

**INFORMAL EMPLOYMENT, WAGE DIFFERENTIAL
AND CHILDREN'S PERCEIVED SCHOOL
PERFORMANCE IN BADIKHEL, LALITPUR, NEPAL**

A Thesis

Submitted to the

Central Department of Economics

Faculty of Humanities and Social Sciences, Tribhuvan University

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF ARTS

In

ECONOMICS

By

ANJU TAMRAKAR

Roll.No. 19/072

Regt. No: 7-2-25-100-2006

Central Department of Economics

Kirtipur, Kathmandu

April, 2021

LETTER OF RECOMMENDATION

This thesis entitled “**INFORMAL EMPLOYMENT, WAGE DIFFERENTIAL AND CHILDREN’S PERCEIVED SCHOOL PERFORMANCE IN BADIKHEL, LALITPUR, NEPAL**” has been prepared by Ms. Anju Tamrakar under my supervision. I hereby recommend this thesis for examination to the Thesis Committee as a partial fulfillment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS.

.....

Dr. Resham Thapa-Parajuli

Assistant Professor

Thesis Supervisor

Date: 19th April, 2021

6th Baisakh, 2078

APPROVAL SHEET

We certify that this thesis entitled “**INFORMAL EMPLOYMENT, WAGE DIFFERENTIAL AND CHILDREN’S PERCEIVED SCHOOL PERFORMANCE IN BADIKHEL, LALITPUR, NEPAL**” submitted by Ms. Anju Tamrakar to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University, in partial fulfillment of the requirements for the Degree of 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.

Thesis Committee

.....

Prof. Dr. Shiva Raj Adhikari
(Head of Department)

.....

Prof. Dr. Devendra Prasad Shrestha
(External Examiner)

.....

Dr. Resham Thapa-Parajuli
(Thesis Supervisor)

Date: 19th April, 2021

ACKNOWLEDGEMENTS

I owe my deepest gratitude to my thesis supervisor, Dr. Resham Thapa-Parajuli, Assistant Professor, Central Department of Economics (CEDECON), Tribhuvan University (TU) for his unfailing commitment and guidance throughout my thesis writing. It has been an honor to be his advisee and learn from his tremendous knowledge and insights. This study could not have been completed without his help. I also express my warmest gratitude to Prof. Dr. Shiva Raj Adhikari, Head of Department and Prof. Dr. Kushum Shakya, Former Head of Department, Central Department of Economics, Tribhuvan University, for their generosity and encouragement.

I am grateful to Ms. Archana Adhikari, Programme Coordinator, Godawari Community Library Resource Center (GCLRC) for providing me the valuable information about the study area and hospitality throughout my field visit. I truly appreciate her generous support. I am thankful to all the respondents who helped me giving valuable information to conduct this research work.

I would like to thank my parents, my husband, my relatives and friends for their continuous support and encouragement. Finally, I would like to thank to all those who directly or indirectly contributed in completing the thesis.

DEDICATIONS

To my parents, my husband and my late brother who always believed in my ability to be successful in my academic arena.

TABLE OF CONTENTS

LETTER OF RECOMMENDATION	ii
APPROVAL SHEET	iii
ACKNOWLEDGEMENTS	iv
DEDICATIONS.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABBREVIATIONS	x
CHAPTER I.....	1
INTRODUCTION	1
1.1 Introduction	1
1.2 Statement of The Problem.....	3
1.3 Objectives of The Study.....	3
1.4 Conceptual Framework of The Study	3
1.5 Significance of The Study	4
1.6 Limitation of The Study	4
1.7 Structure of The Thesis	4
CHAPTER II.....	6
LITERATURE REVIEW	6
2.1 Introduction	6
2.2 Theoretical Review	6
2.3 Empirical Review	14
2.4 Conclusion.....	22
CHAPTER III	23
RESEARCH METHODOLOGY.....	23
3.1 Research Design.....	23
3.2 Study Area and Rationale for Selection	23
3.3 Nature and Sources of Data.....	23

3.4	Population, Sample and Sampling Procedure	24
3.5	Method of Data Collection.....	24
3.5.1	Primary Data Collection	24
3.6	Data Analysis, Tools and Techniques	25
3.6.1	Model Specification	27
CHAPTER IV		28
DATA ANALYSIS AND DISCUSSIONS		28
4.1	Introduction	28
4.2	Determinants of Informal Employment	28
4.3	Wage Differential	32
4.4	Informality and Perceived School Performance.....	40
CHAPTER V		44
SUMMARY OF FINDINGS, CONCLUSION AND FURTHER EXTENSIONS		44
5.1	Summary of Findings	44
5.2	Conclusion.....	45
5.3	Further Extensions.....	46
REFERENCES		47
ANNEXES		51

LIST OF TABLES

Table 3.1: Number of Household Surveyed With Their Proportion.....	24
Table 4.1: Informality and Socio-economic Status.....	30
Table 4.2: Wage (In NRs.).....	32
Table 4.3: Wage Differential (In NRs.)	33
Table 4.4: Occupation, Educational level and Gender (%)	35
Table 4.5: Wage Difference by Informality and Gender (t-test)	37
Table 4.6: Wage Difference by Occupation and Gender	38
Table 4.7: Mincer Model of Wage Determination.....	38
Table 4.8: Parents Perception on Children’s Education (%)	40
Table 4.9: Parental Education, Children’s Effort and Their Performance (ttest)	41
Table A1: Tabulation of Gender Informality status.....	51
Table A2: Parental Schooling and Children’ School Performance	51

LIST OF FIGURES

Figure 1.1: Conceptual Framework of The Study	4
Figure 2.1: Informal Employment Nepal Flowchart.....	8
Figure 4.1: Labor Informality as % of Total Employment by Education	28
Figure 4.2: Informality as % of Total Employment in Selected Wards by Education	29
Figure 4.3: Labor Informality and Total Employment by Gender (%).....	29
Figure 4.4: Labor Informality and Total Employment (%)	30
Figure 4.5: Wealth Quintiles Among the Respondents	36
Figure 4.6: Informality, Wage and Children’s Performance	42
Figure A1: The Frequency Distribution of Hourly Wage by Wards	52
Figure A2: Mann-Whitney U Test.....	52
Figure A3: Wealth Quintiles	53

ABBREVIATIONS

AFQT	Armed Forces Qualification Test
CBS	Central Bureau of Statistics
CEDECON	Central Department of Economics
CPI	Customer Price Index
CSAE	Centre for the Study of African Economies
ECHP	European Community Household Panel
FE	Fixed-Effects
FQP	Formation Qualification Professionnelle
GSO	Ghana Statistical Office
HH	Household
HILDA	Household, Income and Labour Dynamics
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organization
LFS	Labour Force Survey
NBS	National Bureau of Statistics
NLFS	Nepal Labour Force Survey
NLSY	National Longitudinal Survey of Youth
NPC	National Planning Commission
NSCO	Nepal Standard Classification of Occupation
NSO	National Statistical Office
NSSO	National Sample Survey Organization
O-B	Oaxaca-Blinder (O-B)
OLS	Ordinary Least Square
SDG	Sustainable Development Goal
SILC	Income and Living Conditions Survey
SPSS	Statistical Package for Social Survey
WoS	Web of Science

CHAPTER I

INTRODUCTION

1.1 Introduction

Informality is a matter of concern among policymakers and the business community all over the world. It effects on productivity and growth, fiscal revenues, workers' rights including social protection, decent working conditions and the rule of law. It also has a negative impact on the development of sustainable enterprises (especially in terms of low productivity and lack of access to finance), public revenues and governments' scope of action, particularly with regard to economic, social and environmental policies, the robustness of institutions, and fair competition in national and international markets (ILO, 2018). Informal employment has traditionally been associated with low earnings, wage inequality and poverty. The conventional segmented markets theory explains that labor informality is nothing but a survivalist alternative for those disadvantaged or rationed out of formal employment opportunities (Fields, 1975; Mazumdar, 1976; Bernabe, 2002; Perry et al., 2007). At one time, no attention was given by the economists to economic activities carried out outside the formal framework of the economy. In the 1950s and 1960s, however, the informal dimensions of organizational life became increasingly recognized as important and were accepted as a commonplace topic for research by economists (Blau and Scott, 1963; Gouldner, 1954).

In many developing countries, a majority of workers are employed in the informal economy with low incomes, limited job security and no social protection which hinders poverty reduction efforts. The persistent labor market vulnerabilities have prevented developing countries from benefiting from the dynamics of globalization. According to ILO, 2018, two billion (60 percent) of the world's employed population make their living in the informal economy, most people enter the informal economy not by choice but as a consequence of a lack of opportunities in the formal economy and in the absence of any other means of earning a living. Globally, informal employment is a greater source of employment for men (63.0 percent) than for women (58.1percent) (ILO, 2018). In Nepal, a majority of the workforce are informally employed. The share of informal employment among females is 90.5 percent which is higher compared to 81.1 percent among males (NLFS, 2017/18). However, in developing countries like Nepal, informal employment has helped to avoid high open unemployment despite

adverse economic conditions. It has become an important source of livelihoods for many people.

Informality is addressed directly in Sustainable Development Goal (SDG) indicator 8: 'Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.' The prevalence of high informality is a major challenge for sustainable development. In recent years, the high share of informal employment has raised some concerns in policy circles in Nepal. Nepal's Fifteenth Five Year Plan (2019/20 – 2023/24) emphasizes on an integrated approach to the alleviation of poverty, which includes the development of productive employment opportunities through the development of healthy and educated citizens and skilled human resources.

Informality is witnessing wage differential especially in developing countries like Nepal. Wage differential between informal and formal employment creates much broader socio-economic inequality. Disparity that exists in assets, consumption, healthcare, educational attainment, and other accepted indicators of well-being, especially in developing countries are due to difference in wages and earnings. Education is one of the major causes of wage differential in the labor market. The wage differentials can differ substantially between workers with different education levels, and that shifts in labor demand towards more educated workers. Psacharopoulos, (1993) asserts that education plays a central role in preparing individuals to enter the labor force, as well as equipping them with the skills to engage in lifelong learning experiences. Individuals gain education for various reasons aiming for securing jobs and earning high wages. Therefore, educational attainment raises one's income. Education is one of the most powerful and proven vehicles for sustainable development. SDG 4 aims to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.' In this regards, parental employment may directly or indirectly has its impact on child education and other performances as well. (Vellymalay, 2012) stated that a child's capability to succeed in school depends on how his/her parents manage them in the environment. The child learning skills, attitude and behavior that could mould them into productive and successful students depend on the environment he/she grows up.

1.2 Statement of The Problem

Informality has increased substantially in many developing countries. It has its impact on different dimensions including wage inequality and children's educational performance. In general, educated labor force are more productive than a less educated one. Thus, it is expected that the labor with higher education should have higher productivity and a higher wage. Similarly, the children of the parents working in informal economy may have a different educational performance from those children of parents working in formal economy. Linking wage differential with education and the effects of parental employment with children's educational performance is challenging but crucial for making policy recommendations. There are significant gaps in research regarding informality and education especially in areas like Badikhel. Therefore, the research questions arise whether there exists wage differential in informality in Badikhel. What are the factors that influence wage differences? Is it the level of education that creates wage differences among workers? Could the parental employment impact on the children's educational performance?

1.3 Objectives of The Study

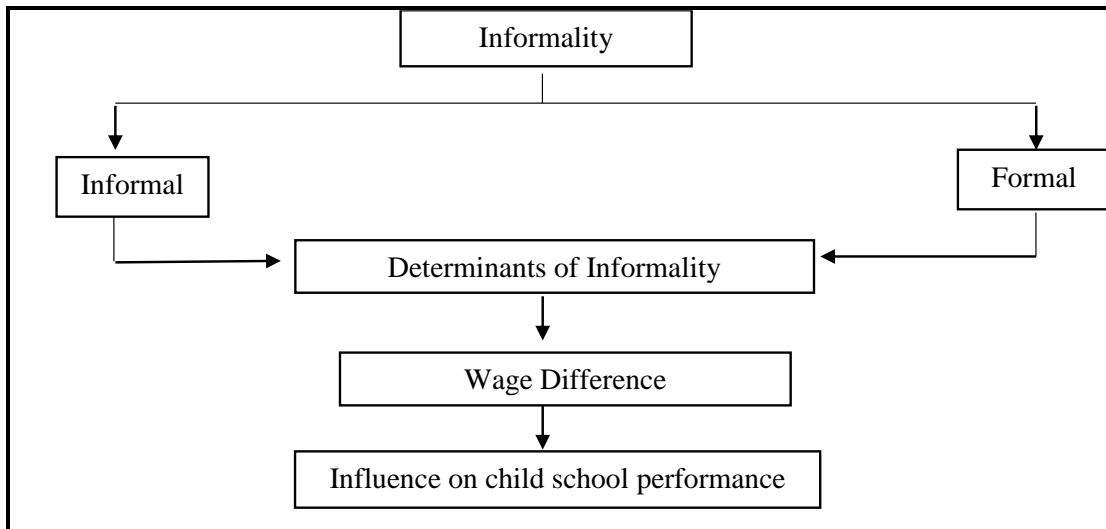
Although the broader objective of this study is to analyze informality and its impact on the labor force in Badikhel, the specific objectives are:

- i. To identify the relationship between education and wage differentials among workers in Badikhel
- ii. To determine the other factors that contribute to the wage differences
- iii. To determine the influence of parental employment on children's school performance

1.4 Conceptual Framework of The Study

The terms 'Informality' and 'Formal/ Informal' binary are used synonymously in the study, as well as other term associated is 'Informal employment'. There are various factors that affect informality in the labor market. The determinants of informality will have impact on wage differences. Due to parental informality and wage differences, it will have influence on child school performance.

Figure 1.1: Conceptual Framework of The Study



Source: Constructed by author

1.5 Significance of The Study

The analysis of wage differential between formal and informal employment and other factors that contribute to wage differential provides an evidence-based understanding of earnings from informal employment in Badikhel. The further analysis between parental employment and its influence on children's school performance provides insight on the importance of parents' role in children's development. Thus, this study might guide the policymakers and stakeholders to formulate adequate policy in this area.

1.6 Limitation of The Study

During the research, there were some limitations which are as follows:

- The study was conducted in three different wards in Badikhel although the other study areas in Kathmandu can be selected.
- The study deals about the informal employment rather than informal sector.
- Due to the time and resource constraint, STEM (Science, Technology, Engineering and Mathematics) exam is not conducted to the children while analyzing the reflection of informality on children's school performance. Only the parental perception on children's performance is studied.

1.7 Structure of The Thesis

The study has five chapters beginning with the introduction that deals about the statement of the problem and objectives of the study. Chapter two is divided into

theoretical and empirical review of literature on the subject matter. Chapter three deals with research methodology that explains model and data. Chapter four presents the descriptive and empirical analysis and chapter five concludes with some further extensions.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

There are two sources of literature in the study. The literature collected from Web of Science (WoS), Google Scholar and others. Web of Science is the world's leading scientific citation search and analytical information platform. It is a website which provides access to multiple databases that provide comprehensive citation data for many different academic disciplines. WoS has been used in thousands of published academic studies over the past 20 years. The literature was searched using the keywords: i) Wage differential in formal and informal sectors and ii) Wage differential and qualification. The articles related to economics covering the year up to 2010 were selected for the study. Similarly, Google Scholar is a freely accessible web search engine that indexes the full text or metadata of scholarly literature across a large data of publishing formats and disciplines. In Google Scholar, the literature for the study was searched using the same keywords used in WoS. The additional keywords used were: relationship between wage differential and education, parental employment and children's school performance. The literature related to subject matter irrespective of years are also included.

Several scholars have studied on different aspects of informality and wage differentials by applying different methodologies with data from different parts of the world. We provide several literatures on subject matter throughout this section. They are summarized theoretically and empirically below.

2.2 Theoretical Review

The general meaning of informality means the relaxed behaviour that does not follow strict rules or a manner that does not take forms and ceremonies seriously. The Cambridge Dictionary meaning of informality means the fact of not being formal or official, where the formal means using an agreed and often official or traditional way of doing things.

Herrera-Idarraga Lopez-Bazo et al. (2015) define workers as formal if they contribute both to health and old-age insurance, as proposed by the International Labor Organization (ILO). According to this legal definition, an informal job is an activity that is unregulated by the formal institutions and regulations of a country. Importantly, since data comes from a household survey and therefore the information relates only to workers and not to firms, the informal sector term is related to the nature of the job and not of the firm in which the worker is employed.

Bargain and Kwenda (2013) adopt social security (or legalistic) view, where informality refers to the lack of formal registration, taxation, labor regulation and lack of social security protection for workers. In Mexico, employees have to contribute to the social security agency (IMSS). In Brazil, employees must hold a labor card, the signing of which guarantees them access to formal labor protection. Thus, those wage employees not registered with the social security agency in Mexico or not holding a signed labor card in Brazil are considered as informal employees.

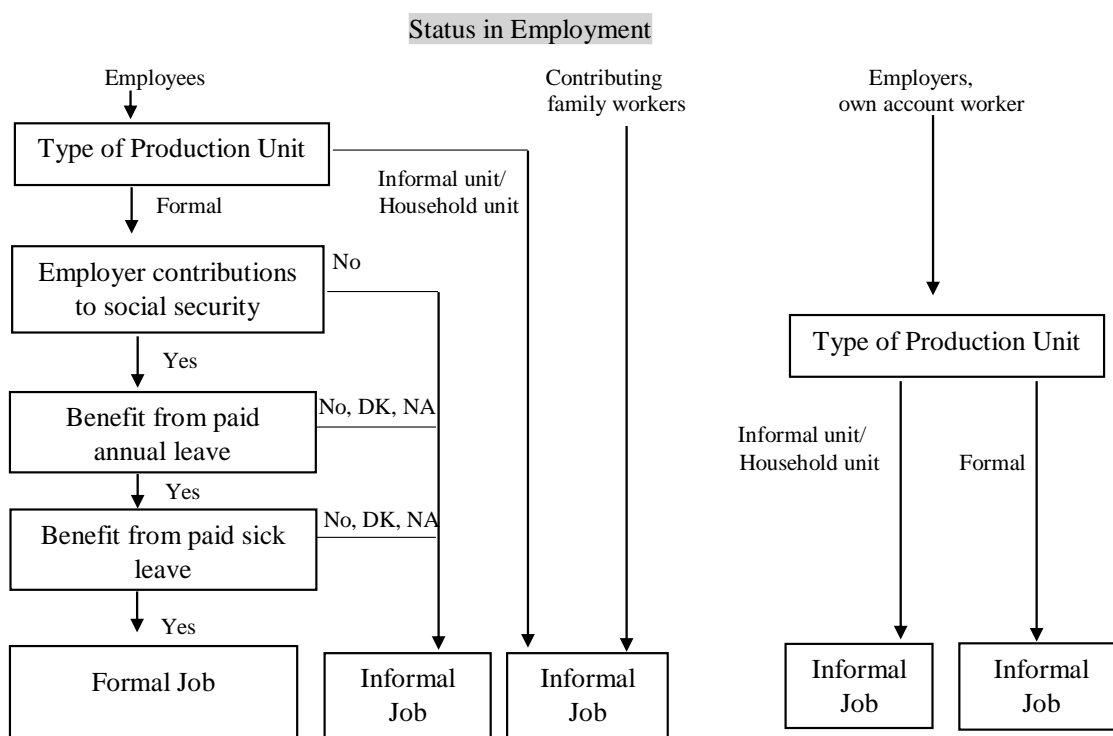
The 17th International Conference of Labour Statisticians (ICLS) defined informal employment as “employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severances of pay, paid annual or sick leave, etc.)”.

The concept of the informal sector was then expanded by the ICLS in 2003 to include description on the nature of employment. It integrates the production-based approach with a job based approach as noted in ILO (2012). It includes not only employment in the informal sector but also other workers who may be working in formal enterprises but without a formal job.

Accordingly, ILO (2012a) described informal employment as the total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises or households and includes employees working in informal sector enterprises and those who are informally employed in the formal sector; employers and own-account workers employed in their own informal sector enterprises; members of informal producers’ cooperatives; contributing family workers in formal or informal

sector enterprises; and own-account workers engaged in the production of goods for own end use by their household (ILO, 2012a).

Figure 2.1: Informal Employment Nepal Flowchart



Source: ILO, 2003

South African Labour Force Survey (LFS) relies on the questions regarding fringe benefits and other aspects of the job that can be used to identify individual’s informal sector status, questions regarding whether the firm is registered, provides medical aids and deducts unemployment insurance contributions. If individuals answer in favorable to any of these questions, the sector is identified as formal sector.

Nepal Labor Force Survey (NLFS) defines the informal employment as: (i) who operate their own business with no employees, (ii) private unregistered company workers or if registered only employing less than ten persons, (iii) those family members working on family business, and (iv) those not having paid leave by the employer or where the employer does not pay social security contribution for the worker.

From a labour market perspective, two competing views regarding informality are at stake in the literature: the exclusion and the exit hypotheses, following Hirschman’s seminal work (Perry et al., 2007). The first one, also called the ‘dualist approach’, is an extension of the works by Lewis (1954) and Harris and Todaro (1970). It is based on a

dual labour market model where the informal sector is considered as a residual component and is totally unrelated to the formal economy. It is a subsistence economy that only exists because the formal economy is incapable of providing enough jobs, and is condemned to disappear with the development process. Informal workers, suffering from poor labour conditions, are queuing for better jobs in the formal sector. The second view, also known as the 'legalist approach' considers that the informal sector is made up of micro-entrepreneurs who prefer to operate informally to evade economic regulations (de Soto, 1989); this conservative school of thought is in sharp contrast to the former in that the choice of informality is voluntary due to the excessive legalization costs associated with formal status and registration.

India's National Commission on Employment in the Unorganized Sector (NCEUS) reflects the debate in distinguishing between the informal sector (consisting of enterprises) and informal employment (consisting of workers), drawing on the guidelines of the International Convention of Labour Statisticians (ICLS, 2003) but applying them to India's specificities:

"The informal sector consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers."

"Informal workers/employment consists of those working in the informal sector or households, excluding regular workers with social security benefits by the employers, and the workers in the formal sector without any employment and social security benefits provided by the employers."

"Informal economy consists of the informal sector and its workers plus the informal workers in the formal sector constitute the informal economy."

Altman (2008) defines informal activity as a precarious low income, low productivity activities whether in employment or self-employment, whether linked to registered firms or not.

A growing literature assesses why informal sector is good for some economies. Generally, in countries that have subsistence informality, there is a positive relationship between informality and unemployment. Informality is a substitute to unemployment particularly for vulnerable and marginalized members of society to participate in

economic activity. They might be better off under informality than in unemployment. Rogers and Swinnerton (2004) and Docquier et al (2014) support the idea of informality as a substitute for unemployment. Similarly, Goñi (2013) finds frequent transitions from unemployment to informality in the Andean countries and Knight et al (2004) support similar conclusions for South Africa. For the region of KwaZulu-Natal, Valodia et al. (2006) and Cichello et al. (2005) find that, for many workers, the informal sector has generated more employment and shown faster wage progression in the 1990s.

Maloney and Mendes (2004) affirm that the combination of a decrease in productivity and an increase in the minimum wage during the second part of the nineties created a perfect setting for segmented markets, and is responsible for the significant increase in informality. South Africa views the informal sector as a means of reducing unemployment and consequently aims to promote entrepreneurship through self-employment. Colombia, on the other hand, views informality as a constraint on the growth of the formal sector, a drain on the fiscus and insufficient to provide adequate support for a better standard of living. The informal economy is seen as infinitely expandable with low barriers to entry and few capital inputs (Fields, 2006): more entry simply has the impact of reducing profitability or wages.

In Keith Hart's study, informal activities were analyzed as multiple opportunities for increasing the income of the poor. The focus on dualism was developed later, for example with the ILO. The Bretton Woods institutions had an interest in the informal sector because the accuracy of the calculations of GDPs and growth, and the strengthening of the capacities of the statistical services. Taxation has also been a key issue for the IMF in the context of stabilization programs. The informal sector was viewed as a factor in the low level of revenue and has been the subject of various reform proposals—for example, presumptive taxation or taxation of production factors (Taube and Tadesse 1996). The lower size of enterprises having higher proportion of low productivity and higher private cost of regulation that leads to informality since there is lower intensity of enforcement of regulation. Similarly, the poor and vulnerable members of the society have lower household income. They have low access to opportunities and prone to unemployment. Then, the default option to unemployment becomes informality. An established view, propounded by Tokman (1992) and others is that informal sector (or informal employment) acts as a buffer between formal

employment and open unemployment – when formal jobs are scarce, informality rises in developing countries because workers simply cannot afford to be unemployed. This leads to labour market segmentation – returns in the different sectors of the economy differ for workers who are otherwise equal in terms of characteristics (Dickens and Lang, 1985). With respect to the more vulnerable groups, Peña (2013) found that informality is higher amongst women, the unskilled, and either very old or very young workers who would usually have difficulty finding employment. In South Africa, Lund (1998), found that the informal sector in Durban was offering employment to unskilled women who would not easily find a job elsewhere. Dinkelman and Ranchod (2007) support the hypothesis of informality as the only option for vulnerable groups in South Africa.

The ILO, in 2002, noted that the informality is a heterogeneous and complex phenomenon and that there is no simple relationship between working informally and being poor, and working formally and escaping poverty (ILO, 2002: p. 2–3). Chen (2004) notes that many informal entrepreneurs might like to upgrade if they had the chance: but the benefits must outweigh the costs of formalization: examples include, enforceable contracts, access to capital and insurance, tax breaks or cash incentives, membership of formal trade associations, and social protection for its workers.

Although there are literatures that have studied wage inequality and informality in isolation, very few papers have linked the two.

Docquier et al, (2014) in a long run model, found that “low-skilled workers may obtain a higher salary with the existence of an informal sector than in its absence, because there is an alternative sector where they can supply their working hours. However, the existence of the informal sector also increases child labour and reduces the incentives to education. In the long run, the informal sector prevents the economy from developing as it would in the absence of informality.” Nevertheless, he also found that a sudden elimination of informality would induce severe welfare losses for poor people.

Chong and Gradstein (2007) develop a model in which an increase in income inequality causes a bigger informal sector by lowering the relative benefits from becoming formal,

with the effect being stronger when the institutions and the protection of property rights are weak in the formal sector.

Related to this literature, Goldberg and Pavcnik (2003) develop a model to establish a link between informality and trade liberalization. In their model, trade opening leads to an increase in the size of the informal labour market via a simple mechanism: trade reforms expose formal establishments to increased foreign competition to which firms in the formal sector respond by laying off workers who subsequently seek employment in the informal sector. There is evidence of rising wage inequality globally. Rodrik (1997) explains this as being a result of greater global integration, where capital is mobile but labour is less so. This reduces the negotiating power of nations and of workers. It intensifies competition between firms and encourages strategies to reduce cost and mitigate risk.

Technological change is also a cause of wage differentials in the labor market. This is evident in the capital-skill complementarity hypothesis (Goldin and Katz, 1996) which asserts that skilled or more educated labor is more complementary with new technology or physical capital than is unskilled or less educated labor. Goldin and Katz (1996) argued that capital intensified technological changes which brought about a shift to batch and continuous – process methods, as well as the rise in purchased electricity, led to an increase in the relative demand for higher- skilled and educated workers. Reinforcing the shift in manufacturing was an increased demand for educated workers to sell, install, and service technologically- advanced products.

In other words, the technological change brings about a substitution of capital for unskilled and less educated workers and since this capital is better complemented with skilled and more educated workers, there is an increase in the demand for skilled labor and a fall in the demand for unskilled labor. This leads to high wages for skilled labor and relatively low wages for unskilled labor. This process generates the dynamics of wage inequality in most of the developed countries, where the existence of capital-skill complementarity hypothesis is well documented (Griffin, 1992; Bergstrom and Panas; Krusell et al. 1998 as cited by Ahay and Yuksel, 2009) as cited in Enu Patrick, & Hagan Edmond, A. E., AttahObeng Prudence (2014). Card, Kramarz and Lemieux (1995) as cited in Enu Patrick, & Hagan Edmond, A. E., AttahObeng Prudence (2014) Enu

Patrick, & Hagan Edmond, A. E., AttahObeng Prudence (2014) present this same conclusion in their view of skill- biased technological change.

The level of education is another key factor affecting the level of informality. Globally, when the level of education increases, the level of informality decreases. Those who have completed secondary and tertiary education are less likely to be in informal employment compared to workers who have either no education or completed primary education (ILO, 2018).

Card (1998) as cited in Enu Patrick, & Hagan Edmond, A. E., AttahObeng Prudence (2014) states: “Education plays a central role in modern labor markets. Hundreds of studies in many different countries and time periods have confirmed that the better educated individuals earn higher wages, experience less unemployment, and work in more prestigious occupations than their less educated counterparts.” Indeed, education develops the intellectual abilities of a person. Human beings possess a lot of potential abilities that can be enhanced through education and only proper education can pave the way and lead to virtue (Khostinat, 2009). Evidence suggests that cognitive skills have large economic effects on individuals’ wages (Hanushek and Woessmann, 2007) and workers’ productivity depends on both years of education and what is learnt at school (Heckman, Layne-Farrar, and Todd 1995; Murnane, Willet, and Levy 1995). This relationship between education, productivity and wages is evident in the human capital theory which considers schools to be institutions for the formation of human capital, as presented by Becker (1964). Rutherford (2002), in the Rout Ledge Dictionary of Economics, defines human capital as the education and training embodied in a human person that gives rise to increased future income. It encompasses the abilities, skills and knowledge embodied in a person. The modeling of human capital in a more vigorous framework was pioneered by the studies of Mincer (1958), Schultz (1961) and Becker (1964) which formalized the analysis of demand for education by individuals and their supply of skills in the labor market. In this literature, they perceived education as an investment good which permitted individuals to accumulate human capital in order to receive a higher income afterwards.

2.3 Empirical Review

Mahuteau (2017) examined public-private sector wage differentials in Australia using data of the longitudinal Household, Income and Labour Dynamics (HILDA). The study focused on employees aged between 21 and 65. The study showed that on average, workers in the public sector earn about 5.1 percent more in hourly wages than those in the private sector. On average, women with certificates and diplomas benefit more than men from working in the public sector, presumably because of their higher paid jobs in the female dominated health sector is compared with the lower paid male jobs in the trades. The panel data quantile regression model with fixed effects showed that the positive wage effects of public sector employment are heterogeneous, with comparatively larger impact at the lower end of the wage distribution than at other parts. The result showed that qualification, time period, occupation and state/territory are the causes of heterogeneity.

Lee and Wie (2017) analyze how changes in overall wage inequality and gender-specific factors affected the gender wage gap in Chinese and Indian urban labor markets in the 1990s and 2000s. The study estimated gender wage gap based on Ordinary Least Squares (OLS) and Heckman's two-step estimation technique. Analyses of micro data present that contrasting evolutionary patterns in gender wage gap emerged over the period, showing a widened wage gap in China but a dramatically reduced gap in India. In both countries, female workers' increased skill levels contributed to reducing the gender wage gap. However, increases in observed prices of education and experience worked unfavorably for high-skilled women, counterbalancing their improvement in labor market qualifications. Decomposition of changes in the gender wage gap shows that China's widened gap was attributable to gender-specific factors especially against low- and middle skilled female workers. For India, gender-specific factors and relatively high wage gains of low- and middle-skilled workers reduced the male female wage gap.

Herrera-Idarraga Lopez-Bazo et al. (2016) analyzes the role of education and informality on regional wage differentials using Colombian micro-data in thirteen metropolitan areas. The metropolitan areas were grouped into five regions, following the classification suggested by (National Statistics Department) DANE based on

geographical proximity and natural characteristics. The study was restricted to salary workers not carrying formal studies and aged between 15 and 60 years who report working more than 16 hours per week. The study excludes public employees, self-employed and employed workers. The study applied Blinder-Oaxaca (B-O) decomposition at the mean and the decomposition for unconditional quantile regression (UQR) models proposed by Firpo, Fortin and Lemieux (2009; 2011) at selected quantiles that makes it possible to isolate the particular contribution of education and informality to the regional wage gap at different quantiles. The study revealed that informality differs considerably between regions that increases wage differentials since formal jobs usually entails higher wages than informal jobs. The highest wage gap found is 36% and the lowest is 9%. Similarly, education contributes significantly in increasing wage inequality. The wage increase caused by an additional year of education in Colombia is ten-fold higher at the upper part of the wage distribution than at the bottom.

Herrera-Idarraga (2015) also examines the return to education considering the existence of formal and informal employment in Columbian labour market. Result showed that the returns vary along the wage distribution and that the pattern of variation differs for formal and informal workers. The formal workers have a higher return to their education, around double, compared with their informal counterparts. Furthermore, informal workers face not only lower returns to their education, but suffer with educational mismatches that puts them at a greater disadvantage compare to their formal counterparts.

Kumar and Ranjan (2015) investigates broad empirical picture of wage differential between informal and formal wage worker across different sector, gender, industry, education, social group and state in India using data of household survey on employment and unemployment conducted by National Sample Survey Organization (NSSO). The survey proposed number of questions related to availability of social security, type of job contract and employment status which allows identification of informal and formal worker. Real wage is estimated by using implicit deflator. The study showed that informal worker earns approximately two times less than formal worker. Wage difference is sharp in case of skilled labour as compared to unskilled and semi-skilled labour.

Dasgupta, Bhula-or and Fakthong (2015) estimated the earnings gap between formal and informal employment in Thailand, with a sample of workers including both wage and self- employed workers. Using micro data sets of the Household Socio-Economic Survey (SES) conducted by Thailand National Statistical Office (NSO) for 2011 and applying quantile regression method, the study found that informally employed workers have lower earnings, and the difference increases with level of earnings. The study selected the variables based on intuitive understanding of what affects earnings of formal and informal workers and findings of previous studies. The total monthly earnings were transformed into natural log. The basic characteristics of workers were proxied by the variables such as a formality status dummy, female dummy, age, educational attainment, rural dummy, worker having multiple jobs dummy and farm and non-farm self-employed working status. The study used Oaxaca-Blinder (O-B) decomposition technique in order to understand the reason for earnings differential between formal and informal workers.

As for the Nepalese case, the wage differential in formal and informal sectors was discussed in Thapa-Parajuli (2014), where the wage differential was analysed using country representative labor force survey based crosssection data produced by ILO in 2008. The study includes both urban and rural workers. Estimating Probit regression model, the study found that the gender, geography, educational status, marital status, age of the employee and ethnicity of the employee matter whether an individual works in informal or formal sector. The dependent variable of the regression model is a binary variable that takes a value of one if the worker is employed in the informal sector and zero otherwise. The major explanatory variables are: (i) an urban dummy; (ii) demographic characteristics of the worker (male dummy, ethnicity, marital status and age group); (iii) the highest educational level attained by the worker; and (iv) experience proxy of the worker. These variables are regressed using MLE method to capture and analyze probability of participating informal employment instead of formal one. The logarithm of hourly wage measured in rupees is regressed with years of formal schooling, experience proxy measured by multiplying age with formal years of schooling and gender dummy to compare the return to education of workers in formal and informal. The study revealed that urban workers are engaged more in informal jobs in Nepal. Married, separated, divorced and males are more inclined to informal jobs. Older people despite their old age are into informal sector in Nepal. In regards to

education, the study showed that the workers in formal sector with secondary, higher secondary and college level have higher wage than informal sector workers.

Patrick and Edmond (2014) did a case study with a questionnaire to find out the relationship between education and wages differentials between public and private sector in Accra region in Ghana. Using the convenience sampling technique, the sample size of 100 was taken considering the target group and how busy they were, resources and not having the luxury of time. The study did not consider the effects of informal education. The study used regression based on Mincer's earning function to test the significance. The result showed that education has a positive effect on wage differentials. The public sector paid lower wages than the private sector. Furthermore, there are other factors such as the sex of the worker, sector in which the worker works in, company policy, skills and working conditions that are significant causes of wage differentials besides education in Accra.

Longhi (2013) analysed the difference in wage gap of selected ethno-religious groups of male workers in Great Britain at the mean and over the wage distribution using the data of Labour Force Survey (LFS). The study decomposed wage gaps using a combination of weighting and regression approaches, as proposed by Firpo et al. (2007). The study focused on three of the largest UK minorities: Indian Hindu, Indian Muslim, and Pakistani Muslim men, distinguishing between first and second generation, using White British Christian men as a reference group. The results show striking differences in wages between ethno religious groups: Indian Hindus have the highest wages and Pakistani Muslims the lowest; Indian Muslims fare better than Pakistani Muslims but worse than Indian Hindus. Furthermore, within all minority ethno-religious groups, the second generation achieves higher wages than the first generation, but the amount that is explained by characteristics does not necessarily increase with generation.

Tansel and Kan (2012) examined the formal/informal sector earnings differentials in the Turkish labor market using a novel panel data set drawn from the 2006-2009 Income and Living Conditions Survey (SILC) in participation and earnings of formal-salaried, informal-salaried, formal self-employed and informal self-employed. A two-stage stratified sampling procedure is used in sample selection. The unpaid family workers are excluded in the study. They constructed dependent variable, log real hourly

earnings, first by calculating the hourly earnings then deflating it by the 2006 Turkish Consumer Price Index (CPI). They grouped other variables into three categories as individual, household and job characteristics that are associated with the level of earnings. Accordingly, individual characteristics consist of gender, age, education; household characteristics include household size, marital status, whether the household have children, household head status, whether there is a formal worker in the household; and finally job characteristics comprise sector of economic activity, occupation, firm size and part/full-time status. The study exhibited that education has a positive (negative) relationship with formal (informal) employment. Almost 50 percent of those who are formally employed have a high school or above degree, whereas informal employees remain at only 13 percent. Considering the wage/self-employment, the self-employed tend to have significantly lower levels of education compared to wage workers. As for experience, the results reveal that informal workers have on average more years of experience in the labor market, especially those who are informal self-employed. First, estimation of standard earnings equations at the mean using OLS on a pooled sample of workers confirms the existence of an informal penalty, which tends to decrease as other earning-related variables (i.e. individual, household and job attributes) are included in the regression. Second, using quantile regression estimations, the result showed that pay differentials are not uniform along the earnings distribution, i.e. informal penalty decreases with the earnings level. Confirming the heterogeneity within informal employment, the study found that self-employed are often subject to lower remuneration compared to those who are salaried. The formal-salaried workers are paid significantly higher than their informal counterparts.

Addabbo and Favaro (2011) used quantile regression to analyse wage differential on the sample of Italian full time employed workers aged 15 to 65, selected from European Community Household Panel (ECHP). The model estimated is a Mincerian wage equation in which the logarithm of the wage rate (gross hourly wage) is assumed to be explained by individual productive characteristics such as education and experience including variables related to demand side of the labour market (such as size of the firm and activity sector), institutional features (such as contract type: permanent, temporary and other types of contract) and summarizing the incidence of market characteristics (such as local unemployment rate, availability of child care services, etc) on wage levels. In regards to education, the study separated workers with a compulsory

educational level from those with a higher level diploma. In Italy, compulsory schooling sums a total of up to 8 years (first 5 years of primary school and the last 3 years of lower-secondary school). For the principal activity performed, the study used 16 occupational categories. The analysis showed that female-to-male wage differential in Italy strongly depend on workers' education attainment: highly-educated women are affected by lower wage gaps than low-educated women, at any wage rate. Similarly, highly-educated females have better characteristics than highly-educated men that partially compensate the high difference in returns.

Lang and Manove (2011) studied on education and labor market discrimination between blacks and whites using data from the National Longitudinal Survey of Youth (NLSY79). The study explored how the Armed Forces Qualification Test (AFQT), wages, and education are related. The AFQT is generally viewed as an aptitude test comparable to other measures of general intelligence. AFQT score is regressed with age (using the 1981 weights) and adjusted the AFQT by subtracting age times the coefficient on age. The study found that black men get about 1.2 years more education than white men with the same AFQT. The difference is about 1.3 years among women. The results revealed that the blackwhite wage differential is largely due to premarket factors that lower the AFQT of blacks to whites rather than labor market factors. However, it showed that some of the black-white wage differential reflects the operation of the labor market. Blacks earn noticeably less than whites with the same education and cognitive score.

Ahmed and McGillivray (2015) investigates changes in the gender wage gap in Bangladesh over the period 1999-2009. The gap in average wages between men and women decreased by 31%. The paper shows that a key driver of the change was an improvement in female educational qualifications. It also shows that the gender wage gap narrowed much more at the lower end of the wage distribution than at the upper end.

Cho and Cho (2011) studies on gender difference of the informal sector wage gap in the Korean labor market. The study considers market structure as a more crucial factor in determining the gender earning gap. The Fixed-Effects (FE) model was used in the study. The study found that while estimated wage differentials from cross-sectional

analysis between formal and informal sector among male workers disappear in the FE estimations, the wage gap between the formal and the informal sector among female workers still exists in the FE estimations.

Bargain and Kwenda (2011) estimate the conditional earnings gap between formal and informal sectors, distinguishing between salary and self-employed workers. Rich panel datasets for Brazil, Mexico, and South Africa are assembled to define informality in a comparable way and to control for unobserved heterogeneity. Estimations are conducted at different points of the conditional earnings distributions. The study found two major results. First, informal salary workers are underpaid compared to the formal sector workers, in all countries. Second, informal self-employment contributes to a more dispersed earnings distribution in all three countries.

Falco (2011) explores the questions as to the size and causes of earnings differentials in two urban African labor markets: Ghana and Tanzania using a longitudinal labor market survey conducted by the Centre for the Study of African Economies (CSAE) and in collaboration with the Ghana Statistical Office (GSO) and the Tanzania National Bureau of Statistics (NBS). The study collects information on incomes, education and labor market experience, household characteristics and various other modules for labor force participants (ages 15 to 60) in urban areas. Furthermore, the study included information on whether the individual is own self-employed, self-employed with employees, a private or public sector wage employee and the size of the enterprise in which wage employees work or which the self-employed owns. The study showed that unobserved individual market ability is the most important factor in explaining the variance of earnings. Furthermore, the wage employees earn the same as the self-employed in both Ghana and Tanzania.

Baron and Cobb-Clark (2010) analyse the source of the gender wage gap across public- and private-sector wage distributions in Australia. The study found that irrespective of labour market sector, the gender wage gap among low-paid, Australian workers is more than explained by differences in wage-related characteristics. The gender wage gap among high-wage workers, however, is largely unexplained in both sectors suggesting that glass ceilings may be prevalent. Gender differences in employment across occupations advantage all women except those in high-paid jobs. Disparity in

educational qualifications and demographic characteristics are generally unimportant in explaining the gender wage gap.

Bocquier (2010) develops indicators of vulnerability in employment in seven economic capitals of West Africa and studies their links with individual incomes. The study was restricted to private sector workers aged 15 and above with at least five years of potential labor market experience. The study showed that vulnerability compensation mechanism is mainly seen in the informal sector. Employment vulnerability is not compensated for the poorest workers in the private sector. Long "job queues" and weak institutional protection of workers may have reduced bargaining power in the formal sector.

Aeberhardt (2010) studies on wages and employment of French workers with African origin. The study focuses on the differences in wages and employment between French workers with French parents and French workers with at least one African parent, using the data of the Formation Qualification Professionnelle (FQP) survey conducted by (INSEE, Paris, 2003). The questionnaires in the FQP is made up of five parts: professional mobility, initial education, vocational training, social origin and earnings. The study includes wage earners and the non-working population except students and retired individuals. The study estimated the Tobit model by a two-step Heckman-type procedure and by a maximum likelihood procedure. The wage decomposition was done using Blinder-Oaxaca (B-O) decomposition. The study found that the higher education increases the probability to be employed in each groups. Furthermore, individuals of African origin without any education are slightly less employed than individuals with French parents.

Glinskaya and Lokshin (2005) investigate wage differentials between the public and private sectors as well as workers' decisions to join a particular sector using the data of all-India household survey collected by National Sampling Survey Organization (NSSO). The study included those employed and working for wages excluding those who are self-employed and work for profit and unpaid family workers. The study used Ordinary Least Square (OLS) regression to estimate wage differentials. Estimates show that, on average, the public sector premium ranges between 62% and 102% over the private-formal sector, and between 164% and 259% over the informal-casual sector, depending on the choice of methodology. Our review of wage differentials (estimated

using similar methodologies) across the world shows that India has one of the largest differentials between wages of public workers and workers in the formal private sector. The wage differentials in India tend to be higher in rural as compared to urban areas, and are higher among women than among men. The wage differential also tends to be higher for low-skilled workers.

2.4 Conclusion

The literature reviewed in this chapter tells us two folds' information: one is regarding the research gap and the next on methodological gap. Literature review says that informality may arise where formal firms or the public sector are not expanding fast relative to labor market supply. Although a big informal economy implies less productivity; more corruption; less stability and protection, the informal economy is often seen as an important component in expanding economic participation. The expansion of the informal economy can have a positive effect on poverty whereas there are other aspects where informality has impacted adversely. At the same time, wage differentials are prevalent in almost all labor markets. Education plays a significant role while studying on wage differentials. Other factors such as technology, school quality and the motives of employers all have huge bearing on wage differentials. In that sense, parental employment has its influence on children's educational performance as well. The different scholars have used different methodologies in their studies. Mahuteau (2017), Herrera-Idarraga Lopez-Bazo et al. (2016) applied quantile regression; Addabbo and Favaro (2011) used quantile regression and model estimated is Mincerian wage equation; Dasgupta, Bhula-or and Fakthong (2015) applied quantile regression and used O-B decomposition technique, Lee and Wie (2017) estimated OLS and Heckman's two-step estimation technique, Kumar and Ranjan (2015) proposed number of questions to identify informal and formal workers and estimated real wage using implicit deflator. Similarly, Thapa-Parajuli (2014) estimated Probit regression model; Patrick and Edmond (2014) used descriptive method; Urdinola and Tanabe (2012), Tansel and Kan (2012) and Bhattarai, K. (2017) used Mincer earning model in their studies. Therefore, this research seeks to study on the determinants of wage differentials, the relationship between education and wage differentials and the influence of parental employment on children's educational performance. The methodology to justify the research objectives are explained in detail in following chapter.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study is based on the primary data conducted in Badikhel which is located in Godavari, Lalitpur, Nepal. The primary data were collected from Household (HH) Survey. The study used both descriptive and inferential analysis. The collected data were processed with the help of Microsoft Excel and Statistical Package for Social Survey (SPSS) software.

3.2 Study Area and Rationale for Selection

The research is carried out in Badikhel in the year 2020. Badikhel is located in Godawari Municipality in Province No. 3 of central Nepal. It is bordered with Godawari in the east and the north, Jharuwarasi and Chapagaon in the west and Lele and Chapagaon in the south. It is comprised of caste groups like *Paharis, Brahmins, Chhetris, Magar, Tharu, Tamang, Newar, Kami, Damai, Majhi* and others (CBS, 2011). It has a dominant of an ethnic group, *Paharis*. They are considered as socially, educationally and economically backward people in the society. The people in Badikhel are mostly involved in activities like agriculture, bamboo craft, fishing, construction, carpentry, etc.

In Badikhel, the phenomenon of wage differences and informality has not been studied earlier. There is a significant knowledge gap when it comes to understanding the main characteristics of labor market including informal employment. Since there are different ethnic groups and they are engaged in different occupations, the study on the wage differential in various occupations is appropriate in Badikhel.

3.3 Nature and Sources of Data

For this study, primary data is the major source of information for analysis. The primary data is collected through field survey using structured questionnaires. The study used qualitative as well as quantitative data.

3.4 Population, Sample and Sampling Procedure

Badikhel is a community with a population of 3,576 and a household of 791 as per National Population and Housing Census 2011, Government of Nepal, Central Bureau of Statistics (CBS). The sample size for the study is 76 households, i.e, 33%, which is representative of population. The sample was stratified into Pahari and Non-Pahari community. Non-Pahari community can be classified as Urban since it is developed. Pahari community can be classified as Peri-Urban since it is less developed. The cluster is the ward for the study. Within each stratum, clusters have been selected on the basis of community and geographical regions. The cluster has been identified as those communities that have formal and informal wage earners and salaried. Three clusters have been selected. Two clusters were from Non-Pahari community and one was from Pahari community. Ward No. 1, 3 and 4 are cluster 1, 2 and 3 respectively. The data have been collected from 126 wage earners around the studied site; 98 from urban and 28 from Peri-urban as shown in the table 3.1. The details of sampling procedure are given in ANNEX B.

Table 3.1: Number of Household Surveyed With Their Proportion

Ward No.	Studied site / Community	Regions	Total Household	No. of HH surveyed	Percentage of sample	No. of Wage Earners
1	Non-Pahari	Urban	127	30	23.62	53
3	Non-Pahari	Urban	89	27	30.33	45
4	Pahari	Peri-Urban	91	19	20.87	28
Total			307	76		126

Source: Field Survey, 2020

3.5 Method of Data Collection

Questionnaire survey was carried out for primary data collection.

3.5.1 Primary Data Collection

The questionnaire for the study was prepared in English language. The questionnaire was based on the survey questionnaire used in the third Nepal Labour Force Survey

(NLFS III) 2017/18. The questionnaires comprised of 73 questions in nine sections. The nine sections in the questionnaire were designed to capture data on household information, children education, housing and basic utilities, identification of employed and characteristics of main paid job/business activity, characteristics of secondary paid job/business activity, working time, employment related income and training received, goods and land information, other sources of income/remittance/transfer income. Besides, a set of open-ended questions were used at the end of all sections that allowed the respondents some flexibility to discuss their views as openly as possible. A copy of the questionnaire is in ANNEX C. Initially the questionnaire was prepared in English. Then the final English version was translated into Nepali as Nepali was preferred in the studied site. The questionnaires were filled up by the researcher by paying a visit at the households in Badikhel.

The respondents were wage earners from the selected households. The wage earner of the household was the person selected by the household members to answer the questions. The respondent of the household could be either male or female. Respondents were classified into two groups: formal salaried and informal salaried as explained in Tansel and Kan (2012). Self-employed and unpaid family workers whose earnings are difficult to measure are excluded.

3.6 Data Analysis, Tools and Techniques

The collected data and information from HH Survey was analyzed using Statistical Package for Social Science (SPSS) software, Microsoft Excel 2007 and STATA. SPSS and Microsoft Excel were used for descriptive analysis. STATA was used for inferential analysis.

For the analysis, the hourly wage is generated converting weekly and monthly wages into daily by dividing with 7 days and 30 days respectively. For example, x_1 and x_2 be the weekly and monthly wages respectively. Then, daily wage = $x_1/7$ or $x_2/30$ respectively, considering 7 days in a week and 30 days in a month. Then, the hourly wage is calculated by dividing daily wage with number of working hours per day of a worker.

i.e. hourly wage = daily wage / working hours per day of a worker

Similarly, nine occupational categories are defined based on NLFS for wage earners. However, data related to occupational category number six – skilled agriculture, forestry and fishery workers is not included because none of the respondents in the study belonged to this category during field survey. Also, some of the occupational categories are combined due to less sample size. Armed Forces is combined with Professionals. Service and sales workers is combined with clerical support workers. Plant, Machine Operators and Assemblers is combined with Craft and related trade workers. The study used six occupational categories as shown in ANNEX C. The wage earners were asked about the type of activities that they carried out. The work activities could be the formal as well as informal. The definition of informal employment in the study is taken from Nepal Labor Force Survey (NLFS) report. The report defines the informal employment as: (i) who operate their own business with no employees, (ii) private unregistered company workers or if registered only employing less than ten persons, (iii) those family members working on family business, and (iv) those not having paid leave by the employer or where the employer does not pay social security contribution for the worker.

On the basis of education structure of Nepal, education is categorized into: 1) Never attended school, 2) Informal Education, 3) Below Primary, 4) Primary, 5) Lower Secondary, 6) Higher Secondary/Certificate, 7) Technical Degree, 8) Bachelor's and 9) Master's and above. These categories were re-grouped into five categories for analysis as 1) Primary and below, 2) Lower Secondary, 3) Higher Secondary, 4) Bachelor's Degree and 5) Master's and above.

Based on literature review, wage depends on different variables such as education, experience, trainings, skills, age, gender, regular employment, workplace and other factors relating to respondents' features or employment characteristics. In this study, it can be hypothesized that hourly wage depends on independent variables: informal employment, years of schooling and other control variables: age, gender and wealth quintile.

3.6.1 Model Specification

To explain the wage differential between formal and informal employment, Mincer earning model, Mincer (1974), which can be traced back to the human capital theory of Becker (1962, 1964), Schultz (1960, 1961) and Mincer (1958, 1962) is introduced in the study. Addabbo, T., & Favaro, D. (2011), Urdinola and Tanabe (2012), Tansel, A., & Kan, E. O. (2012), Thapa-Parajuli, R. B. (2014) and Bhattarai, K. (2017) also examined similar model in their studies. The Mincer earning model has been used in the study to assess whether the wage of worker employed in informal jobs, on an average, is lower than that of those who employed in formal jobs.

We model logarithm of hourly wage in Nepali currency as the dependent variable. Although various functional specifications of the dependent variable have been tried in the literature, the logarithmic form proved to be the most successful one, both in terms of satisfying the assumption of heteroscedasticity assumption and maximizing the explanatory power of the regression (Dougherty & Jimenz, 1991). The model assumes that three main determinants of individual wages are education, work experience and its square. We extend the model by including a number of variables which are frequently used in the empirical literature, as with most studies. In order to estimate the formal/informal wage difference, the Mincer earning model can be expressed as:

$$LnW = \alpha + \beta_j X_i + \varepsilon_i \quad \dots \dots \dots (1)$$

Where hourly wage is measured in log form, α is intercept, X_i are set of explanatory variables and ε_i is an error term.

Equation (1) can be extended as:

$$LnW = \alpha + \beta_1 inf_emp + \beta_2 age + \beta_3 g_dummy + \beta_4 sch_years + \beta_5 w_quintile + \varepsilon_i \dots (2)$$

Where log hourly wage is regressed with informal employment recorded as ‘1’ if informal, ‘0’ otherwise, age, gender dummy recorded as ‘1’ if male, ‘0’ otherwise, years of schooling and wealth quintile.

CHAPTER IV

DATA ANALYSIS AND DISCUSSIONS

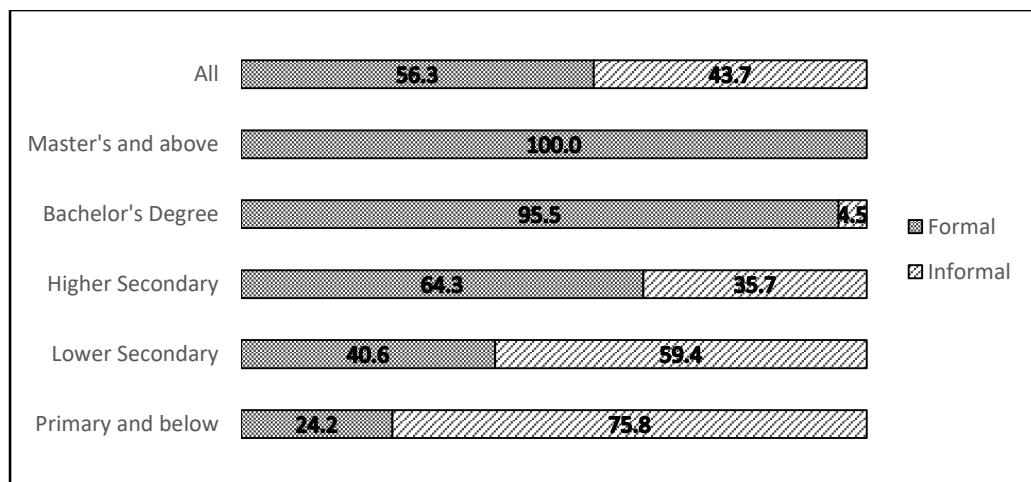
4.1 Introduction

This chapter presents the descriptive data analysis, discussion of the findings and their interpretation relating to the research questions outlined in chapter one and estimated equations specified in chapter three. The initial sub-sections of this chapter is the descriptive analysis of data and variables used in the study followed by the summary of regression results and their interpretations.

4.2 Determinants of Informal Employment

This section presents the profile of informal employment from the survey data in Badikhel. The profile consists in a set of data describing the share of workers in the informal employment according to various characteristics such as their level of education, age, gender, marital status and occupation. The analysis also includes the informality profile for three different wards.

Figure 4.1: Labor Informality as % of Total Employment by Education

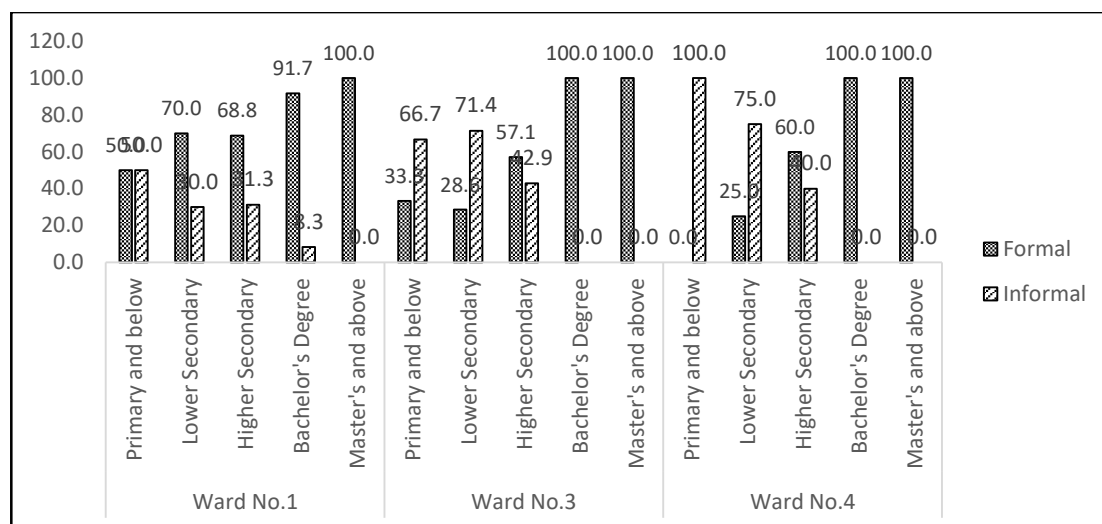


Source: Field Survey, 2020

Level of education is a possible source of informality. It is found that higher the level of education, less likely to participate in the informal employment. This may also mean that highly educated people get mostly formal jobs in Badikhel. More education is associated with a lower percentage of being employed in the informal jobs as shown in figure 4.1. 56.3 percent of education is associated with formal employment whereas 43.7 percent is associated with informal employment. Primary education and below has

the highest association with 75.8 percent of working in the informal employment compared to other levels of education. Attaining Bachelor’s degree has the lowest association with 4.5 percent of working in the informal employment. Master’s and above is predominantly a formal employment.

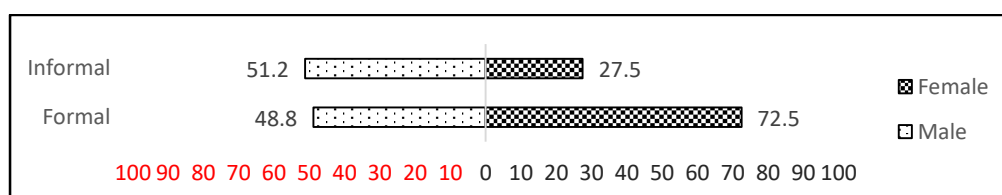
Figure 4.2: Informality as % of Total Employment in Selected Wards by Education



Source: Field Survey, 2020

Informality by education varies across wards. Ward no. 1 has the lowest association with informality in terms of education. Figure 4.2 shows that attaining Bachelor’s degree in ward no. 1 has 8.3 percent working in informal employment. Master’s degree and above has no association with informal employment. Similarly, in wards 3 and 4, none of the respondents attaining Bachelor’s degree and Master’s and above are associated with informal employment. This is due to the fact that ward no. 4 being resided with Paharis, there was only a family who belonged to Non-Pahari attaining Bachelor’s and Master’s degree.

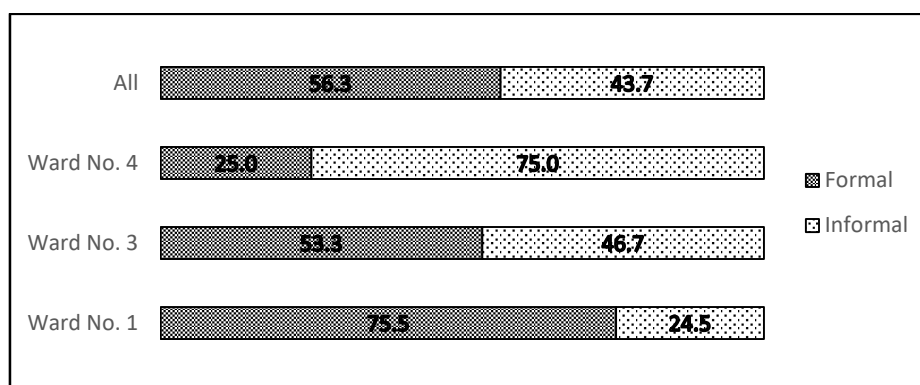
Figure 4.3: Labor Informality and Total Employment by Gender (%)



Source: Field Survey, 2020

Figure 4.3 shows that majority of the workers belong to the formal employment across gender. Male is more inclined to working in informal employment. 51.2 percent of male is associated to the informal employment. On the contrary, female is associated with 27.5 percent of working in informal employment. In Badikhel, female is less inclined to working in the informal employment which is an interesting data. In table A1 of ANNEX, A, the chi-squared test indicates that gender is statistically significant ($p < 0.1$) with informality.

Figure 4.4: Labor Informality and Total Employment (%)



Source: Field Survey, 2020

Working in formal employment varies across wards as shown in the figure 4.4. Ward no. 1 has the lowest association with 24.5 percent of being employed in informal employment. On the contrary, ward no. 4 has the highest association with 75 percent of being employed in informal employment. This is probably due to the fact that ward no. 4 is resided with Paharis.

Table 4.1: Informality and Socio-economic Status

	Formal	Informal
Age Groups		
15 - 24	6 (30.00)	14 (70.00)
25 - 34	32 (69.57)	14 (30.43)
35 - 44	18 (54.55)	15 (45.45)
45 - 54	11 (52.38)	10 (47.62)
56 and older	4 (66.67)	2 (33.33)
Ethnicity		
Brahmin/Chhetri/Thakuri	61	18

		(77.22)	(22.78)
	Janajati / Aadibasi	1	4
		(20.00)	(80.00)
	Pahari	8	27
		(22.86)	(77.14)
	Dalit	1	6
		(14.29)	(85.71)
<hr/>			
Marital status			
	Unmarried	17	15
		(53.13)	(46.88)
	Married	54	40
		(57.45)	(42.55)
<hr/>			
Occupation			
	Legislators, Senior Officials and Managers	18	N/A
		(100.00)	N/A
	Professionals and Armed Forces	18	N/A
		(100.00)	N/A
	Technicians and associate professionals	19	5
		(79.17)	(20.83)
	Sales, service and clerical	12	6
		(66.67)	(33.33)
	Craft, Machine Operators and related trade workers	3	17
		(15.00)	(85.00)
	Elementary occupations	1	27
		(3.57)	(96.43)

Source: Author's own elaboration
N/A stands for 'Not Available'

Descriptive statistics in Table 4.1 reports the fraction of informality workers by age groups followed by ethnicity, marital status and occupation. In case of Badikhel, there are fewer opportunities for fresh and young workers to work formally in the beginning, so people enter into the informal employment as shown in the given data. Most of the country cases also suggest that fresh age group works informally more. As an individual gets older, they are more likely to work in the formal employment. The data indicates the typical characteristic of the informal employment that higher the age group, higher chances to work formally with full of benefits such as paid and sick leaves, social securities and insurances.

Ethnicity is another determining factor for informal employment in Badikhel. Dalit followed by Janajati and Pahari are more likely to participate in the informal

employment. It might be the cause that they possess skills and qualifications suitable for informal employment. Another cause might be the administrative hurdles that they are not likely to face to participate in the formal employment. Majority of them are opted to informal jobs for their survival.

Marital status of an individual is another determining factor for informal employment in Badikhel. The statistics show that unmarried are more inclined to informal employment. The married individuals are less likely to work in the informal jobs. It might be the cause that they can allocate time for the rituals and family matters.

Occupation of an individual also determines whether an individual participates in the formal or informal employment. The statistics display two notable patterns. First, workers with elementary occupation display higher association with informality. It might be the cause that they possess skills and qualifications suitable for informal employment. Second, the occupational category 1 (Legislators, Senior Officials and Managers) and category 2 (Professionals and Armed Forces) are predominantly a formal employment. It might be the cause that these two occupational categories require highly skilled, educated and competent individuals.

4.3 Wage Differential

This section starts with descriptive data analysis relating to various factors determining the wage of the workers in Badikhel. To provide more insights about the wage differences, this section assesses wage differences through regression analysis using a Mincer Earning Model.

Table 4.2: Wage (In NRs.)

	N	Min	Max	Mean	Sd
Hourly	126	21	250	92.99	47.4
Weekly	126	233	14000	5079.48	2482.58

Source: Author's own calculation

Table 4.2 displays the descriptive statistics for hourly and weekly wages. The worker earned a mean of Rs. 92.99 per hour and Rs. 5,079.45 per week in Badikhel. The hourly wage ranges from Rs. 21 to Rs. 250 whereas the weekly wage ranges from Rs. 233 to Rs. 14,000 indicating high standard deviation.

Table 4.3: Wage Differential (In NRs.)

	Formal	Informal
Education		
Primary and below	100.38	96.32
Lower Secondary	69.92	66.74
Higher Secondary	96.50	82.40
Bachelor's Degree	110.62	114
Master's and above	121.00	N/A
Gender		
Male	113.83	90.66
Female	80.07	56.82
Age Groups		
15 - 24	85.17	73.50
25 - 34	102.03	68.86
35 - 44	85.83	92.07
45 - 54	114.73	102.30
56 and older	130.00	108.50
Ethnicity		
Brahmin/Chhetri/Thakuri	102.31	83.33
Janajati / Aadibasi	146.00	46.50
Pahari	79.13	93.37
Dalit	83.00	67.83
Marital status		
Ummarried	103.94	78.53
Married	98.81	85.90
Occupation		
Senior Officials and Managers	130.72	N/A
Professionals and armed forces	103.83	N/A
Technicians and associate professionals	92.58	101.00
Sales, service and clerical	66.58	56.17
Craft, Machine Operators and related trade workers	89.00	76.71
Elementary Occupations	56.00	91.41

Source: Author's own elaboration

N/A stands for 'Not Available'

Descriptive statistics in Table 4.3 presents wage differential in formal and informal employment by education, gender, age groups, ethnicity, marital status and occupation. The data indicates that male workers, workers with higher level of education, workers in the oldest age group and workers with Janajati / Aadibasi ethnicity, show higher average wages in the formal employment. In terms of marital status, the statistics reveal that wages are dominated by single in the formal employment whereas married dominates in the informal employment. By occupation, workers in category 1 (Legislators, Senior Officials and Managers) display the highest average wage rates followed by category 2 (Professionals and armed forces) with no association with the informal employment. The average wage of formal workers is likely to earn more than informal workers.

As one can clearly see, there are discrepancies on average hourly wages amongst educational level. The data shows that a worker having primary education and below in Badikhel earned more than those having lower and higher secondary education. This may be due to the fact that workers with primary education and below are more inclined to informal employment and their working hours is high. For some, the primary occupation is seasonal and they get paid more during their seasonal peaks. On the contrary, returns to investments in lower secondary and higher secondary are significant in the formal and informal employment. A formal worker in Badikhel who has completed lower secondary and higher secondary more than an informal worker with same level of education. There is an interesting data on workers who have completed Bachelor's degree. An informal worker with Bachelor's degree earns more than a formal worker with same level of education. It is found that workers with higher educational degree are likely to have higher hourly wages, on average. This is particularly true for the workers having Master's and above who received the highest wages and enjoy benefit from this educational level the most and interestingly, they have no involvement in the informal employment.

With respect to age groups, the wage differential of young and pre-retirement (Glinskaya and Lokshin, 2005) workers is lower than wage differential of workers in the twenty-five to thirty-four age range and the oldest age group, on average. Interestingly, the informal workers in the thirty-five to forty-four age range earned more than the formal workers with same age group. In figure A1 of the ANNEX A, the

frequency distribution of the hourly wage of individuals in wards 1, 3 and 4 is plotted. The hourly wage distribution is asymmetric. This may indicate a smaller number of people have higher wage rates in all the wards.

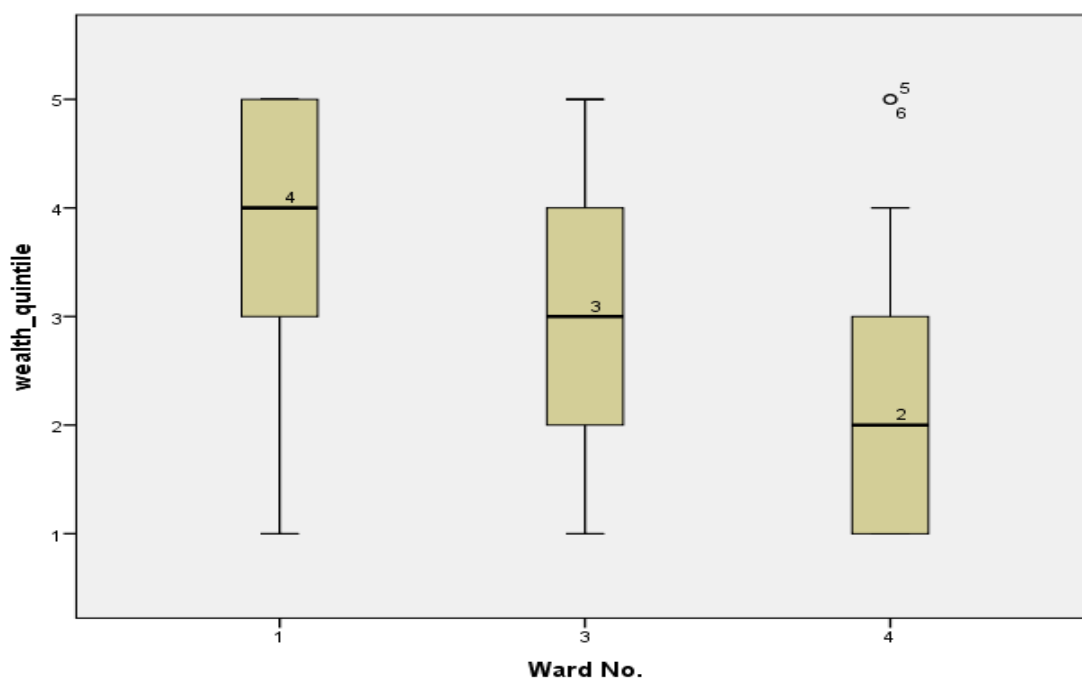
Table 4.4: Occupation, Educational level and Gender (%)

Occupation	Primary and below		Secondary		Higher Secondary/Certificate		Bachelor's Degree		Master's and above	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Legislators, Senior Officials and Managers	9.09	18.18	4.17	12.50	6.25	16.67	25.00	16.67	50.00	0.00
Professionals and Armed Forces	0.00	0.00	4.17	0.00	25.00	8.33	37.50	33.33	25.00	66.67
Technicians and associate professionals	0.00	0.00	16.67	12.50	31.25	41.67	18.75	50.00	25.00	33.33
Sales, service and clerical	9.09	9.09	20.83	50.00	12.50	25.00	6.25	0.00	0.00	0.00
Craft, Machine Operators and related trade workers	27.27	27.27	20.83	12.50	12.50	8.33	12.50	0.00	100.00	0.00
Elementary Occupations	54.55	45.45	33.33	12.50	12.50	0.00	0.00	0.00	0.00	0.00

Source: Author's own elaboration

Table 4.4 reports occupation by education and gender. It shows that in the elementary occupation, there is a larger share of male workers with primary and below than females with same education. A greater share of male with Higher Secondary/Certificate, Bachelor's Degree and Master's and above are concentrated in the top two occupational categories. The proportion on the same occupations is slightly lower for females with same level of education except for the females with Master's and above in occupational category 2 (Professionals and Armed Forces). This indicates significant gender based segregation in the labor market with different levels of education.

Figure 4.5: Wealth Quintiles Among the Respondents



Source: Field Survey, 2020

Figure 4.5 shows wealth distribution among the three clusters using box plot diagram. According to the box plot, first cluster which is ward no. 1 has relatively wealthier respondents. The sample ward no. 3 has uniformly distributed wealth quintile. The ward no. 4 has predominantly less wealthy respondents. When we mix all together, the sample will be representative in terms of wealth index. In figure A3 of ANNEX A, the data shows that among the three different clusters which are wards, cluster 4 and cluster 1 have relatively lowest and highest wealth quintile respectively. 43.5 percent of the lowest quintile exist in ward no. 4. This indicates that ward no. 4 seems more vulnerable that the individuals in there are low educated and they are more inclined to informal employment for their survival. They have low wages. Only 7.4 percent being wealthiest in ward no. 4 signals the possibility of vicious circle of poverty. On the contrary, 66.7 percent being wealthiest in ward no. 1 indicates that they are more educated and more inclined to formal employment. They have higher wages than individuals residing in other wards. This indicates that the richer are getting richer and the poorer are falling into more vulnerable zone of poverty.

Table 4.5: Wage Difference by Informality and Gender (t-test)

	Formal	Informal	dif	t value
Hourly wage	100.04 (n=71)	83.89 (n=55)	16.15* (8.425)	1.9
Weekly wage	5442.47 (n=71)	4610.89 (n=55)	831.58* (441.466)	1.9
	Male	Female		
Hourly wage	101.977 (n=86)	73.67 (n=40)	28.30*** (8.747)	3.25
Weekly wage	5669.01 (n=86)	3812.00 (n=40)	1857.01*** (446.942)	4.15
	Formal	Informal		
Hourly wage - male	113.83 (n=42)	90.65 (n=44)	23.17** (10.26)	2.25
Hourly wage - female	80.06 (n=29)	56.81 (n=11)	23.25* (13.24)	1.75

*** p<0.01, ** p<0.05, * p<0.1: n is observation and SE is Standard Error in parenthesis

Source: Author's own calculation

Table 4.5 statistically presents that the hourly and weekly wages are significant ($p<0.1$) with informality. The formal workers are likely to have higher wages than the informal workers.

In the second stage of analysis, the hourly and weekly wages are significant ($p<0.01$) with gender. It is noteworthy that there is a gender pay gap prevalent in Badikhel. There is a significant discrepancy on average hourly and weekly wages between male and female. The male workers are likely to earn more than the female workers. The Mann-Whitney U Test in figure A2 of the ANNEX A, also shows that hourly wage is statistically significant ($p<0.01$) with gender.

In the third stage of analysis, the hourly and weekly wages within same gender between male and female are significant ($p<0.05$ and $p<0.1$ respectively) with informality. It is notable that there is a wage difference within male and female prevalent in Badikhel. On average, wage differential within female is higher than the wage differential within male. Within male, the formal male workers are likely to have higher wages than the informal male workers. The similar is the case within female. Therefore, changes in wages between gender and variation in wages within gender in informality equally contribute to rising wage inequality levels in Badikhel.

Table 4.6: Wage Difference by Occupation and Gender

Occupation	Wage Difference	Hourly wage (in Rs.)	
		Male	Female
Legislators, Senior Officials and Managers	22 (15.9%)	138	116
Professionals and armed forces	23 (20.9%)	110	87
Technicians and associate professionals	23 (22.1%)	104	81
Sales, service and clerical	29 (38.1%)	76	47
Craft, Machine Operators and related trade workers	54 (58.6%)	92	38
Elementary occupations	20 (21.2%)	94	74

Source: Author's own calculation

Table 4.6 shows the size of average hourly gender pay gap varied considerably among major occupational categories. In all major occupational categories presented in the given table, average hourly wage for male was higher than for female. Among the six major occupational categories, the hourly pay gap was particularly high for Category 5 (Craft, Machine Operators and related trade workers). Data shows that an employed male in Category 5 earns per hour 59 percent more than an employed female. On the contrary, the hourly gender pay gap was relatively low for Category 1 (Legislators, Senior Officials and Managers) where hourly wage of both male and female were the highest. Data shows that an employed male in Category 1 earns per hour 16 percent more than an employed female. This could indicate job discrimination effect that could further lead to lower expected earnings which may discourage female from entering the labor force.

Table 4.7: Mincer Model of Wage Determination

VARIABLES	Hourly wage in log scale		
	(1)	(2)	(3)
Years of Schooling	0.0208*		
	(0.0114)		
Wealth Quintile		0.0816**	
		(0.0327)	
Informal Employment			-0.287***
			(0.0886)
Age			0.00993**
			(0.00397)
Dummy (Male1)			0.407***
			(0.0941)
Constant	4.177***	4.151***	3.896***
	(0.131)	(0.110)	(0.164)
Observations	126	126	126
R-squared	0.026	0.048	0.205

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Author's own calculation

Table 4.7 presents the coefficients of Mincer equations using OLS regressions. Specification (1) only includes years of schooling. Years of schooling is positive and significant ($p<0.1$) with hourly wage other things remaining the same. This indicates that an individual with more education has highest chance to earn more. Returns to investment in education is quite significant in Badikhel. With the increase in years of schooling, hourly wages increase by 0.02% per year.

The wealth quintile in specification (2) is also positive and statistically significant ($p<0.05$) with hourly wage other things remaining the same. The regression result shows that the workers with higher wealth quintile significantly earn higher hourly wage than those who are in the lower wealth quintile. The higher wealth quintile with the higher hourly wage indicates that the rich get richer. It is noteworthy that the workers in the higher wealth quintile are more likely to have privilege to higher education and the highly educated workers are more inclined to formal employment.

The regression results reported in specification (3) reveals that informal employment is another determining factor of wage in Badikhel. The age of the worker followed by gender are also statistically significant variables to determine wage in Badikhel. The result indicates that the informal workers on average earn significantly less than those who are formally employed. Informal employment is negatively significant with hourly wage. In particular, the informal workers earn approximately 0.28% less than those who are formally employed. Results indicate that the average worker in the informal employment is somehow disadvantaged than the average worker in the formal employment. Those who are not entitled to the benefits such as paid and sick leaves, social security contribution from employer, they are being paid less. The regression coefficient of informal employment in specification (3) shows that a worker who earns 0.28% more wage hourly has less likely to participate in the informal employment. This may indicate that as people get more wage, they are more likely to shift their job to the formal employment.

Age is another determining factor for wage in Badikhel. The result shows the typical characteristic of wage earning that higher the age of a worker, higher is the chances to earn more wages. The regression coefficient of age indicates that the older workers are likely to earn 0.009% more than the younger workers.

Another determining factor for wage is gender. The result shows that the male workers significantly earn higher than female workers. The male workers are likely to earn 0.40% more than the female workers in Badikhel as expected in the context of Nepalese society.

As a whole, the regression results are in line with the descriptive analysis and the traditional theory that the formal workers, the higher age groups and the male workers are significantly paid higher than their counterparts.

All the regression models report good fit. The explanatory power of the models ranges from 3 percent to 21 percent, though it seems small. The sample size for the study is small. All the coefficients are significant as shown in the given table.

4.4 Informality and Perceived School Performance

Parental employment and children’s school performance are analyzed in this section to study the influence of parental employment on children’s educational performance.

Table 4.8: Parents Perception on Children’s Education (%)

Items	Formal	Informal
Good	60.00	59.26
Average	40.00	37.04
Bad	0.00	3.70

Source: Author’s own calculation

Table 4.8 statistically presents that children performing good and average whose parents are in the formal employment are 60.00 and 40.00 percent respectively. The formally employed parents perceive that their children’s educational performance in the next year will not be bad. On the contrary, children performing good and average whose parents are in the informal employment are 59.26 and 37.04 percent respectively which are comparatively lower than those whose parents are in the formal employment. The informally employed parents perceive that their children performing bad or likely

to perform bad in the next year constitutes 3.70 percent. This shows that parents informality influence children’s educational performance. The data reveals that majority of the children exhibit good educational performance whose parents are formally employed.

In Table A2 of ANNEX A, it indicates that an increase in parents’ no. of years of schooling results in improvement in children’s educational performances. The data shows that the children with good and average educational performances had parents with 12 years of schooling (75.00% and 25.00%) and 15 years of schooling (28.57% and 71.43%). This can be attributed to the reason that the more the parents are educated the high chances that they appreciate the value of education and thus can support their children in studies. Highly educated parents can support their children in education through assistance with homework and setting home environment conducive for learning. These results support the findings of Mallan (2009), Eccles (2005) and Rana (2015) that parents’ level of education influences students’ academic performance.

Table 4.9: Parental Education, Children’s Effort and Their Performance (ttest)

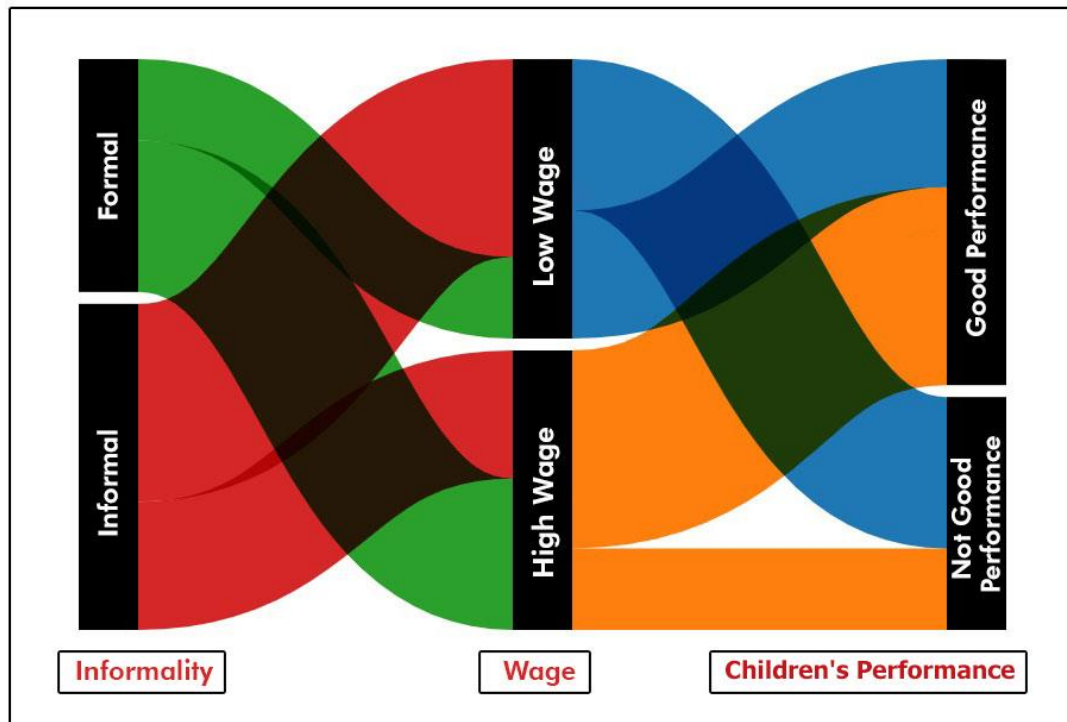
	Formal	Informal	dif	t value
Mothers years of schooling	11.75 (n=20)	6.71 (n=28)	5.03*** (1.226)	4.1
Fathers years of schooling	13.05 (n=20)	8.607 (n=28)	4.44*** (.919)	4.8
Children’s net time effort	94.5 (n=20)	72.14 (n=28)	22.35* (11.99)	1.85

*** p<0.01, ** p<0.05, * p<0.1: n is observation and SE is Standard Error in parenthesis

Source: Author’s own calculation

Table 4.9 statistically shows that mothers’ years of schooling and fathers’ years of schooling are significant (p<0.01) with informality. The children’s net time effort is also significant (p<0.1) with informality of their parents. The children with formally employed parents spend more time on their studies than those with informally employed parents. Therefore, informality matters for children’s educational performance.

Figure 4.6: Informality, Wage and Children's Performance



Source: Author's own elaboration

Figure 4.6 shows association among informality, wage and children's school performance in Badikhel. In the given figure, majority of informally employed parents have low wage than formally employed parents. They perceive that the school performance of their children in the future will not be very good. It might be the cause that due to their low income, they work hard for their family's survival. So, they might not be able to afford good education for their children. The children may have less access or no access to basic school supplies such as pencils, erasers, sharpeners, notebooks. Learning tools such as internet may be out of reach for them. Furthermore, the informally employed parents might be low educated, so they could not support in their children's school education. They might not allocate time for them as well. As a result, the children may not feel the importance of giving net time effort to their education. However, few of the informally employed parents have high wage. They seem optimistic about the future of their children's school performance.

On the other hand, majority of formally employed parents have high wage. They perceive that the school performance of their children in the future will be good. It might be the cause that they are highly educated and they possess knowledge and skills.

Being highly educated and skilled parents, they might feel the need to grow their children as a well-educated adult, so they allocate proper time to support in their children's school education. The next reason might be their high income. Due to their high income, they might afford good education for their children. Their children may have access to all those learning tools needed to have in a quality education. The children themselves may give a sufficient time effort to their education. However, very few of formally employed parents have low wage. They look skeptic about the future of their children's school performance.

Regarding the association among informality, wage and children's school performance, the researcher pursued to find out parents' education and whether it affected on their children's school performance from the open ended questions. Parents admitted that they have low level of education particularly in ward no. 4 and some continued that their low level of education frustrates their involvement in their children's educational activities. Relating to parents' educational level, one parent had these to say;

“I am so willing to help my children in their education but I am very low educated and my educational status really has an adverse effect on my involvement in my children's education. I am unable to assist my children with home work at home and also unable to fully and effectively monitor my children's educational progress.” (*Source: Field data 2020*)

The researcher also sought to find out parents' employment and whether it affected on their children's educational performance. Most parents who are in the informal employment admitted that they get very low time or no time at all to get involved in their children's educational activities. Relating to parents' employment, one parent had these to say;

“I want to get involved in my children's educational activities but I have a work with no fixed time. I have to work from early in the morning to the late in the evening during weekends as well in order to sustain my family. I get a very little time to take rest. Thus, I wish I had a 10 – 5 office job, so I could get time to help to my children in their education.” (*Source: Field data 2020*)

However, either of the parents maintained that they usually create time to monitor their children's education despite the fact that they spend much of their time at work.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSION AND FURTHER EXTENSIONS

5.1 Summary of Findings

The study assessed various socio-economic determinants of informality in Badikhel. Ward No. 4 is among the most informal economies in Badikhel. Badikhel employs about 75 percent of its labor force in Ward No. 4 informally. As a whole, about 43.7 percent of its total employment in Badikhel has its labor force employed informally. On the contrary, wards with more urbanized such as ward no. 1 and 3 are associated with lower levels of informality. Age, gender, education, ethnicity and marital status also constitute important determinants of informality. Informality rates are generally highest among the youngest age group 15-24 indicating about 70 percent of total employment. After age 24, informality rates decrease. Attaining Master's and above is predominantly a formal employment. Attaining Bachelor's degree is associated with about 4.5 percent to be employed informally as compared to those who attained secondary and primary and below. With respect to gender, interestingly, male workers are more inclined to informal employment. Unmarried are more likely to engage in the informal jobs. Pahari and Dalit followed by Janajati are engaged more in the informal employment.

There is a wage differential in formal and informal employment in Badikhel. To examine the wage differential in informality, the Mincer earning model was used. The result showed that the wage of informal workers is significantly lower than that of formal workers. With regards to number of years of schooling, the result showed a significant effect of number of years of schooling on wages. With the increase in number of years of schooling, the high educated workers are likely to have higher earnings. Wealth quintile and age are other positively significant wage determining factors in Badikhel whereas experience of the workers and marital status do not seem to affect wage. Importantly, there is a significant gender wage gap in Badikhel. The gender pay gap reflects disparities that affected mainly female workers. On the one hand, male workers have higher earnings than their female counterparts. On the other hand, wage differential within female workers is even higher than those within male workers.

Based on the analysis, it is found that parental employment influence children's educational performance. Parents with formal employment have children's do well in their educational performance. Mother's and father's number of years of schooling also influence children's educational performance. With the increase in parents' number of years of schooling, they become able to motivate and monitor in their children's education and practice good social behavior. It is also found that children's net time effort is positively significant with informality. Children with their parents in the formal jobs make an effort to perform well in their education than those in the informal jobs. The study revealed that informal workers have lower earning than the formal workers. And the children with formal parents have good educational performance than those with informal parents.

5.2 Conclusion

It can be concluded that along with the informality in Badikhel, there is wage differential between formal and informal employment. Although the informally employed earn significantly less than the formally employed, the informal employment is not found only among the low wages. There are very few formally employed who have low wages as well. Furthermore, gender disparity in earnings is prevalent in Badikhel. Mainly, the female workers are affected by gender wage difference.

Our finding indicates that people with informal employment are already vulnerable that they are less paid, work more, and they do not enjoy any social security provision. On top of it they seem less optimistic regarding their future generation that they think their children might not perform better in the future. The household capital formation through education might be worsen in the days to come leading a vulnerable household further marginalized. With respect to household human capital formation, informal employment has an influence on quality of life. Investment to education, healthcare, trainings, level of income are the factors which contribute to human capital formation. Healthy, skilled, trained, experienced people are assets for an economy. The informally employed people have low wage. They cannot afford good healthcare services since they work very hard for their family's survival. They might be low educated and they could not help in their children's school education. As they face financial challenges

and uncertainty, school dropout and child labor may occur. They themselves are uncertain about their future growth. Thus, they perceive that their children's school performance is not good. They look skeptic about their children's growth in the future. In the long run, parental informal employment affects their children to accumulate human capital in order to receive higher income and to be highly educated afterwards.

5.3 Further Extensions

Therefore, the studies can be carried out in the informal sector. The policies that shift the low earning sector where informality is widespread to high earning sector would improve earning of workers in Badikhel. Similarly, moving beyond primary education towards secondary and tertiary education would improve earning of workers. Gender wage disparity is a critical issue. Thus, transition from informality to formality is significantly important for Badikhel to improve gender wage disparity. Moreover, the STEM (Science, Technology, Engineering and Mathematics) exam could be conducted to the children to get the accurate results on school performance. The studies can also be done on the factors affecting educational performance at other levels of education such as tertiary level. Lastly, there is still possibility of analyzing the study using more other variables.

REFERENCES

- Addabbo, T., & Favaro, D. (2011). Gender wage differentials by education in Italy. *Applied Economics*, 43(29), 4589-4605.
- Aeberhardt, R., Fougere, D., Pouget, J., & Rathelot, R. (2010). Wages and employment of French workers with African origin. *Journal of Population Economics*, 23(3), 881-905. doi:10.1007/s00148-009-0266-3
- Africa, S.-S. (2016). Informality and Inclusive Growth in Sub-Saharan Africa.
- Ahmed, S., & McGillivray, M. (2015). Human Capital, Discrimination, and the Gender Wage Gap in Bangladesh. *World Development*, 67, 506-524. doi:10.1016/j.worlddev.2014.10.017
- Altman, M. (2015). Formal-informal economy linkages.
- Angel-Urdinola, D. F., & Tanabe, K. (2012). *Micro-determinants of informal employment in the Middle East and North Africa region*. World Bank.
- Bargain, O., & Kwenda, P. (2011). EARNINGS STRUCTURES, INFORMAL EMPLOYMENT, AND SELF-EMPLOYMENT: NEW EVIDENCE FROM BRAZIL, MEXICO, AND SOUTH AFRICA. *Review of Income and Wealth*, 57, S100-S122. doi:10.1111/j.1475-4991.2011.00454.x
- Baron, J. D., & Cobb-Clark, D. A. (2010). Occupational Segregation and the Gender Wage Gap in Private- and Public-Sector Employment: A Distributional Analysis*. *Economic Record*, 86(273), 227-246. doi:10.1111/j.1475-4932.2009.00600.x
- Bhattacharai, K., & Bhattacharai, K. (2017). Determinants of wages and labour supply in the UK. *Chinese business review*, 16(3).
- Bocquier, P., Nordman, C. J., & Vescovo, A. (2010). Employment vulnerability and earnings in urban West Africa. *World Development*, 38(9), 1297-1314
- Card, D. (1999). The causal effect of education on earnings. In *Handbook of labor economics* (Vol. 3, pp. 1801-1863). Elsevier.
- CBS. (2017). *Report on the Nepal Labour Force Survey 2017/18*. Kathmandu, Nepal: Central Bureau of Statistics.
- Cho, J., & Cho, D. (2011). Gender difference of the informal sector wage gap: a longitudinal analysis for the Korean labor market. *Journal of the Asia Pacific Economy*, 16(4), 612-629. doi:10.1080/13547860.2011.621363

- Chong, A., & Gradstein, M. (2007). Inequality and informality. *Journal of public Economics*, 91(1-2), 159-179.
- Correia, F., Erfurth, P., & Bryhn, J. (2018). The 2030 Agenda: The roadmap to GlobALLizaton.
- Dasgupta, S., Bhula-or, R., & Fakthong, T. (2015). *Earnings differentials between formal and informal employment in Thailand* (No. 994896403402676). International Labour Organization.
- Enu Patrick, & Hagan Edmond, A. E., AttahObeng Prudence (2014). Relationship between Education and Wage differentials in Ghana: A Case Study of Accra - a Suburb of greater Accra Region *International Journal of Academic Research in Business and Social Sciences*, 4(1). doi:10.6007/IJARBSS/v4-i1/528
- Falco, P., Kerr, A., Rankin, N., Sandefur, J., & Teal, F. (2011). The returns to formality and informality in urban Africa. *Labour Economics*, 18, S23-S31. doi:10.1016/j.labeco.2011.09.002
- Glinskaya, E., & Lokshin, M. (2005). *Wage differentials between the public and private sector in India*. The World Bank.
- Goldberg, P. K., & Pavcnik, N. (2003). The response of the informal sector to trade liberalization. *Journal of development Economics*, 72(2), 463-496.
- Goldin, C., & Katz, L. F. (1998). The origins of technology-skill complementarity. *The Quarterly journal of economics*, 113(3), 693-732.
- Heckman, J. J., Lochner, L. J., & Todd, P. E. (2006). Earnings functions, rates of return and treatment effects: The Mincer equation and beyond. *Handbook of the Economics of Education*, 1, 307-458.
- Heckman, J. J., Lochner, L. J., & Todd, P. E. (2003). *Fifty years of Mincer earnings regressions* (No. w9732). National Bureau of Economic Research.
- Herrera-Idarraga, P., Lopez-Bazo, E., & Motellon, E. (2015). Double Penalty in Returns to Education: Informality and Educational Mismatch in the Colombian Labour Market. *Journal of Development Studies*, 51(12), 1683-1701. doi:10.1080/00220388.2015.1041516
- Herrera-Idarraga, P., Lopez-Bazo, E., & Motellon, E. (2016). Regional Wage Gaps, Education and Informality in an Emerging Country: The Case of Colombia. *Spatial Economic Analysis*, 11(4), 432-456. doi:10.1080/17421772.2016.1190462

- Hossain, K. A., Haque, S. M., & Haque, A. E. (2015). An analysis of the determinants of wage and salary differentials in Bangladesh. *South Asia Economic Journal*, 16(2), 295-308.
- Hussmanns, R. (2004a). Defining and measuring informal employment. *Geneva: International Labour Office*.
- Hussmanns, R. (2004b). *Measuring the informal economy: From employment in the informal sector to informal employment*: Policy Integration Department, Bureau of Statistics, International Labour Office.
- Juma, S. O. (2016). *Influence of parental socio-economic status on students' academic performance in public secondary schools in tana river county, kenya* (Doctoral dissertation, University of Nairobi).
- Kanbur, R. (2009). Conceptualising informality: regulation and enforcement.
- Kanbur, R. (2017). Informality: Causes, consequences and policy responses. *Review of Development Economics*, 21(4), 939-961. doi:10.1111/rode.12321
- Kapsos, S. (2008). The gender wage gap in Bangladesh. *ILO Asia-Pacific working paper Series*
- Kumar, M., & Ranjan, R. (2015). Wage differential between informal and formal wage worker in India. *Academic Journal of Economic Studies*, 1(4), 9-19.
- Lang, K., & Manove, M. (2011). Education and Labor Market Discrimination. *American Economic Review*, 101(4), 1467-1496. doi:10.1257/aer.101.4.1467
- Lee, J. W., & Wie, D. (2017). Wage Structure and Gender Earnings Differentials in China and India. *World Development*, 97, 313-329. doi:10.1016/j.worlddev.2017.04.016
- Longhi, S., Nicoletti, C., & Platt, L. (2013). Explained and unexplained wage gaps across the main ethno-religious groups in Great Britain. *Oxford Economic Papers-New Series*, 65(2), 471-493. doi:10.1093/oep/gps025
- Mahuteau, S., Mavromaras, K., Richardson, S., & Zhu, R. (2017). Public-Private Sector Wage Differentials in Australia. *Economic Record*, 93, 105-121. doi:10.1111/1475-4932.12334
- Maligalig, D., & Guerrero, M. (2008). *How can we measure the informal sector*. Paper presented at the Philippine Statistical Association, Inc. mid-year conference at the Department of Labor and Employment, Intramuros, Manila.
- Menheere, A., & Hooge, E. H. (2010). Parental involvement in children's education: A review study about the effect of parental involvement on children's school education

- with a focus on the position of illiterate parents. *Journal of European Teacher Education Network*, 6, 144-157.
- Mincer, J. (1958). Investment in human capital and personal income distribution. *Journal of political economy*, 66(4), 281-302.
- Mincer, J. (1962). On-the-job training: Costs, returns, and some implications. *Journal of political economy*, 70(5, Part 2), 50-79.
- Mincer, J. (1974). Schooling, Experience, and Earnings. *Human Behavior & Social Institutions* No. 2.
- Nordman, C. J., & Vescovo, A. (2010). Employment Vulnerability and Earnings in Urban West Africa. *World Development*, 38(9), 1297-1314. doi:10.1016/j.worlddev.2010.02.011
- Rutstein, S. O. (2015). Steps to constructing the new DHS Wealth Index. *Rockville, MD: ICF International*.
- Sindzingre, A. (2006). The relevance of the concepts of formality and informality: a theoretical appraisal. *Linking the formal and informal economy: Concepts and policies*, 58-74.
- ScHildberg-HöriScH, H. (2016). Parental employment and children's academic achievement. *IZA World of Labor*.
- Tansel, A., & Kan, E. O. (2012). The formal/informal employment earnings gap: evidence from Turkey. Available at SSRN 2049336.
- Thapa-Parajuli, R. B. (2014). Determinants of Informal Employment and Wage Differential in Nepal. *Journal of Development and Administrative Studies*, 22(1-2), 37-50.
- Usaini, M. I., & Abubakar, N. B. (2015). The impact of parents' occupation on academic performance of secondary school students in Kuala Terengganu. *Multilingual Academic Journal of Education and Social Sciences*, 3(1), 112-120.
- Yamasaki, I. (2012). *The effect of education on earnings and employment in the informal sector in South Africa* (Doctoral dissertation, Columbia University).
- ILO. (2018). Women and men in the informal economy: A statistical picture (Third edition). International Labor Office, Geneva.
https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf

ANNEXES

ANNEX A

Table A1: Tabulation of Gender Informality status

Gender	Formal	Informal	Total
Male	42	44	86
	48.84	51.16	100.00
	59.15	80.00	68.25
Female	29	11	40
	72.50	27.50	100.00
	40.85	20.00	31.75
Total	71	55	126
	56.35	43.65	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 6.2150 Pr = 0.013
 likelihood-ratio chi2(1) = 6.4075 Pr= 0.011

Table A2: Parental Schooling and Children' School Performance

Parental Years of Schooling	Children' School Performance			Total
	Good	Bad	Average	
0	1 (100.00)	0 (0.00)	0 (0.00)	1 (100.00)
1	0 (0.00)	0 (0.00)	1 (100.00)	1 (100.00)
6	4 (50.00)	1 (12.50)	3 (37.50)	8 (100.00)
8	4 (66.67)	0 (0.00)	2 (33.33)	6 (100.00)
10	7 (63.64)	1 (9.09)	3 (27.27)	11 (100.00)
12	9 (75.00)	0 (0.00)	3 (25.00)	12 (100.00)
15	2 (28.57)	0 (0.00)	5 (71.43)	7 (100.00)
17	1 (50.00)	0 (0.00)	1 (50.00)	2 (100.00)
Total	28 (58.33)	2 (4.17)	18 (37.50)	48 (100.00)

Figure A1: The Frequency Distribution of Hourly Wage by Wards

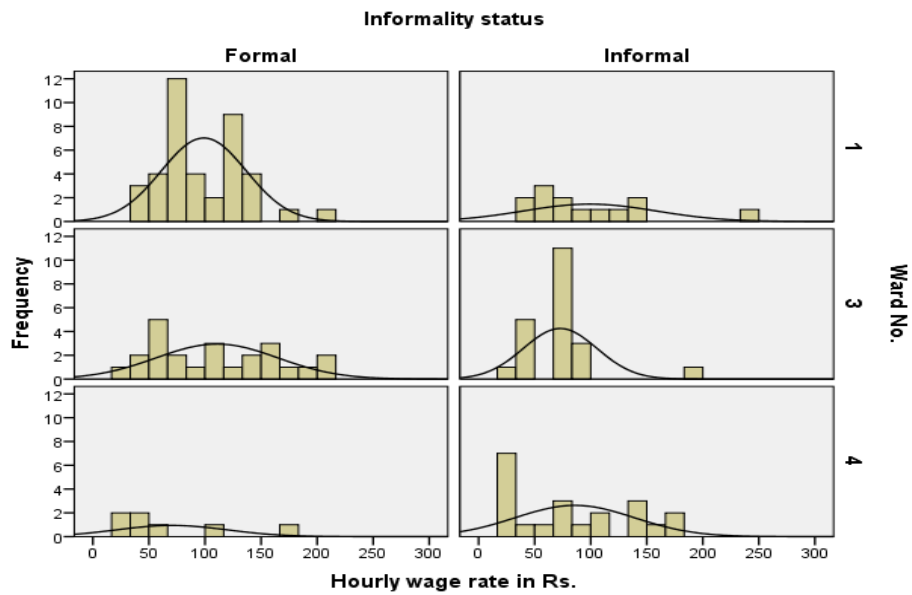


Figure A2: Mann-Whitney U Test

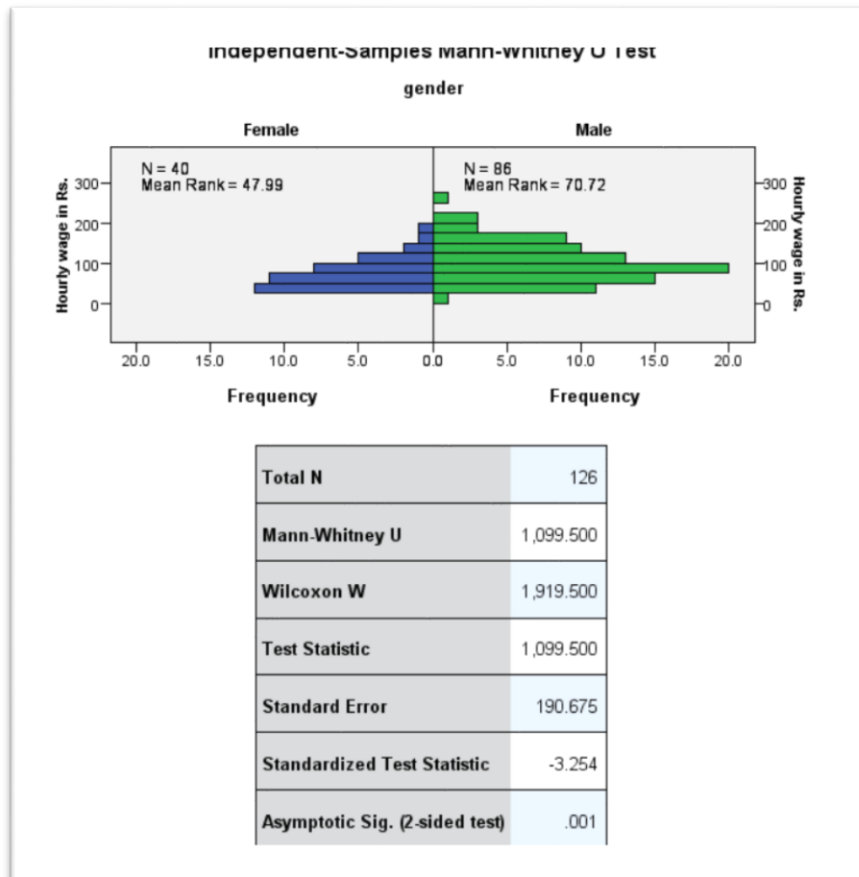
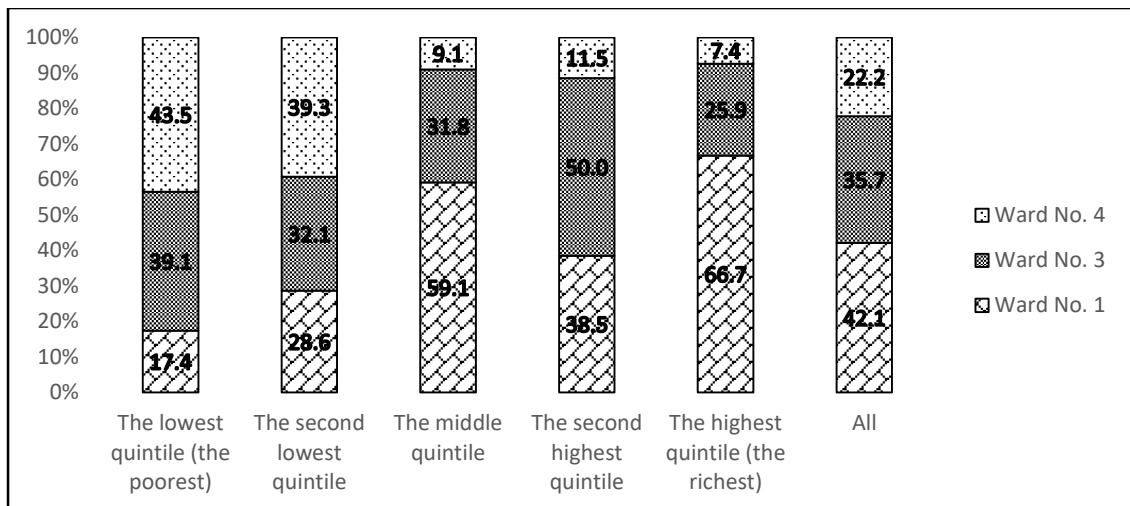


Figure A3: Wealth Quintiles



Name of the Variable that were used to construct the wealth index for each of the 76 households

House Ownership

Material of house fountain

Material of house outer wall

Material of house roof

Rented out a part of dwelling unit

Source of drinking water

Toilet facilities

Source of lighting

Email / Internet facilities

Kind of fuel

Has a refrigerator

Has an oven

Has a washing machine

Has a furniture and fixtures

Has an electric items

Has a gas

Has a television

Has a camera and radio

Has a motorcycle
Has a bicycle
Has a car or such vehicle
Has a sewing machine
Has a telephone
Has a mobile phone
Has a computer / laptop
Own land

A3: Construction of Household Asset-Based Wealth Index

To determine the indicator variables, all the household assets and utility services from questionnaire were included. The identified variables were all set to binary variables as (1=Yes, 0= No): This was done using the SPSS. The first wealth index was generated using the command ‘Count Values Within Cases’. The wealth index as created is a continuous variable that represents the household’s wealth. The higher the score of the index, the wealthier the household. Secondly, the command ‘Rank cases’ was used and the new variable ‘Rwealth’ was obtained. ‘Rwealth’ is the rank of wealth index. Thirdly, the wealth score was created using the command ‘Compute variable’. In the fourth and the last step, the wealth quintiles were achieved using the appropriate wealth score. The wealth score values were determined that correspond to the four cut point values of the quintiles (<20%, <40%, <60% and <80%). A new variable for the quintiles was created and recode for those wealth score values less than the first cut point, equal to the first cut point and less than the second cut point, equal to the second cut point and less than the third cut point, equal to the third cut point and less than the fourth cut point, and greater than the fourth cut point. The four steps of wealth construction were performed using the Statistical program for Social Sciences SPSS.

ANNEX B

Sampling Procedure

The households were selected from the list using systematic random sampling with an interval of three. For Ward No.1, we first calculated the sampling interval by dividing the total number of households (127) by one-third number (33%) of households (42). The sampling is 3. We then selected one household randomly, in this case 5. Household #5 was the first household. We then listed starting with household #5 and selected each 3rd household. The second selected household was 5+3, or #8, then #11, #14, #17 and continued until each ward was completed. The same process was applied for peri-urban.

ANNEX C

Nepal Standard Classification of Occupation (NSCO)

1. SENIOR OFFICIALS AND MANAGERS

- 111 Legislators
- 112 Government officials
- 114 Officials of special interest organizations
- 121 Directors and chief executives
- 122 Production and operations department managers
- 123 Other department managers
- 131 General managers/managing proprietors

2. PROFESSIONALS AND ARMED FORCES

- 211 Physicists, chemists and related professionals
- 212 Mathematicians, statisticians and related professionals
- 213 Computing professionals
- 214 Architects, engineers and related professionals
- 221 Life science professionals
- 222 Health professionals, except nursing
- 223 Nursing and midwifery professionals
- 231 College, university and higher education teaching professionals
- 232 Secondary education teaching professionals
- 233 Primary and pre-primary education teaching professionals
- 234 Special education teaching professionals
- 235 Other teaching professionals
- 241 Business professionals
- 242 Legal professionals
- 243 Archivists, librarians and related information professionals
- 244 Social science and related professionals
- 245 Writers and creative or performing artists
- 246 Religious professionals
- 011 Armed Forces

3. TECHNICIANS AND ASSOCIATE PROFESSIONALS

- 311 Physical and engineering science technicians
- 312 Computer associate professionals
- 313 Optical and electronic equipment operators
- 314 Aircraft controllers and technicians
- 315 Safety and quality inspectors
- 321 Life science technicians and related associate professionals
- 322 Modern health associate professional, except nursing
- 323 Nursing and midwifery associate professionals
- 324 Traditional medicine practitioners and faith healers
- 331 Primary education teaching associate professionals

- 332 Pre-primary education teaching associate professionals
- 333 Special education teaching associate professionals
- 334 Other teaching associate professionals
- 341 Finance and sales associate professionals
- 342 Business services agent and trade brokers
- 343 Administrative associate professionals
- 344 Customs, tax and related government associate professionals
- 345 Police inspectors and detectives
- 346 Social work associate professionals
- 347 Artistic, entertainment and sports associate professionals
- 348 Religious associate professionals

4. SALES, SERVICE AND CLERICAL

- 411 Secretaries and keyboard-operating clerks/assistants
- 412 Numerical clerks/office assistants
- 413 Material-recording and transport clerks/office assistants
- 414 Library, mail and related clerks/office assistants
- 419 Other office clerks/assistants
- 421 Cashiers, tellers and related clerks/office assistants
- 422 Client information clerks/office assistants
- 511 Travel attendants and related workers
- 512 Housekeeping and restaurant services workers
- 513 Personal care and related workers
- 514 Other professional services workers
- 515 Astrologers, fortune-tellers and related workers
- 516 Protective service workers
- 521 Fashion and other models
- 522 Shop salespersons and demonstrators
- 523 Stall and market salespersons

5. CRAFT, MACHINE OPERATORS AND RELATED TRADES WORKERS

- 711 Miners, shotfirers, stone cutters and carvers
- 712 Building frame and related trades workers
- 713 Building finishers and related trades workers
- 714 Painters, building structure cleaners and related trades workers
- 721 Metal moulders, welders, sheet-metal workers, structural-metalpreparer
- 722 Blacksmiths, tool-makers and related trades workers
- 723 Machinery mechanics and fitters
- 724 Electrical and electronic equipment mechanics and fitters
- 731 Precision workers in metal and related materials
- 732 Potters, glass-makers and related trades workers
- 733 Handicraft workers in wood, textile,leather and relatedmaterials
- 734 Printing and related trades workers
- 741 Food processing and related trades workers

742 Wood treaters, cabinet-makers and related trade workers
743 Textile, garment and related trades workers
744 Pelt, leather and shoe making trades workers
811 Mining and mineral-processing plant operators
812 Metal-processing-plant operators
813 Glass, ceramics and relative plant operators
814 Wood-processing and papermaking-plant operators
815 Chemical-processing-plant operators
816 Power-production and related plant operators
817 Automated-assembly-line and industrial-robot operators
821 Metal and mineral products machine operators
822 Chemical-products machine operators
823 Rubber and plastic products machine operators
824 Wood-products machine operators
825 Printing, binding and paper products machine operators
826 Textile, fur and leather-products machine operators
827 Food and related products machine operators
828 Assemblers
829 Other machine operators and assemblers
831 Locomotive-engine drivers and related workers
832 Motor vehicle drivers
833 Agricultural and other mobile-plant operators

6. ELEMENTARY OCCUPATIONS

911 Street vendors and related workers
912 Shoe cleaning and other street services elementary occupations
913 Domestic and related helpers, cleaners and launderers
914 Building caretakers, windows and related cleaners
915 Messengers, porters, doorkeepers and related workers
916 Garbage collectors and related labourers
921 Agricultural, fishery and related labourers
931 Mining and construction labourers
932 Manufacturing labourers
933 Transport labourers and freight handlers
997 Household work (special code)
998 Student (special code)
999 working (special code)

CENTRAL DEPARTMENT OF ECONOMICS, TRIBHUWAN UNIVERSITY, KIRTIPUR, NEPAL HOUSEHOLD QUESTIONNAIRE, 2076

SECTION 1: HOUSEHOLD INFORMATION

INTERVIEW DATE: 2076/ _____		
NAME OF THE RESPONDENT: _____		
WARD NO. _____	RELIGION: _____	ETHNICITY: _____
Is there any wage earner in your household? If no, go to the next household.		

Q 1.1	How many members are there in your family? (Please specify)			Q 1.2 How many salaried/wage earners are there in your family? (Please specify).....			
SN	Name of salaried/wage earners in family Q 1.2.1	Relationship with respondent Q 1.2.2	Age Q 1.2.3	Sex Q 1.2.4	Marital Status Q 1.2.5	Highest education completed Q 1.2.6	Main Occupation Q 1.2.7
		0 = Self 1 = Household Head 2 = Husband / Wife 3 = Son / Daughter 4 = Grandchild 5 = Father / Mother 6 = Brother / Sister 7 = Nephew / Niece 8 = Son / Daughter- in-law 9 = Brother / Sister-in-law		1 = Male 2 = Female	1 = Single 2 = Married 3 = Widowed 4 = Divorced 5 = Separated 6 = Others	1 = Never attended school 2 = Informal Education 3 = Below Primary (less than grade 8) 4 = Primary (Up to grade 8) 5 = Lower Secondary (grade 9 and 10) 6 = Higher Secondary / Certificate 7 = Technical Degree 8 = Bachelor’s Degree	

		10 = Other family relative				9 = Master's and above	
1							
2							
3							
Q 1.3	Is any of the wage earner, the household head?	Yes - 1	No - 2	Education of Household Head	<input type="text"/>	Age	<input type="text"/>
Q 1.4	How many old aged members are there in your family? (Please specify)						

SECTION 2: CHILDREN EDUCATION

Q 2.1	How many school going children are there in your family? (Please specify) ...	Q 2.2 How many non-school going children are there in your family? (Please specify).....					
	<i>If Q 2.1= 0, go to Q 3.1</i>						
Q 2.3	What is the completed highest education of child's mother? (Please specify) Use education codes in '1. Household Information'						
Q 2.4	What is the completed highest education of child's father? (Please specify) Use education codes in '1. Household Information'						
Q 2.5	What type of school does your child study?	Government / Community – 1			Private – 2		
Q 2.6	How was your child's last year's educational performance?	Good - 1	Bad - 2		Average - 3		
Q 2.7	How will be your child's next year's educational performance?	Good - 1	Bad - 2		Average - 3		
Q 2.8	How long does your child study at home? (Please specify)			Hours		Minutes	
Q 2.9	Who helps in your child's studies at home?	Mother - 1	Father - 2	Both - 3	Grandfather / mother – 4	Brother / Sister - 5	Other (Specify) - 6
	Helper's highest education (In no. of years)		<i>Eg. Grade 1= 1 year, Grade 2= 2 years, Grade 10= 10 years, Grade 12 = 12 years, Bachelor 3rd year = 15 years, Master's 2nd year=17 years</i>				
Q 2.10	What is the minimum amount of time the helper gives? (Please specify)			Hours		Minutes	
Q 2.11	What is the maximum amount of time the helper gives? (Please specify)			Hours		Minutes	

SECTION 3: HOUSING AND BASIC UTILITIES

Q 3.1	What is the type of the house occupied by the household?	Owned – 1			Rented – 2 → Q 3.6		
Q 3.2	How many rooms does your household occupy?	1 - Total	2 – Kitchen/Dining room	3 – Toilet/Bathroom.....	4 - Bedroom.....	5 – Living room.....	7 - Others
Q 3.3	What is the structure of your house?	1. Fountain		2. Outer Wall		3. Roof	
		Raw – 1		Mud bonded bricks / stones – 1		Straw / Thatch - 1	
		Solid – 2		Cement bonded bricks– 2		Iron / Tile / Slate - 2	
				Both - 3		Concrete - 3	
						Other (Specify) - 4	
Q 3.4	Did you rent out part of this dwelling unit?	Yes - 1			No - 2 → Q 3.8		
Q 3.5	How much do you receive as rent per month?	Rupees					
Q 3.6	How long have you been in rent?	Years					
Q 3.7	How much do you have to pay for rent monthly?	No. of rooms rented			Rent amount (Rs.)		
Q 3.8	Where does your drinking water come from?	Root water -1	Well – 2	Piped water supply – 3	Jar – 4	Other source - 5	
Q 3.9	What type of toilet is used by your household?	Household flush – 1		Household Non-Flush – 2		Both - 3	
Q 3.10	What is the main source of lighting in your household ?	Electricity – 1	Solar – 2	Kerosene – 3	Biogas – 4	Other - 5	
Q 3.11	Do you have following facilities in your household? <i>(Multiple responses are possible)</i>	Telephone – 1	Mobile Phone – 2	Cable TV – 3	Email / Internet – 4		
Q 3.12	What kind of fuel most often is used for cooking?	Firewood – 1	Cylinder gas – 2	Kerosene – 3	Bio – gas – 4	Other – 5	

SECTION 4: IDENTIFICATION OF EMPLOYED AND CHARACTERISTICS OF MAIN PAID JOB/BUSINESS ACTIVITY

(To be asked to primary wage earner of the household)

Q 4.1	During the last 7 days, did you do any work for a wage, salary, commission, tips or any other pay, even if only for one hour?					Yes - 1	No - 2 → END	
Q 4.2	In the main job/business that you had during the last days, what kind of work do you usually do? <i>(eg. Policeman, primary school teacher, domestic worker, driver, etc)</i>				Occupation title			NSCO Code
Q 4.3	In this job, are you an employee or a wage earner?		Salaried / Employee – 1		Wage Earner - 2		Other (Specify) - 3	
Q 4.4	What is the basis for your employment?		Written contract – 1			Oral agreement – 1 → Q 4.7		
Q 4.5	Is your contract agreement?		Permanent (without duration limit) – 1			Temporary – 1		
Q 4.6	What is the duration of your contract?	Daily – 1	Less than 1 month – 2	1 to less than 3 months – 3	3 to less than 6 months – 4	6 to less than 12 months – 5	12 months and above – 6	
Q 4.7	Does your employer pay social security contribution on your behalf?			Yes – 1		No – 2		Don't know – 3
Q 4.8	Do you benefit from paid leave or get compensation for unused leave?			Yes – 1		No – 2		Don't know – 3
Q 4.9	What is the name and location of your workplace?	Existing name and location – 1		Own house - 2	Domestic worker in private household – 3		Without name – 4	
Q 4.10	What are the main goods or services produced at your workplace or its main function? <i>(eg. Selling fish, teaching children, livestock farming)</i>				Description			
Q 4.11	Was your main activity carried out in?	Government - 1	Semi-Government (State-owned enterprise) – 2	Private financial business or firm - 3	Private nonfinancial institutions- 4	International org/foreign embassy - 5	Non-profit institutions (I/NGOs) - 6	Other (specify)
Q 4.12	Is the business registered?			Yes - 1	In the process of being registered – 2		No - 3	Don't know - 4
Q 4.13	Does the business keep a book of accounts (income and expenditure)?				Yes – 1		No – 2	Don't know – 3
Q 4.14	How many persons, including the owner, work at your workplace?			1 - 1	2-4 – 2	5-9 - 3	10-19 - 4	20 persons and more - 5

Q 4.15	In what type of place do you usually work?	At home - 1	At the client/employer's home - 2	At office - 3	Shop factory or other fixed workplace - 4	Fixed stall in market/street - 5	Land, forest, river - 6	Without fixed location/mobile - 7	Construction site - 8	Other (specify) - 9
Q 4.16	How long have you worked for this employer/in this business?	Less than 6 months - 1	6 months to less than 1 year - 2	1 year to less than 3 years - 3	3 years to less than 5 years - 4	5 years to less than 10 years - 5	10 years or more - 6			
Q 4.17	How many years of work experience do you have prior to this employer?	Less than 6 months - 1	6 months to less than 1 year - 2	1 year to less than 3 years - 3	3 years to less than 5 years - 4	5 years to less than 10 years - 5	10 years or more - 6			

SECTION 5: CHARACTERISTICS OF SECONDARY PAID JOB/BUSINESS ACTIVITY

Q 5.1	Did you have any business or performed any second (<i>permanent, occasional/exceptional</i>) activity for at least 1 hour during the last 7 days?	Yes - 1	No - 2 → Q 6.1
Q 5.2	In the second job/business that you had during the last 7 days, what kind of work do you usually do? (<i>eg. Interviewer, tuition teacher, food deliverer, salesman, etc</i>)	Occupation title	NSCO Code
Q 5.3	In this job, are you an employee or a wage earner?	Salaried / Employee - 1	Wage Earner - 2 Other (Specify) - 3
Q 5.4	What is the name and location of your workplace?	Existing name and location - 1	Own house - 2 Domestic worker in private household - 3 Without name - 4
Q 5.5	What are the main goods or services produced at your workplace or its main function? (<i>eg. Selling fish, teaching children, livestock farming</i>)	Description	

SECTION 6: WORKING TIME (ALL JOBS)

Q 6.1	How many hours did you work during the last 7 days? 1= 0 hour 2= Less than 40 hours 3= Exactly 40 hours → Q 6.5	Main job - 1	Second job - 2	Other job - 3	Total hours
		Hours (Specify)	Hours (Specify)	Hours (Specify)	Hours (Specify)

4= 41-48 hours → Q 6.3
5= 49 hours and more → Q 6.3				

Q 6.2. Why did you work less than 40 hours during the last 7 days?	Q 6.3. What is the main reason that you worked more than 40 hours during the last 7 days?	Q 6.4. During the last 30 days, did you look for additional or other work?	Q 6.5. Do you want to change your current employment situation?	Q 6.6. What is the main reason you want to change current employment situation?	
Contractual hours (part-time job, government job) - 1 → Q 6.4					
Usually works less than 40 hours – 2 → Q 6.4					
Technical unemployment (lack of raw materials or energy, lack of orders or clients, etc) - 3 → Q 6.4					
Training - 4 → Q 6.4					
Days off, holidays, special leave - 5 → Q 6.4					
Ended a job without starting a new one - 6 → Q 6.4					To have higher income - 1
Variable working time/nature of work (shift work, flexi hours) - 7 → Q 6.4					High workload during the last days - 2
Family responsibilities - 8 → Q 6.4					Seasonal work - 3
Personal/family reasons (illness, injury, annual leave) - 9 → Q 6.4					Variable timetable - 4
Start/End/ Change of jobs - 10 → Q 6.4	Usual working hours - 5	Yes - 1	Yes - 1	To better match skills/improve working conditions - 6	
Other (specify) - 11 → Q 6.4	Other (specify) - 6	No - 2	No – 2 → Q 7.1	Other (specify)	

SECTION 7: EMPLOYMENT RELATED INCOME (MAIN / SECONDARY JOB) AND TRAINING RECEIVED

Q 7.1	In your main job, are you paid in cash (<i>such as salaries, wages, commissions or bonuses</i>)?			Yes - 1			No - 2		
Q 7.2	What period do this payment cover?		One day - 1	One week - 2	One month - 3	Piece rate - 4	Other period (specify)		
Q 7.3	How much amount did you receive? (<i>in Rs. '000'</i>)	Less than 10,000 - 1	10 to less than 20 - 2	20 to less than 30 - 3	30 to less than 40 - 4	40 to less than 50 - 5	50 and above - 6		
If engaged in secondary job, (if Q5.1 = 1)									
Q 7.4	In your second job, are you paid in cash (<i>such as salaries, wages, commissions or bonuses</i>)?			Yes - 1			No - 2		
Q 7.5	What period do this payment cover?		One day - 1	One week - 2	One month - 3	Piece rate - 4	Other period (specify)		
Q 7.6	How much amount did you receive? (<i>in Rs. '000'</i>)	Less than 10,000 - 1	10 to less than 20 - 2	20 to less than 30 - 3	30 to less than 40 - 4	40 to less than 50 - 5	50 and above - 6		
Q 7.7	What is the total amount received from other wage earners in your family?			Rs.....	One day - 1	One week - 2	One month - 3		
Q 7.8	Have you received any formal vocational/professional training?			Yes - 1			No - 2 → Q 8.1		
Q 7.9	What was the main area/subject of the training? <i>(If more than one, write the subject of major training)</i>			Description					
Q 7.10	How many days/months did it take to complete this training?			Days / Months (Specify)					

SECTION 8: GOODS AND LAND INFORMATION

Q 8.1	Does your household own any of the following items?										
Code	ITEM DESCRIPTION	Yes - 1	No - 2	Code	ITEM DESCRIPTION	Yes - 1	No - 2	Code	ITEM DESCRIPTION	Yes - 1	No - 2
A	Refrigerator	1	2	F	Gas	1	2	K	Car or such vehicle	1	2
B	Oven	1	2	G	Television	1	2	L	Sewing machine	1	2
C	Washing Machine	1	2	H	Camera, radio	1	2	M	Telephone	1	2
D	Furniture and fixtures (sofa, cupboard, table)	1	2	I	Motorcycle	1	2	N	Mobile	1	2
E	Electric (fans, heaters, iron)	1	2	J	Bicycle	1	2	O	Computer, Laptop	1	2
Q 8.2	Do your household own any land / farm?					Yes - 1		No - 2 → END			
Q 8.3	How much land do your household own?					1=Ropani (Specify)		2=Aana (Specify)		3=Paisa (Specify)	

SECTION 9: OTHER SOURCES OF INCOME / REMITTANCE / TRANSFER INCOME

Q 9.1	Has your household produced any crops over past 12 months?	Total revenue over past 12 months (Rs.)			Q 9.2	Has your household produced any products from livestock over past 12 months?	Total revenue over past 12 months (Rs.)		
Code	CROPS DESCRIPTION	Yes - 1	No - 2	Total sales / revenue	Code	Cereals (Paddy, maize, wheat, etc)	Cereals (Paddy, maize, wheat, etc)	Cereals (Paddy, maize, wheat, etc)	Cereals (Paddy, maize, wheat, etc)
A	Cereals (Paddy, maize, wheat, etc)	1	2		A	Milk / Paneer	1	2	
B	Pulses (Soybeans, gram, lentil, etc)	1	2		B	Ghee	1	2	

C	Vegetables (Green vegetables, potatoes, etc)	1	2		C	Eggs	1	2	
D	Fruits (Apple, Banana, etc)	1	2		D	Curd	1	2	
E	Bamboo	1	2		E	Meat	1	2	
F	Others	1	2		F	Others	1	2	
	Total Income					Total Income			

Q 9.3	During the past 12 months, have you received any money or payments or gifts from the member of your household from abroad?	Yes - 1, If money received, specify the amount (In Rs.)..... If gifts / in-kind received, specify the equivalent amount (In Rs.).....	No - 2→END
Q 9.4	Did any of the household members receive pension during the past 12 months?	Yes - 1, Specify the amount (In Rs.)	No - 2→END
Q 9.5	Did any of the household members receive old age allowance or widow allowance?	Yes - 1, Specify the amount (In Rs.)	No - 2→END

1. What is your opinion on wage differential in formal and informal employment?
2. What is your viewpoint on positive and negative aspects of working in formal and informal employment?
3. How does your employment affect your children's educational performance?