequality.

Sousa et al. (2023) examine economic segregation in Brazil using the labour market statistics, the index of dissimilarity, and decomposition analysis. The study suggests that structural labour market determinants are crucial in sustaining gender wage inequality and reveals continuing occupational segregation, with women concentrated in lower-paying job sectors.

Pattayat et al. (2023) analyse the gender wage gap among rural non-farm workers in India using PLFS data and Oaxaca–Blinder decomposition. The study shows a persistent wage gap, with a large part unexplained by education or experience, pointing to structural inequalities in the labour market and the concentration of women in lower-paying jobs.

Azad P. & Hari K.S. (2024) examined India's gender wage gap using IHDS 2011-2012 data, RIF regression, and FFL decomposition. The results show that educational skills and experience significantly influence wages, with stronger effects for women. However, structural labour market factors channel women into lower-paying jobs, sustaining wage inequality despite improved qualifications.

Shireen A. & Vladimir H. (2025) analysed gender-based occupational segregation in Egypt using the Dissimilarity (Duncan) Index, decomposition analysis, and unconditional quantile regression. Their findings depict that women are concentrated in limited occupations, especially in the public sector. Although education explains part of the segregation, structural and labour market factors largely sustain gender inequality.

### Research Gaps

Most existing studies have analysed gender wage gaps and occupational segregation separately and a very few have looked into how education, occupation, and rural-urban differences together influence gender inequality. Many studies are mainly based on secondary data and pay less attention to the social and structural factors that keep women concentrated in low-paying jobs. Although education has been treated as one of the determinants of wage inequality, insufficient attention has been given to understanding how education interacts with occupational categories and labour market structures in rural areas.

### Database and Methodology

#### Database

##### Secondary Data:

The secondary data were collected from various sources, including the Census of India, articles, books etc.

##### Primary Data:

Primary data has been collected through a household survey with the help of a structured questionnaire. Direct interviews were conducted with the respondents, along with field observation in the selected village committee.

## Methodology

Quantitative data collection methods have been used. Primary data were collected through a household survey using a structured questionnaire, and secondary data were acquired from the Census of India 2011, articles, and village-level data were collected from the Mandai Block. A sample size of 251 has been determined using Cochran's formula at a 90 percent confidence level with a 5.19 percent margin of error to obtain better insights into occupational segregation in the study area.

Mathematically, it is expressed as:  $n_0 = \frac{Z^2 \cdot p \cdot q}{e^2}$

Here,

**Z** represents the selected confidence level,

**p** denotes the estimated proportion of the population having a particular characteristic

**q** is the remaining population, calculated as 1-p.

**e** represents the desired degree of precision (i.e., the margin of error),

Simple percentage techniques have been used to analyse the data. Lastly, for better understanding, the Duncan Index of Dissimilarity has been used to measure the level of gender disparity in education and income in Mandai Block. It provides a clear numerical value ranging from 0 to 1; value 0 means there is no segregation, and value 1 represents complete segregation. It makes it easier to understand the extent of disparity between males and females. The index also indicates the proportion of the group that would need to shift occupations or educational categories in order to achieve an equal occupational distribution within the group. The index compares the share of women (Fi) and men (Mi) in different educational levels and income groups relative to their total population (F and M).

Mathematically, it is expressed as:  $ID = \frac{1}{2} \sum \left| \frac{Fi}{F} - \frac{Mi}{M} \right|$

## Findings and discussions

### Occupational Segregation

As per the International Standard Classification of Occupations (ISCO) of the International Labour Office (ILO), 2008, there are 10 major occupational groups. They are Managers, professionals, Technicians, Associate professionals, Clerical support workers, Service and sales, Craft and related trades, Skilled agricultural, forestry and fishery workers, Plant and Machine Operators and Assemblers, Elementary occupations, and Armed forces. Further other 4 additional groups i.e., Retired, Students, Below 7 Years (children) and Unemployed have been included to fully analyse the occupation status and different occupational segregation existing within the study area.

Table 1: Percentage of respondents by occupations in Mandai block among ST population

| Sl. No | MAJOR GROUPS | OCCUPATIONS   | TOTAL | ST   |        |
|--------|--------------|---------------|-------|------|--------|
|        |              |               |       | Male | Female |
| 1      | Manager      | Hotel manager | 0.10  | 100  | 0      |

|          |                                                |                               |             |           |           |
|----------|------------------------------------------------|-------------------------------|-------------|-----------|-----------|
|          |                                                | Forest Dept. Executive        | 0.10        | 100       | 0         |
|          |                                                | Rubber Trading Business       | 0.21        | 50        | 50        |
|          |                                                | Hostel owner                  | 0.21        | 0         | 100       |
|          |                                                | Restaurant owner              | 0.10        | 100       | 0         |
|          |                                                | Contractor                    | 0.10        | 100       | 0         |
|          |                                                | Hostel superintendent         | 0.10        | 100       | 0         |
|          |                                                | <b>Total</b>                  | <b>0.93</b> | <b>67</b> | <b>33</b> |
| <b>2</b> | <b>Professionals</b>                           | Head Master                   | 0.10        | 100       | 0         |
|          |                                                | Primary teacher               | 1.13        | 91        | 9         |
|          |                                                | Social worker                 | 0.21        | 100       | 0         |
|          |                                                | Announcer in News Channel     | 0.10        | 100       | 0         |
|          |                                                | Tuition Teacher               | 0.41        | 50        | 50        |
|          |                                                | Evangelist                    | 0.10        | 100       | 0         |
|          |                                                | Anganwadi Teacher             | 0.21        | 0         | 100       |
|          |                                                | Pathologist                   | 0.10        | 100       | 0         |
|          |                                                | Pharmacist                    | 0.10        | 100       | 0         |
|          |                                                | Senior instructor in IT       | 0.10        | 100       | 0         |
|          |                                                | <b>Total</b>                  | <b>2.58</b> | <b>80</b> | <b>20</b> |
| <b>3</b> | <b>Technicians and Associate Professionals</b> | Agricultural Dept. Supervisor | 0.10        | 100       | 0         |
|          |                                                | PWD Supervisor                | 0.10        | 0         | 100       |
|          |                                                | BSNL network connector        | 0.10        | 100       | 0         |
|          |                                                | <b>Total</b>                  | <b>0.31</b> | <b>67</b> | <b>33</b> |
| <b>4</b> | <b>Clerical Support Workers</b>                | SHG Master bookkeeper (MBK)   | 0.10        | 0         | 100       |
|          |                                                | GRS(MGNREGA)                  | 0.21        | 100       | 0         |
|          |                                                | Tehsildar helper              | 0.10        | 100       | 0         |
|          |                                                | Panchayat secretary           | 0.21        | 100       | 0         |
|          |                                                | Peon                          | 0.41        | 100       | 0         |
|          |                                                | <b>Total</b>                  | <b>1.03</b> | <b>90</b> | <b>10</b> |
| <b>5</b> | <b>Service and Sales Workers</b>               | Shopkeeper                    | 3.30        | 72        | 28        |
|          |                                                | Pharmacy Assistant            | 0.21        | 50        | 50        |
|          |                                                | SHG Leader                    | 0.10        | 0         | 100       |
|          |                                                | SHG iCRPs                     | 0.10        | 0         | 100       |
|          |                                                | Asha Karmi                    | 0.10        | 0         | 100       |
|          |                                                | ICOS worker                   | 0.21        | 100       | 0         |
|          |                                                | Police                        | 0.21        | 100       | 0         |
|          |                                                | Anganwadi Worker              | 0.41        | 0         | 100       |
|          |                                                | Constable                     | 0.21        | 50        | 50        |
|          |                                                | Cook                          | 0.52        | 60        | 40        |
|          |                                                | Food Deliveryman              | 0.10        | 100       | 0         |
|          |                                                | Assistant Retailer            | 0.41        | 75        | 25        |
|          |                                                | Waiters                       | 0.72        | 86        | 14        |
|          |                                                | Security guard                | 0.10        | 100       | 0         |
|          |                                                | Fast food vendor              | 0.31        | 33        | 67        |
|          |                                                | Firewood Seller               | 0.10        | 100       | 0         |
|          |                                                | <b>Total</b>                  | <b>7.11</b> | <b>65</b> | <b>35</b> |
| <b>6</b> | <b>Skilled</b>                                 | Farmer                        | 0.93        | 100       | 0         |

|    |                                                    |                                      |              |           |           |
|----|----------------------------------------------------|--------------------------------------|--------------|-----------|-----------|
|    | <b>agricultural, forestry, and fishery workers</b> | Market gardener                      | 0.21         | 50        | 50        |
|    |                                                    | Rubber plantation                    | 0.72         | 71        | 29        |
|    |                                                    | Lemon orchard                        | 0.21         | 100       | 0         |
|    |                                                    | Betel nut plantation                 | 0.21         | 100       | 0         |
|    |                                                    | Sericulture                          | 0.10         | 0         | 100       |
|    |                                                    | Subsistence livestock rearing        | 0.10         | 100       | 0         |
|    |                                                    | Woodcutter                           | 0.10         | 100       | 0         |
|    |                                                    | Shifting cultivation                 | 0.62         | 83        | 17        |
|    |                                                    | <b>Total</b>                         | <b>3.20</b>  | <b>84</b> | <b>16</b> |
| 7  | <b>Craft and Related Trades Workers</b>            | Carpenter                            | 0.82         | 88        | 13        |
|    |                                                    | Wedding Decorator                    | 0.10         | 0         | 100       |
|    |                                                    | Butcher                              | 1.34         | 92        | 8         |
|    |                                                    | Mason                                | 0.21         | 100       | 0         |
|    |                                                    | Tailor                               | 0.10         | 100       | 0         |
|    |                                                    | Weaver                               | 0.52         | 20        | 80        |
|    |                                                    | Traditional liquor brewer and seller | 0.21         | 0         | 100       |
|    |                                                    | Electrician                          | 0.10         | 100       | 0         |
|    |                                                    | Fish mongers                         | 0.21         | 50        | 50        |
|    |                                                    | <b>Total</b>                         | <b>3.61</b>  | <b>71</b> | <b>29</b> |
| 8  | <b>Plant and Machine Operators and Assemblers</b>  | Driver                               | 1.44         | 100       | 0         |
|    |                                                    | wood miller                          | 0.31         | 100       | 0         |
|    |                                                    | Rice miller                          | 0.10         | 100       | 0         |
|    |                                                    | Water Supply Operator                | 0.21         | 50        | 50        |
|    |                                                    | <b>Total</b>                         | <b>2.06</b>  | <b>95</b> | <b>5</b>  |
| 9  | <b>Elementary Occupation</b>                       | Labourer                             | 15.05        | 67        | 33        |
|    |                                                    | Electrician helper                   | 0.21         | 100       | 0         |
|    |                                                    | Vegetable vendor                     | 0.82         | 63        | 38        |
|    |                                                    | Sweeper                              | 0.10         | 100       | 0         |
|    |                                                    | Cleaner                              | 0.10         | 100       | 0         |
|    |                                                    | <b>Total</b>                         | <b>16.29</b> | <b>68</b> | <b>32</b> |
| 10 | <b>Armed Forces Occupation</b>                     | TSR                                  | 0.52         | 100       | 0         |
| 11 | <b>Retired</b>                                     |                                      | 1.03         | 90        | 10        |
| 12 | <b>Students</b>                                    |                                      | 25.46        | 49        | 51        |
| 13 | <b>Below 7 Years</b>                               |                                      | 4.43         | 37        | 63        |
| 14 | <b>Unemployed</b>                                  | Home Maker                           | 20.62        | 0         | 100       |
|    |                                                    | Others                               | 10.82        | 75        | 25        |
|    |                                                    | <b>Total</b>                         | <b>31.44</b> | <b>21</b> | <b>79</b> |

Source: Field Survey, April-June 2023

Table 2: Percentage of respondents by subsidiary occupations in Mandai block among ST population

| Sl. No | MAJOR GROUPS         | OCCUPATIONS           | TOTAL       | ST         |          |
|--------|----------------------|-----------------------|-------------|------------|----------|
|        |                      |                       |             | Male       | Female   |
| 1      | <b>Manager</b>       | Hostel superintendent | 0.58        | 100        | 0        |
|        |                      | <b>Total</b>          | <b>0.58</b> | <b>100</b> | <b>0</b> |
| 2      | <b>Professionals</b> | Kritaniya Singer      | 0.58        | 100        | 0        |
|        |                      | Tuition Teacher       | 4.62        | 37.50      | 62.50    |

|          |                                                            |                                      |              |              |              |
|----------|------------------------------------------------------------|--------------------------------------|--------------|--------------|--------------|
|          |                                                            | <b>Total</b>                         | <b>5.20</b>  | <b>44.44</b> | <b>55.56</b> |
| <b>5</b> | <b>Service and Sales Workers</b>                           | Shopkeeper                           | 1.16         | 100          | 0            |
|          |                                                            | Cook                                 | 0.58         | 100          | 0            |
|          |                                                            | Fast food vendor                     | 1.16         | 50           | 50           |
|          |                                                            | <b>Total</b>                         | <b>2.89</b>  | <b>80</b>    | <b>20</b>    |
| <b>6</b> | <b>Skilled agricultural, forestry, and fishery workers</b> | Lemon Orchard                        | 0.58         | 100          | 0            |
|          |                                                            | Farmer                               | 4.62         | 37.50        | 62.50        |
|          |                                                            | Rubber Plantation                    | 4.05         | 100          | 0            |
|          |                                                            | Sericulture                          | 1.16         | 0            | 100          |
|          |                                                            | Dairy milk seller                    | 0.58         | 0            | 100          |
|          |                                                            | Subsistence livestock rearing        | 1.73         | 0            | 100          |
|          |                                                            | Fishery                              | 1.16         | 50           | 50           |
|          |                                                            | Shifting cultivation                 | 1.16         | 50           | 50           |
|          |                                                            | <b>Total</b>                         | <b>15.03</b> | <b>50</b>    | <b>50</b>    |
| <b>7</b> | <b>Craft and Related Trades Workers</b>                    | wedding Decorator                    | 0.58         | 0            | 100          |
|          |                                                            | Weaver                               | 5.78         | 10           | 90           |
|          |                                                            | Butcher                              | 0.58         | 100          | 0            |
|          |                                                            | Traditional liquor brewer and seller | 2.31         | 0            | 100          |
|          |                                                            | <b>Total</b>                         | <b>9.25</b>  | <b>12.50</b> | <b>87.50</b> |
| <b>8</b> | <b>Plant and Machine Operators and Assemblers</b>          | Driver                               | 2.31         | 100          | 0            |
|          |                                                            | Rice miller                          | 0.58         | 0            | 100          |
|          |                                                            | <b>Total</b>                         | <b>2.89</b>  | <b>80</b>    | <b>20</b>    |
| <b>9</b> | <b>Elementary Occupation</b>                               | MNREGA labourer                      | 21.97        | 15.79        | 84.21        |
|          |                                                            | Construction Worker                  | 1.73         | 66.67        | 33.33        |
|          |                                                            | Seasonal labourer                    | 38.15        | 21.21        | 78.79        |
|          |                                                            | Vegetable vendor                     | 1.73         | 66.67        | 33.33        |
|          |                                                            | Cook helper                          | 0.58         | 100          | 0            |
|          |                                                            | <b>Total</b>                         | <b>64.16</b> | <b>22.52</b> | <b>77.48</b> |

Source: Field Survey, April-June 2023

### Managers:

Managers comprise 0.93 percent of the total surveyed population, showing that very few individuals hold high-level managerial positions. Within the manager group, the hotel manager, forest Dept. executive, rubber trading business owner, hostel owner, restaurant owner, contractor, and hostel superintendent are present in Mandai. The distribution shows that males hold 67 percent of managerial positions, while females hold only 33 percent, highlighting a clear gender disparity. Hotel manager, forest department executive, contractor and hostel superintendent occupations are found only among the males and there is no representation of women in these positions. Certain occupations show equal participation by both genders, such as the rubber trading business, where 50 percent are males, and 50 percent are females. Similarly, the occupation of Hostel owner is entirely represented by females 100 percent, and no male representation, indicating that women participate in certain managerial activities that are more accessible within their local and social environment, particularly those that do not require frequent mobility or travel over long distances.

The same pattern is also observed in subsidiary occupations (Table.2), although participation is comparatively lower. Only 0.58 percent of respondents are engaged in managerial group, represented solely by hostel superintendent 100 percent with no female representatives, reflecting the persistence of gender inequality at higher occupational levels.

### Professionals:

The overall percentage of the ST population employed in professional occupations is 2.58 percent, signifying that a limited segment of the population is engaged at the professional level. The distribution demonstrates a distinct gender disparity: 80 percent of the professional positions are occupied by males, whereas only 20 percent are occupied by females. Occupations like head master, primary teacher, social worker, announcer in news channel, tuition teacher, evangelist, Anganwadi teacher, pathologist, pharmacist, and senior instructor in IT are found in Mandai. These professional occupations such as head master, social worker, announcer in a news channel, Evangelist, pathologist, pharmacist, and senior Instructor in IT, are found only among the males reflecting the limited presence of women in many specialised and skilled occupations. Womens' presence are evident in teaching but are dominated by the males 91 percent of males are in primary level teaching against only 9 percent among the females. An equal percentage of male and female participation is seen in tuition teachers, with both accounting for 50 percent each, indicating that there is no disparity in this occupation. In contrast, the occupation of Anganwadi Teacher is entirely represented by females (100 percent), indicating that women are more concentrated in care and community-related professions, clearly highlighting the gender-based expectation in society.

Subsidiary professional occupations account for 5.20 percent of the total respondents, out of which 44.44 percent are males and 55.56 percent are females. Tuition teaching is the predominant subsidiary occupation in this category, with women 62.50 percent participating more than men 37.50 percent. Compared with the main occupation, the subsidiary occupation remains relatively low but offers additional income opportunities, especially for educated women through tutoring. The higher representation of women in tutoring is due to its flexible working hours and the ability to balance income-generating activities with household responsibilities. Kritaniya Singer consists of 0.58 percent, represented solely by males (100 percent), with no female representation, highlighting gender disparity. Although its share is very small, it reflects the continued role of traditional cultural activity as an occasional source of income.

### Technicians and Associate Professionals:

Technicians and Associate professionals comprise 0.31 percent of the total surveyed population. Within this group, 67 percent of the workers are males and 33 percent are females, indicating a moderate gender disparity. Agricultural Dept. Supervisor, PWD Supervisor and BSNL network connector are found in the study area. The overall distribution indicates that males are more prevalent in technical and supervisory roles, although females are observed in specific positions. Occupations such as Agricultural Department supervisor and BSNL connector are entirely male, with no female representation; in contrast, the PWD Supervisor comprises only a female representative (100 percent). It shows that, in the study area, participation in these job categories is limited for both males and females, highlighting unequal access.

### Clerical Support Workers:

Clerical support workers represent 1.03 percent of the overall surveyed population. The data reflect that men occupy 90 percent of these occupations, whereas women account for only 10 percent, pointing to a clear gender gap. Occupations such as SHG MBK, GRS (MGNREGA), Tehsilder helper, Panchayat secretary, and peon are found in the study area. Many occupations within this category, like GRS (MGNREGA), Tehsilder helper, Panchayat secretary and Peon are occupied by males (100 percent). However, the SHG MBK position is entirely held by females (100 percent), as Self-Help Groups (SHGs) are composed exclusively of women. The primary objective of these groups is to encourage women to develop saving habits, achieve financial independence and collectively address their socio-economic challenges. This also shows that women's participation in clerical roles is largely concentrated in activities closely tied to community or self-help group work.

### Service and Sales Workers:

Service and sales workers account for 7.11 percent of the total surveyed population in the study area. The overall pattern shows that 65 percent of workers in this group are men, while 35 percent are women, highlighting a clear gender gap. Occupations found within this category are shopkeeper, pharmacy assistant, SHG leader, SHG iCRPs, Asha Karmi, ICOS worker, police, Anganwadi Worker, constable, cook, food deliveryman, assistant retailer, waiters, security guard, fast food vendor and firewood seller are found in Mandai. Within this group, shopkeepers hold the largest share at 3.30 percent, with 72 percent male and 28 percent female, indicating that males primarily lead small businesses. A similar pattern can be seen in subsidiary occupations, where Shop keeping (1.16 percent) is represented exclusively by men 100 percent with no female representation, highlighting the disparity in work participation. According to the respondents, shop keeping involves financial transactions, keeping accounts and operating shops till late evening. Respondents indicated that this job is suitable for men rather than women for safety concerns and domestic responsibilities. Occupations such as ICOS workers, police, food delivery, security guards, and firewood sellers have only male representation (100 percent) and no female participation was observed highlighting the male dominance in physically demanding and security-related jobs. Meanwhile, some occupations are entirely represented by females, including SHG leader, SHG iCRPs, ASHA karmi, and Anganwadi workers (100 percent), which are primarily community-based and welfare-oriented roles. Other occupations show shared participation, such as pharmacy assistant and constable (50 percent male and 50 percent female); the gender distribution varies in cook between main occupation and subsidiary occupation, while cooking as a main occupation comprises 60 percent males and 40 percent females; the gender disparity in this occupation is relatively low. However, in the subsidiary occupation, the share is relatively low at 0.58 percent and is represented solely by females (100 percent), with no male representation. In this case, women are employed as hostel cooks to earn additional income alongside their household responsibilities. The fast-food vendor occupation is primarily dominated by women, making up 67 percent, while men represent 33 percent, highlighting some gender disparities. On the other hand, subsidiary fast-food vending is taken up equally by both genders, with each making up 50 percent. Both men and women often take up these roles occasionally, especially during lively fairs, pujas and local events, depending on what suits them best. Therefore, the equal share of both men and women in subsidiary fast-food vending is due to its flexibility, rather than to regular employment. The occupation of Assistant retailer remains male-dominated, with 75 percent males and 25 percent females.

### Skilled agricultural, forestry, and fishery workers:

Table 1 show that 3.20 percent of the ST population in Mandai Block is engaged in this major group. The general distribution shows a gender disparity, with 84 percent of workers male and 16 percent female. Occupations like farmer, market gardener, rubber plantation, lemon orchard, betel nut plantation, sericulture, subsistence livestock rearing, woodcutter and shifting cultivation are found in Mandai. Among these occupations, farmers, as the main occupation, account for the largest share, 0.93 percent, and are completely participated by males (100 percent), but it shows a different pattern in farmers as a subsidiary occupation, which accounts for 4.62 percent; women comprise 62.50 percent, and males comprise 37.50 percent. This difference suggests that men are likely to take up farming as their primary source of income. While farming is taken up more by women to help their partner engage in farming alongside other work, occupations such as lemon orchards, betel nut plantations, and woodcutting also show full male participation (100 percent), showing that men do these physically demanding jobs. Subsistence livestock rearing as a main occupation comprises 100 percent male representation, whereas subsistence livestock rearing as a subsidiary occupation has 100 percent female representation it shows that men and women engage in livestock rearing in different ways, with men likely to take it up as a primary source of income, while women take it up as an additional source of income alongside other responsibilities. The

findings also show that gender patterns within an occupation can change depending on its role in the household livelihood. On the other hand, some jobs are done by both males and females, such as market gardening, with equal representation of 50 percent male and 50 percent female participation, indicating balanced involvement in small-scale agricultural activities. Rubber plantation as the main occupation, males make up 71 percent, while females account for 29 percent, and rubber plantation as a subsidiary occupation (4.05 percent) is presented solely by men, 100 percent participation with no female representation. Although men dominate in this job, women are also engaged in these activities. Conversely, sericulture is entirely participated in by females only, that is, 100 percent both as a main and a subsidiary occupation, signifying that women are more involved in certain specialised agricultural activities that are often carried out at the household or community level. Additionally, shifting cultivation, as a main occupation (0.62 percent), shows 83 percent male participation and 17 percent female participation, highlighting male predominance in traditional cultivation practices while shifting cultivation as a subsidiary occupation (1.73) shows equal participation of both genders, 50 percent each. One of the factors in the lower participation of women in shifting cultivation is the distance and uneven terrain of the cultivation sites, which makes it difficult for women to travel long distances. Therefore, men participate more in this type of work. However, when taken as a subsidiary occupation, participation is more balanced, as females help with shifting cultivation to complete tasks on time. Among the subsidiary occupations, dairy milk sellers and fishery account for 0.58 percent and 1.16 percent, respectively. Dairy milk sellers comprise only women (100 percent), with no male participation, indicating gender disparity. This activity is carried out near the household and requires little mobility. Fishery shows equal participation for both genders, 50 percent each, showing no gender disparity, as this activity does not necessarily require much involvement and is very flexible in nature.

### **Craft and Related Trades Workers:**

This category comprises 3.61 percent of the total population, with men accounting for 71 percent and women for 29 percent, clearly reflecting gender imbalances in this occupational category. Occupations found within this group are carpenter, wedding decorator, butcher, mason, tailor, weaver, traditional liquor brewer and seller, electrician and fish mongers. Several occupations in this category are dominated by male. Butchery as a main occupation consists of 92 percent males and 8 percent females, and butchery as a subsidiary occupation (0.58) is solely represented by males (100 Percent), and carpentry consists of 88 percent males and 13 percent females, showing that women are gradually entering occupations previously considered male-oriented. According to the respondent, after trying carpentry, she found it easier than it looks and felt that women can also participate in carpentry. Occupations such as masonry, tailoring, and electrical work have only male participation (100 percent) with no female participation, highlighting disparity. Weaver comprises 80 percent females and 20 percent males in the main occupation, and 90 percent females and 10 percent males in the subsidiary occupation. Though females dominate, the presence of males shows that the disparity is slowly diminishing. According to the respondents, some men initially started weaving as a hobby, gradually developed an interest in it, and later continued it as a source of income. Wedding decorators and traditional liquor brewing, both in main and subsidiary occupations have 100 percent female participation with no male participation. In the case of traditional liquor brewing, the brewing techniques are passed down from generation to generation within the household. The process also requires traditional methods and the collection of specific local ingredients, which is considered the natural role of women within the household. In fishmongers, both males and females are equally represented at 50 percent each, indicating no gender disparity in this occupation.

### **Plant and Machine Operators and Assemblers:**

Plant and machine operators and assemblers make up 2.06 percent of the total surveyed population. In this category, 95 percent of the workers are male, and 5 percent are female,

indicating that most of the work is done by men. Driver, wood miller, rice miller and water supply operator occupations are present in the study area. Within this group of occupations, drivers and wood millers are entirely male (100 percent) and no female workers were found in these jobs. These types of work involve operating machines, physical labour, and technical skills; they are considered male-oriented occupations, and women in the study area are not usually involved in them. However, the water supply operator shows equal participation of both males and females, that is, 50 percent each. Rice milling as a main occupation is entirely dominated by males (100 percent), with no female participation. On the other hand, rice milling in subsidiary occupations is represented solely by females (100 percent), with no male participation. This activity is taken up by men as a primary occupation when other job opportunities are limited. Women, however, take up this job to earn additional income to help their families.

### **Elementary Occupations:**

This major group comprises 16.29 percent of the total surveyed population. Occupations such as labourers, electrician helper, vegetable vendor, sweeper and cleaner are found in the study area.

Within this category, 68 percent are males and 32 percent are females, out of which labourers comprise 15.02 percent and males make up a 67 percent and females 33 percent revealing disparity because women are considered physically weaker than men. These jobs involve manual labour and physically demanding tasks; men are more likely to participate in this type of work. Vegetable vendors, as main occupations, comprise 63 percent males and 38 percent females, and as subsidiary occupations, comprise 66.67 percent males and 33.33 percent females. Women of this area participate in vegetable selling because a large proportion of the population in the study area belongs to ST community, where locally available vegetables collected from the nearby forests form an important part of their daily cuisine. Women gather these forest products to sell them in the markets, which has helped them to earn some income to help in their households, although the disparity is evident, and males remain dominant in this field. However, the nature of the job, in which anyone can sell whatever they have collected, has created opportunities for women to engage in this work and earn income. On the other hand, occupations such as Electrical helper, Sweeper, cleaner as main occupations, and cook helper as a subsidiary occupation are held only by males (100 percent), with no female workers. Though women are involved in some elementary occupations, men still make up the larger share of workers in the occupational major group. To understand the nature of subsidiary work in elementary occupations more clearly, the category has been divided into different types of labour. Seasonal labour forms the largest share (38.15percent), with women accounting for 78.79 percent and men 21.21percent. MGNREGA labour also shows a higher participation of women (84.21percent) than men (15.79 percent), while construction work is mainly undertaken by men (66.67percent), compared to 33.33 percent women. Overall, women are more involved in seasonal and MGNREGA work, whereas men are more involved in construction work.

### **Armed Forces Occupation:**

Armed Forces occupation comprises 0.52 percent of the total surveyed population, and all are male. Most of them are from the Tripura State Rifles, clearly indicating a male dominated occupation.

### **Retired:**

It comprises 1.03 percent of the total surveyed population, out of which 90 percent are males and 10 percent are females. This group includes the older populations who were previously employed in government service, have now retired, or are no longer able to work, as well as the working adult populations who have retired due to physical issues and continue to receive a pension. The representation of females is low because the overall participation of women in the main working population is comparatively limited.

### Students:

A large proportion of the population consists of students, 25.46 percent, out of which 51 percent are females and 49 percent are males. This shows that in the study area, girls are getting equal educational opportunities. It also indicates the higher dropout rates of boys due to several factors.

### Below 7 Years:

This includes the population below 7 years of age who are totally dependent on adults for support. It comprises 4.43 percent of the total surveyed population, out of which 37 percent are males and 63 percent are females, indicating slightly higher female representation among young children in the study area.

### Unemployed:

The unemployed group accounts for the largest share, at 31.44 percent, with 21 percent males and 79 percent females. This group comprises older adults aged 60 and above, homemakers (20.62 percent, mostly females), and the other category (10.82 percent), mostly consisting of unemployed youths seeking jobs and individuals engaged in marginal work, which are generally low-paying and insufficient to provide for a family. This shows the limited employment opportunities in the study area and limiting their representation in the main working population. Older adults age 60 and above also contribute to the family with their government Bata pension, though the pension amount is relatively low and a few of them rely completely on their Bata pension to meet their basic needs instead of relying on family members because they don't want to be a burden to their family members who are already struggling financially. The larger share of the group's population is women, mostly homemakers with no male participation. These homemakers are mostly engaged in marginal work along with the household chores; they play a very vital role in their households as they take care of the family members, help them with their daily chores along with their own chores, managing the limited monthly finances provided by the head of the family to ensure smooth functioning of the household and meet their daily need, they also participate in marginal work to help within the household yet their contributions are undervalued despite being overworked. This is one of the major reasons in the study area why women have lower representation in the main working population, as they are mostly engaged in marginal and irregular forms of work and household chores, which are unpaid household work.

Table 3: Percentage distribution of ST population with subsidiary occupation across main occupational categories by gender

| Category                 |           | Total person in the category | Person with Subsidiary Occupation |       |        |
|--------------------------|-----------|------------------------------|-----------------------------------|-------|--------|
|                          |           | Total                        | Total                             | Male  | Female |
| Unemployed               | Homemaker | 20.62                        | 36.5                              | 0     | 100    |
|                          | Others    | 10.82                        | 19.05                             | 90    | 10     |
| Students                 |           | 25.46                        | 1.21                              | 0.81  | 0.40   |
| Main Occupational Holder |           | 37.63                        | 20.82                             | 42.11 | 57.89  |
| Retired                  |           | 1.03                         | 10                                | 100   | 0      |

Source: Field Survey, April-June 2023

The distribution of subsidiary occupations among homemakers, others, students, and retired persons also reveals some important patterns. Among homemakers, 36.5% reported having a subsidiary occupation, and all of them were women (100 percent) with no male participation. This complete gender disparity indicates that some women continue to engage in income-generating activities alongside their household responsibilities. The "Others" category, which includes unemployed persons and those in the older age group, shows 19.05 percent participation in subsidiary occupations, with men accounting for 90% and women 10%. Respondents indicated that these individuals generally take up work whenever opportunities arise, particularly seasonal

work, to earn additional income. Among students, only 1.21 percent shows a subsidiary occupation, with slightly higher male participation (0.81 percent) than female participation (0.40 percent). The low participation among students is expected, as they are still pursuing their education, while the figures also point to a degree of dependence on the working-age population for household support. Among the main occupational holders, 20.82 percent reported a subsidiary occupation, with women (57.89 percent) slightly exceeding men (42.11 percent). This shows that although women's share of the main working population is low, their share of the subsidiary occupation is quite high. Some retired individuals (1.03 percent), comprising 100 percent male participation with no female participation, continue working to earn additional income and remain economically and socially active after retirement.

Table 4: Gender disparity of the main working population in education and income in Mandai block

| Indicator | ID (Duncan Index) |
|-----------|-------------------|
| Education | 0.16              |
| Income    | 0.33              |

Source: Field Survey, April-June 2023

The education disparity index of 0.16 and income disparity index of 0.33 indicates that to achieve an equal distribution between men and women, around 16 percent in education and 33 percent in income of either group would need to shift across different educational categories and different jobs or income categories in the study area. In this case, in terms of education around 16 percent of women would need to shift across different educational categories and in terms of income level 33 percent of women would need to move to different jobs or high paying income levels to attain gender equality, as in the study area, men are already in a more advanced position in terms of educational attainment as well as in economic position or earnings compared to women it is evident from figure 2 and figure 3 respectively. The gender gap in education is relatively small. However, when it comes to income, the gap is much wider. The number of women decreases as income level rises, which means men are more dominant in higher-paying jobs compared to women. This clearly shows a significantly greater disparity in income than in education. Men have greater access to income-generating opportunities and higher earnings, whereas women are largely engaged in lower-paying or informal activities and household responsibilities. The data also demonstrates that improvements in educational attainment have not resulted in equal economic opportunities for women.

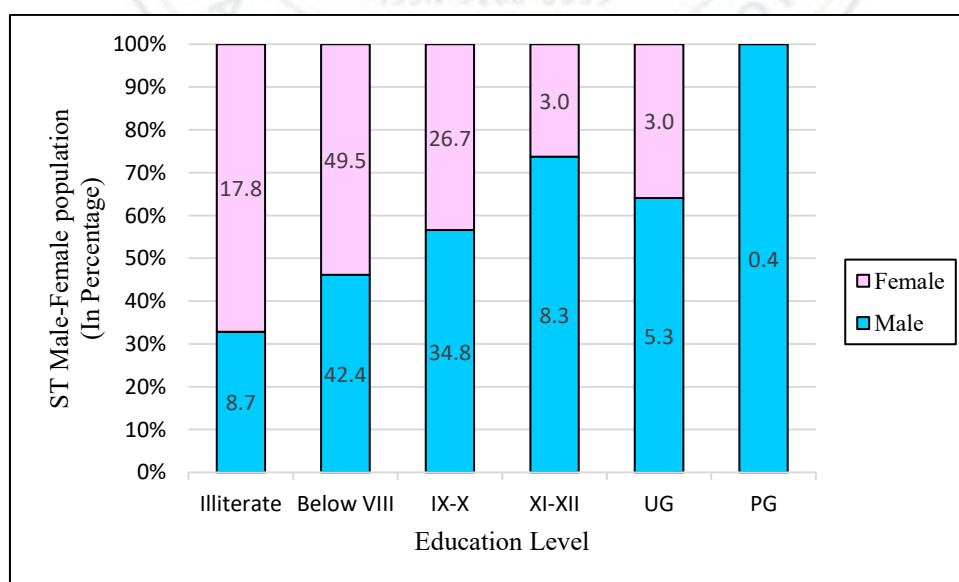


Figure 2. Gender-wise percentage distribution of education levels among the ST population of the main working population in Mandai block

Source: Field Survey, April-June 2023

The data shows that illiterates comprise 8.7 percent of the male and 17.8 percent of the female main working population in Mandai block. A large portion of the population is concentrated at the class VIII level or below, with 49.5 percent females and 42.4 percent males, indicating that educational attainment in the study area is mainly limited to the primary stage. At the class IX-X level, male participation is 34.8 percent higher than female participation at 26.7 percent. As the level of educational increases, participation among both genders gradually decreases. At the class XI-XII level, 8.3 percent are males, while only 3 percent are females. The notable decline in female participation is driven by socio-cultural beliefs, such as the notion that women do not require much education to oversee household responsibilities, which has discouraged women from pursuing higher education. In most remote villages within the study area, few women were married soon after completing secondary education. Some of the illiterate people indicated that they were forced into marriage due to financial issues of the family being unable to support them further. In addition, colleges are often located far from rural villages, and concerns about safety and travel also limit many girls' ability to continue higher education. At the undergraduate level, a similar pattern is noticed, where 5.3 percent are male, and 3 percent are female. At the postgraduate level, participation drops drastically, with just 0.4 percent of males continuing and nearly no female participation recorded. The fall in higher education participation among both genders is mainly due to financial difficulties and household responsibilities. Many families lack the economic capacity to support higher education, as shown in Table 1, a significant proportion of the ST main working population in the study area is engaged in elementary occupations (16.29 percent), of which 15.05 percent are labourers, indicating that many households rely on low-income, unstable jobs. Similarly, Figure 3 shows that a major portion of the population belongs to low-income households, especially those who are earning below rupees 10,000 and between rupees 10,000 and 20,000. According to the respondents in such financial situations, families often focus on immediate financial support to meet daily needs, leaving little room for continued education. Therefore, while the gap in basic education between males and females is small, disparities remain at higher levels of education, it is evident from the Duncan Index (ID) for education, 0.16, which means that about 16 percent of females would need to shift educational categories to achieve an equal distribution between the two groups, as shown in Table 4, as men are already in a more advanced position in terms of educational attainment compared to women.

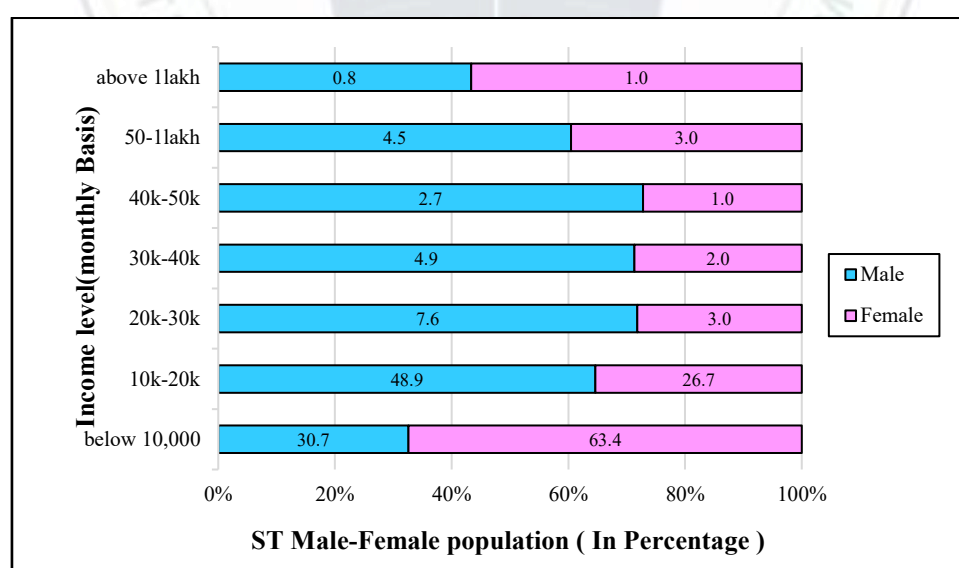


Fig.3. Gender-wise percentage distribution of monthly income levels among the ST main working population in Mandai block

Source: Field Survey, April-June 2023

The data shows that a majority of women, about 63.4 percent, are in the lowest income group, earning less than 10,000 rupees, compared to 30.7 percent of men who are in this group. This pattern clearly shows that many women remain in the lowest-income group, indicating that they

are limited to lower-paying jobs and lack access to higher-paying ones. On the other hand, the 10,000-20,000 rupees category is dominated by males (48.9 percent) compared to females (26.7 percent), and in the 20,000-30,000 rupees category, males account for 7.6 percent, while females constitute only 3 percent. Similarly, in the 30,000-40,000 rupees income group, 4.9 percent are males and 2 percent are females. As the income level gets higher, such as 40,000-50,000 rupees and 50,000-1lakh rupees, men continue to have a more noticeable presence, accounting for 2.7 percent and 4.5 percent respectively, while Women make up only 1 percent and 3 percent respectively. In the above 1 lakh category, participation is quite low for both genders, with only 0.8 percent of males and 1 percent of females represented. A notable point is the broader pattern showing that as income rises, the presence of women tends to decline relative to men. This pattern of income distribution is very much similar to the educational attainment trends observed in Figure 2. Another factor in the lower representation of females in the main working population is due to the fact that they are more engaged in marginal work and take on household responsibilities, which limits their participation in stable income-generating activities. Although men tend to participate more in economic activities, many of them are still underrepresented in the main workforce. This is largely due to lower levels of education, which limit their access to stable, better-paying jobs.

## Conclusion

The analysis of the occupational structure among the Scheduled Tribe (ST) population in Mandai Block reveals a changing environment marked by severe gender gaps and the continuation of traditional roles with rising responsibilities for women. The data show that unemployment is the most serious issue, affecting nearly one-third (31.44 percent) of the surveyed population, with women accounting for a significantly higher proportion 79 percent and men only 21 percent. This, along with the fact that students account for 25.46 percent of the population, indicates a high reliance ratio and emphasises the need for job creation within the study area. While the relatively balanced gender distribution among students, 51 percent female and 49 percent male, implies improvement in girls' education access, this has yet to translate into equal participation in the workforce. Across most types of jobs, a noticeable gap between men and women continues to exist. Men consistently outnumber women in the workforce, whether in elementary occupations (68 percent male, 32 percent female) or managerial occupations (67 percent male, 33 percent female). The biggest differences are found in the military services (TSR), which are entirely participated by male (100 percent); secretarial employment, which is 90 percent male and 10 percent female; and plant and machine operations, which are 95 percent male with only 5 percent female participation. These trends are a reflection of long-standing social norms that quietly steer women towards a narrower range of roles, while men are more often expected to take up physically demanding, technically skilled, and public-facing work. However, the data also reveal clear differences, particularly the way women tend to be concentrated in specific roles, usually caregiving or community-based. Occupations such as Anganwadi teachers, Asha karmis and traditional liquor brewers are mostly carried out by females. These roles are tied to women's daily household tasks and are influenced by what society expects. They often include caring for others, supporting the community, and engaging in activities that can be done at home or nearby areas. These are simple and fit well within social expectations, making them comfortable choices. The SHG platforms are made up entirely of female members because they were founded expressly to empower women by promoting income-generating activities and instilling saving practices. Positively, the analysis also shows that certain stereotypes are gradually diminishing and changing. Cooking shows a clear difference between main and subsidiary occupations, with men accounting for 60 percent and women 40 percent in the main occupation, while cooking as a subsidiary occupation is taken up entirely by women, 100 percent, with no male representatives. It is also seen that 20 percent of males in the main occupation and 10 percent of males in the subsidiary occupation participate in weaving, a female-dominated craft. This is purportedly due

to men taking up the skill as a hobby that has become a source of income. Occupations such as fishmongers and the rubber trade exhibit equal gender representation, 50 percent each. The craft and agricultural sectors present a varied visual. Women have important roles in market gardening (50 percent female and 50 percent male) and sericulture and traditional liquor sellers, 100 percent female with no male participation recorded, both in the main and subsidiary occupational categories, yet in framing and plantation, these sectors continue to be largely dominated by men. At the same time, female participation in carpentry is 3 percent, and butchering (8 percent), though still low, is gradually increasing, demonstrating that economic needs and shifting views are slowly opening areas for more balanced involvement. Driving as an occupation is taken up solely by males, both in the main and subsidiary occupations, with no female participation recorded, highlighting a clear gender disparity.

In education, while basic literacy is improving, female participation in the main working population sharply declines, starting at the secondary level (class IX-X) and worsening at higher levels. Girls' access to higher education is limited by social and cultural standards, as well as early marriage at a young age, safety concerns, and the distance to the university. Female participation is almost non-existent at the postgraduate level. The education disparity of 0.16 percentage indicates a very low overall gender difference; this obscures the fact that women are concentrated at the lowest education levels, while males excel further.

The income difference is rather noticeable. Gains in education have not resulted in greater economic opportunities for women, as evidenced by the income disparity index of 0.33 percentage points, which is more than twice the education index. Men are mostly found in middle- and higher-income categories, but the vast majority of women around (63.4 percent) are found in the lowest income group below rupees 10,000. As income levels increase, the number of females in these higher brackets declines slowly. These reflect the everyday realities many families face. When household income is low, there is often need to prioritise immediate earnings over education, which makes it difficult for both men and women to continue their studies. Although there are changes, such as equal representation in selected occupations like rubber trading and tuition teaching, these remain exceptions.

This clearly shows that education on its own is not sufficient enough to bring about gender equality. The gap between educational attainment and economic outcomes, as reflected in the education and income disparity index brings out how deep-rooted structural, socio-economic, and cultural barriers continue to hold women back and limit their opportunities. To address this, focused initiatives are needed to increase girls' access to higher education, challenge ingrained gender stereotypes, and develop secure, higher-paying work routes for women so that educational achievements can be translated into significant economic empowerment. Overall, women have a lower share of participation in main occupations compared to men, but slightly higher participation in subsidiary work, indicating that they continue to play an important role in supporting their families financially. This also shows how much of women's work, especially that carried out alongside household work, remains overlooked when their contribution is measured only by their main occupation.

### Limitations of the study

The study is limited to Mandai Block; its findings may not fully apply to other areas that have different socio-economic conditions and geographical settings.

Since the study uses a cross-sectional method, capturing data at a single point in time, it is difficult to track long-term trends and determine causal links among education, employment, and income outcomes. Furthermore, infrastructure-related hurdles, such as distance to universities and safety concerns, are mentioned but not measured.

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