ESTIMATING CASTE BASE WAGE GAP IN NEPAL: AN OAXACA- BLINDER DECOMPOSITION APPROACH

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DECLARATION

This thesis entitled, "ESTIMATING CASTE BASE WAGE GAP IN NEPAL: AN OAXACA- BLINDER DECOMPOSITION APPROACH ", was conducted under supervision of Assistant Professor Mr. Naveen Adhikari of Central Department of Economics, Tribhuvan University. I declare that the information reported in this thesis is the result of my own work, except where due reference has been made. The thesis has not been accepted for any degree nor has been concurrently submitted to for candidature in other degree granting programs.

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LETTER OF RECOMMENDATION

This thesis entitled, "ESTIMATING CASTE BASE WAGE GAP IN NEPAL: AN OAXACA- BLINDER DECOMPOSITION APPROACH", is submitted by Mr. Hemanta Panthi under my supervision for partial fulfillment of the requirements for the degree of MASTER OF ARTS *in* ECONOMICS. I forward it with a recommendation for approval.

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APPROVAL LETTER

We certify that this thesis entitled, "ESTIMATING CASTE BASE WAGE GAP IN NEPAL: AN OAXACA- BLINDER DECOMPOSITION APPROACH" submitted by Mr. Hemanta Panthi to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University, in the partial fulfillment of the requirement for the MASTER OF ARTS *in* ECONOMICS has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the said degree.

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ABSTRACT

Nepal is a diverse country with a complex mix of castes, cultures, religions, languages, and ethnicities. The caste system in Nepal is based on occupation and is heavily influenced by patriarchal values. In this context, this study investigates wage gaps among different caste groups, employment sectors, and reservation status in Nepal. Using the data from third wave of National Labor Force Survey (NLFS 2017/18) we estimate mincerian log wage equations and further decompose it using oaxaca-blinder decomposition into composition and wage structure component. The findings suggest that wage gaps are primarily driven by market endowment factors, such as education, experience, and skills, rather than discrimination.

In particular, the study found that returns on education are minimal for marginalized caste groups, while education attainment among the Tagadhari caste group leads to higher wages compared to other caste groups with similar levels of education. The government sector tends to offer higher wages, even for those with poor market endowment levels, and reservation has helped to reduce wage gaps. The unexplained component of the wage gap decomposition was found to be insignificant, suggesting that wage discrimination is not a significant factor.

Key words: Wage discrimination, Caste group, Employment sector, Reservation

LIST OF ACRONYMS

A/J	Adibasi / Janajati
CBS	Central Bureau of Statistics
CDF	Cumulative Distribution Function
EA	Enumeration Areas
FC	Forward Class
GoN	Government of Nepal
GM	Geometric Mean
IMR	Inverse Mills Ratio
MPT	Managers, Professionals and Technicians
NLSS	Nepal Living Standard Survey
NPC	National Planning Commission
NSCO	Nepal Standard Classification of Occupation
NSIC	Nepal Standard Industrial Classification
NSSO	National Sample Survey Organization
OB	Oaxaca and Blinder
OBC	Other Backward Class
OLS	Ordinary Least Square
PB	Private Business
PDF	Probability Density Function
PI	Private institution
PSU	Primary Sampling Units
SAT	Skilled Agriculture and Trade Workers
SC	Scheduled caste
SSU	Secondary Stage Units
UP	Un-adjusted Pooled

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CHAPTER I
INTRODUCTION

1.1 Background of the Study

Nepal is a highly diverse country in terms of its castes, cultures, languages, religions, and ethnicity. The caste system in Nepal is derived from the Hindu caste system and is based on a patriarchal social and cultural classification system. Six categories, based on sex, religion, ethnicity, caste, region, and physical condition, are considered excluded groups in Nepal, and face issues such as discrimination, lack of power, marginalization from mainstream development, and under representation in bureaucracy and politics (Dhakal, 2013). The caste and class-based divisions within Nepali society have resulted in marginalized groups being denied justice and placed at the bottom of the social inclusion ladder.

According to the 2011 Population Census, there are 126 caste/ethnic groups in Nepal. The largest of these groups is the Chhetri, accounting for 16.6% (4,398,053) of the total population, followed by the Brahman-Hill (12.2%, 3,226,903), Magar (7.1%, 1,887,733), Tharu (6.6%, 1,737,470), Tamang (5.8%, 1,539,830), Newar (5%, 1,321,933), Kami (4.8%, 1,258,554), Musalman (4.4%, 1,164,255), Yadav (4%, 1,054,458), and Rai (2.3%, 620,004) (CBS, 2011). These groups have evolved from three major language groups: Indo-Aryan, Tibeto-Burman, and various indigenous languages. The diversity of the caste/ethnic groups in Nepal is closely linked to the country's ecological diversity. Minorities in Nepal are often deprived of equal rights and participation in social rituals and functions, as discriminatory practices are still deeply ingrained in Nepalese society. Discrimination in the labor market can take many forms, including restrictions on the entry of subordinate groups into the market, selective inclusion with unequal treatment, and unequal working conditions and opportunities for advancement(Das & Dutta, 2007).

The literature, particularly from the west, suggests that caste based discrimination is believed to be more powerful form of discrimination compared to discrimination based on race (Akerlof, 1976). Racial discrimination emerged in countries that were either colonized or participated in slave trading during colonial

era. Caste based discrimination have been practiced for centuries before colonialism. The United Nations Development Program (UNDP) report 2008 states that one of the caste group of Nepal called "Dalit" face discrimination in society despite of having provisions for equal rights in the interim constitution 2007 . The issue of ethnicity in Nepal is not only the matter of discrimination because of membership of an ethnicity of minority group or lower social class status, but it is a form of social exclusion in the absence of other of other qualifications necessary for group membership such as lessee, education, employment etc . In order to overcome inequalities in outcome based on caste; the government have often introduced a number of measures. Such measures include abolishing of any forms of discrimination making such actions illegal, number of targeted programs and a quota-based reservation system in the public institutions. However, there is poor understanding about impact of such policies in the job market outcomes.

Caste wage inequality can exist due to several reasons, and both demand and supply factors operating in the labor market can be a source of inequality. It is defined that individual characteristics of labor known as pre market endowments are not sufficient on low caste labor. Pre market endowments is traditionally defined as education, skills and other form of human capital. (Mainali et al., 2017) analyses caste wage discrimination found strong evidence of caste discrimination against the Dalit in Nepal. On the supply side of labor market, economic theories suggests that individuals with similar per market endowments are unlikely to select lower paying jobs. If pre-market endowment are defined broadly and including the access to better paying occupations and higher paying firms then individuals belonging to disadvantaged castes, might self-select into low-paid jobs for two reasons. First, they might be subject to collective pressure by fellow caste members to restrict themselves to traditional caste occupations (Akerlof, 1976). Second, low-caste workers might face higher transaction costs in attempt to attain high paying jobs, whether via the choice of occupation or via employment with higher paying firms within the same occupation.

Caste discrimination linger in two self-perpetuating ways. First case, it subjects backward castes to information and network disadvantage because of their exclusion from certain sectors of employment. Second, caste class discrimination discourages low caste workers for developing occupation skills assigned to high class workers (Mainali et al., 2017) . Nepal initiated different programs and policies to address the problem of social inclusion. The policies are targeted to promote equality, social security, participation on development programs, gender budgeting and end of discrimination. Government introduced reservation system

to encourage the participation in civil service through amendment of civil service act for Women, Dalit, Madhesi, Disabled, Ethnic group and people from back warded region. In this paper we subgroup the sample according to the muluki aain caste system viz Tagadhari, Matwali and Pani nachalne groups and study thw components of wage differentials between the caste groups.

(Madheswaran & Attewell, 2007) employed individual-level data from the National Sample Survey Organization (NSSO) for three different years, namely 1983, 1993-94, and 1999-2000. Using the Blinder-Oaxaca (1973) decomposition technique, he analyzed the wage gap and separated it into explained and unexplained components. The study's findings indicate that discrimination in wages within occupations is more significant than discrimination in accessing occupations.(Karki & Bohara, 2014) found that Dalits in the Nepali caste system earn less than non-Dalits, and this wage gap can be largely explained by the endowment effect. This means that Dalits have unfavorable characteristics that make them less desirable in the labor market compared to other non-Dalit caste groups such as Brahman/Chhetris, Janajati, Newar, Madheshi, and other castes.

A legal code known as Muluki Ain was implemented, which classified all Nepalese individuals into various categories based on their relative ritual purity, regardless of their religious backgrounds (Bennet et al., 2008).The study categorizes ethnic groups into three broad categories based on their historical classification within the caste system: Tagadhari, Matwali, and Pani Nachalne. While the Tagadhari and Matwali castes were considered 'pure', the Pani Nachalne were deemed 'impure'(Cox, 1988).

For the study purpose we follow caste brackets as Muluki Ain classification and re-defining the caste labels as Khas , Adibasi/Janajati, Dalit . Similarly, we classify employment sectors into four groups as Government , Private Business , Private Institutions and Others and decompose the wage differentials among the caste group and employment sectors into composition and wage structure effect.

1.2 Statement of the Problem

Economics literature identifies three main factors that contribute to wage differentiation: differences in human capital traits (such as education and experience), wage discrimination, and the exclusion of minority groups from high-status professions and positions. There are evidences that caste-based discrimination continues to be a problem in Nepal. Vishwakarma (2002) states , one of the caste groups in Nepal, known as "Dalits," continue to experience social discrimination despite the fact that the interim Constitution of Nepal, introduced in 2007,

prohibits caste-based discrimination .The caste system and its associated discrimination is based on the idea that people in the marginalized castes, are inherently inferior in intelligence and ability. This belief serves as the foundation for the discrimination faced by Dalits (Gandhari, 2014).

After the reinstatement of democracy in 1990, the political movement in Nepal increased efforts to root out caste-based discrimination, The prolonged Maoist conflict and the people's movement of 2007 also contributed to the heightened efforts of the movement. The Interim Constitution of Nepal in 2007 further strengthened protections against caste-based discrimination and introduced affirmative action measures such as inclusion. Although, caste based differences are still ubiquitous in forms of individual ,institutional and wage discrimination (Khanal & Kushiyait, 2010).

The caste system has been legally abolished since the adoption of the Interim Constitution of Nepal in 2007. Article 11 of the Interim Constitution states that "No person shall, on the grounds of untouchability be subjected to any discrimination, restriction or condition in the practice of any profession or in the carrying on of any occupation, trade or business."Additionally, Article 18 of the Interim Constitution guarantees the right to equality and prohibits discrimination on the grounds of religion, race, sex, caste, tribe, origin, language or ideological conviction. These provisions were carried forward into the 2015 Constitution of Nepal, which further strengthens the prohibition on discrimination and specifically includes provisions to ensure the rights of marginalized and disadvantaged groups, including those who have historically been subject to caste-based discrimination (Law, 2020). The median monthly wage for male workers in Nepal was NPR 12,497 and the median monthly wage for female workers was NPR 9,421.The survey also found that the wage gap between men and women was higher in urban areas than in rural areas. In urban areas, the median monthly wage for men was NPR 14,832 (about USD 130) and the median monthly wage for women was NPR 10,216 (about USD 90). In rural areas, the median monthly wage for men was NPR 10,935 (about USD 97) and the median monthly wage for women was NPR 8,334 (about USD 74) (CBS, 2018).The difference in wages between Dalits and other castes is -5.7%, which is -380% of the total earnings gap between them (i.e., 1.5%). The earnings gap between Dalits and Newars is also 3%. The wage differential between Dalits and Brahman/Chhetris is 1.1%, which is approximately 19% of the total earnings gap between them (i.e., 5.8%) (Karki & Bohara, 2014). Discrimination is a major contributor to the difference in gross earnings, with job discrimination (inequality in access to certain occupations) being more significant

than wage discrimination (unequal pay within a given occupation, given an individual's educational and skill level) in the regular salaried urban labor market (Madheswaran & Attewell, 2007).Despite of long political upheaval's marginalized caste groups are still underpaid in labor market, is it the composition effect (Human capital) or a wage structural effect (discrimination) factors creating the wage differences is still unknown.

1.3 Objective of the study

- To estimate Mincerian equation according to caste group and employment sector in Nepal.
- To decompose wage differentials using Oxaca-Blider decomposition method.

1.4 Significance of the Study

This study aims to investigate the factors that contribute to wage differences based on caste in Nepal, with a focus on the roles of composition and wage structural differences. The results suggest that composition effects, rather than wage structural differences, are the main drivers of wage differentials in the Nepalese labor market. This finding adds to the existing literature on the topic and has implications for policy efforts to reduce wage inequalities. The study also uses mincerian log wage functions to analyze the impact of human capital on wages, and decomposes wage differences using two models: a human capital model and a full specification model that includes socio-economic variables. These techniques provide a more nuanced understanding of the factors influencing wage differences and can inform efforts to create a more equitable labor market. The study follows the Nepal Standard Classification of Occupation (NSCO) in its analysis, which allows for a more detailed examination of the nature of jobs performed by individuals and provides insights into occupational choices. This information can be useful in planning and policy implementation.

1.5 Limitations of the study

We use Oaxaca-Blinder for decomposition of wage differentials into two components composition and wage structure component (discrimination). Nopo method would have estimated the wage gap between two groups by taking into account differences in individual characteristics. It decomposes the wage gap into four components, two of which are related to caste-based discrimination and the endowment effect, and the other two of which are related to differences in characteristics between the two caste groups.This method assumes that the distribution of individual characteristics is different between the two groups.

1.6 Organization of the study

This study is focused on analyzing the caste system in Nepal and its impact on the wage gap differentials between castes. The first chapter provides an overview of the caste system in Nepal, while the second chapter reviews the existing literature on the topic. The third chapter explains the research methodologies used in the study, while the fourth chapter presents the findings of the empirical analysis. Finally, the fifth chapter summarizes the study's key findings, limitations, and implications for policy and practice.

Overall, this study provides a comprehensive understanding of the caste system in Nepal and its impact on the wage gap differentials between castes. The study's findings can inform policymakers and practitioners on how to address caste-based discrimination and inequality in Nepal, particularly in terms of reducing the wage gap differentials between castes. Additionally, the study contributes to the existing literature on caste-based discrimination and inequality in Nepal, and can serve as a basis for future research in this area.

CHAPTER II
LITERATURE REVIEW

The following section presents a review of relevant literature. This chapter is further sectioned as a theoretical review, a review of international studies, a review of methodology, and a review of national studies.

2.1 Theoretical Review

The main economic theory to study discrimination was developed by Gary Becker, in the 1950s. Becker (1960) proposes that taste for discrimination creates a wage differential in the short run, as a result of the willingness on the part of discriminators to bear an additional cost in order to avoid any association with certain other agents. But employer discrimination is predicted to disappear in the long run, subject to constant returns to scale production technology and the distribution of tastes. Becker highlights that in an open market economy there will be competitive forces working against discrimination. He views economic discrimination as a reflection of market imperfections. This theory was mainly applied to study racial discrimination but was extended later to analyze other forms of discrimination including gender discrimination.

Blinder (1973) and R. L. Oaxaca and Ransom (1994) both independently developed a statistical model to estimate discrimination. They decomposed the earnings differential into a component explained by differences in personal characteristics of workers that affected their productivity and a component unexplained by observable productive differences and therefore attributable to discrimination. This has been a widely used technique to assess the extent of discrimination and has been applied to study both racial and gender discrimination.

Das and Dutta (2007)used the mean caste wage gap. Mincerian earning equation is used for controlling the human capital on various other characteristics.Separate wage determination is specified for workers from different social Groups. SC, OBC and general castes are engaged in wage employment.

$$W_s i = X'_s i\beta_s + \mu_s i W_g i = X'_g i\beta_g + \mu_g i \tag{2.1}$$

The subscripts s and g denote the social groups, where s stands for other back warded caste (OBC) and s strands for Scheduled caste and g stands for General caste (GC). Oaxaca methodology Blinder, 1973is used to decompose the average wage gap between each of the social groups. The decomposition is done using the following OLS estimation of social group specific wage equation.

$$\bar{W_g} - \bar{W_s} = (\bar{X_g} - \bar{X_s})'\hat{\beta}_g + \bar{X_s'}(\hat{\beta}_g - \hat{\beta}_s) \tag{2.2}$$

The bars in the above equation denote the mean values for the social group specific wage determining characteristics. The first component in the decomposition equation represents the endowment effects or the explained component of wage differential. Explained component are the individual characteristic that are required for a labor to participate in the labor market. Education, training, years of schooling which defines the individual characteristics are required in terms of per-entry to the labor market. The issue of wage equation selection bias is addressed by using a polychotomous outcome between three employment categories such as i) non-wage earners, it includes the non-participant cohort in labor market who are self employed and unemployed individuals, ii) casual workers and regular workers. As a whole the labor market can be classified into two different type of wage earners. The mean regression models are estimated as:

$$W_s i = X_s' i\beta_s + \gamma_s\hat{\lambda}_s i + \mu_s i // W_g i = X_g' i\beta_g + \gamma_g\hat{\lambda}_g i + \mu_g i \tag{2.3}$$

Where, $\lambda_j]$ are the unknown selection parameters for each social groups $\hat{\lambda}_j i$ refers to estimated standard selection variable for j social group. The mean caste wage gap is decomposed as below:

$$\bar{W_g} - \bar{W_s} = [\bar{X_g} - \bar{X_s}]'\hat{\beta}_g + \bar{X_s'}[\hat{\beta}_g - \hat{\beta}_s] + [\hat{\theta}_g\bar{\lambda_g} - \hat{\theta}_s\bar{\lambda_s}] \tag{2.4}$$

The overall wage differential can be decomposed into 'endowment' and treatment effect.$[\bar{X_g} - \bar{X_s}]'\hat{\beta}_g$defines the endowment effect and $\bar{X_s'}[\hat{\beta}_g - \hat{\beta}_s]$defines treatment effect. The additional part $[\hat{\theta}_g\bar{\lambda_g} - \hat{\theta}_s\bar{\lambda_s}]$ defines the social group differences in selection.

2.2 Review of International Studies

R. Oaxaca (1973) aimed to assess the average extent of discrimination against female workers in the United States and provide a quantitative evaluation of the factors contributing to the wage gap between men and women. To conduct the study, Oaxaca used data from the 1967 Survey of Economic Opportunity, focusing

on a specific subset of the population that met the following criteria: reporting an hourly wage for the week preceding the survey, being adults aged sixteen years or older, living in urban areas, and identifying as either White or Negro. Based on the analysis of the data, Oaxaca found that discrimination accounted for 58.4% of the logarithmic wage differential for Whites and 55.6% for Blacks, which represents the simple average of the two estimates obtained.

Reimers (1983)examines labor market discrimination against Hispanic and black men.Possible reasons for wage inequality in the wage market might be age, geographical location, immigration, language difference and discrimination. Hispanics have lower average level of education compared to white non- Hispanic and education attainment is related to wage earning. Survey of income and education 1976, is used for the study. Mexicans, Puerto Ricans, Central and American, Cuban, white non-Hispanic, Hispanic, other Spanish ethnic groups are addressed in the study. A set of explanatory variables is used for the real wage rate regression including: Potential work experience, date of immigration and nativity, education (in the United States or abroad), Health, race, government employment, fluency in English, Disabilities, U.S military service and inverse of mills ratio. Following the oaxaca decomposition method, the study finds out the total wage differential between Mexican and white non-Hispanic, education is the source of half of the 34% wage differential. The study finds out that the average estimates of discrimination is largest in the case of central and South American men. Pureto rican males wage rates are 33% less than white non-Hispanic. The gap widens to 43% when the price level is adjusted to real wage. The counter factual wage rate seems to be greater by 6% on the favor of Cuban male as compared to non-Hispanic males. The study includes race as the characteristic to distinguish the discrimination in the labor market. The paper concludes that there may have indirect effect of discrimination in the wage structure.

Banerjee and Knight (1985) examined the problem of caste in the light of discrimination theory and government policy. The empirical basis of the paper is a survey conducted in Delhi. Total of 1,615 migrant heads of household of whom 1408 had come from rural areas is considered in the study. The individuals satisfying flowing criteria were interviewed: i) male, ii) age on arriving Delhi being 14 years or more, iii) born outside Delhi, iv) came after securing employment or in search of employment. The caste classification is based on Hindu caste system, each caste had a traditional occupation regarded as duty. Difference in mean wages between scheduled and nonscheduled caste is decomposed into explained and unexplained component. These differences is used to reflect the extent of

labor market discrimination. The average monthly earning of scheduled and non-scheduled caste were rs 272 and rs 337 respectively. The difference of rs 65 per month is statistically significant at 1 percent. Of the gross earnings difference (G) of 17 percent, the explained wage difference (WE) accounts for 0.39 percentage points, the explained occupational difference (JE) for 6.20 percentage points, wage discrimination (WD) for 9.19 percentage points, and occupational discrimination (JD) for 1.69 percentage points. According to the neo-classical theory of labour market discrimination, wage differences arise among equally productive workers because group specific characteristics are valued in the market, and the values placed on these characteristics are determined by a 'taste for discrimination' exercised by employers, employees or consumers (Banerjee & Knight, 1985).

In India, based on the three rounds (1993-94, 2004-05, 2011) of employment and unemployment survey data Madheswaran and Singhari (2016) examines the caste discrimination in the regular urban labor market. The study employed 4 different decomposition methods to estimate the extent of discrimination against Scheduled castes (SCs) workers in the public and private sector of regular urban labor market. Blinder-Oaxaca decomposition method is used to separate the wage differentials between scheduled castes (SCs) and forward castes (FCs). In order to solve the index number problem in this decomposition technique Cotton, Neumark and Oaxaca/Ransom decomposition technique is adopted as an alternative. For more contribution to distinguish between wage discrimination and job discrimination, expanded decomposition: combining wage and job discrimination is employed. At last, in order to identify the sources of wage gaps at various quintiles of the wage distribution, the study employ Machado-Mata-Melly decomposition method.

Das and Dutta (2007) explored whether pay gaps on the basis of caste are still evident in the Indian labor market using data from the most recent round of the nationally representative National Sample Survey. The estimates of caste wage gap in Indian labor market and the extent to which this differential can be explained by the differences in endowments of workers from different caste group. The Social Tribes (ST) caste group is seen to be on the shadow side of Indian reservation system. One of the reasons behind it is due to lack of access of information about vacancies or due to lack of education or due to fact that they have subsistence agriculture to fall back. As last resort they end up in causal workers. The hypothesis is that the hierarchical nature of the caste system and the strong association of ritual purity with different occupations translate into poorer labor market outcomes, including occupational segregation and wage dis-

crimination. Separate wage equations, corrected for selection bias, are estimated for different social groups (scheduled castes, other backward castes and general castes) in regular and casual wage employment. Conventional index number techniques are used to decompose the caste pay gap into 'endowment' and 'treatment' components. The empirical evidence in this paper suggests that caste is still a determining factor in how individuals are remunerated in the wage labor market. Amongst regular workers the extent of the wage gap is substantial at about 0.37 log points, of which between a third is attributable to unequal treatment of scheduled caste workers relative to general caste workers, depending on whether selection into regular wage employment is taken into account. The wage gap among casual workers, as expected, is very low and almost entirely accounted for by differences in characteristics.

Madheswaran and Attewell (2007) usages individual level data from the National Sample Survey Organization (NSSO) for the years 1983, 1993-94 and 1999-2000, and used the Blinder-Oaxaca (1973) decomposition technique to decompose the wage gap into explained and unexplained components. He further uses the Brown et al. (1980) decomposition technique to examine if there is discrimination in the occupational attainment process itself which would explain the wage differences between male and female workers and between low and high caste workers. To estimate the earning differences attributed to discrimination, Mincherian earning function is estimated as per the caste categories (Other Castes, SC/ST and OBC). Logarithm of daily wage rate is taken as dependent variable. Age, level of education, gender, marital status, sector, Job tenure, union status, occupation and region were taken as independent variables.

The earning function estimates that level of education had significant contribution on daily wage. The level of education is defined as primary, middle, secondary, higher secondary and graduate level. Rate of return of Professional degree compared to general degree are higher in all caste groups. Sc caste groups return have increased from 10.44 % to 15.34% from the period of 1983 to 2000. Whereas the return of primary education is decreasing in SC caste group. In the period of 1983 the return was 4.48% which decreased to 1.92% in 2000. The wage gap between male and female workers has decreased and between low and high caste workers has increased slightly over the period under study. The explained component of the wage gap has increased over time.However, based on the occupational decomposition of the wage gap, the study concludes that discrimination in wages within occupations is more important than discrimination in access to occupations.

The Oaxaca-blinder decomposition results concluded that in the public sector SC workers earned 5% less than FC workers in 1993-94, 11% less in 2004-05, and 9% less in 2011-12. Similarly, in the private sector, SC workers earned 11% less than forward caste employees in 1993-94, 17% less in 2004-05 and 18% less in 2011-12. Cotton (1988) , Mincer (1974) and R. L. Oaxaca and Ransom (1994) decomposition results suggests that wage difference due to skill is 80.6% in private sector while it is 68.3% in private sector. In the absence of discrimination, the differences in wages for FC is 5.3% in public sector and 8.1% in private sector whereas, for SCs, the difference in wages is 14.1% in public and 23.6% in private sector.

The findings from the expanded decomposition analysis show that in the public sector, job discrimination against SCs is more pronounced than wage discrimination in all categories of occupation except in elementary occupation whereas in private sector, the same discrimination results is exceptional on elementary and clerical occupation. The results concluded occupational differences is considerably important than wage differences. At last, Machado-Mata-Melly decomposition results concluded that the contribution of endowment difference to the raw wage gap is higher in public sector than in private sector. The degree of discrimination against disadvantaged group is very high in the private sector.

Ito (2009) attempts to quantify the caste based discrimination in labor market using household data taken from rural north India. The sample used in the analysis includes male household members from age between 15-60. The sample size of the study consists of 3324 individuals. the classification of caste is done as, upper caste, middle caste, agriculture based back warded caste, other back warded caste, Muslim caste, Scheduled caste and Scheduled Tribes. Dalits, or once known as "untouchables" is grouped under Scheduled caste and scheduled tribes (SCs/STs). The analysis includes individual level variables (log earning-regular, log earning-casual, schooling years, experience, age), household level variables (no. of working age members, no. of non-working age members, land size, Livestock etc.) and other variables (ratio of landless, distance to facilities, ratio of regular workers and up state dummy). This paper examined caste discrimination in the labor market by estimating simultaneously market earnings, reservation wages, and the costs of finding regular employment. The estimation results suggest that socially backward castes do face disadvantages in finding regular employment in the sense that they face higher transaction costs associated with entry into the labor market. On the other hand, there is no evidence for wage discrimination in regular employment activities. He finds that members of disadvantaged castes face higher

transaction costs in accessing regular jobs as compared to high-caste members. He cautions that higher transaction costs could reflect either demand-side barriers or informational and network disadvantages operating on the supply-side.

Similarly, another study in India by Deininger et al. (2013) on the wage discrimination in India's Informal Labor Markets uses a nationally representative household survey to extend analysis of wage discrimination to the informal sector. The research objectives are namely to (i) quantify the size of discrimination in casual labor markets compared to what is found in formal settings; (ii) explore whether caste- or gender-based discrimination is more important; and (iii) compare discrimination in villages with high- and low-income levels. The casts are divided into SC/ST and Non- SC/ST caste groups.

The daily wage for SCs/STs is between 10% and 11% lower than that received by others (38 versus 43 Rs/day and 53 versus 59 Rs/day). Wage variability across regions is greater as well; caste differences are most marginally significant for agriculture sector. In the South, where caste wage differentials are most pronounced, with 18% and 30% for agriculture and non-agriculture, respectively, their magnitude is significantly below the gender wage gap ascertained earlier. 61% of gender wage gaps for all casual workers and 76% of the gap for agricultural workers is attributable to discrimination; (ii) wage differences between scheduled castes and tribes (SC/STs) 1 and the rest of the population reflect differences in endowments rather than discrimination. The observed wage difference is 0.334 gender discrimination in rich villages is higher than in poor villages.

Siddique (2011) studied the Caste based quotas in hiring, which existed in the public sector in India for decades. Recently there has been debate about introducing similar quotas in private sector jobs. This paper uses a correspondence study to determine the extent of caste based discrimination in the Indian private sector. Four different websites were used for the audit study: Monster India, Naukri, times of India and jobs ahead. A total of 523 job vacancies in customer care, a total of 1046 resumes were received. Naukri website was used by 70% of applicants. Of the resume, 64% were applied for jobs in customer service and remaining 36% for front office administration. All the applicants had an undergraduate degree in the same field as well as same duration of experience (10 to 12 months). The call back rate for high caste applicants was 16.1% , low caste applicants was 13.6. A multivariate analysis is done for the analysis of call backs. The Binary outcome for applicant j who faces firm I is defined as 0 if the applicant doesn't receive call back and 1 for the applicant who does not receive call back. where, y_ij follows a Bernouli distribution.

A probit estimation on call back dummies with random effect at the firm level shows that being a low caste applicant reduces 0.19 in call back probability. Similarly, multivariate analysis of caste and recruiter characteristics on call back dummies is carried out. For Hindu recruiters' low caste reduces the call back by 0.21 whereas for non-Hindu recruiters' low caste actually increases call back by 0.62.the largest effects of low caste is found in male Hindu recruiters. Low caste reduces the probability of call backs by 0.51 among this group of recruiters. For all other groups, the effect of low caste was seen as positive and the larger magnitude was observed in female low caste recruiters.

The study reveals that low caste applicants receive low call backs irrespective of the job type. Low caste reduces call back for more of jobs in front office/ administration than it does for front office/ administration. On average low-caste applicants need to send 20% more resumes than high-caste applicants to get the same callback. Differences in callback which favor high-caste applicants are particularly large when hiring is done by male recruiters or by Hindu recruiter.

2.3 Review of National Studies

Karki and Bohara (2014) use the Ñopo method to estimate the earnings gap between Dalits and non-Dalits in the Nepali caste system. They compare Dalits to each of the non-Dalit caste groups: Brahman/Chhetris, Janajati, Newar, Madheshi, and other castes. The results suggest that the majority of the earnings gap between Dalits and non-Dalits can be attributed to the endowment effect, meaning that Dalits earn less than non-Dalits due to characteristics that are unfavorable in the labor market. This endowment effect benefits non-Dalits and works against Dalits, which may be a reflection of the social exclusion and job segregation that Dalits have experienced in the past. In Nepalese context, Mainali et al. (2017) examines the source of wage differentials among castes in Nepal by extending the conventional Oaxaca method including both occupational and firm size effects. The paper employed two waves of the Nepal Living Standard Survey (NLSS) of Nepal for 2003/2004 and 2010/2011 carried out by Central Bureau of Statistics. In consideration of caste category, Tagadhari workers are taken as the dominant/reference group whereas Matwali and Pani Nachalne workers are taken as non-dominant comparison groups. The probit estimates for access to large firms suggests that both Matwali and Pani Nachalne castes are less likely to work in large firms in 2003, while for 2010 only the Pani Nachalne effect remains significant but of smaller magnitude.

The multinomial logit models for access to occupations shows Tagadhari

workers are more likely to work in professional occupations, but less in skilled occupations in 2003. For 2010, Tagadhari workers are more likely to work in clerical occupations and less in skilled, as compared to Matwali . Moreover, firm sized played a crucial role in wage determination for the Tagadhari and Matwali sub-samples. For the purpose of examining the sources of wage differentials three different models of decomposition were employed; occupational, firm size and interaction and decomposition model. The result suggests that less than half of the wage differentials in 2003 and more than three fourths of wage differentials in 2010 is attributable to human capital endowments.

In 2003, for the Tagadhari-Matwali wage differentials, difference in occupation explain a gap of 0.127, difference in firm size explain 0.077 and interaction of two shows 0.180; while for the Tagadhari& Pani Nachalne wage differential, each model explains 0.128, 0.063, 0.191 respectively. In 2010, for Tagadhari& Matwali wage differentials, difference in occupation explain a gap of 0.041, difference in firm size explain 0.032and interaction of two shows 0.041; while for the Tagadhari& Pani Nachalne wage differential, each model explains 0.088, 0.078, 0.227 respectively. Overall, the three model results shows that access to job in better occupation and higher pays firms plays a nontrivial part in explaining the wage gaps across castes.

2.4 Research gap

Caste discrimination has deep rooted Nepalese society in the form of human behavior and wage earnings. Although the practice have been abolished through constitution but the forms of discrimination are still visible in society. Such discrimination is still unaccounted. There were other studies that used national household survey to decompose ethnicity-based wage gap decomposition and concluded caste wage differentials in Nepal are large and that human capital endowments and lack of access to better paying occupations and larger firms have a significant impact. This paper tries to extend the thread of study and access the wage discrimination according to caste employment sector. However, there are no studies in Nepal which have attempted to study the wage discrimination by clustering the employment sector into four different markets viz. government owned , private business, private institution and other sectors. Policies targeted to uplift marginalized population are practiced by the government since last decades in government and public institutions but its virtue is still unstudied. Education is one of the major contributing factor for an individuals wage rate, being literate is not enough in today's labor market for earning better wage rates. so, the contribution of different education levels for minimizing the wage gaps is still

unknown. The study tries to account the returns on human capital factors and its contribution in explaining the prevalent wage gaps.

CHAPTER III
RESEARCH METHODOLOGY

This section discusses the theoretical and conceptual framework of the study. Mincerian wage function and Oaxaca-Blinder decomposition approach is used to examine wage differentials and Heckman two-step model is used for addressing the selection bias issues. The following sections describes the sample design, conceptual frame work , sources of data and techniques for data analysis.

3.1 Philosophical Issues

This study adopts a research paradigm influenced by radical structuralism, which assumes that labor force participation is objectively determined by factors such as human capital and other variables. The ontological position of this study is objectivism, as it aims to produce objective and value-free knowledge about reality as a part of economics research. The epistemological position is positivism, as it relies on empirical methods and data to develop and test theories of labor discrimination. The axiological position is value-free, as the researcher endeavors to not be influenced by or influence the subject or results of the study. The philosophical tradition that guides this study is the Neo-classical framework.

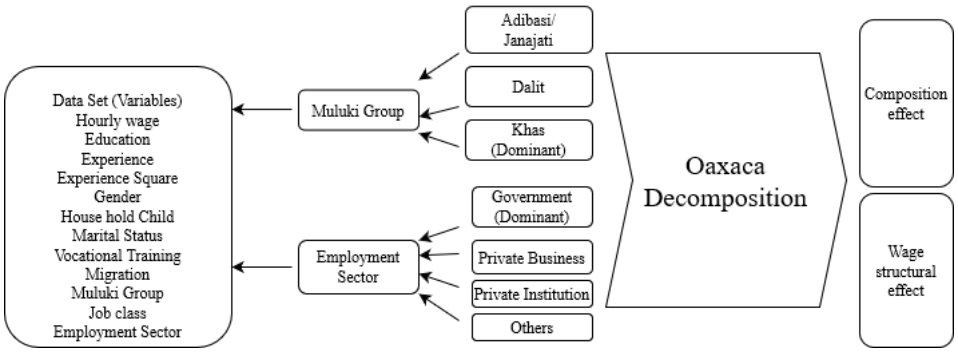

Figure 3.1: Conceptual Framework of the Study

3.2 Conceptual Framework

Figure 3.1 represents the conceptual framework of the study. Third wave of National Labor Force Survey of Nepalis filtered at the first stage with required variables and Not available observations are omitted. Then the data set is clustered according to the muluki group viz Khas, A/J and Dalit caste and employment sector viz Government, Private business, Private Institution and others. We run the decomposition for Khas and A/J , Khas and Dalit and A/J and Dalit caste groups wage differentials for studying the status of caste based wage gap.

In this study, we conduct two types of models - human capital and full fledged models - for each sub-group. The human capital model is used to examine the impact of education, experience, and experience squared on earning function. We use OLS regression for each of the muluki groups and employment sectors in the first stage, and add other socio-economic variables as controls in the human capital model to examine the effect of socio-economic factors on the earning function. We also decompose the human capital model to analyze the contribution of human capital to wage differentials, and decompose the full specification model in a similar way. Both models also include adjusted and un-adjusted models for IMR.The variables and its dissection is presented in Table **??**.

3.3 Empirical Strategy

3.3-1 Mincerian Wage Equation

Mincer (1974) wage model framework is used to estimate returns to education, experience and other attributes. It is a price equation revealing the price of productive attributes such as education and experience. The regression model is specified as:

$$\log w = \beta_0 + \beta_1 educ + \beta_2 exp + \beta_3 exp^2 + \epsilon \tag{3.1}$$

Where, $\log W$ = Log of individual wage ,educ = Years of Schooling ,exp = experience of an individual , approximated by age of an individual,x = vector of individual observable characteristics , gender , region.As stated by mincer, an individual maximizes the present value of further income during different education levels and it is equalized for all education levels in equilibrium. Education level has a multiplicative effect on earnings. Log -linearity of the earning function is used for the aforementioned reasons and for convenience of the model. Mincerian model includes squared term for experience along with experience in order to capture the effect of on the job training and educational investment decline along the time in life-cycle capital model (Mincer, 1974).

3.3-2 Oaxaca-Blinder decomposition

The Blinder-Oaxaca methodology is a statistical technique used to analyze differences in group means, particularly in the context of labor market outcomes such as wages. The approach involves decomposing the wage gap between two groups, such as men and women or White and Black workers, into two components: one attributable to differences in group characteristics, such as education or experience, and another due to differences in the way these characteristics are rewarded in the labor market, which may indicate discrimination. This method can provide insight into the sources of wage differentials and help to identify potential areas for policy intervention Blinder, 1973.The wage setting model is assumed to be linear and distinguishable in observable and un-observable characteristics as:

$$y_l = X\beta_g + \epsilon_g \tag{3.2}$$

where, for g represents the caste categories (Khas (K), Adibashi/Janajati (A/J), Dalit (D)), x is a vector containing the predictors and constant β contains the slope parameters and intercepts and ϵ is the error term. We take two groups from caste categories (K&A/J) and outcome variable y and set of predictors. Letting D_k =1 be an indicator of group Khas(T) membership and taking the expectations over X, the overall mean wage gap Δ_0^μ can be written as:

$$\begin{aligned}
\Delta_0^\mu &= E[y_k|D_k, = 1] - E[y_k|D_a = 0] \\
&= E[E(y_k|X, D_k = 1)|D_k = 1] - E[E(y_a|X, D_k = 0)|D_t = 0] \\
&= (E[X|D_k = 1]\beta_t + E[\epsilon_t|D_k = 1]) - (E[X|D_k = 0]\beta_a + E[\epsilon_a|D_a = 0])
\end{aligned}$$

Where, $E[\epsilon_a|D_a = 0] = E[\epsilon_t|D_t = 1] = 0)$. Adding and subtracting the average counterfactual wage that Khas workers would have earned under the group structure of A/J, $E[X|D_k = 1]\beta_a$, the expression becomes:

$$\begin{aligned}
\Delta_0^\mu &= E[X|D_k = 1]\beta_t - E[X|D_k = 1]\beta_a + E[X|D_k = 1]\beta_a \\
&\quad + E[X|D_k = 1]\beta_a - E[X|D_k = 0]\beta_a \\
&= E[x|D_k = 1](\beta_k - \beta_a) + (E[X|D_k = 1] - E[X|D_a = 0])\beta_a
\end{aligned}$$

Replacing the expected value of the covariates $E[x|D_t = d]$, for $d = 0, 1$, by the sample averages $\bar{X}_g$, the decomposition is estimated as:

$$\begin{aligned}\Delta_0^{\mu} &= \bar{X}_k\hat{\beta}_k - \bar{X}_k\hat{\beta}_a + \bar{X}_k\hat{\beta}_a - \bar{X}_a\hat{\beta}_a \\ &= E[X|D_k = 1](\beta_k - \beta_a) + (E[X|D_k = 1] - E[X|D_k = 0]\beta_a\end{aligned}$$

Replacing the expected value of the covariates $E[X|D_k = d]$, for d= 0,1 by the sample averages $\bar{X}_g$, the decomposition is estimated as

$$\begin{aligned}\Delta_0^{\mu} &= \bar{X}_k\hat{\beta}_k - \bar{X}_k\hat{\beta}_a + \bar{X}_k\hat{\beta}_a - \bar{X}_a\hat{\beta}_a \\ &= \bar{X}_k(\hat{\beta}_k - \hat{\beta}_a) + (\bar{X}_k - \bar{X}_a)\hat{\beta}_a\end{aligned}$$

The first term in above equation $\bar{X}_k(\hat{\beta}_k - \hat{\beta}_a)$ is the wage structure effect also been called the "Unexplained " part of wage differentials or the "Discrimination". whereas, the second term in above equation $(\bar{X}_k - \bar{X}_a)\hat{\beta}_a$ is the composition effect or explained component. If, $D_a = 1$ be an indicator of group A/J (m) membership and taking the expectations over X, the overall mean wage gap would be $\Delta_0^{\mu} = \bar{X}_a(\hat{\beta}_a - \hat{\beta}_k) + (\bar{X}_a - \bar{X}_k)\hat{\beta}_k$. For the two fold decomposition a unknown nondiscriminatory coefficients vector β^* is needed. There may be a reason to assume that discrimination is directed towards a specific group so that $\beta^* = \beta_k or \beta^* = \beta_a$. But there is no specific reasons to assume that coefficient of one or other group are non discriminating. Taking a groups beta coefficient as reference can undervalue the comparison group and overvalue the reference group. To overcome the problem Reimers (1983) proposed to use the average coefficient over both groups as an estimated for the nondiscriminatory parameter vector, i.e. $\hat{\beta}^* = 0.5(\hat{\beta}_k) + 0.5(\hat{\beta}_a)$ as pooled model. We follow the Reimers proposition for our decomposition analysis.

3.3-3 Heckman two step sample selection bias adjustment

Wages are only observed for the individuals who are participating on labor force which might be a selective group Jann (2008) . We follow Heckman (1979) two step sample selection model by deriving Inverse Mills Ratio (IMR) on the first step and plug in the value into our estimated regressions in second step. we compute the mills ratio outside of oaxaca and later adjust to the correct the differential. The Mills ratio is derived from the standard normal cumulative distribution function (CDF), which gives the probability that a normally distributed random variable will be less than a certain value. The standard normal CDF is

given by the formula:

$$\Phi(x) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{x} e^{-\frac{1}{2}t^2} dt$$

The Mills ratio is then defined as the probability that a standard normal random variable is less than the negative of the standardized value of a particular random variable. This can be expressed mathematically as:

$$\lambda(x) = \frac{\phi(x)}{1 - \Phi(x)}$$

Where, $\phi(x)$ is the standard normal probability density function (PDF) and $\Phi(x)$ is the standard normal CDF. We plug in mills ratio in the OLS and decomposition equation as a correction of sample selection bias.If the coefficients of IMR is significant in the estimates then we can conclude the presence of sample selection bias.

3.4 Sources of data and variables

This study uses the nationally representative sample from the third wave of Nepal labor force survey conducted by the central bureau of statistics. The survey covers the basic system of labor statistics according to the ILO standards, including employment, unemployment and underemployment and their associated characteristics. The survey adopted a two stage stratified sampling scheme, following the frame of 2001 National population and housing census. There are only two strata (Urban and rural) in NLFS I. Similarly, NLFS (III) adopted a two stage stratified sampling technique and enumerated 18000 households selected from 900 PSU in the entire country. The country was stratified according to the political map comprising 7 states.

The survey followed the 2001 National population and Housing Census as the frame. Considering rural and urban reasons each from the seven provinces there are 14 domains considered as the primary stratas.The characteristics of sampling frames were evaluated, normal distribution of household number was tested at first. I followed Kolmogorov-Smirnov test for normality test and the test provided enough evidence that the distribution was skewed. The problem of skewed population is addressed through stratification of the sampling units in each domain into three strata guided by Lavallee-Hidiroglou(LH) algorithm (Allee & Hidirogloui, 1988). The algorithm jointly minimizes the total coefficient of variation and the sample size in the choice of stratum boundaries and determines the sample rate per stratum. Modified LH algorithm is used to further accounting of the possible

Table 3.1: Disaggregation of Variables Used in the Study

Variable	Disaggregation of variables
Loghr	Log hourly wage
Experience	Experience in years
Experience_Sq	Experience Squared
Education	Illiterate, Below Primary, Primary Tenth grade, Secondary, Bachelor, Masters and above
Class_5 employment	Elementary, Managers ,Professionals and technicians Clerical, Skilled agriculture and trade workers Plant machinery operators
Muluki group	Khas , Adibashi/Janajati(A/J) , Dalit
Firm type	Government, Private Institution, Private Business , Others
Gender	0 for Female and 1 otherwise
Marital Status	1- for married and 0 otherwise
Vocational training	1 for Yes Vocational training and 0 otherwise
Migration	1 for Migrated and 0 otherwise
Urban	1 for urban and 0otherwise
Over time	1 for overtime and 0 otherwise- No overtime

variance between number of household and number of employed individuals. Modified LH is applied to identify the boundaries of three stratas. Stratum 1 &2 are called as "take some" strata and are smaller compared to third stratum. Stratum 3 is bigger strata with more number of primary sampling unit (PSU) and called as "take all" stratum. From all the strata the samples were drawn from Probability Proportional to size.A systematic sample of 20 households per sample PSU was selected and it numbered total of 18,000 households which were enumerated.

The table 3.1 represents the variable and its respective factors used in the study. We use log hourly wage as our outcome variable. The wage differentials is measured in terms of log hourly wage. Education, experience and experience square are the independent variables of the study. We use employment classification, gender, Marital status, vocational training, Migration status, over time status, Settlement region (urban/ rural) as covariates for the study. In addition to differences in human capital and occupation, the type of the firm also plays a role in creating wage differences(Mainali et al., 2017). With reference to the empirical strategy of the study we use Muluki group classification and firm type classification is used as the control of the covariates in the analysis.

CHAPTER IV
RESULT AND DISCUSSION

This chapter contains the results from our data analysis methodology stated in the previous chapter. Descriptive statistics of our samples and results from OLS and OB decomposition is presented and discussed in the following sections and subsections.

4.1 Descriptive Statistics

Hourly wage is calculated as per the daily earnings of the individuals divided by 8. For the individuals receiving weekly payment, hourly wage is divided by the hours spent on their main job. For the individuals receiving a monthly wage, the amount received is divided by the product of hours spent on their main job with 4. There are individuals who receive remuneration in terms of cash and kinds, the cohort is identified as the population receiving goods and facilities in terms of food and beverage, transportation, clothing and others. The benefits that an individual receives is identified by subtracting the amount to be spent if an individual had to pay if he/she had to purchase from the market. Hourly benefit is calculated by dividing the total net benefit multiplied by daily hours spent at the main job. Caste classification is done according to prevailing muluki aain classification. Muluki aain was implemented in Nepal as a legal code of conduct. The caste system was designed according to an individuals occupation.Tables 4.1 represents caste wise descriptive statistics and table 4.2 represents employment sector wise descriptive statistics of socio-economic variables.

4.1-1 Education

Table 4.3 represents the education status of different caste groups. Out of 8447 observations, the literate population is 79.12 % and illiterate is 20.88%. Illiterate cohort of Dalit caste group is maximum, it counts to 36.32%, followed by Khas caste group i.e. 10.10% and the least illiterate population is observed in A/J caste group. Among A/J caste group 29.62% of people have attended primary education and only 1.47% of people have attended masters and above education. Whereas, the Dalit caste groups are seen back warded in the education attainment.

Table 4.1: Descriptive Statistics of Socio-Economic Variables: Muluki Group

Variable	Khas Mean	Std. Dev.	A/J Mean	Std.Dev	Dalit Mean	Std. Dev.
Hourly wage	104.7026	66.14268	81.66646	48.16074	72.59563	43.17242
Gender	0.586477	0.492478	0.569939	0.495097	0.599062	0.490117
Household child	1.167138	1.273132	1.170268	1.28453	1.674721	1.546821
Experience	25.4576	21.81932	25.73097	21.21699	25.3044	19.84746
Experience square	1124.147	1471.201	1112.221	1418.149	1034.188	1300.208
Married	0.703935	0.456532	0.695494	0.46021	0.73349	0.44216
Vocational Training	0.092945	0.290363	0.083687	0.276925	0.063578	0.244014
Urban	0.602348	0.489426	0.587105	0.492367	0.62393	0.484426
Chores hour	0.157439	0.393185	0.136454	0.363135	0.171265	0.393306
Household Size	4.971736	2.342724	5.314886	2.773057	5.713079	2.849918
Education level						
Illiterate	0.279161	0.448599	0.325615	0.468616	0.423695	0.494172
Below Primary	0.117458	0.321975	0.146564	0.35368	0.157889	0.364658
Primary	0.222742	0.416098	0.269475	0.443698	0.264516	0.441101
Tenth grade	0.198609	0.398964	0.163481	0.369813	0.101936	0.302581
Secondary	0.111969	0.315337	0.068417	0.252466	0.03566	0.185451
Bachelor	0.05131	0.220635	0.02066	0.142246	0.013959	0.117327
Masters& above	0.018752	0.135652	0.005789	0.075865	0.002346	0.048382
Occupation classification						
Elementary	0.219144	0.413741	0.360812	0.480298	0.433125	0.495649
Managers, Professional & Technician	0.391508	0.488175	0.135593	0.3424	0.073421	0.2609
Clerical service	0.187837	0.390653	0.103749	0.304974	0.071144	0.257138
Skilled agriculture	0.140698	0.347772	0.312019	0.463377	0.359135	0.479883
Plant machine operators	0.060813	0.23903	0.087827	0.28308	0.063176	0.243348
Employment						
Government Institution	0.332854	0.471319	0.116333	0.320665	0.064883	0.24639
Private Institution	0.277078	0.447636	0.202619	0.402003	0.15424	0.361282
Private Business	0.241454	0.428042	0.489728	0.499959	0.494593	0.500113
Other	0.148615	0.355772	0.19132	0.393391	0.286283	0.452152

Source: Authors computation

Table 4.2: Descriptive Statistics of Socio-Economic Variables: Employment Sector

Variable	Government		Private Institution		Private Business		Other sector	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Hourly wage	125.9348	66.97167	85.3625	59.30797	76.14254	38.91112	78.24003	53.00224
Gender	0.313003	0.463871	0.321858	0.467317	0.207137	0.405313	0.257676	0.437486
Household child	1.022788	1.143971	1.027869	1.240729	1.441833	1.383311	1.40578	1.353822
Experience	19.19973	12.39747	14.96393	12.33999	24.26545	15.44742	24.19988	15.20209
Experience square	522.2239	609.8856	376.1115	540.0792	827.3655	897.6383	816.5984	881.0321
Married	0.871984	0.33422	0.703825	0.456694	0.807079	0.394649	0.801325	0.399123
Vocational Training	0.243968	0.429618	0.193989	0.395529	0.116913	0.321364	0.093919	0.291804
Urban	0.656837	0.474925	0.817486	0.386373	0.618799	0.485752	0.603251	0.48937
Chores hour	0.064768	0.22899	0.027377	0.132558	0.102031	0.285585	0.1059	0.273548
Household Size	4.615282	2.264409	4.986885	2.683372	5.438062	2.798335	5.228176	2.639428
Education level								
Illiterate	0.02815	0.165457	0.07541	0.264124	0.289527	0.453609	0.328116	0.469669
Below Primary	0.038874	0.193359	0.081421	0.273555	0.219611	0.414043	0.187237	0.390219
Primary	0.104558	0.306085	0.207104	0.405341	0.319118	0.466203	0.291993	0.454816
Tenth grade	0.229223	0.420474	0.190164	0.392538	0.125326	0.331137	0.108369	0.310939
Secondary	0.273458	0.445884	0.212568	0.409237	0.037714	0.190531	0.040939	0.198209
Bachelor	0.19504	0.396365	0.165027	0.371307	0.007543	0.086534	0.0295	0.169255
Masters& above	0.130697	0.337182	0.068306	0.252339	0.00116	0.03405	0.013847	0.116891
Occupation classification								
Elementary	0.118633	0.323464	0.167213	0.373268	0.438062	0.496221	0.470801	0.499297
Managers, Professional & Technician	0.664209	0.472425	0.328962	0.469965	0.013635	0.115987	0.063215	0.243422
Clerical service	0.176944	0.381749	0.287978	0.452945	0.045547	0.208531	0.062011	0.241248
Skilled agriculture	0.016756	0.128399	0.134426	0.341203	0.398027	0.489562	0.357616	0.479443
Plant machine operators	0.023458	0.151405	0.081421	0.273555	0.104729	0.306248	0.046358	0.210322
Muluki group								
Tagadhari	0.619973	0.485556	0.420765	0.493817	0.194662	0.395998	0.248645	0.432358
Matwali	0.303619	0.459974	0.431148	0.495372	0.553235	0.49723	0.448525	0.497493
Pani nachalne	0.076408	0.265738	0.148087	0.355284	0.252103	0.434283	0.30283	0.459621

Source: Authors computation

27.2% of Dalit population have completed primary education. Whereas the higher education attainment rate is lower. Only 8.58% have completed tenth grade and 2.58% have attained bachelor level education and the number falls to 0.49% in the case of masters and above education. Similarly, educational status of Khas is seen well in comparison to other caste groups. 20.65% of Khas population have completed tenth grade and the 14.36% have completed bachelor level education. Masters and above education level is seen more in Tagdhari caste group, it accounts to 6.43% of total Tagdhari population. Out of total data, highest number of populations is observed to complete primary education (25.81%) followed by illiterate population of 20.88%, similarly 15.80% of population have passed tenth grade and 2.84% have completed masters and above education.

The figure 4.1 shows hourly wage earned by three different caste group with respect to their education level. Hourly wage rate of tagdhari caste group is higher as compared to A/J and Dalit. As stated by Becker, education helps a labor to develop those skill sets that increases an individual's productivity. Despite having same level of education, A/J and Paninachalne caste groups are seen to be paid lower compared to Khas caste group. The hourly wage of illiterate population is between 61 and 66 Rupees per hour. The hourly wage rate of tagdhari, A/J

Table 4.3: Education level: Caste group

Education level	A/J	Dalit	Khas	Pooled
Illiterate	21.13%	36.32%	10.10%	20.88%
Below Primary	18.20%	19.37%	9.45%	15.67%
Primary	29.62%	27.20%	19.24%	25.81%
Tenth Grade	15.82%	8.58%	20.65%	15.80%
Secondary	9.43%	5.33%	20%	11.82%
Bachelor	4.33%	2.58%	14.36%	7.15%
Masters and above	1.47%	0.49%	6.43%	2.84%

Source: Authors computation

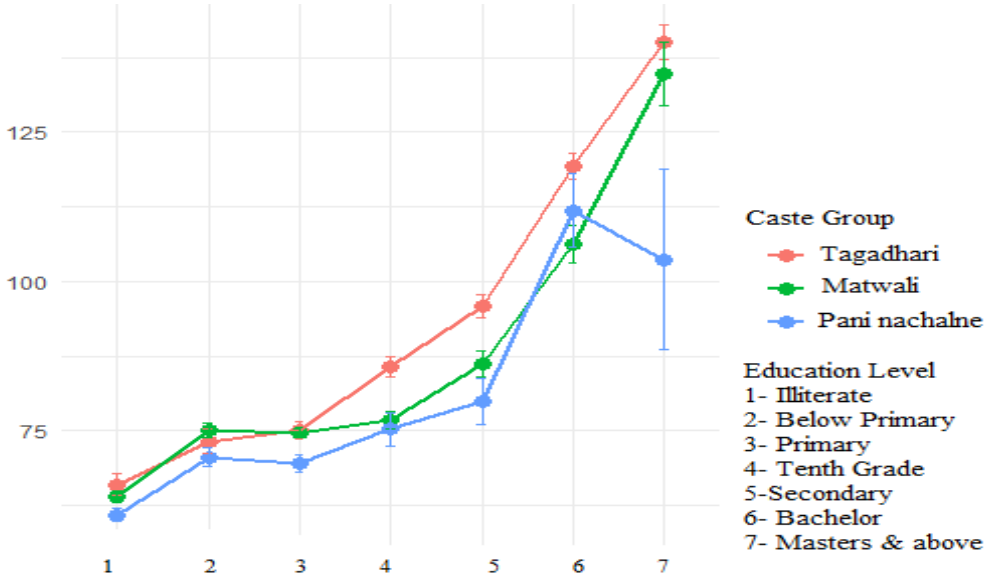

Figure 4.1: Mean Hourly Wage : Education Level

and Paninachalne caste group is observed to be similar along illiterate, below primary and primary education level, it might be due to nature of work they perform. Basically, manual labor and agricultural labor task is preferred due to lack of knowledge and advance skills. As the education level increases, the difference in hourly wage between three caste groups increases. Tagdhari caste group earned 96 rs and Paninachalne caste group earned 80 Rs per hour despite having secondary education level, similarly, the wage difference is larger in master and above education qualification. Comparing the hourly wage rate for masters and above education, tagdhari earned rs 140 Rs per hour whereas Paninachalne earned 104 Rs per hour and A/J earned 135 Rs per hour.

4.1-2 Employment Sector

In Table 4.4 employment sector is classified into four sectors viz Government, Private Business and Private Institutions. there are 1492 (17.69%) observations employed in government sector, 1830(21.7%) employed in private institutions,3477(40.88%) employed in Private business and 1661(19.73%) employed in other business. Classifying the employment sectors via caste group we observe Khas caste group to overshadow other caste groups in Government sector. 61.99% of government employees are from Khas caste group followed by 30.36% from A/J caste group and 7.64% from Dalit caste group. similarly , A/J caste groups participation is higher in private institutions. 43.11% of employees in private institution belong to A/J caste group followed by 42.07% from Khas caste group and 14.82% from Paninachalne caste group. In the context of private business, A/J caste group represents 55.32% of employment followed by Dalit caste group representing 25.22% and Khas caste group with the representation of 19.46%. Similarly, the representation of A/J caste group is seen heavy in other sectors of employment. A/J caste group occupy 44.85% of employment in other sectors followed by Paninachalne caste group i.e. 30.29% and Khas caste group by 24.86%.

Table 4.4: Employment Sector: Caste Group

Employment	Khas	A/J	Dalit	Pooled
Government	61.99%	30.36%	7.64%	17.69%
Private institution	42.07%	43.11%	14.82%	21.7%
Private business	19.46%	55.32%	25.22%	40.88%
Other	24.86%	44.85%	30.29%	19.73%

Source: Authors computation

Khas caste group is seen dominant in civil service whereas A/J caste group is seen dominant in rest of the three categories and Dalit caste groups representation is higher than Khas caste group in private business, whereas it lags in other sector of employment.The hourly earnings of these caste groups in aforementioned employment sector is represented in the figure below:

Hourly mean wage of cate groups employed in different job sectors. Mean hourly wage of Khas caste group working in government sector is highest and it accounts to RS 133.64, followed by A/J caste group in government sector earn an hourly wage of Rs 116.73 and Dalit caste group earning Rs 99.92. Similarly, Khas caste group working in private institutions earn an hourly wage of Rs 97.48, followed by A/J caste group earning Rs 77.74 and Dalit caste group earning by Rs 73.09. Similar pattern is observed in private business, where Khas caste group

earn RS 81.58, followed by A/J Rs 75.89 and Dalit caste group earning Rs72.49. Looking into other employment sectors, Khas caste group earns higest hourly wage of Rs 90.88 , followed by A/J caste group earning Rs 79.28 and Dalit caste group earning Rs 66.30. The representation of A/J caste group in Private business, private institutions and Other sector is higher compared to other caste group but the hourly earning of Khas caste group is seen higher in all employment sectors, followed by A/J caste group and Dalit caste group on the bottom tire.The participation of Dalit caste group is observed lower in all of the employment sector and so are earnings. A density plot is a graphical representation of the distribution of a continuous variable. It shows the probability density function of the variable, which is a way of describing the probability of different outcomes or values within a given range. The height of the plot at a given point represents the probability that the variable will take on a value within a small interval around that point. The area under the curve of the density plot is equal to 1, indicating that the sum of the probabilities of all possible values of the variable is 1. A density plot explaining the hourly wages on X axis and density on Y axis for different job sectors is presented below:

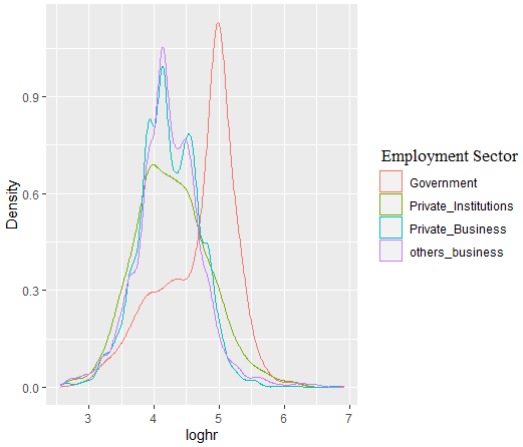

Figure 4.2: Density Plot: Employment Sector

4.1-3 Gender

The issue of occupational segregation between genders has left small room available for female employment. Increasing number of females in particular occupation have undervalued the work, reflected in wage gap.Table 4.5 shows female participation in labor force is noticed to be un-elevated, occupying only 26.38% of a pie. Compared to other caste group females, the share of Tagdhari females to male is higher i.e 28.02% followed by A/J and Dalit females .Males share on employment is observed to be bulky occupying 73.62%. Whereas, Paninachalne

caste group male is seen dominant (75.68%) compared to other castes male to female percentile.

Table 4.5: Gender Participation: Caste Group

Gender	A/J	Dalit	Khas	pooled
Female	26.22%	24.32%	28.02%	26.38%
Male	73.78%	75.68%	71.98%	73.62%

Source: Authors computation

The mean hourly wage rate of female is 66.2 and the male is Rs.84.The mean hourly wage of A/J female is 61.8 rs per hour and A/J males is 81.3. Among all three caste groups tagdhari females earn 80.6 which is larger than other caste female participants. The lowest wage earners are from Paninachalne caste group i.e 52.1 rs per hour. Comparing to male mean hourly wage, females earn less in all the caste group. Among the three caste groups the hourly mean wage of tagdhari caste group is seen superior. Tagdhari males earn rs 95 per hour whereas A/J and Paninachalne caste groups earn 81.3 and 74.4 respectively. Wage structure is often determined according to the position and hierarchy of the organization and those factors are dependent upon education and experience.A density plot explaining the hourly wages on X axis and density on Y axis for male and female is presented below:

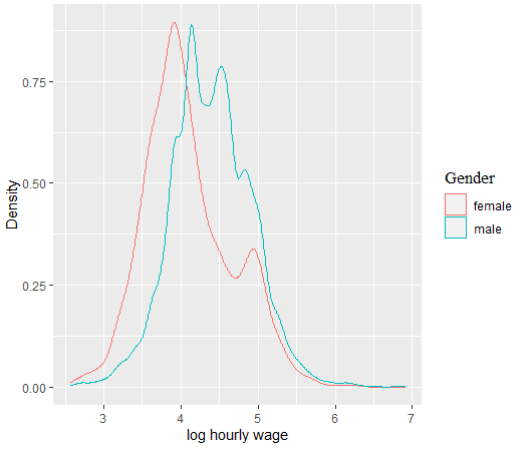

Figure 4.3: Density Plot : Gender

4.1-4 Urban and rural region classification

Table 4.6 represents the share of urban and rural samples where, out of the total sample, 34.07% were from rural area and 65.92% are from urban. Compared to other caste groups, most of the tagdhari caste group are living in urban area

i.e 66.28%. Whereas, similar proportion is seen in A/J and tagdhari caste. The proportion of urban population is dominant in all the caste groups. Urbanization generally takes place on the basis of economic development attracting different firms and traders. The demand for labor is high in urban area as compared to rural area.

Table 4.6: Caste Group : Region

Region	A/J	Dalit	Khas	Pooled
Rural	33.71%	35.88%	33.71%	34.07%
Urban	66.52%	64.11%	66.28%	65.92%

Source: Authors computation

The mean hourly wage of rural labor is 79 and urban is 79.4. The difference in wage rate is negligible, similar is the condition for all three caste groups. A/J caste group living in rural region earn 77.8 whereas urban region earn rs 75.4. Similarly there is no huge difference in wage rate in Dalit caste group. Tagdhari caste group living in rural region earn 88.4 rs and urban region earn 92 rs per hour.A density plot explaining the hourly wages on X axis and density on Y axis for different residential location is presented below:

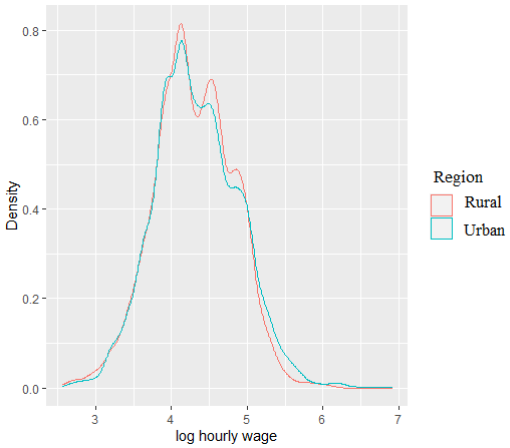

Figure 4.4: Density Plot : Region

4.1-5 Migration Status

The notion that people migrate in response to economic opportunities was formally incorporated by Sjaastad (1962). Similar notion is seen in the migration pattern,table 4.7 represents the migration status. Among the employed sample, 88.05% have not migrated whereas the remaining 11.95% have migrated. Caste

wise migration data shows that 90.91% of Paninachalne population have not migrated for the purpose of employment and only 9.09% have migrated for employment. The proportion of non-movers in A/J caste group is 89.39 and movers is 10.61. 84.14% of tagdhari population have not migrated whereas, 15.86% have migrated. The migration ratio is seen higher in the Khas caste group.

Table 4.7: Migration Status: Caste Group

Migration Status	A/J	Dalit	Khas	pooled
Not migrated	89.39%	90.91%	84.14%	88.05%
Migrated	10.61%	9.09%	15.86%	11.95%

Source: Authors computation

The average hourly wage of migrant population is 93.2 and non immigrant is 77.4. Migrant population is earning higher wage as compared to their non migrant counterparts. Migrant population of A/J caste group earn 90 rs per hour whereas its non immigrants earn 74.5, similarly migrant population of Dalit caste group earn 78.5 rs per hour whereas non migrants of the same caste group earn 68.3. Similar differential is observed in the Khas caste group. Wage gap between migrant and non-migrant population from Khas and A/J caste group is similar 14.5 and 15.5 rs per hour respectively.A density plot explaining the hourly wages on X axis and density on Y axis for different migration status is presented on figure 4.5

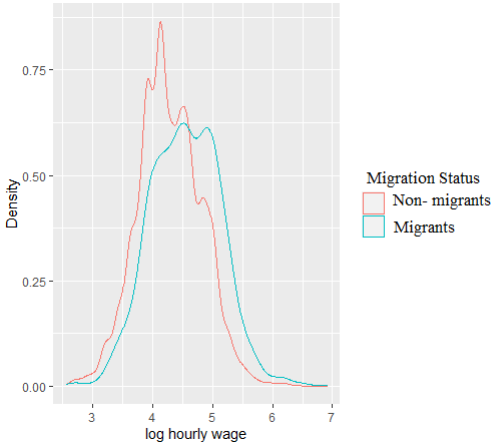

Figure 4.5: Density Plot: Migration Status

4.1-6 Job Classification

Jobs are classified according to the NSCO classification, the following table 4.8 illustrates the participation of muluki group in different job classification. Majority of the observations are employed in elementary occupations , among 2775 (32.95%) employed in elementary occupations, 50.98% belong to A/J caste group, 27.43% belong to Dalit caste and 21.94% belong to Khas caste group. Similarly, 2237 observations are employed as Skilled Agricultural trade workers occupying 26.53% of total share. Segregating the sector by muluki group, 54.31% belong to Khas caste group , 28.21% and 17.47% belong to Dalit and Khas caste group respectively.Managers, professionals and technician employment shares 20.69% i.e. 1745 of the sample, 62.35% belong to Khas caste group followed by 30.25% and 7.39% from A/J and Dalit caste group.12.46% are employed as Clerical Service and sales workers in which 49.66% belong to Khas caste group , 38.45% and 11.89% belong to A/J and Dalit caste group respectively. Similarly, 622 observations belong to plant and machine operators and assemblers. Seggregating it by muluki group classification, 54.98% belong to A/J caste group , 27.17 % belong to Khas and 17.84% belong to Dalit caste group. only 7.34% of the population is engaged as managers , professionals and technicians.

Table 4.8: Occupation classification : Caste Group

Occupation Classification	A/J	Dalit	Khas	Pooled
MPT	30.25%	7.39%	62.35%	20.69%
Clerical Service & sales	38.45%	11.89%	49.66%	12.46%
SAT	54.31%	28.21%	17.47%	26.53%
Plant & Machine Operators	54.98%	17.84%	27.17%	7.37%
Elementary Occupation	50.63%	27.43%	21.94%	32.95%

Source: Authors computation

The Khas caste group is observed to be more financially successful than other castes, based on their mean hourly wages. In the occupation of managers, the Khas caste group earns an average of Rs 141 per hour, compared to Rs 123 for the A/J caste group and Rs 105 for the Paninachalne caste group. The difference in wages between the A/J and Paninachalne castes is small for those working in clerical and sales positions, with the A/J earning Rs 76 and the Paninachalne earning Rs 78 per hour. However, the Khas caste group earns significantly more in these occupations, at Rs 94 per hour. In skilled and agricultural trade work, the hourly earnings for the A/J and Khas castes are similar, with the A/J earning Rs 89 and the Khas earning Rs 90 per hour. The Paninachalne caste group earns significantly

less in these occupations, at Rs 80 per hour. The wage differences between the castes are minimal in elementary occupations, with the Khas earning Rs 65 per hour, the A/J earning Rs 62 per hour, and the Paninachalne earning Rs 60 per hour. In the occupation of plant and machine operators, the Khas caste group earns the most at Rs 88 per hour, followed by the A/J at Rs 85 per hour, and the Paninachalne at Rs 77 per hour. A density plot illustrating these wage differences is provided.

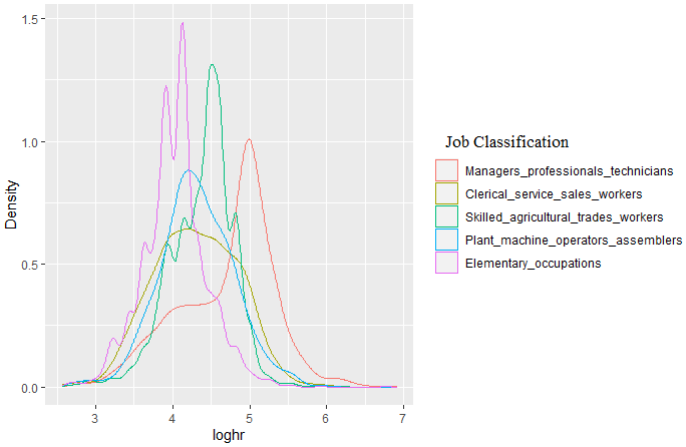

Figure 4.6: Density Plot : Job Classification

The representation and earning of Dalit caste group is shorter compared to Khas and A/J caste groups. 43.31% of Dalit population is employed in elementary occupations. Elementary occupation are those which requires little training and education. One of the reason might be the deep rooted caste system and discrimination one faced during his/her childhood and learning phase leading to Poor learning outcomes. This might be one of the reason for the undervaluation of skills and low wage payment for the caste groups.

4.2 Results from empirical analysis

We estimate probit model to estimate the probability of a person being employed on the set of predictor variables and compute inverse mills ratio. The IMR is adjusted to the mincherian log wage equation and earning functions. The results from probit estimation, mincerian log wage equation , earning function and OB decomposition is presented below.

4.2-1 Probit estimates

The results from the probit model for employment are shown in Table 4.9. The model estimates that an additional year of schooling increases the probability of being employed by 4.4%, holding other predictors constant. On the other

hand, an increase in household chores reduces the probability of being employed by 33.12%. The model also shows that living in an urban location increases the probability of being employed by 16% compared to living in a rural location. An increase in the number of household children increases the probability of being employed by 1%. In terms of marital status, being married increases the probability of being employed by 53.4% compared to being unmarried. Among the different caste groups, the Khas caste has a 26.4% higher probability of being employed, while the Dalit caste has a 37% higher probability. Finally, the model estimates that males have a 89% higher probability of being employed compared to females.

Table 4.9: Probit Estimates

Employed	Coef.	Std. Err.	z	P>|z|	95% Conf. Interval
Schooling years	.0447031	.0014746	30.31	0.000	.0418129 .0475933
Chores hour	-.3312476	.0261533	-12.67	0.000	-.3825072 -.279988
Urban	.1611043	.0154562	10.42	0.000	.1308107 .1913978
Household child	.0106473	.0056514	1.88	0.060	-.0004291 .0217238
Marital satstus	.5348234	.0175618	30.45	0.000	.5004028 .5692439
Muluki Group					
Matwali	.2648757	.0167611	15.80	0.000	.2320244 .2977269
Pani nachalne	.3788027	.0213821	17.72	0.000	.3368947 .4207108
Gender	-.8966224	.0150293	-59.66	0.000	-.9260794 -.8671655
Constant	-1.441151	.026401	-54.59	0.000	-1.492896 -1.389406

Source: Authors computation

4.2-2 OLS estimates: Muluki group classification

In table 4.7 coefficients of the micherian log wage equation for A/J , Dalit and Khas caste group are presented. There are 3943 A/J caste group observations followed by 1817 and 2687 observations from Dalit and Khas caste group respectively. We take educational level, experience and experience square as our independent variable and hourly log wage as independent variable. Since the dependent variable is reduced to its natural log, now it can be explained as a percentage change in dependent variable associated with one level increase in independent variable. On an average an additional year of schooling adds 5.4% to an individual wage. segregating the returns of schooling to the caste group we observe that an additional year of schooling adds 4.2% of wage for A/J caste group, 2.5% for Dalit and 6.2% for Khas caste group earnings. Similarly an additional years of experience adds 2.6% to an individuals hourly earning, further we look the contribution of

Table 4.10: Mincerian Log Wage Equation: Caste Group

	UP	A/J	Dalit	Khas	Pooled
Years of Schooling	0.062***	0.042***	0.025***	0.062***	0.054***
Experience	0.031***	0.026***	0.017***	0.021***	0.026***
Experience Square	-0.0004***	-0.0003***	-0.0002***	-0.0002***	-0.0003***
Mills		-0.289***	-0.337***	-0.263***	-0.246***
Constant	3.414***	3.994***	4.194***	3.858***	3.850***
Observations	8430	3894	1757	2779	8430
R2	0.293	0.239	0.205	0.377	0.321
Adjusted R2	0.292	0.238	0.203	0.376	0.321
Residual Std. Error	9.877	9.548	9.024	9.837	9.678
F Statistic	1161.693***	304.836***	112.968***	419.659***	995.586***

***, **, * represent significance at 1%, 5% and 10%
Source: Authors computation

experience according to the caste group. We observe that an additional year of experience adds 2.6% of wage for A/J , similarly Dalit and Khas caste group yield 1.7% and 2.1% . We observe a positive effect of experience and negative effect of experience square, that means as an experience increases people get older and its effect is decreased. with zero years of schooling and experience a layman would earn hourly log wage of 3.850, A/J caste group would have earned 3.994 hourly log wage similarly, Dalit and Khas caste group would earn 4.194 and 3.858 hourly log wage.

Mills ratio is included in the regression as a control of selection bias. Significance of mills ratio indicates the presence of sample selection bias. In the case of uncontrolled mills ratio, hourly log wage would be 3.41 and a years of education and experience would increase the wage rate by 6.2% and 3.1% respectively. We further add predictor variables in the adjusted mincerian earning function to identify and account for potential confounding variables, which can help to control for their effects on the relationship between the predictors and the response variable.

We add Vocational training, gender, Marital Status, number of children, Chores hour, migration status, place of residence, firm type and job classification as our control variable in table 4.11. The second third and fourth column represents the muluki group clusters , fifth represents the mills adjusted pooled model and sixth column represents un-adjusted pooled model. An additional schooling year increases the hourly wage by 4.2% and experience increases by 2.3% . Vocational training has no significant contribution to the earning function in any of the models. Females earned 24.7% less compared to males and married earned 3.7% more compared to un-married group. An increase in household child

Table 4.11: OLS : Earning Function- Caste Group

	UP	A/J	Dalit	Khas	Pooled
Schooling years	0.042***	0.043***	0.094***	0.097***	0.048***
Experience	0.023***	0.024***	0.015***	0.018***	0.022***
Experience Square	-0.0003	-0.0003***	-0.0002***	-0.0002***	-0.0003***
Mills	0	0.229	2.104***	1.326***	0.242***
Vocational Training	0.001	-0.026	0.056	0.011	-0.0002
Gender (Male)	-0.247***	-0.396*	-1.747***	-1.161***	-0.416***
Married	0.037***	0.126	0.921***	0.586***	0.137***
Child	-0.009**	-0.004	0.007	0.002	-0.006
Chores hour	-0.018	-0.1	-0.535***	-0.393***	-0.084***
Overtime	-0.084***	-0.080***	-0.008	-0.147***	-0.084***
Migrated	0.149***	0.173***	0.104***	0.115***	0.144***
Urban	0.012	0.009	0.265***	0.200***	0.040***
Firm type [1]					
Private Institutions	-0.226***	-0.221***	-0.260***	-0.206***	-0.222***
Private Business	-0.079	-0.098***	-0.093*	-0.080**	-0.071***
others Business	-0.102***	-0.092***	-0.170***	-0.060*	-0.095***
Job sector[2]					
MPT [3]	0.306***	0.351***	0.151***	0.261***	0.302***
CSSW[4]	0.058***	0.026	0.087**	0.086***	0.055***
SAT[5]	0.207***	0.221***	0.171***	0.273***	0.22***
PMOA[6]	0.209***	0.064**	0.057	0.182***	0.083***
Constant	3.748***	3.422***	0.572	1.194*	3.356***
Observations	8430	3894	1757	2779	8430
R2	0.409	0.348	0.275	0.459	0.411
Adjusted R2	0.408	0.345	0.267	0.455	0.41
Residual Std. Error	9.033	8.851	8.657	9.195	9.02
F Statistic	323.995***	109.002***	34.613***	123.017***	309.191***

***, **, * represent significance at 1%, 5% and 10%

[1] = Taking government institution as base group

[2] = Taking elementary Occupations as base group

[3]= Managers, Professionals, Technicians

[4] = Clerical service sales workers

[5]= Skilled agricultural trade workers

[6]= Plant machine operators and assemblers

Source: Authors computation

decreases hourly earning by 0.9%. Migrants earn 14.9% more compared to non migrants. Taking government institutions as our comparison group, those who work in private institution earn 22.6% less, similarly private business and other business employees earn 7.9% and 10.2% less. We take elementary population as our comparison group for job classification, we observe that Managers professional and technicians earn 30.6% more , clerical service sales workers, Skilled agricultural professional and plant machinery operators earn 5.8%,20.7% and 8.5% more respectively. The minimum hourly log wage specified by the model is 3.74.

Adding mills ratio as control variable in the model the yield of additional, year of schooling has increased to 4.8% and experience has reduced to 2.2%. Males now earn 41.6% more than females in the adjusted model. similarly married employees earn 13.7% more compared to unmarried ones. The effect of Household children is seen insignificant in the model which was significant in preceding model. Household chores hours has a negative effect on hourly earning as an additional chores hours decreases the hourly wage by 8.4%. The variable is significant in the adjusted model. Similarly, overtime has a negative effect in the earning function, over timers loose 8.4% hourly wage as compared to non over timers. Migration population earns 14.4% more than non migrants. Compared to rural population, urban population earns 4% more, and the variable is significant in the adjusted model. Compared to government institution wage, private institutions, private business and other businesses employees yield 22.2%, 7.1% and 9.5% less. As previously we take elementary population as our comparison group for job classification, we observe that Managers professional and technicians earn 30.2% more , clerical service sales workers, Skilled agricultural professional and plant machinery operators earn 5.5%,20.9% and 8.3% more respectively. The minimum hourly log wage specified by the model is 3.35.

I further run the model in muluki group clusters. An additional year of schooling adds 9.7% on Khas caste group 9.4% on Dalit caste group and 4.3% for A/J caste group. An additional year of experience yields 2.4% more in A/J caste group similarly Dalit caste group yields 1.5% and Khas caste group yields 1.8%. Mills adjustment is insignificant only in A/J caste group. Compared to females, A/J males earn 39.6% more, Khas and Dalit caste group males earn 174.7% and 116.1% more. Marital status is observed insignificant in A/J caste group but married Dalit cohort and Khas cohort earn 92.1% and 58.56% more respectively. The number of household children is seen insignificant in all of the caste cohorts. Overtime is observed insignificant in Dalit caste group and has negative effect on Khas and A/J caste group. Compared to non migrants , A/J

caste migrants earn 17.3% more, similarly Dalit and Khas caste migrants earn 10.4 and 11.5% more. Urban or rural location is insignificant for A/J caste group whereas, Dalit and Khas urban population earns 26.5% and 20% more hourly wage compared to respective rural population. With the reference to government employees for all the muluki groups, we observe Khas group earning higher wages in private institution and private business compared to other caste groups and Dalit caste group earns higher wages in other business employment, Similarly, the job is classified according to two-digit NSCO code. Compared to respective caste group elementary occupation earning , A/J caste group managers professionals and technicians earn 35.1% more, Dalit clerical service sales workers earn 8.7% more , Khas skilled agricultural trade workers and plant and machinery operators earn 27.3% and 18.2% more. A/J , Dalit and Khas caste groups minimum hourly log wage is 3.422, 0.572 and 1.194 respectively.

4.2-3 Results from Blinder Oaxaca Decomposition

In the first section we take wage as a function of human capital traits which include, years of schooling , experience and experience square and add socio-economic variables as control variables. The result of OB decomposition is further presented below:

Blinder-Oaxaca:Human Capital Traits

As mentioned earlier the caste groups are divided into A/J, Tagadhai and Dalit groups following muluki group classification. We run three model of oaxaca decomposition to decompose the caste based mean wage gap into explained and unexplained component . Model 1 represents the coefficient from Khas and A/J caste , model 2 represents the coefficients form Khas and Dalit caste group and model 3 represents the coefficients from A/J and Dalit caste group. there are 6673 observations in group 1 and 4536 and 5651 observations in model 2 and three respectively.Table4.12 summarises the wage gap decomposition according to caste group. we take human capital variables for the study and observe its effect on defining the wage gap. Human capital theories defines that an individual earning is the function of ones human capital traits.

Isolating the socio-economic variables the hourly wage of of Khas caste group is Rs 92.33, A/J is Rs 72.73 and Dalit caste group is Rs 61.32. The observed wage differential between Khas & A/J caste is 26%, Khas & pani nachlne caste is 50% and A/J & Dalit caste group is 18%. Adjusting the IMR in the analysis, the hourly wages of each caste groups increases. Now, Khas caste group earns hourly wage of Rs 133.85, A/J and Dalit earns Rs 109.26 and Rs 93.96. The observed

Table 4.12: OB: Caste wise human capital

Group 1 Group 2	Khas A/J	Khas Dalit	A/J Dalit
	Overall		
Group_1	92.33***	92.33***	72.73***
Group_2	72.73***	61.32***	61.32***
Difference	1.26***	1.50***	1.18***
	Adjusted		
Group_1	133.85***	133.85***	109.26***
Group_2	109.26***	93.96***	93.96***
Difference	1.22**	1.42***	1.16*
Composition	1.19***	1.28***	1.07***
wage Structure	1.02	1.10	1.08

***, **, * represent significance at 1%, 5% and 10%
Source: Authors computation

wage differential between Khas and A/J caste group is 22% which was 26% in un-adjusted model. Out of total differences 19% is due to the composition effect (explained component). similarly, the hourly wage differentials between Khas and Dalit caste group is 42% out of which 28% is due to the composition effect. Similarly the difference between A/J and Dalit caste group is 16% of which 7% is due to composition effect. The structural effects of wages are observed insignificant in all of the comparisons.

Hourly wage that an individual earns is affected by the type of organization where s/he is employed. Government owned organizations have higher hourly wage rates compared to other institutions. Table 4.13 illustrated the OB decomposition results according to employment sector. Observing the human capital traits, Government organization employees yield hourly wage of Rs 118.40, Private business employees yield Rs 67.52, Private institution employees yield Rs 73.12 and other institutions yield Rs 66.78. Observed wage differential between government institution; private business is 75%, Private institution is 61% and Other institution is 77%. Adjusting the model with IMR, we observe an increasing hourly wage for every employment sectors. Now government sector earns an hourly wage of Rs 138.27, Private Business earn Rs 104.46, Private institutions earn Rs 99.24 and others earn Rs 102.69. the wage differentials have reduced in the adjusted model compared to un-adjusted ones. Now the observed wage differential between Government and Private business is 32% out of which 40% is due to the composition effect. Similarly the differences between Government and

Table 4.13: OB: Employment Sector human capital

Group1 Group2	Government Private Business	Government Private institutions	Government Others
	Overall		
Group_1	118.40***	118.40***	118.40***
Group_2	67.52***	73.12***	66.78***
Difference	1.75***	1.61***	1.77***
	Adjusted		
Group_1	138.27***	138.27***	138.27***
Group_2	104.46***	99.24***	102.69***
Difference	1.32***	1.39***	1.34***
Composition effect	1.40***	1.21***	1.51***
Wage Structure effect	0.94	1.14	0.88

***, **, * represent significance at 1%, 5% and 10%
Source: Authors computation

private institution shrinks to 39% out of which 21% is due to composition effect. The wage differential between Government and other institutions is 34% out of which 51% is due to the composition effect. Wage structural effect (un explained component) for all of the above decomposition is insignificant.

Oaxaca-Blinder: Full specification

We introduce other socio-economic variables as our controls in the previous model. We add migration status, marital status, vocational training , job classification, Overtime status, urban region and Muluki group/ employment sector.

Table 4.14 represents caste based mean wage gap decomposition results. The means of wages are Rs 72.73 for A/J caste group and Rs 92.33 for Khas caste group and Rs 61.32 for Dalit caste group. Observed wage differential betwenn Khas and A/J caste group is 26% similarly, Khas and Dalit caste group is 50% and 18% wage differential is observed between A/J and Dalit caste group. . Adjusting the mills ratio in the decomposition we find the mean wages to decrease for Dalit caste group and increase for remaining caste group. Now, A/J caste group earns a mean wage of Rs 97.53 and Khas caste group earns Rs 117.75. The wage differential between Khas and A/J caste group is 20%, Khas and Dalit caste group is 122% and A/J and Dalit caste group is 84% Comparing the models, the wage differential is under estimated for model 2 and 3 in the un-adjusted one. Decomposing the wage differetrials into explained and unexplained components we observe 22% of wage differential between Khas and A/J caste group is explained and negative 2% is unexplained. Adjusting A/J caste groups endowment levels to level of Khas

Table 4.14: OB: Caste Group Wage Gap

Group 1 Group 2	Khas A/J	Khas Dalit	A/J Dalit
	Overall		
Group 1	92.33***	92.33***	72.73***
Group 2	72.73	61.32	61.32
Difference	1.26***	1.50***	1.18***
	Adjusted		
Group 1	117.75***	117.75***	97.53***
Group 2	97.53***	52.85***	52.85***
Difference	1.20	2.22*	1.84*
Composition	1.22***	1.36***	1.08***
Wage Structure	.98	1.63	1.69
N	6673	4536	5651

***, **, * represent significance at 1%, 5% and 10%
Source: Authors computation

would increase A/Js wage by 22%. Similarly, 36% of wage gap between Khas and Dalit caste group is explained and 63% is unexplained. Which explains that, if Dalit caste groups endowment level is adjusted to Khas would increase Dalit caste groups hourly wage by 36%. similarly, 8% of wage gap between A/J and Pani nchalne is explained and 69% is unexplained. if the market endowment level of Dalit caste group is adjusted to A/J caste group, the hourly wage of Dalit caste group wages by 8%.The explained component of three models are significant at 1% and unexplained component are insignificant. The graphical representation of above mentioned decomposition is presented in 4.7.

We adjust endowments of below primary education level to Khas caste group in 4.15 and observe a decrease in the mean hourly wage of A/J and Dalit caste group by 1% similarly, primary level would decrease the mean hourly wage of respective caste groups by 1.8% and 1.4%. Tenth grade and secondary education level would increase the mean hourly wage for all group 2 caste groups. The returns of bachelor education is observed more fruitful for Dalit caste group as compared to Khas caste group. Adjusting the endowment level Dalit caste group with Khas caste group for bachelor level qualification, Dalit caste group would earn 12.4% more hourly wage rate, similarly A/J caste group would have earned 9% more. similarly in model three, adjusting the market endowments with A/J

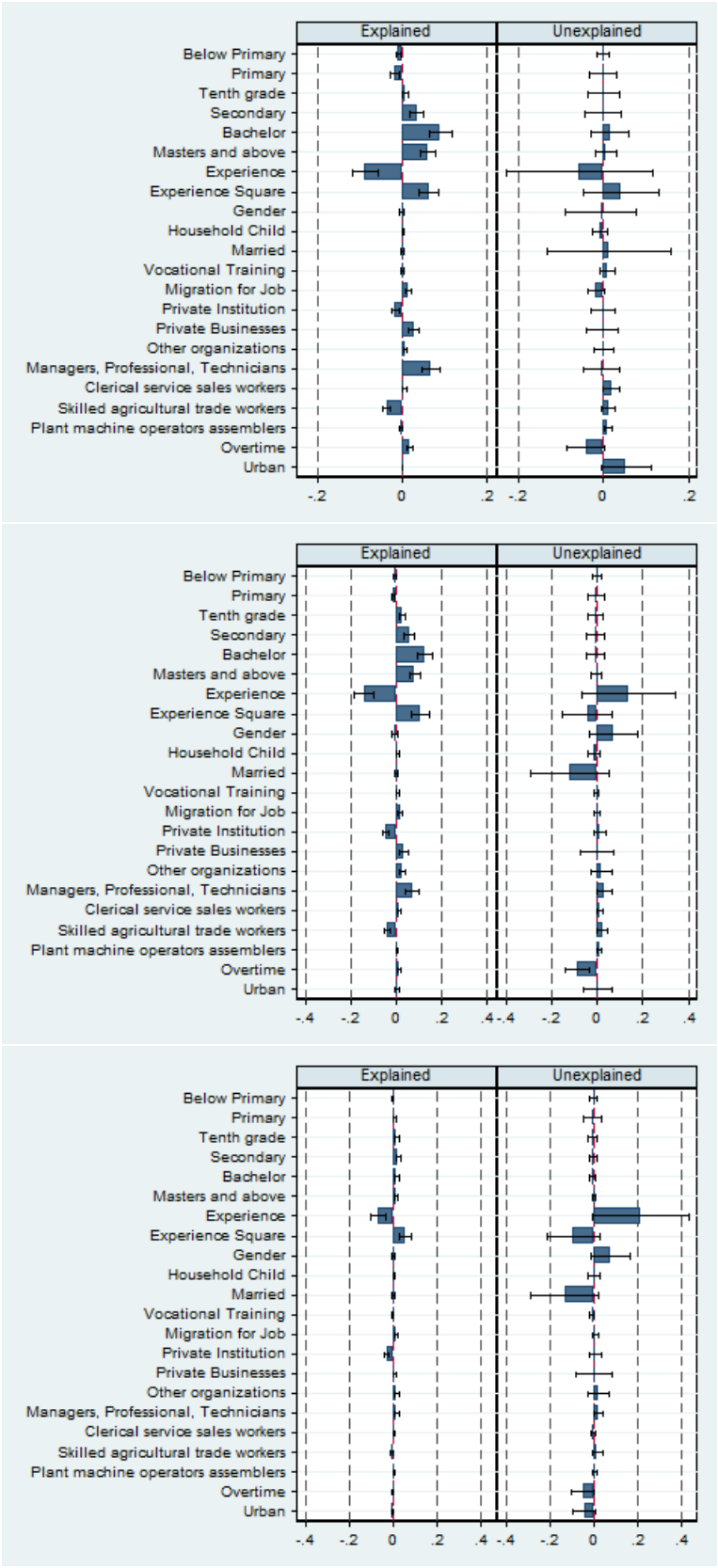

Figure 4.7: OB: Caste Explained and Unexplained Component

Table 4.15: OB: Caste Wise Market Endowment Explained Component

Group1	Khas	Khas	A/J
Group2	A/J	Dalit	Dalit
Education (Illiterate)			
Below Primary	-0.0102**	-0.0103**	0.000659
Primary	-0.0187***	-0.0147**	0.00669*
Tenth Grade	0.00702*	0.0249**	0.0176***
Secondary	0.0331***	0.0582***	0.0234***
Bachelor	0.0901***	0.124***	0.0166***
Masters and above	0.0590***	0.0815***	0.0149**
Experience	-0.0894***	-0.143***	-0.0686***
Expirence Square	0.0620***	0.107***	0.0564***
N	6673	4536	5651

***, **, * represent significance at 1%, 5% and 10%
Source: Authors computation

caste group, Dalit caste group would earn 1.6% more mean hourly wage. Similarly, A/J population with master and above education qualification would have earned 5.9% more hourly wage and Dalit caste group would have earned 8.15% more on adjusting respective caste group endowment level with Khas caste group. An added year of experience would decrease the explained differences for all of the caste groups. An added year of experience explains 147.3% of wage differentials between Khas and Dalit caste group. Adjusting a year of Dalit caste groups experience to Khas caste group would decrease the mean hourly wage of Dalit caste group by 14%. We observe low returns in education for Dalit and A/J caste group as compared to Khas caste group.

The unexplained component for OB decomposition are insignificant in all of the models which justify no evidence of caste based wage discrimination. The yields to education and low market endowment yields for A/J and Dalit caste group is observed in explained component. Despite of having similar level of education and experience the mean hourly earning of Dalit and A/J caste group is low. The standard explanation for these differences is social animus. The findings align with Banerjee and Knight (1985), finds that districts with higher proportion of traditionally disadvantaged groups with respect to caste and religion, the scheduled and Muslims have lower access to health and education. Similarly in Nepalese society, A/J and Dalit caste groups face early discrimination in the phase of development of human capital either in school or training centers leading to poor learning outcomes. Earning of an individual is affected by his/her employed sector, as mentioned earlier we divide employment sector into four different sub sectors as

Government , Private Business, Private institution and others. We differentiate and decompose the mean hourly wage of three employment sector with Government sector. Government sector is supposed to a fair sector implementing all of its reforms and practices. The mean hourly wage of government sector is Rs 200.43, PB, PI and other sectors earn Rs 65.27, Rs 78.68 and Rs 77.98 respectively.

Only the explained component of the wage differences are significant and there is no evidence of discrimination. We further look the share of education on the explained component of the discrimination. The table 4.17 represents the explained market endowment differences. The table 4.16represents the Employment

Table 4.16: OB: Employment Sector Wage Gap

Group 1 Group 2	Government Private Business	Government Private Institution	Government Other
	Overall		
Group 1	118.40***	118.40***	118.40***
Group 2	67.52***	73.12***	66.78***
Difference	1.75***	1.61***	1.77***
	Adjusted		
Group 1	200.43***	200.43***	200.43***
Group 2	65.27***	78.68***	77.98***
Difference	3.07**	2.54	2.57*
Composition	1.51***	1.24***	1.56***
Wage Structure	2.02	2.05	1.64
N	4939	3322	3153

***, **, * represent significance at 1%, 5% and 10% respectively
Source: Authors computation

sector wise wage gap decomposition result. Employment sectors are clustered into four categores viz government, Private business, Private institution and other sectors. In model 1 we take government and private business cluster, model 2 and 3 represents government and private institution and Government and other sector of employment. There are 4939 observations in model 1 similarly, 3322 and 3153 observations on model 2 and 3 respectively. The mean hourly wage of government, Private business, private institution and other sector employees is Rs 118.40, Rs 67.52 Rs 73.12 and Rs 66.78 respectively.We observe a wage gap differences of 75% in model 1, difference of 61% and 77% in model 2 and 3 respectively. After adjusting the model with mills ratio, the mean hourly earning of government, Private Institution and other sector have increased to Rs 200.43, Rs 78.68 and Rs 77.98 respectively but the mean wage rate of Private business have decreased to Rs 65.27.

Comparing the wage gap differential between adjusted and un-adjusted model,the differences are under estimated in the un-adjusted model. Now the wage gap differential between Government and Private Business is 307% where 51% of the differential is explained by market endowment variables. Adjusting Private business employees endowments levels to the levels of Government employees would increase Private business wages by 51%. similarly, hourly mean wage differentials between Government and Other sector is 257% out of the differential 56% is explained. The explained component can be defined as, other job sector employees could earn 56% more, if the market endowment levels of the group is adjusted to government sector. whereas the mean wage gap between government and private institution is 254% but the differential is insignificant. The explained component of the model is significant and explains 24% of the wage gap which signifies that private institution employees could earn 24% more, if the given endowment level of private institution workers are adjusted to government sector employees. The unexplained component is insignificant for all models.The detailed results from the above stated decomposition is presented in figure 4.8. Adjusting the Below

Table 4.17: OB: Explained Component Employment Sector

Group1 Group2	Government Private Business	Government Private institutions	Government Others
Education (Illiterate)			
Below Primary	-0.0182**	-0.00101	-0.0108
Primary	-0.0308***	-0.00502	-0.0233*
Tenth Grade	0.0211**	0.00661	0.0241*
Secondary	0.0672***	0.0152	0.0664**
Bachelor	0.0979***	0.0178	0.0837***
Masters and above	0.0965***	0.0490**	0.0879***
Experience	-0.0966***	0.138***	-0.167***
Experience Square	0.0789***	-0.0616***	0.146***

***, **, * represent significance at 1%, 5% and 10%
Source: Authors computation

primary education market endowment level of Private business employees to the government employees would reduce the mean hourly wage of private business by 1.8% similarly adjusting the endowment level of Primary education would decrease mean hourly wage by 3%. If PB employees endowment level are adjusted with government employees, PB employees having tenth grde qualification would have earned 2.1%, similarly secondary, bachelor, masters& above would have earn 6% and 9% more hourly wage respectively. whereas the explained component is

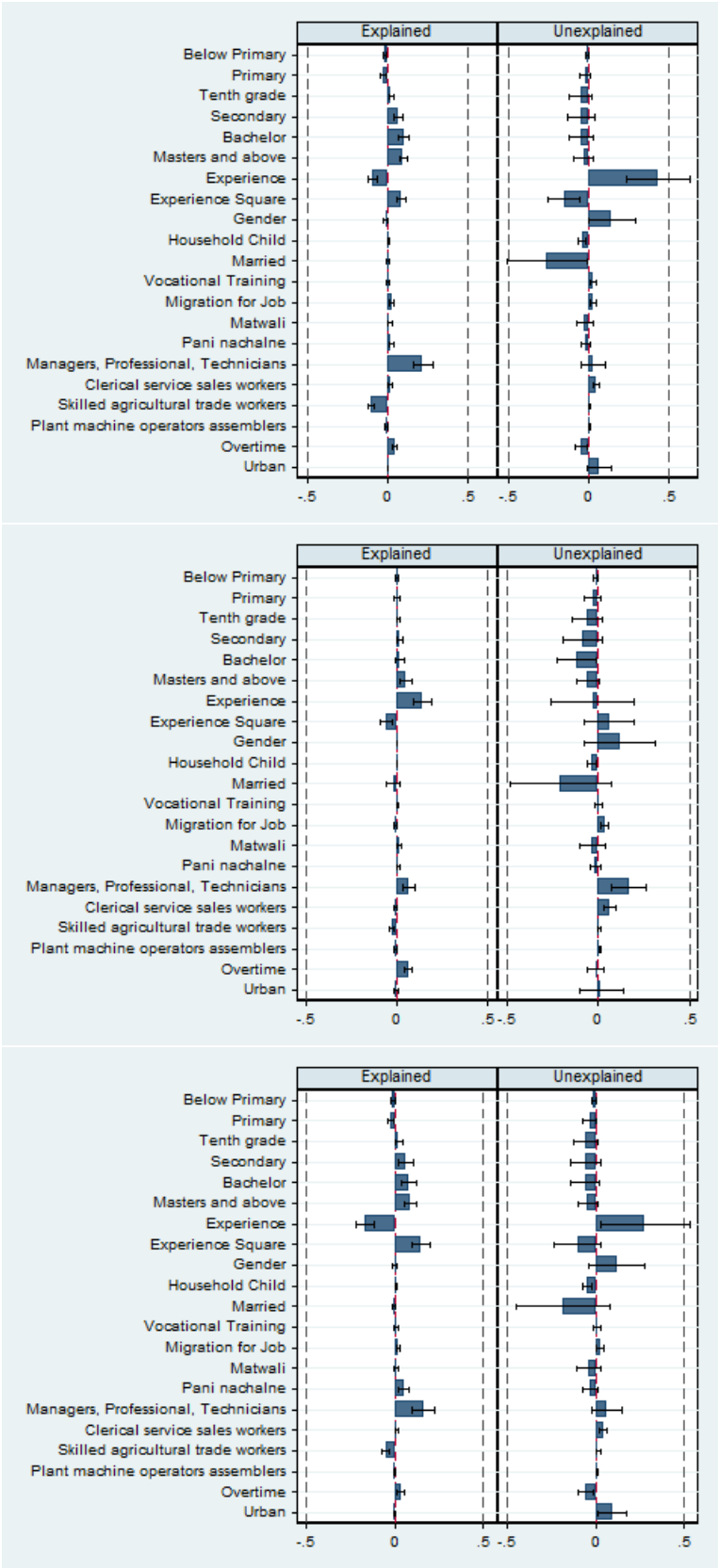

Figure 4.8: OB: Employment Sector Explained and Unexplained Component

significant in masters and above education level in Government and private institution cohort. Similarly , looking into Government and other sector cohort, other sector employees would loose 2% of hourly wage if their endowments are adjusted to government sectors,similarly would gain 2%, 6%, and 8% if tenth , secondary , Bachelor, Masters and above education endowments are are adjusted. Private business employees would loose 9% of their income if a year of experience is is adjusted to government sector similarly, private institution would gain 13.8% more hourly wage and other sector would loose 16.7% of their hourly wage. The market endowments of Government sector are less competitive compared to other sectors but are earning twice of hourly wages this phenomenon is defined as sheepskin effect. Wages will rise faster with extra years of education when extra year also conveys a certificate(Hungerford & Solon, 1987).

4.3 Discussion of Major Findings

The Mincerian equation demonstrates that education level has a significant effect on earnings for different caste groups. 78.87% of the A/J population is literate, while 63.68% of Dalit and 89.9% of Khas are literate. As education levels increase, there is an increase in income levels. The result suggests that the Khas caste group has better market endowment returns and institutional earnings compared to other caste groups. When comparing education levels across caste groups, the Khas caste group has a higher level of education attainment in higher studies compared to other groups. Better access to education services has helped tagdhari caste group to improve market endowment levels, leading to better career opportunities and higher hourly earnings (Rs 117.5 for Khas, Rs 97.53 for A/J, and Rs 52.85 for Dalit). When decomposing wage differentials among the caste groups, we see that composition factors contribute significantly to the wage gap, while the wage structure (related to discrimination) is insignificant for all caste groups.

The mean hourly earning for the government sector, private institutions, and other sectors is Rs 200.43, Rs 78.68, and Rs 77.98, respectively. The wage gap differential between the government and private businesses is 307%, with 51% of the differential being explained by market endowment variables.Similarly, hourly mean wage differentials between Government and Other sector is 257% out of the differential 56% is explained and the hourly mean wage differentials between Government and Private Institutions is 254% out of which 24% is due to composition component. The differentials explained by wage structure components are insignificant for all the decomposition's.

Our results summarizes that wage gap differentials is attributed to composition effect, and there is no evidence in wage structure discrimination. It aligns with the result of Akerlof (1976) where, the majority (more than 50%) of the earnings gap between Dalits and non-Dalits is attributed to the endowment effect. Dalits earn less than non-Dalits because they have less education, hold elementary-level menial jobs, and work in informal sector Karki and Bohara (2014). Similar evidence is observed in our study. Dalit population have low years of schooling and are more engaged in elementary and clerical occupations which requires low level of training and expertise. Dalit caste group often experience the cycle of illiteracy, unemployment, and political marginalization . Providing education, both at the primary and higher levels, to marginalized can help to break the cycle. Ensuring access to education may serve as a turning point in dismantling this cycle of interrelated issues (Gandhari, 2014).

CHAPTER V
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of the Study

This study aims to understand the factors that contribute to wage differences based on caste in Nepal, with a particular focus on the roles of composition and wage structural differences. According to economics literature, there are three main factors that can contribute to wage differentiation: differences in human capital traits (such as education and experience), wage discrimination, and the exclusion of minority groups from high-status professions and positions. Caste wage inequality can occur for several reasons, and both demand and supply factors in the labor market can contribute to this inequality. Although the caste system has been legally abolished in Nepal since the adoption of the Interim Constitution in 2007, caste-based differences still exist in the form of individual, institutional, and wage discrimination.

The main objectives of this study includes estimating the Mincerian earning equation and decomposing the observed wage gap into its composition (explained) and wage structural (unexplained) components. We followed the Oaxaca-Blinder two-fold decomposition method to analyze the wage differentials in terms of log hourly wage. Education, experience, and experience squared is used as independent variables. Employment classification, gender, marital status, vocational training, migration status, overtime status, and settlement region (urban/rural) is used as covariates. For the analysis, muluki group classification and firm type classification is used as controls for the covariates.

In the study, we examined the impact of education, experience, and experience squared on the earning function through two types of models: the human capital model and the full fledged model. we used mincerian earning function analyze the earning function for each sub-group and employment sector in the first stage, and then add in other socio-economic variables as controls in the human capital model to see how they affect the earning function.The mincerian equation is specified as $\log w = \beta_0 + \beta_1 educ + \beta_2 exp + \beta_3 exp^2 + \gamma X' + \epsilon$.We will also break

down both the human capital model and the full specification model to analyze the contribution of human capital to wage differentials. Both models will also include adjusted and unadjusted versions for Inverse Mills Ratio.The oaxaca-blinder decomposition model is specified as $\Delta_0^{\mu} = \bar{X}_a(\hat{\beta}_a - \hat{\beta}_k) + (\bar{X}_a - \bar{X}_k)\hat{\beta}_k$. The first term in above equation $\bar{X}_a(\hat{\beta}_a - \hat{\beta}_k)$ is the wage structure effect also been called the "Unexplained " part of wage differentials or the "Discrimination". whereas, the second term in above equation $(\bar{X}_a - \bar{X}_k)\hat{\beta}_k$ is the composition effect or explained component.

The hourly earnings of three caste groups, Khas, Adibasi/Janajati, and Dalit, are Rs 117.5, Rs 97.53, and Rs 52.85, respectively. Analysis of the wage gap among the caste groups reveals that composition factors significantly contribute to the wage differential. The wage differential between the Khas and A/J caste groups is 20%, while the differential between the Khas and Dalit groups is 122% and the differential between the A/J and Dalit groups is 84%. When comparing the models, it is found that the wage differential is underestimated for models 2 and 3 in the unadjusted model. Decomposing the wage differentials into explained and unexplained components, we find that 22% of the wage differential between the Khas and A/J caste groups is explained, with the remaining 2% being unexplained. Adjusting the A/J group's endowment levels to the level of the Khas group would increase the A/J group's wage by 22%. Similarly, 36% of the wage gap between the Khas and Dalit groups is explained, with the remaining 63% being unexplained. This suggests that adjusting the Dalit group's endowment levels to those of the Khas group would increase their hourly wage by 36%. Additionally, 8% of the wage gap between the A/J and Dalit groups is explained, with the remaining 69% being unexplained. If the Dalit group's market endowment level is adjusted to that of the A/J group, their hourly wage would increase by 8%, although the wage structure related to discrimination is insignificant for all caste groups.

On average, the mean hourly earning for the government sector is Rs 200.43, while it is Rs 78.68 and Rs 77.98 for private institutions and other sectors, respectively. The wage gap between the government and private businesses is 307%, with 51% of the differential being attributed to market endowment variables. Similarly, the hourly mean wage differential between the government and other sector is 257%, with 56% of the differential being explained, and the hourly mean wage differential between the government and private institutions is 254%, with 24% of the differential being attributed to composition effect. The differentials explained by wage structure components are insignificant for all of the decompositions.

The government's policies and practices for reducing wage gaps and ensuring

the representation of minorities in mainstream governance have had some success. However, the mean hourly wage of the Khas caste group is still higher than that of the other caste groups. The market endowment characteristics of the A/J and Dalit groups are also low. The government should focus on improving the inheritance skills and marketability of these marginalized groups. Their skills should be valued and enhanced with modern tools and techniques. Easy access to information, education, and opportunities has changed the ways people can earn a living, but marginalized castes are still unable to develop their human capital endowments. Poor learning outcomes in the early stages of life have forced marginalized castes to engage in low-class occupations.

5.2 Conclusion

Caste-based discrimination is a form of discrimination that is based on the social hierarchy that exists within a society. It is considered to be more pernicious than racial discrimination because it has existed for centuries and has deep roots in many societies. Nepal is a diverse country with a complex mix of castes, cultures, religions, languages, and ethnicity's. The caste system in Nepal is based on occupation and is heavily influenced by patriarchal values. Those belonging to marginalized caste are excluded from the main stream of society.

In an effort to combat discrimination against those considered to be in the lowest castes, known as "Dalits," Nepal's legislature passed the Bill on Caste-Based and any forms of Discrimination . This legislation aims to end discriminatory practices against Dalits in both public and private spheres, increases penalties for officials who discriminate, criminalizes incitement to caste-based discrimination, and provides compensation to victims of discrimination. These policies and initiatives of the government have been successful in safeguarding the positions and representation of marginalized population to the main stream of governance and politics.

This study investigates wage gaps among different caste groups, employment sectors, and reservation status in Nepal. The findings suggest that wage gaps are primarily driven by market endowment factors, such as education, experience, and skills, rather than discrimination. In particular, the study found that returns on education are minimal for marginalized caste groups, while education attainment among the Khas caste group leads to higher wages compared to other caste groups with similar levels of education. The government sector tends to offer higher wages, even for those with poor market endowment levels, and reservation has helped to reduce wage gaps. The unexplained component of the wage gap decomposition was

found to be insignificant, suggesting that wage discrimination is not a significant factor for wage differences.

5.3 Recommendation

The governments policies and practices for lowering the wage gaps and guarantying the representation of minorities in the main stream of governance seems to be successful to a extent. But the caste groups are still incompetent in terms of mean hourly wage with Khas caste group. Market endowment characteristics of A/J and Dalit caste groups are observed low yield. The beneficiary are those who belong to marginalized caste and have better access to education and human capital development. Those living in rural region and fall under the discriminatory shadow are lagging behind the race of capital development. Government should focus on shaping their inheritance skills and market them well. Their skills should be valued and exposed with modern tools and techniques. Easy access to information, education and opportunities have now changed the ways of earning but marginalized caste groups are still unable to develop human capital endowments.The poor learning outcomes in early learning phase of life has compelled the marginal caste groups to engage in low class occupations. Government of Nepal should now focus on developing human capital traits by abolishing the pre market discrimination during early learning phase. The new generation has shifted its paradigm form caste based society towards a progressive society which surely will abolish incompetent practices in the labor market.

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ANNEX

Table 5.1: Mincerian Equation: Job Sector

	UP	Government	PI	PB	Other	Pooled
Years of Schooling	0.062***	0.078***	0.056***	0.023***	0.049***	0.054***
Experience	0.031***	0.021***	0.027***	0.013***	0.023***	0.026***
Experience Square	-0.0004***	-0.0001**	-0.0003***	-0.0002***	-0.0003***	-0.0003***
Mills	0	-0.125***	-0.212***	-0.335***	-0.293***	-0.246***
Constant	3.414***	3.551***	3.657***	4.332***	4.017***	3.850***
Observations	8430	1492	1830	3447	1661	8430
R2	0.293	0.345	0.268	0.169	0.293	0.321
Adjusted R2	0.292	0.343	0.266	0.168	0.291	0.321
Residual Std. Error	9.877	9.481	10.851	8.375	9.566	9.678
F Statistic	1161.693***	195.619***	167.018***	175.470***	171.217***	995.586***

***, **, * represent significance at 1%, 5% and 10% respectively
Source: Authors computation

Table 5.2: Earning function: Job Sector

	UP	Government	PI	PB	Other	Pooled
Schooling years	0.040***	0.078***	0.062***	0.054***	0.116***	0.063***
Experience	0.024***	0.023***	0.028***	0.010***	0.021***	0.023***
Experience Square	-0.0003***	-0.0002***	-0.0003***	-0.0001***	-0.0003***	-0.0003***
Mills		0.71	0.201	1.035***	2.396***	0.719***
Vocational Training	-0.004	0.044*	0.018	-0.064***	0.012	-0.003
Gender (Male)	-0.261***	-0.613*	-0.357	-1.023***	-1.999***	-0.760***
Married	0.048***	0.25	0.134	0.492***	1.017***	0.344***
Child	-0.007	-0.052***	-0.004	0.001	0.021**	-0.002
Chores hour	-0.003	-0.339**	0.11	-0.250***	-0.703***	-0.197***
Overtime	-0.121***	-0.157***	-0.121***	-0.059***	-0.050**	-0.122***
Migrated	0.133***	0.250***	0.123***	0.094***	0.090***	0.130***
Urban	-0.009	0.212***	0.09	0.102**	0.236***	0.076***
Muluki Group[1]						
Matwali	-0.024**	0.126	0.005	0.180**	0.499***	0.117***
Paninachalne	-0.083***	0.053	-0.046	0.220**	0.591***	0.117*
Job Sec[2]						
MPT[3]	0.308***	0.284***	0.132***	0.548***	0.407***	0.309***
CSSW[4]	0.021	0.186***	-0.008	-0.03	-0.041	0.023
SATW[5]	0.203***	0.181*	0.172***	0.276***	0.117***	0.206***
PMO&A[6]	0.069***	0.244***	0.054	0.129***	0.033	0.069***
Constant	3.710***	2.186**	3.018***	2.039***	0.657	2.387***
Observations	8430	1492	1830	3447	1661	8430
R2	0.396	0.462	0.325	0.294	0.371	0.397
Adjusted R2	0.395	0.456	0.319	0.29	0.364	0.396
Residual Std. Error	9.135	8.629	10.458	7.737	9.061	9.129
F Statistic	324.439**	70.378***	48.493***	79.268***	53.743***	307.413***

***, **, * represent significance at 1%, 5% and 10% level of significance

[1] = Taking Tagadhari as base group

[2] = Taking Elementary Occupations as base group

[3]= Managers, Professionals, Technicians

[4] = Clerical service sales workers

[5]= Skilled agricultural trade workers

[6]= Plant machine operators and assemblers

Source: Authors computation