



**DETERMINANTS OF SCHOOL PARTICIPATION CHILD LABOUR
AND ITS EFFECT ON SOCIO-ECONOMIC ACTIVITY IN GURAGE
ZONE: THE CASE OF WOLKITE TOWN**

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ACRONYMS AND ABBREVIATIONS

CRC	Convention on the Rights of the Child
CSA	Central Statistics Agency
CSAE	Center for the Study of Africa Economics
FDRE	Federal Democratic Republic of Ethiopia
GZFED	Gurage Zone finance and economic Department
ICCLE	International Center on Child Labour and Education
ILO	International Labour Office
ILO	Interntional Labour Organization
MDGs	Millennium Development Goals
OLS	Ordinal List Square
PINE	People in Need Ethiopia
SNA	System of National Accounts
SNNPR	Southern Nations, Nationalities, and Peoples' Region
UCW	Understanding Children's Work
UN	United Nation
UNESCO	United Nation Educational Scintific and Cultural Organization
VIF	Variance Inflation Factor

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ABSTRACT

Child labour participation is a global phenomenon focusses all kinds of working conditions which endanger health, education, physical and social development of child. This study investigated the determinants of school participation child labour and its effects on socio economic activity in the case of Wolkite town. To achieve the objectives, data were collected from 393 sample child labourer using stratified sampling with structured questioner method. Data were analyzed using descriptive statistics such as percentage, mean, standard deviation, and as econometrics method binary logistic was used. The results showed that working condition of child labourers affects students' school attendance as they work for 11 hours. The findings of the study indicate that children parents who have enough source of income get more human needs than childrens' parents who have no source of income. Regarding to parents life status the result has shown that childrens' parent life status were positively effect on child labour participation. This is due the fact that childrens' childrens' who have no parents are enforced to work and they face a variety of socio-economic problems. Children were low source of family income, failure of interest in attending school and as result they migrate to study area to examine a job without permission of their parents. There is a need to develop and exercise policy direction in overcomeing the socio-economic problems of children engaged in child labour especially for those from poor families.

Key Words: Binary Logit, Child Labour Participation, Child Education, Family Income, Wolkite

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Estimating the number of children working around the world is a challenging task. Most working children live in low-income countries. These countries often lack reliable data on many aspects of their labour market. Even more difficult, some policymakers have until recently defined “child labour” as economic activities that are harmful to the well-being of children. There are some situations where it is hard to imagine how an activity could not be harmful to the child forced prostitution, and child soldiers. Most working children participate in activities that can be harmful or beneficial for the child, depending on the circumstances of the activity, and ultimately, the effect of child labour on the well-being of the child (Edmonds *et al.*, 2011).

The number of children working in the world today is higher than most people think, although it is difficult to obtain anything more than an educated global estimate. This is firstly because many kinds of child labor are under reported, and secondly because many countries have no desire or incentive to publicize how many of their young people work International Labour Organization (ILO, 2004). Nevertheless, by using statistical techniques ILO estimated that there were some 306 million children ages 5 to 17 in the world in 2008 and some 215 million children trapped in child labour across the world with 115 million in the worst forms. In the age group 5 to 14 years almost 153 million children were engaged in child labour in the four years trends covered between 2004 -2008 and there were an increase in hazardous work among the children 15 to 17 years of age (Gebremedhin, 2013).

The most extreme forms of child labour participation involves children being confined, separated from their families, exposed to serious hazards and illness for themselves on the street of large cities often at a very early age. Whether or not exact forms of work can be called child labour participation depends on the children’s age, the type and hours of work performed, the condition under which it is performed and the objectives pursued by individual countries. Child labor maintains poverty by depriving children of education and consequently renders these children without the skills needed to secure the future of their countries (ILO, 2013).

ILO reported that 168 million children worldwide are engaged in child labour as of (ILO, 2013). Of these 168 million children, 85 million are engaged in what the ILO deems hazardous work. The Sub-Saharan African region has the second highest number of child laborers in the world; about 59 million in 2012. Children aged 5 to 17, or 21.4 percent, are involved in child labor while 10.4 percent are engaged in hazardous work. Only one out of five children involved in child labor is paid for his or her work. The majority of children in child labor perform unpaid family work.

Ethiopia is the one among the countries listed as worst countries for child labor in 2012. About 60 percent of children in Ethiopia are engaged in some form of child labour. Many of these children work in the mining industry; an industry that poses some of the biggest dangers for child laborers. Many parents in impoverished countries push their children to work out of necessity. Unable to sustain their families on their own income, the parents feel that they have no choice but to push their children into child labor (Matt, 2014).

The satisfaction with life scale was used as a proxy indicator for subjective well-being consists of five items, rated on a seven-point Likert scale, with higher scores indicative of higher life satisfaction. The German version of the satisfaction with life scale has been validated in a German sample, which included individuals up to 91 years (Glaesmer, *et al.*, 2011). Child labour force participation points out all kinds of working conditions which endanger health, education, physical and social development of child. The most severe definition of child labor states that enslaved and separated child is exposed to hard living conditions such as disease, poverty obliged them to take care of themselves (ILO, 2017).

Child labour participation is the abuse of children's approaches in a serious problem for those who are healthy. The main reason for this is the low income of the family. As a result, they are forced to go to work instead of going to school. Therefore, in order to solve this problem, the Government should make stricter laws to exterminate of child labour.

1.2 Statements of the Problem

Currently, children are the prospect of a country. Child labour exploitation in developing countries to be a controversial issue, which is often debated at international forums (Mahendra, 2013). The United Nations Open Working Group on Sustainable Development Goals lists the

elimination of child labour as an important component of sustainable development by 2025. Child labour has the potential to undermine economic growth through its impact on child development, wages, and technology adoption (Edmonds, 2011).

In the sub Saharan Africa and South Asian countries typically school acceptance is low and child labour is wide spread. And child labour in these countries affects school performance as children miss important lessons and fall behind academically (Ravinder, 2009). Just like other developing countries, child labour is necessary for family survival in Ethiopia. A large number of individuals enter the labour market below the age of 15 and with little or no formal education (Guarcello *et al.*, 2007). In general, Ethiopian children start participating in work activities at an early age (as early as five years old) and many of them without getting the chance to attend school (CSA, 2015).

In Ethiopia, the child labour participation is a serious problem. For instance, A National Ethiopian Labour Survey indicated that 52 percent of children aged 5–17 years were economically active (49 percent of those aged 5–14 years, or 7.4 million). A further 33 percent were engaged in non-economic housekeeping activities, with half of them not attending school. Overall, 85 percent of children aged 5–17 years were involved in economic or housekeeping activities that prevented or impeded school attendance or performance, (Abraham, 2017).

As Addisu, (2008) and Solomon, (2006) revealed child labour in the informal sector has negative impact on the holistic personality of the child, which is physical, health, psychological, educational and social impact on participation of child labours. Moreover, Gebremedhin (2013), Tseganesh (2011), Dawit (2010), Getinet and Beliyu (2007) on their studies indicated the negative effect of child labour on children wellbeing. As a result, child labour can be seen as a major problem which derives educational opportunities of children that will open up for them better future.

Compared to the severity of the problem both on the existing and future generation, there is a gaps in policy implementation, literatures and no study have conducted in this study area before child labour participation. In Gurage society, hard working and generating different income source starting from childhood is very common. Child labour is very harmful and the worst forms exposed to serious hazards and illnesses. As a result, it is mandatory to investigate this

study on the participation of child labour and its effect on socio-economic activity in Wolkite town. To this end an attempt was made to address the following research Questions.

1.3 Research Question

1. What are the major causes of child labour participation?
2. What socio-economic effect have child labour participation?
3. What are the working conditions of child labour participation in the study area?

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of the study is to examine the determinants of child labour participation and its effect on socio-economic activity in Wolkite town.

1.4.2 Specific Objectives

The specific objectives of the study are to:-

1. Assess the working conditions of child labour in the study area
2. Assess the socio-economic effect of child labour participation in Wolkite town
3. Examine the determinants of child labour participation in the study area.

1.5 Scope of the Study

This study attempts to assess the major determinants of child labour participation and its socio economic effect. The effects of child labour could be seen from different dimensions like from psychological, moral, health, emotional development. However this study assesses the effects of child labour on the child's wellbeing health and on children age between 5-17 year who are engaged in economic activities: in childrens keeping house, metal and wood workshops, children working in transportation service (weyalla), children working in small restaurants, child shoe polishers and lottery seller are the focus of the study.

1.6 Limitation of the Study

Limitation of the study different challenges were faced to collect the data at the time of data collection. The unwillingness of some of the respondents for interviews for unknown reasons made the data collected less than the amount proposed even though it doesn't significantly

affect the overall finding. Collection of data took more time than planned because of poor documentation. However, due to lack of data, time and budget constraints the research would be done only on children age between 5-17 year who are engaged in economic activities. In general, these all potentially limit the scope of the study.

1.7 Significance of the Study

The study aims to examine the major determinants of school participation child labour and its effect on socio economic activity in the 5-17 age categories. This study would help to identify the determinants of school participation child labour and its effect on socio economic activity in the Gurage zone the case of Wolkite town. Specifically, the study will inform the determinants and effects of child labour. This study helps to create awareness among children, children's families, concerned sectors, policy makers, politicians to reduce child labour. The study tries to help to reduce child labour, to increase school learning and to reduce children's health problem in the study area.

1.8 Organization of the Study

Including this chapter, the study was organized in five main chapters. The first chapter contains background information of the study, statement of the problem, objectives of the study, scopes and limitations of the study, significances of the study and organization of the study. Chapter two discusses about the related theoretical and empirical literature. The third chapter deals with research methodology which includes description of the study area, research design, population and sample size, data collection instruments and data analysis and methods and materials. Chapter four of this study also explains result and discussion and finally the fifth chapter is conclusions and recommendations.

CHAPTER TWO

REVIEW OF LITERATURE

In this section, the theoretical and empirical related literatures were presented. Just the review were examined that child labour participation and its effect on socio-economic activity, theoretical framework of child labour participation, and final the effects of child labour.

2.1 Conceptual Definition of Child Labour Participation

A child is defined as a person who is below the age of 18 years. Biologically a child is a human between the ages of 5-17 years. Age 18 is the dividing line between childhood and adulthood according to the major ILO child labour Conventions, Nos. 138 and 182, and the United Nations Convention on the Rights of the Child (CRC). Although many cultural traditions and personal characteristics could argue for a higher or lower age, in first crafting and then in ratifying these Conventions the international community has determined that persons under 18 are children and have the right to special protection (ILO, 2019).

Child labour is a global phenomenon. There has been growing interest in the concept (child labour) among researchers worldwide in recent years. Many works of literature have given various explanations for child labour. However, according to the (ILO), child labour is the exploitation of children to engage in work that deprives them of their childhood, interferes with their schooling, and is morally, mentally, and physically dangerous for the child.

2.1.1 Child Labour

The term “child labour” is often defined as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical-mental development. It refers to work that is mentally, physically, socially or morally dangerous and harmful to children, and interferes with their schooling by depriving them of the opportunity to attend school, obliging them to leave school prematurely or requiring them to attempt to combine school attendance with excessively long and heavy work. The worst forms of child labour involves children being enslaved, separated from their families, exposed to serious hazards and illnesses and/or left to tend for themselves on the streets of large cities often at a very early age (ILO, 2020).

The term child labour reflects the engagement of children in prohibited work and, more generally, in types of work to be eliminated as socially and morally undesirable as stipulated by national legislation, the ILO Minimum Age Convention, 1973 (No. 138), and the Worst Forms of Child Labour Convention, 1999 (No. 182), as well as their respective supplementing Recommendations (Nos.146 and 190). Child labour may be measured in terms of the engagement of children in productive activities either on the basis of the general production boundary, or on the basis of the SNA production boundary (CSA, 2015).

Children are employed in both formal and informal sectors. Among the occupations where in children are engaged in work are construction work, domestic work and small-scale industries. Child labour activity affect a child's mental health, physical health, social development, and general well-being and often interfere with his/her education. Child labor simultaneously works long hours and study, experience higher levels of negative attitudes towards school, and decreased school attendance and grades, than before working (Mohamud, 2020).

Not all work performed by children is equivalent to “child labour” for abolition. Based on the two conventions, Convention 138 on the Minimum Age for Admission to Employment and Work, which sets the minimum working age at 15 years (14 years for some developing countries like Ethiopia), and Convention 182 on the Worst Forms of Child Labour, which focuses on the worst forms of child labour. ILO define child labourers as all children under 15 years of age who are economically active excluding (i) those who are under five upto eleven years old and (ii) those between 12-14 years old who spend less than 14 hours a week on their jobs, unless their activities or occupations are hazardous by nature or circumstance. Added to this are 15-17 year old children in the worst forms of child labour. However there are variations upon the minimum work age restriction and the type of labour among different nations, which might make the definition of child labour ambiguous. For instance the minimum work age in some developing countries is 14 years (Dawit, 2010).

Often the terms ‘child work’ and ‘child labour’ are used interchangeably in the literature. The ILO, however, distinguishes between three types of working children: children in employment, child labourers and children in hazardous work. The category ‘children in employment’ is the broadest of the three categories and includes all types of paid productive activity as well as certain types of non-paid productive activity. Examples of the latter are production of goods for

own (household) use or domestic work outside the child's own household. Domestic work performed within the child's own household does not, however, count as economic activity. Further, the definition of economic activity is not confined to legal activities, but also encompasses illegal activities (Gebremedhin, 2013).

The category 'child labourer' is more restrictive than the previous category, excluding certain types of children in employment. Children who are older than age 11 and only work a few hours in light work are not considered to be child labourers, where light work by definition does not interfere with the child's ability to attend school or vocational training. Further, children over the age of 14 who are not engaged in hazardous work are excluded from this category. Finally, 'hazardous work' is defined as work that has or leads to risks for the children engaged in these activities. Risks include the child's safety, moral development, physical and mental health. More detailed definitions of the different categories of working children, including the relevant ILO conventions, can be found (Diallo *et al.*, 2010).

2.1.2 Hazardious Forms of Child Labour

It is possible to use them for inference about the scope of child labor in a country. For these difficult-to-monitor forms of child labor, the ILO and interested organizations conduct specialized surveys that interview only those individuals engaged in the activity. It is a challenge to use these surveys to understand why children are engaged in relatively rare activities, but they are useful for estimating the incidence of some of the most hazardous forms of child labour (Edmonds *et al.*, 2011).

According to ILO Recommendation No. 190, the following criteria should be taken into account when determining hazardous work conditions of children at the national level: (a) work which exposes children to physical, psychological or sexual abuse; (b) work underground, under water, at dangerous heights or in confined spaces; (c) work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads; (d) work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health; and (e) work under particularly difficult conditions such as work for long hours. Hazardous work by children is statistically defined in terms of the engagement of children in activities of a hazardous nature (CSA, 2015).

Hazardous child labour or hazardous work is the work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children. Guidance for governments on some hazardous work activities which should be prohibited is given by Article 3 of ILO No.190 : work which exposes children to physical, psychological or sexual abuse; work underground, under water, at dangerous heights or in confined spaces; work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads; work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health; work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer (ILO, 2020).

Hazardous work is a subset of child labour and refers to the engagement in industries or occupations designated as hazardous by the national legislation, as well as work carried out in hazardous conditions. Such conditions include long working hours, working at night, carrying heavy loads, working in an unhealthy environment such as extreme temperatures or humidity, exposure to dust, fumes etc. As per the international guidelines, the survey indicated that 42.7 percent of children aged 5 to 17 years were engaged in child labour (CSA, 2015).

2.2 Review of Theoretical Literature

2.2.1 Economic Conditions and Policies that Affect Child Labour

Families take into account their valuation of child time in its various possible uses and allocate it accordingly. Thus, factors that raise the relative return to schooling may discourage child labor while increases in the child's wages or the family's valuation of the child's wages may encourage it. Norms will influence the extent of the agency problem. For instance, in cultures where girls depart the family but boys stay and support the parents, the parent perceives a greater return to investing in the boy. This norm in turn makes investment in boys more profitable for the immediate family, and girls accordingly may work more. However, even with these norms, a vast body of research suggests that various aspects of poverty are of primary importance in understanding why children work (Edmonds, *et al.*, 2011).

In a study by (Edmonds, *et al.*, 2007) a child is defined as economically active if he or she works for wages in cash or in-kind; works in the family farm in the production and processing of primary products; works in family enterprises that are making primary products for the market, barter or own consumption; or is unemployed and looking for these types of work.

2.2.2 Unconditional Worst Forms of Child Labour

The Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour was adopted by the ILO in 1999 as ILO Convention No 182. This convention asks signatory countries to clarify the definition of worst forms of child labour at the country level and to develop specific plans for its eradication. Article 3 of convention No. 182 contains several guidelines for the types of activities that should be considered for persons under the age of 18. These include all forms of slavery and "practices similar to slavery." This later clause includes the sale and trafficking of children, debt bondage, serfdom, and forced or compulsory labour including for the purposes of armed conflict (Donger, 2016).

Children in prostitution, pornography, the production or processing of drugs are also included as "worst forms" of child labour. Article 3(d) represents the most ambiguous part of the convention referring to "work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children." Article 4 of the convention is explicit that it is up to individual countries to define what types of work. International standards set the framework for minimum age, but national legislation can determine the national minimum age for employment and criteria for unlawful work, working conditions as well as working hours for children (Donger, 2016).

2.2.3 The Consequences of Child Labour

Children who fall victim to child labour lack the pleasant memories of childhood and may experience extreme bodily pain, psychological problems, and even death sometimes. These children get exposed to injuries like burns and lacerations, tiredness, cuts and fractures, experience excessive nightmares and fears. Some of these children risk been trafficked, which makes the girls highly prone to sexual abuse (as some may be forced into prostitution or child pornography) and the boys to armed groups exploitation, affecting their morals and dignity. Sexual abuse frequently lands children in unwanted pregnancies, abortions, drugs and

alcoholism, sexually transmitted diseases and HIV/AIDS. Often, child labour negatively affects children's schooling and results in the child missing educational qualifications and higher skills, thereby perpetuating the cycle of poverty. Lack of schooling also restricts the child's fundamental human rights and threatens their livelihood, in the long run, making them more vulnerable to exclusion and poverty (UNICEF, 2019).

Consequences of their working and living conditions included psychological and physical impacts and the lost opportunity to receive a formal education. The type of work children engage in appears to be influenced by age, migration status and gender. For example, migrant children are more likely to work in informal low-income jobs and girls are more likely to be domestic workers. These background characteristics also influence the living situations they experience and, subsequently, the hazards they face, as well as their capacity to deal with them (CSA, 2020).

2.2.4 Causes of Child Labour

According to the ILO and experts, the family itself is also another factor that forces children into child labour. In smaller cities and villages, some children work unpaid in family enterprises and farms. Many national laws forbid child labour but exempt the activities of children in family enterprises. However, some of these activities hinder the child's education or affect them psychologically, socially or emotionally or cause these children's ill health. In bigger cities, families faced with financial challenges and cannot cope with the high demands of city life or even provide adequate nutrition for their children may force them to work to supplement families' income (ILO, 2018).

Several studies have examined the potential long-term effects of child labour on future earnings, intergenerational persistence and health outcomes. For example, (Emerson and Souza ,2011) find that child labour is associated with lower adult earnings for those entering the labour market while young, though this relationship reverses between the ages of 12 and 14, at which point entering the labour market is associated with higher adult earnings. A systematic review on the association between child labour and health by (Batomen *et al.*, 2018) finds a relative consensus on the negative relationship between child labour and health.

2.2.5 Economic Shocks of child labour

There is a growing, but still embryonic, body of literature on the links between economic crisis and child labour. Most of this focuses on specific shocks at specific times on specific groups of children and so does not offer a model that can, or should, be applied across the board. Moreover, the conclusions of studies carried out to date indicate a need for caution in making blanket conclusions about the impact of any individual occurrence of shock on levels of child labour or school enrolment. For example, a 2008 in-depth study by the Understanding Children's Work (UCW) project (Guarcello *et al.*, 2008) into the impact of different kinds of shocks (in this case, drought, floods and crop failure) on child labour in Cambodian villages concluded that: 'household responses to shocks depend considerably on the specific type of shock encountered'. In this case, crop failure reduced school attendance and increased child labour, droughts were less relevant, and floods had no significant impact on child labour or school attendance at all.

The existing literature has not assessed the differential impact of the various shocks that can hit households. Instead, shocks have been treated as a general category of negative events affecting the household, while in reality they are of course different in nature and in their likely consequences. Better policy formulation and targeting would require the identification of the shocks that are most damaging to children's welfare in terms of education and participation in child labour (Guarcello *et al.*, 2008). This confirms but nuances the same authors' conclusion in an earlier report (Guarcello *et al.*, 2002) that, 'there is no established evidence on the extent Kane: What the Economic Crisis Means for Child Labour 177 to which children's labour supply is actually used as a risk coping strategy and/or as a buffer against shocks'.

2.2.6 Family Characteristics and Child Labour

In most societies, the family is both the child's immediate emotional influence and its introduction to living in society, and then its first avenue of contact with the outside world. Most children start work by helping their families, before they go out to work for others. They do so partly because of poverty but also, in many societies, because cultural values and expectations view this as a natural and "right" way to introduce a child to the roles and responsibilities linked to being a member of a family and to growing up. This occurs throughout the world in millions of agricultural families. If the family owns land or works on the land of others, the child will

start by spending the day in the fields alongside its parent, doing very easy jobs at first and then progressively more demanding ones (ILO, 2004).

2.2.7 School Related Factors

According to (Gebremedhin, 2013), several studies point to the importance of school quality as an important determinant of schooling and work. However, school quality is virtually never measured directly. At best, some studies have evidence on the integrity of the school structure, whether or not the school is open most days of the week, and other services available to the general community such as running water or electricity. (Mazhar, 2008) education system in developing countries is featured with weak infrastructure and ineffective to attract and hold the children. A lot of studies about education and work trade off in developing countries highlight the problem of poor schooling or the irrelevance to future market requirements

2.2.8 Socio-Cultural Sector

This body of work criticises utilitarian models for their neglect of children's own perspectives on how to meet their development needs (Feeny and Boyden, 2004). It argues that any conceptualisation of children's rights to education, freedom from economic exploitation and leisure in developing countries should incorporate an awareness of context-specific ways of understanding child work, and diverse livelihood strategies adopted to ensure family survival. Work activities that children in some contexts (especially in the North) would not undertake, are not only common but also acceptable and even encouraged in others. In some developing countries participation in work activities is viewed as contributing to children's self-confidence and development, and therefore complementary to formal education (Bourdillon, 2006). Moreover, empirical research also shows that the majority of children are not employed in full-time activities, and that often the time spent on work competes marginally with schooling, albeit more significantly with leisure or study time (Brown *et al.*, 2002).

2.2.9 Demand-Side Factor in Child Labour

There is a market demand for child labour since children are generally docile, obedient, hired at cheaper rates than adults, and dispensed with easily if labour demands fluctuate. They incur no long-term investment on the part of industry in terms of insurance or social security and low paid child labour may be perceived as a significant element for industries wishing to maintain

a competitive edge in national and international markets. Children are unprotected, powerless and silent as far as their rights as workers are concerned (ILO, 2002).

The more pressure is exerted on the supply side (i.e. the more households offer child labour), the less productive and remunerated this labour will tend to be. The more pressure is exerted on the demand side (i.e. the more uses for child labour are generated), the more productive and remunerated it will be. Both sorts of pressures will tend to increase the overall amount of this labour performed (ILO, 2004).

2.2.10 Education and child labour in developing countries

Child labour is widespread in developing countries. Most of working children, about more than one in five children in the world work live in poor countries (Edmonds et al, 2011). As states in (Rammohan, 2000) study in developing countries, children make substantial contribution to house hold income and also considered as a gantry at old age security, ether by performing in house hold tasks in rural areas or employed in formal sector in urban areas. However these two economic benefits from children are linked as parents face a trade off between present and future consumption.

2.2.11 Education and child labour in Ethiopia

As of 2012, 168 million children aged 5 to 17 years worldwide were still trapped in child labor, according to a 2015 International Labour Organization report, and they comprised almost 11% of the child population as a whole. More than 120 million of these children were part of the core school-aged group of 5 to 14 year olds about 47% of all out-of-school children. Sub-Saharan Africa has the highest percentage among any regions of children in labor, at 21%. The report points out that labor at an early age unquestionably impedes a child's ability to go to school and learn. In some countries with high levels of child labor, the ILO report shows, school attendance rates are only about half of those of non-working children and literacy rates are low. Also, school attendance levels drop the longer a child works each day.

In Ethiopia, as in several other Sub-Saharan Africa countries, a large number of individuals enter the labour market below the age of 15 and with little or no formal education (Guarcello *et al.*, 2007). Results as presented in (Bhalotra, 2003) from large integrated household data by Addis Ababa University and the centred for the study of Africa Economics, indicated that

Ethiopia has the lowest gross (34 percent) and net (21 percent) primary school enrolment rates in the world and rural enrolment rates are even lower than the national average.

According to (Guarcello *et al.*, 2007) in their studies found that Child economic activity rises sharply with age but 40% of even the youngest (5-9 year old) group children are involved in economic activity. Rural children and male children face the greatest risk of involvement in child labour. Fifty four % of rural 5-14 year-old, is involved in economic activity against only 15% of their urban counterparts. The economic activity rate of male children exceeds that of female children by percentage points, although this difference does not take into account the performance of household chores such as water and fuel wood collection, typically the domain of female children.

According to a study by (PINE, 2009) in Ethiopia there are lots of factors that make children stay out of school in their early age, the cause that force children in the labour market include poverty, family problems and migration. From point of view of demand in the labour market child labour is cheap and easy to access compared to the adult workers who have the relative advantage of bargaining the terms of employment in the labour market. Moreover, Household demand for labour has been identified as the most important reason for not sending children to school in Ethiopia (Takashi, 2000, in Guarcello, *et al.*, 2007).

2.3 Emprical Review of Literature

According to (ILO, 2018). The types of hazardous work prohibited for children do not cover traditional weaving, an area of work in which there is evidence of using dangerous machinery, equipment, and tools, or work that involves the manual handling or transporting of heavy loads other than in the transportation industry. Lastly, Article 89.5 of the Labour Proclamation allows children ages 14 to 16 to engage in certain forms of hazardous work following the completion of a government-approved and inspected vocational training course (ILO, 2018). This contradicts ILO C.138, which prohibits hazardous work for all children under age 16. However, the Government of Ethiopia notes that, in practice, children may begin apprenticeships only after the completion of 10 years of schooling, or at age 17.

Based on the two conventions, Convention 138 on the Minimum Age for Admission to Employment and Work, which sets the minimum working age at 15 years, and Convention 182 on the Worst Forms of Child Labour, which focuses on the worst forms of child labour. ILO

define child labourers as all children under 15 years of age who are economically active excluding (i) those who are under five years old and (ii) those between 12-14 years old who spend less than 14 hours a week on their jobs, unless their activities or occupations are hazardous by nature or circumstance. In addition to this those between 15-17 year old who spend less than 40 hours a week on their jobs, unless their activities are hazardous by nature. As a result the minimum working hour of age between 5-17 is greater than the minimum requirements of child convention 182.

According to (Kashif and Hussain, 2013), the study found that children develop an interest in labour due to family responsibilities, a lack of educational opportunities for children from poor families and household poverty at the cost of their education. Children have to do more work because of poverty, families are unable to sustain themselves, and thus, making children work and support their families together with their heads. Some key factors such as uncertain jobs market, inflation, poor living standard, weak economy, civic negligence, and unawareness of parents, push the children to labour market.

According to (Kashif and Hussain, 2013), child labour is dependent on their respective household income, working status of parents, education of household head and when poor families face trouble to generate income, they push their children to the work. The study further pointed that around 56% of the working children were uneducated and unpaid and the reasons for working included household poverty and it was compulsory for the children to financially support their families. The empirical results of the study shows that male children are mostly target of participating labour and girls are less affected, because they are engaged in household activities and are not a part of formal economic sector. The literature on child labour shows that most of the available research work is based on case studies and small surveys, which cover few cities, villages, and small entities. The literature suggests that insufficiency is the main cause behind child labour participation.

2.3.1 Education and Children Labour

According to (Sakurai, 2006) poverty is the root of child labour and its relation to education is considered two sides of the same coin, meaning that poor children are more likely to work in developing nations and, if children have to work, then they are less likely to attend primary or secondary school, resulting in a pervasive cycle of poverty that spans generations. (Ravalizon *et*

al., 1999) argued that although schooling typically raises future earnings, yet one finds relatively low enrolments amongst currently poor families, the explanation behind that is the low current incomes of their families keeps poor children out of school and thus perpetuates their poverty into the next generation. However Cockburn (2000) stated that it is generally assumed that as household wealth increases children will be progressively withdrawn from labour activities in favour of schooling.

Mavrokonstantis (2011) in his study also found that child labour has a large adverse impact on educational attainment for children in urban areas of Vietnam, as employment opportunities in the formal labour market are more prevalent in urban areas which are not compatible with schooling. (Ersado, 2003) in his study the improved labour market condition for adult household member in rural areas of Nepal and Peru leads to higher school enrolment rates and less employment of children and also higher wages for adult women in rural Zimbabwe are associated with a low prevalent child labour. and the educational levels of both the highest educated man and women in the family, rural infrastructure and higher average educational expenses at community level, significantly improve child education and decrease the likelihood of child labour in all three countries and in rural Nepal and Zimbabwe access to credit has positive effect on child schooling and negative effect on child labour.

2.3.2 Parental education

According to (Gebremedhin, 2013), (Rickey, 2009), found that in rural India the children of mothers with less than primary education are significantly to be in full-time work as compared with full time study, and having a mother who completed middle school reduced the probability of combining work and school as compared with full-time study, while the father's education has no significant effect. In Vietnam (Rosati *et al.*, 2009) revealed that years of father's education have no effect on child labour but mother's education has a negative impacts on the probability of work (full-time and part-time) as well as on the probability of being neither in work nor school .

2.3.3 Family assets

According to the study (Gebremedhin, 2013), household assets are important in the absence of access to formal capital markets. Households that want to borrow against the future may be able to tap internal assets. The presence of the father in the household, the presence of an older

sibling in the household (particularly a brother), the capacity of the mother to engage in market work, or property associated with a family enterprise can all be thought of as assets that can be drawn upon even if the family has no access to formal capital markets. For this reason, the presence of such household assets might be expected to lower child labour. Consequently, gender, birth order, the presence of older siblings, the mother's work opportunities, and the presence of a family enterprise are also important determinants of whether a child works, the type of work undertaken, the number of hours worked, and whether part-time schooling is an option.

2.3.4 Poverty and Child Labour

According to (Kashif and Hussain, 2013), the study found that children develop an interest in labour due to family responsibilities, a lack of educational opportunities for children from poor families and household poverty at the cost of their education. Children have to do more work because of poverty, families are unable to sustain themselves, and thus, making children work and support their families together with their heads. Some key factors such as uncertain jobs market, inflation, poor living standard, weak economy, civic negligence, and unawareness of parents, push the children to labour market.

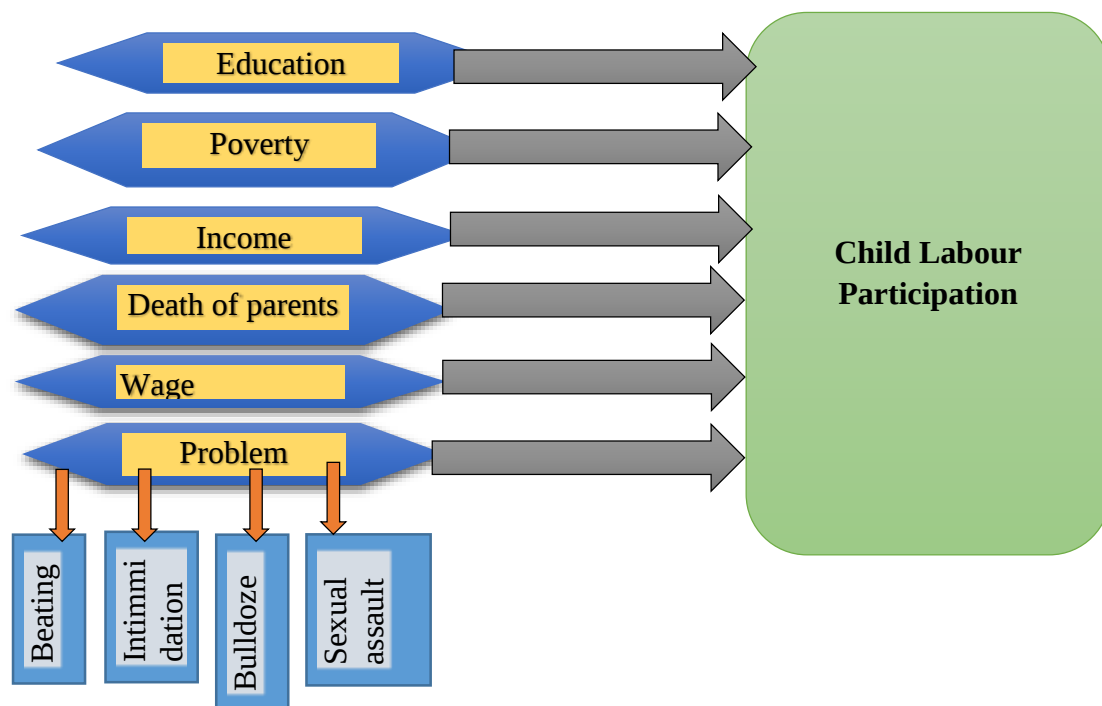
Children have to do more work because of poverty, families are unable to sustain themselves, and thus, making children work and support their families alongside their elders. (Kashif and Hussain *et al.*, 2017) reported that some key factors such as uncertain jobs market, inflation, poor living standard, weak economy, civic negligence, and unawareness of parents, push the children to labor market. According to them, child labor is dependent on their respective household income, working status of parents, education of household head and when poor families face trouble to generate income, they push their children to the work. The study further pointed that around 56% of the working children were uneducated and unpaid and the reasons for working included household poverty and it was compulsory for the children to financially support their families.

To sum up, from the review of literature shows childrens who are under five years old and those between 12-14 years old who spend less than 14 hours a week on their jobs, unless their activities or occupations are hazardous by nature or circumstance. This implies, age 5 to 11 years at least 1 hour of economic work or 21 hours of unpaid household services per week, age

12 to 14 years at least 14 hours of economic work or 21 hours of unpaid household services per week and age 15 to 17 years at least 40 hours of economic work per week. From the study area childrens age between 12-14 years old who spend above the minimum requirments they work above 14 hours a week. This causes children too many problem like mental and pshcological problems. In addition to this those between 15-17 year old who spend less than 40 hours a week on their jobs, unless their activities are hazardous by nature.

2.4 Conceptual Framework of Child Labour Participation

As discussed above about child labour participation and its socio economic effect, the following conceptual framework was shown here below figure (2.1), the study was use dependent variable child labour participation, the independent variables analyzing the influence of socio-economic effect of child death of parents, problems, income, wage, education, working affects. The aim of the researcher is to conduct the socio economic effects of child labour participation. The arrow indicated in each variable figure (2.1) is to see the effects of on child labour participation.



Soure: Author Conceptualization (2021)

Figure 1: Conceptual Framework of Child Labour Participation

Based on the concise review of literature and frame work of the study, the research design and methodology of the study are framed and presented in the next chapter.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Description of the Study Area

The study area is located in Gurage Zone one of zone in Southern Nations, Nationalities, and Peoples' Region (SNNPR) region. The zone is home for different Ethnic groups in Ethiopia and the majority of the residents are Gurage People. The town is located on the main road of Addis Ababa to Jimma town at distance of 158 kilo meter (km) south west of Addis Ababa and 259 kilo meter (km) from Hawassa. The City stretches some 12 km towards south west direction of Gubre sub city which is recently being part of Wolkite town and the place of Wolkite University. According to the Gurage Zone Finance and Economic Department (GZFED, 2019) data, the current population of the town is estimated to be male 889,499 (48.55%) and female 942,787 (51.45%) with a total of 1,832,286 (GZFED, 2019). The total area of the town is 6373 square km. This town has a latitude and longitude of 8°17'N 37°47'E and an elevation between 1000 and 3700 meters above sea level. Gurage zone is surrounded by Northern, Western and Eastern part of Oromiya Region, Southern part of Hadia and Silte Zone, South Eastern part of Yem special Woreda. It has five towns and 16 woredas.

The current population of wolkite town is estimated to be male 41,310 (51.56%) and female 38,799 (48.43%) with a total of 80,109. The total population of study area age between 5-17 years children are male 11,608 and female 12,704 which gives a total of 24,312. Wolkite town is a boundary between Abeshge woreda, Kebena woreda and Cheha woreda. It has three sub-cities (Kifle-Ketema), namely Bekur Kifle-Ketema, Addis Kifle-Ketema and Gubre Kifle-Ketema and also it has six kebeles (GZFED, 2019).



Gurage Zone Finance and Economics Department, 2019

Figure 2: Maps of Gurage zone Wolkite Town

3.2 Data Type and Sources

Primary data were the major focus of achieving the objectives of the study. To gather information primary data were the main source from the working children and other concerned individuals in the study areas. The major instruments that applied to explore the situation in the study area were questionnaire.

3.3 Sampling Techniques and Sample Size Determination

Stratified sampling is a type of sampling method in which the total population is divided into smaller groups or strata to complete the sampling process. The strata is formed based on some common characteristics in the population data. After dividing the population into strata,

randomly selects the sample proportionally. Stratified sampling is a common sampling technique used to draw conclusions from different sub-groups or strata. The strata or sub-groups should be different and the data should not overlap and use simple probability sampling. The population is divided into various subgroups. Stratified sampling is used to understand the existing relationship between two groups.

Stratified sampling was appropriate to ensure that specific characteristics are purposively represented in the sample. To collect information from Child labourers between age 5-17 year who were engaged in Metal and wood workshops, Taxi worker (weyalla), children working in small restaurants, working house, lottery seller and child shoe polishers. Stratified sampling was required, due to lack of reliable data about how many child labourers and on what types of economic they were engaged in the wolkite city, used probability sampling; where the sample respondents. However, the sampling approaches that used given the representative nature of the sample of the popupaltion used to generalize the findings to the study area. As a result, considering these facts a total of 393 child labourers' sample were used for the study.

Based on Yemane (1967) sample size determination formula, it was possible to determine the sample size, at 95% confidence level and 0.05 precision levels.

$$n = \frac{N}{1 + (N)e^2} \quad (3.1)$$

Where: n is number of respondents, N is population size of children = 24312

e = sampling error/level of percision =0.05

$$\begin{aligned} n &= \frac{N}{1 + (N)e^2} \\ &= \frac{24312}{1 + (24312)0.05^2} \\ &= \frac{24312}{1 + (24312)0025} \end{aligned}$$

$$= \frac{24312}{1+60.78}$$

$$= \frac{24312}{61.78} = 393$$

Total population of children Ages between 5-17 years male 11,608 female 12,704 total 24,312. The total sample size of respondents based on the above sample size determination is 393. This the total sample size is proportion to the major works for the participation of the child labourers are Metal and wood workshops, Taxi conducting (weyalla), children working in small restaurants, working house, lottery seller and child shoe polishes in the wolkite city. Based on the major working field for the child labours, the research employed proportionally. The proportion of the sample is given in the table 3.1 based on the sample distribution, further analysis has been executed. These sample population is:

$$393 = n + n+1 + n+2 + n+3 + n+4 + n+5$$

$$6n + 15 = 393$$

$$6n = 393 - 15$$

$$6n = 378$$

$$N = 378 / 6$$

$$N = 63, n+1 = 64, n+2 = 65, n+3 = 66, n+4 = 67, n+5 = 68$$

When n is metal and wood work, n+1 children working shoe shine, n+2 taxi conductor, n+3 working in small restaurant, n+4 Lottery distributor and n+5 working house.

Table 3. 1: The Proportion of Sample Population

No.	Labour type	Sample
1	Metal and wood workshops	63
2	child shoe polishers	64
3	Taxi worker (weyalla)	65
4	children working in small restaurants	66
5	Lottery seller	67
6	working house	68
Total		393

Source: Own calculation (2021)

3.4 Method of Data Collection

In this study data were collected by using structured questionnaire and key informant interviews. Primarily, the questions were prepared in English language and translated into local languages, Amharic where everybody can easily understand about the ideas and respond. To collect data from respondents, data collector who can speak both English and Amharic were trained and conducted a face to face interview with the sample labourers who are metal and wood work, working shoe shine, taxi worker, working small restaurant, Lottery seller and working house.

3.5 Data Analysis Methods and Model Specification

Descriptive Statistics

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Descriptive statistics are typically distinguished from inferential statistics. Descriptive statistics are simply describing what is or what the data shows. Descriptive Statistics are used to present quantitative descriptions in a manageable form. Descriptive statistics help us to simplify large amounts of data in a sensible way. Each descriptive statistic reduces lots of data into a simpler summary.

Inferential statistics

Inferential statistics takes data from a sample and makes inferences about the larger population from which the sample was drawn. Because the goal of inferential statistics is to draw conclusions from a sample and generalize them to a population, we need to have confidence that our sample accurately reflects the population. This requirement affects our process. Inferential statistics is when data from a sample group and make a prediction that effects the conclusion on a large population. Can use random sampling to evaluate how different variables can lead to make generalizations to conduct further experiments. To get an accurate analysis, and to identify the population measuring, create a sample for that population and incorporate analysis to find a sampling error.

Inferential data analysis methods were used by using STATA software version 13.0 which is a general purpose statistical software package that enables users to analyze, manage and produce

of data collected by researcher. To make all the data collecte and store meaningful and consumable appropriate analysis was made by using tabular and percentage form of presentation accompanied by relevant explanation. In case of the analysis, there are three types of labour welfare effect (i.e., health, income and family status) being potentially chosen by each labour participation type, each labour participation may be zero, one, two or more labour welfare in each type. In this section the main econometric used to determinants of child labour participation binary logit model was presented. The form to eximine the determinants of child labour by child labour participation the logit model we emphasized. The basic ideas underlying the logit model that in explaining children attending school and work to not attend school, the CLP was (Gujarati, 2004).

$$\begin{aligned}
 P_i &= E(Y = 1 | X_i) = \beta_0 + \beta_1 X_i \\
 &= \beta_0 + \beta_1 \text{Age}_i + \beta_2 \text{Sex}_i + \beta_3 \text{Educ}_i + \beta_4 \text{Pl}_i + \beta_5 \text{Sinc}_i + \beta_6 \text{Inc}_i + \beta_7 \text{Mprob}_i + \\
 &\quad \beta_8 \text{Wafect}_i + \beta_9 \text{Wage}_i + u_i
 \end{aligned}
 \tag{3.2}$$

Where X_i is independent variables and $Y = 1$ means childrens participate in work, 0 otherwise.

Where β_i is the cumulative distribution function of a standard normal variable which ensures $0 \leq p_i \leq 1$, x_i is i^{th} vector of factors that determine or explain the variation in child labour participation outcome and β is a vector of parameters or coefficients that reflects the effect of changes in x on the probability of participation. The relationship between a specific factor and the outcome of the probability were understand by the means of the marginal effect which accounts for the partial change in the probability. The marginal effects provide insights into how the explanatory variables will change the predicted probability of participation.

$$P_i = E(Y = 1 | X_i) = \frac{1}{1 + e^{-(\beta_0 + \beta_i X_i)}}
 \tag{3.3}$$

$$P_i = \frac{1}{1 + e^{-Z_i}} = \frac{e^Z}{1 + e^Z}
 \tag{3.4}$$

Where $Z_i = \beta_0 + \beta_i X_i$. Equation (3.4) represents what is known as the (cumulative) logistic distribution function.

Binary logistic regression was performed to calculate the effects of explanatory variables in dependent variable. The research considers first the case where the response y_i is binary, assuming only two values that for convenience we code as one or zero. It can be defined,

$$Y_i = \begin{cases} 1 & \text{if the } i\text{-th child participates in work} \\ 0 & \text{otherwise.} \end{cases}$$

We view y_i as a realization of a random variable Y_i that can take the values one and zero with probabilities π_i and $1 - \pi_i$, respectively.

The logit transformation is the next step in defining a model for our data concerns the systematic structure. We would like to have the probabilities π_i depend on a vector of observed covariates x_i . The simplest idea would be to let π_i be a linear function of the covariates, say

$$\pi_i = x_i' \beta \quad (3.5)$$

Where β is a vector of regression coefficients. Equation 3.5 is sometimes called the linear probability model. This model is often estimated from individual data using Ordinary Least Squares (OLS). One problem with this model is that the probability π_i on the left-hand side has to be between zero and one, but the linear predictor $x_i' \beta$ on the right-hand-side can take any real value, so there is no guarantee that the predicted values will be in the correct range unless complex restrictions are imposed on the coefficients. A simple solution to this problem is to transform the probability to remove the range restrictions, and model the transformation as a linear function of the covariates. We do this in two steps.

First, move from the probability π_i to the odds

$$\text{Odds}_i = \frac{\pi_i}{1 - \pi_i} \quad (3.6)$$

Defined as the ratio of the probability to its complement, or the ratio of favorable to unfavorable cases. If the probability of an event is a half, the odds are one-to-one or even. If the probability is $1/3$, the odds are one to-two. If the probability is very small, the odds are said to be long. In some contexts the language of odds is more natural than the language of probabilities. In gambling, for example, odds of $1:k$ indicate that the fair payoff for a stake of one is k . The key from our point of view is that the languages are equivalent, i.e. one can easily be translated into

the other, but odds can take any positive value and therefore have no ceiling restriction. Second, we take logarithms, calculating the logit or log-odds

$$\eta_i = \text{logit}(\pi_i) = \log \frac{\pi_i}{1 - \pi_i}, \quad (3.7)$$

Which has the effect of removing the floor restriction. To see this point note that as the probability goes down to zero the odds approach zero and the logit approaches $-\infty$. At the other extreme, as the probability approaches one the odds approach $+\infty$ and so does the logit. Thus, logits map probabilities from the range (0, 1) to the entire real line. Note that if the probability is 1/2 the odds are even and the logit is zero. Negative logits represent probabilities below one half and positive logits correspond to probabilities above one half. Logits may also be defined in terms of the binomial mean $\mu_i = n_i \pi_i$ as the log of the ratio of expected successes μ_i to expected failures $n_i - \mu_i$. The result is exactly the same because the binomial denominator n_i cancels out when calculating the odds. Binary logistic regression was performed to calculate the effects of explanatory variables in dependent variable. The model we used in this study is as below:

$$Y_i = X_i \beta + u_i$$

Where Y is our dependent variable (i.e. Child Labour Participation/CLP), X represents independent variable and u indicates residuals for regression model. In addition, i shows the children age between 5- 17 in wolkite town and β is the coefficient of econometrics model used in this study is shown below:

$$CLP_i = \beta_0 + \beta_1 \text{Age}_i + \beta_2 \text{Sex}_i + \beta_3 \text{Educ}_i + \beta_4 \text{Pl}_i + \beta_5 \text{Sinc}_i + \beta_6 \text{Inc}_i + \beta_7 \text{Mprob}_i + \beta_8 \text{W affect}_i + \beta_9 \text{Wage}_i + u_i \quad (3.8)$$

CLP is dependent variable assuming two values (1 represents participate in work and 0 otherwise). We also used some explanatory variables: Living in wolkite or out of wolkite town (Plife) variable. This variable has two values: living in out of wolkite [0] or living in wolkite [1]. Sex of child (sex) is another explanatory variable (1 for male and 0 for women), because males might be more put under child labour than women's or vice versa (Webbink E., *et al.*, 2012). 'Age' was also used as a variable to have some influence on child working (Serra R. 2009). This variable has been categorized into three values (0 for 5-9 years, 1 for 10-14, 2 for

15-17). ‘Educ’ represents children attending school (1 for attendance and 0 not). ‘*Mprobi*’ is main problems of work 0 for beating, 1 for intimidation, 2 for bulldoze and 3 for sexual assault and 4 others. Depending on the level of mortality and poverty, when child mortality increases, the number of child workers is expected to increase or decrease.

Table 3. 2: Definitions of variables and their expected signs

Variable	Definition
CLP	Main activity of a child (1 represents attending school and work and 0 otherwise)
Child Characteristics	
Age	Age of child
Sex	Dummy for the sex of the child(1 if male, 0 otherwise)
Household Characteristics	
Plife	Dummy for parents alive (1 if yes, 0 otherwise)
SInc	Source of income (0 if mother, 1 if father, 2 if relatives, 3 if combination of above, 4 otherwise)
Inc	Dummy for amount of money sufficient (1 if yes, 0 otherwise)
Problems	
Mprob	The main problems of children (0 if beating, 1 if intimidation, 2 if bulldoze, 3 if sexual assault and 4 others)
Education	
Attschool	Dummy for attending school (1 if yes, 0 otherwise)
Waffct	Dummy for working affect to school(1 if yes, 0 otherwise)
Wage	
Gwage	Earnings of work
Wage	Per day wage

Table 3. 3: Description of Variables and Expected Sign

Variables	Variables Description	Type	Expected Sign
CLP	Child Labour Participation which measure the Working Hour	Continuous	+
Age	Age of the respondent	Continuous	-
Inc	Amount of money	Dummy	-
Sex	Sex of the respondent	Dummy	+
Edu	Education of Child	Continuous	-
Fedu	Father Education	Continuous	+
Medu	Mother Education	Continuous	+
Mprob	Main problems	Categorical	-
Nw	Nature of work	Categorical	+
Wh	Working hours	Continuous	-
Gwage	Duration of Getting wage	Continuous	-
Wage	Getting wage	Continuous	-

Diagnostic test**Normality**

Checking normality of Variables and transforming variables some researchers believe that linear regression requires that the outcome (dependent) and predictor (explanatory) variables be normally distributed. To clarify this issue it is the residuals that need to be normally distributed. In fact, the residuals need to be normal only for the hypothesis tests (like t-tests) to be valid. The estimation of the regression coefficients do not require normally distributed residuals.

Hypothesis test:

H_0 : residual is normally distributed [H_0 : errors are normally distributed].

H_1 : residual is not normally distributed [H_1 : errors are not normally distributed].

Homoscedasticity

If the model is well-fitted, there should be no pattern to the residuals plotted against the fitted values. If the variance of the residuals is non-constant then the residual variance is said to be "heteroscedastic."

Hypothesis test

Ho: there is homoscedasticity

H₁: there is heteroskedasticity

Multicollinearity

When there is a perfect linear relationship among the predictors, the estimates for a regression model cannot be uniquely computed. The term collinearity implies that two variables are near perfect linear combinations of one another. When more than two variables are involved it is often called multicollinearity, although the two terms are often used interchangeably. The primary concern is that as the degree of multicollinearity increases, the regression model estimates of the coefficients become unstable and the standard errors for the coefficients can get wildly inflated. To detect multicollinearity we can use the vif command after the regression to check for multicollinearity. Vif stands for variance inflation factor. As a rule of thumb, a variable whose VIF values are greater than 10 may merit further investigation. Tolerance, defined as $1/VIF$, is used by many researchers to check on the degree of collinearity. A tolerance value lower than 0.1 is comparable to a VIF value of 10. It means that the variable could be considered as a linear combination of other independent variables.

Ho: There is multicollinearity

H₁: There is no multicollinearity

Autocorrelation

Another OLS assumption is the errors associated with one observation are not correlated with the errors of any other observation. The statement of this assumption that the errors associated with one observation are not correlated with the errors of any other observation cover several different situations.

Hypothesis test

Ho: No Serial Correlation (no autocorrelation)

H₁: There is Serial Correlation (there is autocorrelation)

Based on the above mentioned research design, the primary data have been analysed with the help of STATA and the executed analysis have been clearly explained in the results and discussions part of the study.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This section is presented analyzes and discussions and the findings of the research based on the data collected in study area. This chapter presents by tables and interpretations to show the effects of child labour participation and its effect on socio-economic activity in Wolkite town. The total of 393 child labourers were surveyed, analysed, summerized and discussed.

4.1 Descriptive statistics

4.1.1 Demographic Charactristics of Sample Respondents

The demographic features of child labour participation are age of child, gender, birth place, marital status, Father Education, Mather education, parents living place, source of income.

Table 4. 1: Age and sex classification of child laborers

Sample Respondents	Age between 5-9			Age between 10-14			Age between 15-17			Total		Grand Total	%
	M	F	Sum	M	F	Sum	M	F	Sum	M	F		
Metal work (63)	0	0	0	12	0	12	12	0	51	63	0	63	16.03
Restaurant (66)	0	0	0	12	19	31	9	22	31	21	45	66	16.79
Taxi worker (65)	0	0	0	25	0	25	25	0	40	65	0	65	16.54
Shoeshine (64)	2	0	2	31	0	31	31	0	35	64	0	64	16.28
Lottery seller (67)	1	0	1	32	0	32	32	0	34	67	0	67	17.05
House worker (68)	0	6	6	8	28	36	0	36	26	4	64	68	17.3
Total (393)	3	6	9	120	47	167	109	58	217	284	109	393	100

Source: Own Survey, 2021

The above table shows the distribution of child labourers who were involved in Metal and Wood work, Children Working in small restaurants, Children Working in Tax, Child Working shoe polishing at the time of the survey by age and sex and from it, it can be seen that from a total of 393 child workers 284 (72.3%) are males and 109 (27.7%) are females. As taxi transport, shoe polishing, working in garage and furniture workshops is the traditional domain of men, a

brief look at the data presented in above table implies that males have greater tendency to be involved in those above work than females however works traditionally left for women like cooking and cleaning registered a few females as worker, as a result from 66 children who were engaged in small restaurants 45 of them were females. The age of the respondents range from 5 to 9 were accounted 9 (2.3%), but the majority of the respondents are within the age group of 15 to 17 which accounts 217(55.2%) and child workers within the age group of 10 to 14 accounted for 109 (42.5%).

Table 4. 2: Birth Place of child and living arrangement of the respondents

Variable	Case	Frequency	%
Birth Place Of Child	Out of Wolkite	335	85.24
	Wolkite Town	58	14.76
	Total	393	100
Parents Life Status	Yes	340	86.51
	No	53	13.49
	Total	393	100
Parents Living Status	Both Alive	280	71.25
	Mother Dead	50	12.72
	Father Dead	49	12.47
	Both Dead	14	3.56
	Total	393	100
Child Living With	Relatives	173	44.02
	Others	122	31.04
	Mother	29	7.38
	Both	28	7.12
	Alone	21	5.34
	Father	20	5.09
	Total	393	100
Parents Living in Wolkite	Yes	65	16.54
	No	328	83.46
	Total	393	100

Source: Own Survey, 2021

It was important to analyze the place of birth and the living arrangements of the child labourers to know whether it had any influence on children to join working activities. In the sequence of showing the survey, they were asked to mention with whom they were living with and the places they were born. The responses summarized in Table 4.2 shows that out of the total study

population, those living relatives were dominant, accounting for 173 (44.02%) of all the working children interviewed. Child workers that were living with mothers involved 29 (7.4%) and those that were living with their father involved 20 (5.1%) while those children living with alone accounted for 21 (5.3%). Living arrangement is a significant determinant of children engaging in child labour those smaller child labourers live with their both parents and a child who lives with a father and mother is less exposed to involvement in child labour and many children who live with relatives are child labourers. In the same way as indicated above out of the total number of child labourers the majority 335 (85.2%) of them were born out of Wolkite and 44% of them were living with relatives and also 31% of the children living with others.

The conclusion one can draw from this finding is that living arrangements sometimes does have a direct influence on whether a child should work or not and other dominant variables such as poverty, migration status, death of parents may facilitate the process. The responses of the children as summarized 113 (28.7%) of child workers were orphans who have lost either a mother or father, or both parents. Majority of the orphans have more of their mothers dead who constituted 49 (12.5%) of the survey population compared to those children who have only their fathers dead who accounted for 50 (13%). These findings suggest that more mothers carry the responsibility of taking care of child than fathers at the time of one of them death as a result of in Ethiopia only few mothers have access to education and well paying jobs to enable them to fulfill the basic needs of their children. For this reasons, many children were forced to engage in child labour.

In addition to this, 4% of the respondents in the survey population were orphans who have lost both of their parents and forced to engage in child labour activities as a survival mechanism. On the other hand child workers who nominated both parents were alive accounted for 280 (71.3%). This shows however both parent are alive they forced to work, this is because the majority of them their parents live out of Wolkite, they were living alone and with relatives as mentioned above condition forced to involve in working activities to be them self. Similar as indicated above out of the total number of child labourers the majority 328 (83.5%) of childrens' parents living place were out of Wolkite.

Table 4. 3: Sex of Head and Parents Marital Status of the Sample Child Labour

Variable	Case	Frequency	%
Sex of Head	Male	245	62.34
	Female	148	37.66
	Total	393	100
Parents Marital Status	Married	304	77.35
	Divorsed	45	11.45
	Withdraw	26	6.62
	Single	18	4.58
	Total	393	100

Source: Own Survey, 2021

Table 4.3 shows that from a total of 393 samples of child labourers the sex of head who were males' 245 (62.34%) and sex of head who were females were 148 (37.66). This shows in table that the sex of male's household-head have greater participation than females. As indicated the above table out of the total number of child labourers the parent's marital status married were 304 (77.4%), divorced were 45 (11.5%), withdraw were 26 (6.6%) and single were 18 (4.6%).

Table 4. 4: Parents Education Level of the Sample Child Labourers

Variable	Case	Frequency	%
Father education level	Illiterate	177	45.04
	Read and Write	117	29.77
	Grade 1-6	64	16.28
	Grade 7-12	35	8.91
	Total	393	100
Mother education level	Illiterate	180	45.8
	Reade and Write	108	27.48
	Grade 1-6	72	18.32
	Grade 7-12	33	8.4
	Total	393	100

Source: Own Survey, 2021

It was essential to examine the family status of child labourers to know whether parent's education had any influence in forcing children to participate in working activities. Within this frame work, child workers that participated in the survey were requested to report the situations of their parents, paternal educational status, maternal educational status, paternal occupation and maternal occupation. In the survey, information on education level of parents was collected

from every child worker that participated in the survey. The purpose was to understand the effect of educational level of parents in influencing children to take up in working participation.

Table 4.4 presents the educational status of the parents of the child workers. Generally, about 177 (45%) of the fathers of child workers and 180 (46%) of the mothers of the child workers were found to be illiterate. Among the illiterate parents, mothers registered to some extent higher illiteracy level than fathers. And also about 117 (30 %) of the fathers and 108 (27.5%) of the mothers were able to read and write only. Considering into the residents by grade level, 64 (16%) of fathers and 78 (18.3%) of mothers were found to be those that completed grades 1-6 and 35 (9%) of fathers and 33 (8.4%) of mothers were found to be those that completed grade 7-12. The findings of study also indicates that the majority of the child workers that participated in the survey come from illiterate families and families with poor educational background and the number of working children declines with an increase in educational level of the parents. Especially as mother's educational level increase the number of working children became decrease.

Table 4. 5: Sources of Income of the Sample Child Labourers

Variables	Case	Freq.	%
Source of Income	Mother	78	19.85
	Father	202	51.4
	Son	12	3.05
	Relatives	24	6.11
	Others	18	4.58
	All	59	15.01
	Total	393	100
Amount of money is enough or not	Yes	58	15.01
	No	334	84.99
	Total	393	100

Source: Own Survey, 2021

Table 4.5 presents the sources of income of the parents of the child workers. Generally, about 78 (19.9%) of source of income gets from their mothers and 202 (51.4%) of the source of income were found from their fathers. Among the source of income, fathers showed to some extent higher source of income than mothers. And also about 12 (3.05%) of the source of income comes from son and 24 (6.11%) of the source of income comes from relatives. Considering into the residents source of income comes from all family members were 59 (15%)

and only 18 (4.6%) of source of income comes from others. The findings of study indicates that the majority of the child workers source of income gets from their father. In the same way as indicated above out of the total number of child labourers the majority 334 (85%) of their parents amount of money they get were not enough and 58 (15%) of their parents amount of money they get were enough. These findings indicate that many children were forced to engage in child labour. This is because, the majority of their parents getting insufficient amounts of money.

Table 4. 6: Working Hours of the Sample Child Labourers

Variables	Case	Freq.	%
Working Hours	11 hour	49	12.47
	14 hour	93	23.66
	9 hour	57	14.5
	6 hour	24	6.11
	10 hour	148	37.66
	13 hour	20	5.09
	Other	2	0.51
	Total	393	100

Source: Own Survey, 2021

As showed in table 4.6 During the data collection period the nature of working hours for the majority of child workers found was difficult for them to tell the exact number of hours worked in a day. Thus, the accuracy of the data on the number of working hours should be accepted with attention. As presented in the table 4.6 the majority of child workers, 49 (12.5%) were engaged in working activities work time was 11 hours in a day. Those 93 (23.66%) were engaged in working activities work time was 14 hours in a day.¹ Child workers those who were working 9 hours were 57 (14.5%) and Child workers those who were working 6 hours were 24 (6.11%). And also Child workers who were working 10 hours were 148 (38%). On the other hand 20 (5.09%) were engaged in working activities work time was 13 hours in a days. According to the proclamation of Federal Negarit Gazette Maximum Daily or weekly Hours of

¹ Children are also protected from economic exploitation by Proclamation No. 377/2003 of the Labour Law. This proclamation that sets the minimum age for work as 14 years categorizes workers of ages 14 to 18 as young workers. Accordingly, young workers are given a right to special protective measures. Young workers can work for a maximum of seven working hours per day compared to the eight working hours for adults.

Work “normal hours of work” means the time during which a worker actually performs work or avails himself for work in accordance with law, collective agreement or work rules. Normal hours of work shall not exceed 8 hours a day or 48 hours a week (Federal Negarit Gazette, 2019). Concerning the amount of time spent on work per day, on average, children works 11 hours per day. Children’s work which is of such a nature or force that it is harmful to their health and development and prevents them from receiving a proper education. The concern is with children who are rejected their childhood, who work at too young an age, who work long hours, who work under conditions harmful to their health and to their physical and mental development, who are separated from their families, and who are poor of education.

Table 4. 7: Durations of Working Time of the Sample of Child Labourers

Variable	Case	Frequency	%
Time of work in a week	The whole week	304	77.35
	six day	64	16.28
	five day	15	3.82
	four day	10	2.55
	Total	393	100
Working on Holy day	Yes	258	65.65
	No	135	34.35
	Total	393	100
Rest in a day	Below 8 hour	39	9.92
	8 hour	173	44.02
	9 hour	77	19.59
	10 hour	53	13.49
	11 hour	37	9.41
	11 hour & above	14	3.56
	Total	393	100
Working per day	Full time	280	71.25
	Part time workers	6	1.53
	Half day worker	30	7.63
	Temporary worker	77	19.59
	Total	393	100

Source: Own Survey, 2021

As presented in table 4.7 the majority of child workers, 304 (77.4%) were engaged in working activities seven days a week. On the other hand, child workers who work six days a week and five days a week accounted for 64 (16.3%) and 15 (3.8%) respectively. Those respondents who

were working four days a week accounted for 10 (2.55%), there is no one child worker said three, two and one day per week. In addition to this, child workers, 258 (66%) of children were working on holiday and only 135(34%) of children were not working on holiday. This indicates the majority of childrens were working on holiy day. The accuracy of the data on the number of working hours should be recognised with consideration. As presented in the above table the majority of child workers, 39 (9.92%) were occupied in working activities below 8 hours in a day. On the other hand, child workers who work eight hours, nine hour, ten hour, eleven hour and above eleven hour in a day justified for 173 (44.02%), 77 (19.59%), 53 (13.49%), 37 (9.41%) and 14 (3.56%), respectively. The general picture of this findings is that the majority of child workers are working several hours in a day with little or no time. This clearly indicates that the majority of the respondents that participated in the survey don't have full time for lesiur, health, education and also causes physical and mental health.

According to the the proclamation of Federal Negarit Gazeta Maximum Daily or weekly Hours of Work “normal hours of work” means the time during which a worker actually performs work or avails himself for work in accordance with law, collective agreement or work rules. Normal hours of work shall not exceed 8 hours a day or 48 hours a week (Federal Negarit Gazette, 2019). As presented in the above table the majority of child workers, 280 (71.25%) were engaged in working full times in a days. On the other hand, child workers who work part time works in a day, half day worker in aday and temporary worker in a day were explained for 6 (1.52%), 28 (7.13%) and 77 (19.59%) respectively². The general picture of this findings is that the majority of child workers were working full times in a day. This clearly indicates that the majority of the respondents that participated in the survey don't have time to study and becomes mentally and psychological abused.

² Limits of Normal hours of work for young workers shall not exceeds **seven hours** a day, light work includes employment and non hazardous work for less than 14 hours a week performed by children aged 12 to 14.

Table 4. 8: Problems and Main Problem faced by the Sample Child Labourers

Variable	Case	Frequency	%
Problems	Yes	299	76.08
	No	94	23.92
	Total	393	100
Main problem	Beating	85	21.52
	Intimidation	97	24.58
	Bulldoze	176	44.9
	Sexual assault	37	9.0
	Total	393	100

Source: Own Survey, 2021

As Table 4.8 indicates out of the total of 393, those who were facing problems or difficulties 299 (76.08%) and who were no facing problems or difficulties were 94 (23.92%). 76% of children's facing problems or difficulties this shows that there is a negative effects of child labour participation on their health. In addition to this child labourer that had main problems or difficulties of beating were 85 (21.52%). Child labourer that had main problems or difficulties of intimidation were 97 (24.58%). Child labourer that had main problems or difficulties of bulldoze were 176 (44.9%). Child labourer that had main problems or difficulties of sexual assault were 37 (9.0%). To summarize the above table out of the total of 393, those who were facing the main problems or difficulties of bulldoze were negative affects on child labour participation. Those problem affects the child by mentaly and phsycologicaly.

4.1.2. Determintants of Socio - Economic Effect of Child Labourers

In this section, discussed factors that determintants of socio - economic effect of child labourers namely: socio-economic factors (introducing work, components of work, kind of problems, reasons to work) against child labour are discussed with the help of proper tables and analysis.

Table 4. 9: Main Reasons for the Work of the Sample Child Labourers

Variable	Case	Frequency	%
Main Reason that Made You Start to Work	Separation from family	15	3.82
	Peer influence	71	18.07
	Low family income	172	43.77
	I have no one to support me	21	5.34
	Death of parents	7	1.78
	Under the pressurs of parents	107	27.23
	Total	393	100

Source: Own Survey, 2021

The results in table 4.9 indicated that poverty is the main causes that forces children to participate in working activities. From the reasons chosen for the cause of child labour among children the most important factor responsible for pushing children into work was low family income which accounted for 172 (43.77%) of the reasons given by the child workers. The child labourers in the study population mostly come from economically poor families, and unfortunately, they are forced by poverty to engage in child labour for subsistence. A significant number of children 21 (5.34%) mentioned the need to be self reliant as reason forced them to work. About 107 (27.22%) of the child workers pointed out that the reason why they are working was to support their low family income. Poverty was well-known as a significant determinant of children being forced to take up employment in their current work in the study population that participated in the survey and this is shown by the high percentage of children being forced to work because of poor family and to support family income. These indicates that strong efforts to improve the household income and living standards can prevent parents from engaging their children in working activities to supplement their mix incomes. Another important reason given by 7 (1.78%) of the child workers was the death of one or both of their parents. Other factors that forced children to enter to employment include, breakup of family 15 (3.81%) and peer influence 71 (18.08%).

Table 4. 10: Willingness to Stop and Reasons to the Work of the Sample Child Labour

Variable	Case	Frequency	%
willingness to stop work	Yes	281	71.5
	No	112	28.5
	Total	393	100
Reasons	do not like to work	125	31.99
	health problem	121	30.01
	do not like work environment	40	9.98
	make too tierd to go to school	76	19.01
	do not like the physical abuse	33	9.01
	Total	393	100

Source: Own Survey, 2021

As indicated the above table out of the total of 393, those who were willingness to stop the work were 281 (71.5%) and 112 (28.5%) did not have willingness to stop work. This implies that 71.5% of children's willingness to stop the work because to decrease different types of problem like mental problem and phsycological problem. In addition to this children's main reason willingness to stop work because of not like to work were 125 (32%) and main reason willingness to stop work because of health problem were 121 (30%). The main reason willingness to stop work because of they do not like the working environment, tired go to school and not like the physical abuse were 40 (10), 76 (19%) and 33 (9%) respectively. This implies that children's willingness to stop the work because of the above main reasons.

4.1.3. Working Participation of the Child Labourers

In this section, discussion on working Participation of the child labourers namely: Currently Working, Attending school, time to attend school, Work affects the Study, earning by the work and terms of salary against child labour were analysed and presented.

Table 4. 11: School Participation of the Child Labourers

Variable	Case	Frequency	%
Attending school	Yes	180	45.81
	No	213	54.19
	Total	393	100
Time to attend school	Regularly	19	4.83
	Night	161	40.97
	Other	213	54.2
	Total	393	100
Work affect the Study	Yes	236	60.05
	No	157	39.95
	Total	393	100

Source: Own Survey, 2021

As shown table 4.11 out of the total number of child labourers that participated in the survey those who were currently attending school 180 (45.81%) and those who were currently not attending school 213 (54.19%). The findings from the questionnaire and key informant persons indicate that majority of children who were working rather than going to school. In the same way child labourers who were attending school regularly accounted for 19(4.83%), Child labourers who were attending school at night accounted for 161 (41%) and 213 (54.2%) of the total number of respondents were not attending school neither regularly nor night time. The findings from the study indicate that majority of children who were working instead of attending school. As indicated table 4.11 out of the total of 393, those who were working affects the study were 236 (60%) and working not affects the study 157 (40%). This implies that 60% of working children's affect the study. The findings of the study indicate that majority of children who were working instead of going to school were forced by the situations rather than a deliberate choice of their own. Thus, in order to reduce the negative effect of child labour on the education of the children that participated in the survey, it needs to solve the problems that families and children face which are primarily economic in nature

Table 4. 12: Terms of Wage and Earnings by the Work of the Sample Child Labourers

Variable	Case	Frequency	%
Earnings by the work	Money	375	95.42
	Material	8	2.04
	Food	10	2.54
	Total	393	100
Terms of wage	Monthly	195	49.62
	Daily	179	45.55
	Weekly	2	0.51
	Yearly	14	3.56
	Other	3	0.76
	Total	393	100

Source: Own Survey, 2021

As indicated above table children's who were earnings by the work getting money were 375(95.42%). Children's who were earnings by the work getting only material were 8(2.04%) and Children's who were earnings by the work getting only food were 10 (2.54%). The finding indicates that child labourers who earnings by the work getting money were highly influenced children going to working activities. On the other hand, children's who were 195 (49.62%) were getting wage in terms of month and 179 (45.55%) of childrens' were getting wage in terms of daily. Children's those who were 2(0.51%) were getting wage in terms of a weekly and also 14(3.56%) of children's were getting wage in terms of yearly. The general picture of this findings is that the majority of child workers getting wage were daily and monthly. Accordingly, child labourers who were getting wage daily, weekly, monthly and yearly wage changed to daily wage.

Table 4. 13: Per Day Wage of the Sample Child Labourers

Variable	Case	Frequency	%
Per Day Wage	20 Birr	49	12.47
	40 Birr	51	12.98
	60 Birr	89	22.65
	80 Birr	88	22.39
	100 Birr	4	1.02
	120 Birr	42	10.69
	150 Birr	70	17.81
	Total	393	100

Source: Own Survey, 2021

As table 4.13 showed that out of the total number of child labourers who were getting wage on average 20 birr accounted for 49 (12.5%). Child labourers who were getting per day wage on average 40 birr, 60 birr and 80 birr accounted for 51(12.97%), 89(22.65%) and 88 (22.39%) respectively. On the other hand child labourers who were getting per day wage on average 100 birr, 120 birr and 150 birr accounted for 4(1.01%), 42(10.68%) and 70(17.81%) respectively. The results shows that child workers that who were getting money on average per day wage from the total number of respondents were not enough to servive.

4.2 Econometric Results and Discusion of Determinats of Child Labour Participation

Diagnosis test

Normality

Checking normality of Variables and transforming variables some researchers believe that linear regression requires that the outcome (dependent) and predictor (explanatory) variables be normally distributed. To clarify this issue it is the residuals that need to be normally distributed. In fact, the residuals need to be normal only for the hypothesis tests (like t-tests) to be valid. The estimation of the regression coefficients do not require normally distributed residuals. As we are interested in having valid ttests, we will investigate issues concerning normality. The Kolmogorov-Smirnov test (**sktest**) was used to determine whether the distribution of the residuals was statistically significantly different from that of a theoretical normal distribution.

Hypothesis test:

H0: residual is normally distributed [H0: errors are normally distributed].

H1: residual is not normally distributed [H1: errors are not normally distributed].

. swilk resid

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
resid	393	0.89836	27.542	7.883	0.00000

Decision rule: Corresponding to sktest the swilk test rejects the claim that the residual is normally distributed, since p-value is smaller which is less than 5 % (P-value=0.00000). Having concluded that CLP is normally distributed reject H_0 and accept H_1 .

Homoscedasticity

If the model is well-fitted, there should be no pattern to the residuals plotted against the fitted values. If the variance of the residuals is non-constant then the residual variance is said to be "heteroscedastic." To detect heteroscedasticity of the error term using the Breusch-Pagan test. The Breusch-Pagan test for the violation of homoscedasticity is performed with the `hettest` command (see appendix).

Hypothesis test

H_0 : there is homoscedasticity

H_1 : there is heteroskedasticity

The p-value ($p=0.7845$) is large. Therefore reject the null hypothesis and accept the alternative hypothesis that the variance is not homogenous (i.e heteroscedasticity). So in this case, the evidence is against the null hypothesis that the variance is homogeneous.

Decision rule: the p value is greater than 0.05. Therefore there is homoscedasticity.

Multicollinearity

When there is a perfect linear relationship among the predictors, the estimates for a regression model cannot be uniquely computed. The term collinearity implies that two variables are near perfect linear combinations of one another. When more than two variables are involved it is often called multicollinearity, although the two terms are often used interchangeably. The primary concern is that as the degree of multicollinearity increases, the regression model estimates of the coefficients become unstable and the standard errors for the coefficients can get wildly inflated. To detect multicollinearity we can use the `vif` command after the regression to check for multicollinearity. Vif stands for variance inflation factor. As a rule of thumb, a variable whose VIF values are greater than 10 may merit further investigation. Tolerance, defined as $1/VIF$, is used by many researchers to check on the degree of collinearity. A tolerance value lower than 0.1 is comparable to a VIF value of 10. It means that the variable could be

considered as a linear combination of other independent variables. We can test for multicollinearity with the vif command, although STATA checks for this problem and automatically drops perfectly collinear predictor variables prior to estimation. The higher the correlations between the predictor variables, the more the multicollinearity.

The variance inflation factor, VIF, is a measure of the reciprocal of the complement of the inter-correlation among the predictor variables: $VIF = 1/(1 - r^2)$ where r^2 is the multiple correlation between the predictor variable and the other predictors. VIF values greater than 10 indicate possible problems.

H₀: There is multicollinearity

H₁: There is no multicollinearity

From this Stata output, (see appendix) all variables are not multicollinearity variable with $VIF < 10$. If there is multi collinearity between or among variables the solution is increasing sample size, transforming the variable and dropping highly collinear variable. However, dropping the collinear variable is not recommendable because it may create a misspecification problem. The variance inflation factor, VIF, is less than 10, reject the null hypothesis and accept alternative hypothesis.

Decision rule: The variance inflation factor, VIF, is 1.33 which is less than 10, there is no multicollinearity.

Autocorrelation

Another OLS assumption is the errors associated with one observation are not correlated with the errors of any other observation. The statement of this assumption that the errors associated with one observation are not correlated with the errors of any other observation cover several different situations.

Hypothesis test

H₀: No Serial Correlation (no autocorrelation)

H₁: There is Serial Correlation (there is autocorrelation)

Decision rule: the p-value is less than 0.05. Therefore reject H₀ and accept H₁.

Using STATA version 13.0, logit regression result output where presented in table 4.14 below. Accordingly, parent's life status, source of income, amount of money, main problem, attending school and working affects these variables are found statistically significant where logit model predicts 53.89% of variation of CLP explained by variables under consideration at significance level of 1%.

The model have also satisfied different test like VIF, odd ratio, marginal effect, goodness of fit. Looking at the goodness of fit tests, there is no evidence of gross deficiencies with the model. Goodness of fit test the p-value associated the chi-square with "n" degrees of freedom and Hosmer and Lemeshow's are used to test goodness-of-fit test. The p- value of 0.0038 indicates that the model as a whole is statistically significant i.e. the model fit the data well (see appendix). The variance inflation factor (VIF) test has been employed to check for the presence of severe multicollinearity problem among the explanatory variables included in the empirical model. The VIF test result showed that multicollinearity is not of a serious problem in our data set (see appendix).

Table 4. 14: Logistic Regression Result and Its Marginal Effects after Logit

Logistic Regression Result				Marginal Effects After Logit			
Variable	Odds Ratio	Coef.	P>z	dy/dx	Z	P>z	X
Age	1.049516	.0483294	0.550	.0118771	0.60	0.550	13.8804
Sex*	.5176167	-.6585202	0.182	-.1626451	-1.35	0.178	.725191
Plife*	3.218021	1.168767**	0.037	.2542596	2.50	0.012	.875318
Sincome	.6614978	-.4132486***	0.000	-.1015575	-3.55	0.000	1.69211
Inc	2.584033	.9493515**	0.024	.2333068	2.25	0.024	.183206
Mprob	1.44565	.3685587***	0.003	.0905747	2.93	0.003	2.01527
Attsch~l*	23.73659	3.167018***	0.000	.6590174	11.37	0.000	.396947
Waffect*	.1668996	-1.790363***	0.000	-.4198296	-5.59	0.000	.664122
Gwage	1.259113	.2304073	0.443	.0566235	0.76	0.445	.603053
Wage	.9988389	-.0011618	0.661	-.0002855	-0.44	0.661	85.8931
Log likelihood = -124.19795, Number of N = 393, LR Ch2 (10) = 290.29, Prob> Chi2 = 0.000, and Pseudo R2 = 0.5389							

Source, Survey result (2021)

(*) dy/dx is for discrete change of dummy variable from 0 to 1

*** Significant at 1%, and ** significant at 5% probability level.

The above table 4.14 presents the binary logistic regression coefficient together with marginal effects after the dependent variable (CLP) was regressed on a set of explanatory variables. Those factors had significant influence on child labour participation.

The odds ratio is the proportion of the probability of event occurs to the probability of the event do not happen. That is the ratio of probability that child work and attending school to probability of child not participate. Table 4.14 shows that if parent life status increase by one unit, child whose parents alive were increased by 3.22 units and it is significant at 5% level of significance. Whereas, if childrens getting source of income from their parents, odds ratio increased by 0.66 units at 1% significant level. Similarly child who were attending school increased by 23.7 units at 1% level of significant those children not attending school.

The probability of childrens whose parent's amount of money is enough 2.58 more likely than childrens whose parents amount of money is not enough the other variables are held constant. The probability of childrens who have main problem these are harazment 1.44 more likely than childrens who have not phase harazment the other variables are held constant.

According to logit regression output source of income shows coefficient negative and statistically significant at 1% with marginal effect of where a unit change in the variable have negatively effect on CLP in the study area. According to logit regression output the amounts of income shows coefficient positive and statistically significant at 5% with marginal effect of where a unit change in the variable have positively effect on CLP in the study area. According to logit regression output main problem shows coefficient positive and statistically significant at 1% with marginal effect of where a unit change in the variable have positively effect on CLP in the study area.

In spite of the fact that majority of the childrens that they have parents some of the children who have no parents does transfer one place to other place. From the model results, a positive estimated coefficient implies increase in the child labour participation on socio economic effect with increased value of the explanatory variable. Whereas negative estimated coefficient in the model implies decreasing labour with increase in the value of the explanatory variable. The results from the binary regression model analyses of the sampled child labourer are presented in the above table. The model outputs from regression indicated that most of the independent variables have significantly influenced to child labour participation. The result shows that parent's life status, source of income, income, main problem, attending school and work and working affects have more likely significant influence on child labour participation. Whereas, age, sex, getting wage and wage have insignificant influence on child labour participation. The results of correlation of independent variables (in appendix) show that there is no serious multicollinearity problem.

For continuous variables Source of income (Sincome) has shown that childrens' parent whose source of income were positively effect on child labour participation. This is due the fact that childrens' parents who have enough source of income are more likely than childrens' parents who have no source of income. Childrens' parents who have no source of income are enforced to work. As a result, they face a variety of socio-economic problems. Child labour participation in the study area are highly participating. Since childrens' parents who have enough source of income get more human needs like education than childrens' parents who have no source of income. The study result in table above shows childrens' parents who have enough source of income are more likely than childrens' who have no parents decreased the probability of child labour participation by 10.2% at 1% level of significance.

According to (Gebremedhin H, 2013) with respect to education, it can be observed that education also has a role to play an influencing way. With respect to educational attainment level, child workers who were Pre primary (Never attended) educational level constituted the majority 33.3 percent of the total respondents in the survey. These child labourers were followed by those who were complete primary education level (5-8) who accounted for 27% percent. Out of the total number of child labourers that participated in the survey those who were currently attending primary education and secondary education constituted 26 percent and 14 percent respectively. The picture that emerges from these findings is that a large percentage of child workers that constituted 80 percent of the total number of respondents were either school dropouts or had never been enrolled in school.

From marginal effect table main problem (Mprob) has shown that childrens' main problems positively effect on child labour participation. This is due the fact that childrens' who are participating child labour has main problem are more likely than childrens' who are not participating child labour has no main problem. Childrens' who are child labour participation have the main problems of mentally and psychologically. As a result, they face a different types of socio-economic problems. The study result shows childrens' who are participating child labour has main problem are more likely than childrens' who are not participating child labour has no main problem increased the probability of child labour participation by 90.5% at 5% level of significance.

Similarly, C4ED (December, 2019). Shows among working children, 11% declared suffering a health problem because of their work. Children carrying out work classified as child labour are more likely to suffer an injury or illness due to work with 12.4% of child labourers suffering an illness or injury due to work vs. 5.7% of children working but not classified as child labourers. We also see that the risk of illness or injury is higher in rural areas for both genders, while there are no major differences by gender, with urban females only marginally more likely to suffer injury or illness and no differences between rural males and females. 29.7% of working children report facing specific hazards at work which accounts for 15.2% of all children in Ethiopia.

Due to the fact that more children are economically active in rural areas, this leads to more children being exposed to potentially hazardous work (and therefore being in child labour). This is also true for boys, in that more are exposed to hazards at work because they are more likely

to be economically active. However, when considering the working population of children, the picture is less clear. At young ages, fewer children are working, but those boys who are working seem to be relatively likely to face hazards. Across the rest of the age distribution, working girls seem to be at least as likely to face hazards as working boys.

For dummy regarding to parents life status (Plife) the model output has shown that childrens' parent life status were positively effect on child labour participation. This is due the fact that childrens' who have parents are more likely than childrens' who have no parents. Childrens' who have no parents are enforced to work. As a result, they face a variety of socio-economic problems. Child labour participation in the study area are highly participating. Since childrens' who have parents get more human needs than childrens' who have no parents. The study result in table above shows that childrens' who have parents more likely childrens' who have no parents incresed the probability of child labour participation by 25.4% at 5% level of significance.

From the model output, it is clear that childrens who are getting income (Inc) has shown that childrens' who are getting income from their father is positively effect on child labour participation. This is due the fact that childrens' whose have getting income from their father is more likely than childrens' who have getting income from their mothers. Childrens' whose have getting income from their father is more likely than childrens' who have getting income from their mothers. The study result in table above shows childrens' getting income from their father is more likely than ho have getting income from their mothers increase the probability of child labour participation by 23.3 % at 5% level of significance.

The fact that education has significant association with child labour participation. This implies that childrens who attending school and working are more likely than childrens who are not attend school. The result of logistic model in table above shows that attending school and work more likely than childrens who are not attend school increased the probability of child labour participation by 65.9% at 1% level of significance. Similarly other studies such as (Okurut, F.N. & D.O. Yinusa, 2006) shows that with 71.8 percent of the children who are schooling engage in labour market activities on weekends/holidays which may be argued to be good for the development of children into responsible citizens, concern is on the rest of the children who engage in labour market activities daily (or sometimes) before or after school.

By implication such children will not have time to concentrate on their studies which will have negative effects on their school performance and human capital development, thereby having adverse effects on their future earnings potential. The gender decomposition of the children by the time they engage in labour market activities suggests that the females are more likely to engage daily (or sometimes) before and after school as compared to male children. The male children are however more likely to be engaged in labour market activities on weekends/holidays than the female children. The burden of daily labour market activities therefore falls more disproportionately on female children.

This section explained the analysis part of the study which are demographic characteristics of the sample respondents, working conditions of them, and determinants of child labour participation and finally, application of the econometric model in the child labour participation. Hence, the next chapter of the study has been presented conclusions and appropriate recommendations.

CHAPTER FIVE

CONCLUSSIONS AND RECOMMENDATIONS

5.1 Conclussions

Child labour is classified as children's work which is of such a nature or force that it is harmful their health and development and prevents them from receiving a proper education. The concern is with children who are rejected their childhood, who work at too young an age, who work long hours, who work under conditions harmful to their health and to their physical and mental development, who are separated from their families, and who are poor of education. Concerning the amount of time spent on work per day children works 11 hours per day on average.

Child labour is an enormous social obstacle that requires to be undertaken on an instant basis with the help of parents, teachers and government. Children are very slight however they lead a flourishing future. Childrens are the enormous responsibility of all the adult citizens so, there is a need to break in negative ways. There is a need to get a proper chance to evolve and grow within the happy atmosphere of family and school.

The problem of child labour continues to carriage a challenge before the nation. Government has been taking various practical measures to block this problem. However, considering the magnitude and extent of the problem and that it is essentially a socio-economic problem indivisibly linked to poverty it requires joint efforts from all society to make a decrease in the problem.

These socio-economic factors may point to increasing levels of poverty. The result shows that childrens are mainly engaged in work to assist parents or to get money to support themselves which may be a reflection of inadequate resources of economics from parents to support the children.

The social goodness of child labour can be brought under control, if each individual takes responsibility of prevailing child labour. There is a need from each and every citizen to aware their responsibilities to take corrective measures and to stop child labour. Child labour can be controlled if the government functions effectively with the support of the public.

The major conclusions of the study are:-

- The study finding indicates that the main cause that forces children to engage in working activities is the wide spread of poverty in their families. Poverty and the need of poor families for income are the most important factors that push children to engage in working activities.
- The conclusion one can draw from this finding is that living arrangements sometimes does have a direct impact on whether a child should work or not and other intervening variables such as poverty, death of parents and problems of health facilitate the process.
- The other main factor that frequently mentioned by the children were low source of family income, failure of interest in attending school and as result they migrate to study area to examine a job without permission of their parents or guardians.
- The general picture one can get from this finding is that the majority of child workers are working several days of week for long hours with no time for attending school, seffering different types of problems.
- Poor children are more inclined to be involved in child labour as they are over powered by parents to make some money to give financial help to their family at a very tender age (too young to understand their liabilities towards family) alternately of taking proper education and enjoy their childhood.

5.2 Recommendations

Considering child labour as a social and economic problem, government can exercise influence over it by developing new policies, providing social support to poor families, creating new employment opportunities which are key elements in poverty. Especially in developing countries, many social institutions such as non-governmental organizations, international foundations closely interested in this issue by creating social responsibility projects, allowing the poor children and their families for building new capabilities for a job.

- Since childrens are engaged in child labour for short term benefit which will affect future life of themselves and also future generation too, there is a need to solve the socio-economic problems of children in the study area through physical, mental and pshycological to solve their current problem and future life too.
- Government should formulate policy direction in reducing child labour participation through economic growth and development of families found in poverty in the study area.
- There is a need to detail investigation about children in the study area since child labour participation is very problematic and increasing which future will become burden to country in general and give room to participate in illegal activities if not able to sustain their life.
- There is a need to all the children be given first priority by their parents to take proper and regular education from their early childhood.
- Government should develop and exercise policy in children transferring one place to another place be completely eradicated since children will be free from labour.
- There is a need for more efficient and stringent government laws against child labour to prevent children from working in a little age.
- Government should develop and exercise policy direction in overcomeing the socio-economic problems of children engaed in child labour especialy for those from poor families.

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APPENDIX

Appendix 1. Questionnaire

Appendix A:

Questionnaire to be responded by child labourers in Wolkite city

This Questionnaire is prepared by a post graduate student in Wolkite University to deal with master thesis for partial fulfilment of Master Degree in development Economics. The main purpose of this questionnaire is to assess the determinants of school participation child labour and its effect on socio-economic activity: the case of Wolkite city, Snnpr, Ethiopia.

Dear respondents, your appropriate information has great role on accomplishment of the research. Therefore, I kindly request you to give a response honestly and I want to assure you that the information you provide would be used purely for academic purpose.

General Directions for Enumerators

Please answer all questions properly according to the questioner, put the answers on the space provided and make a tick (✓) mark in the given boxes.

Section I: Demographic characteristics of the child and family

1. Age of the child _____
2. Gender ☐ Male ☐ Female
3. Place of birth ☐ Wolkite ☐ out of Wolkite
4. Are both your parents alive? ☐ Yes ☐ No
5. If your answer for question numbers four is No, who is dead?
☐ Father ☐ Mother ☐ Both of them
6. With whom are you living?
☐ Both parents ☐ Mother ☐ Father
☐ Alone ☐ Relatives ☐ Others,

7. Are your parents living in wolkite, currently?

☐ Yes ☐ No

8. What is the sex of head of the family (parents or your guardian)?

☐ Male ☐ female

9. What is your father's educational attainment level?

☐ Illiterate ☐ Read and write ☐ 1-6
☐ 7-12 ☐ Diploma ☐ Degree

10. What is your mother's educational attainment level?

☐ Illiterate ☐ Read and write ☐ 1-6
☐ 7-12 ☐ Diploma ☐ Degree

11. Who earns the main source of income for the family?

☐ Mother ☐ Father ☐ Child
☐ Relatives ☐ Others ☐ Combination of above

12. Do you think the total amount of family income sufficient amount of money to support your family?

☐ Yes ☐ No

Section II: The working conditions of the child.

13. The child main activity

☐ Attending school and work ☐ other wise

14. At what time do you start working? _____ and at what time do you finish working?

15. How many times do you work in a week?

- ☐ The whole week ☐ Six days ☐ Five days
☐ Four days ☐ Three days ☐ Two days
☐ One day

16. Do you work on holidays?

- ☐ Yes ☐ No

17. How many hours a day do you rest?

- ☐ Below 8 hour ☐ 8 hour ☐ 9 hour
☐ 10 hours ☐ 11 hours ☐ over 11 hours

18. How long you work per day?

- ☐ Full time worker ☐ Part time workers ☐ half day worker
☐ Temporary worker others (specify) _____

19. Do you face any problems or difficulties with your present job?

- ☐ Yes ☐ No

20. If your answer is yes for question number twenty three describe the main problems or difficulties and the reasons for the difficulties?

- ☐ Beating ☐ Intimidation ☐ Bulldoze
☐ Sexual Assault Others _____

Section III: Factors that determine the child socio_economic effect of child

21. What was the main reason that made you start to work?

- ☐ Separation from family ☐ Family under pressure ☐ Peer influence
☐ I have no one to support me ☐ Under the pressure of guardians/parents
☐ Low family income ☐ Death of parents Others (specify) _____

22. If they force you to work with your parents/ guardians, what makes them do this?

☐ Economic hardship ☐ Lack of home in the region
☐ If there is no other source of income Others (specify) _____

23. Would you like to stop working if you could? ☐ Yes ☐ No

24. For number 23 If your answer is yes, why do you want to stop?

☐ Do not like to work ☐ Health problem
☐ Do not like the work environment ☐ Make too tired to go to school
☐ Do not like the physical Abuse

Section IV: working Participation of the child

25. Are you currently working?

☐ Yes ☐ No

26. If your answer is yes, what is your working condition?

☐ Metalwork ☐ Restaurant ☐ Taxi worker
☐ Shoe shine ☐ Lottery distributor ☐ House worker

Others _____

27. Do you attend school?

☐ Yes ☐ No

28. For number 27 if you answer is yes, at what time?

☐ Regularly ☐ night
☐ Weekly Others (specify) _____

29. If you are attending school and also working, does your work affect your studies?

☐ Yes ☐ No

30. If you are working, what you get?

☐ Money ☐ Material ☐ Food

Others (specify) _____

31. If you are working, when you get wage?

☐

Monthly

☐

Daily

☐

Weekly

☐

Yearly

Others (Specify) _____

32. How many wages do you get?

☐

Below 100 birr

☐

100 birr

☐

150 birr

☐

300 birr

☐

500 birr

☐

1000 birr

☐

Above 1000 birr

Thank you for your time!

Appendix B:

Focus Group Discussion Questions for Child Labourer's Parents or Guardians in Wolkite City

1. What do they know about child labor?

2. What are the main reasons for his entry into work?

3. If the children don't put their safety at risk, what's wrong with them doing work as long as it's safe for your children?

4. How does the baby's activity affect the baby's academic success?

5. What do they say needs to be done to address the problems children face at work?

Thank you for giving yourself time!

Additional Section C

For women's children and young people and Semago Sector

6. What do they say about child exploitation?

7. How do you think education plays a vital role in the future of children?

8. As long as the children don't put their safety at risk, what's wrong with doing a job?

9. What do they say is the main reason you pushed kids into work?

10. What should be done to tackle/save child exploitation?

From parents

From the government

11. If they call it child exploitation as a whole

Thank you!

የህጻናት ጉልበት ብዝበዛ እና ማህበራዊ ኢኮኖሚያዊ ተፅዕኖው በደኅንነታቸው ላይ ያመጣው ችግር በወልቂጤ ከተማ በሚል ጥናት ለመስራት የተዘጋጀ መጠይቅ

ይህ ጥናት በወልቂጤ ከተማ የህጻናት ጉልበት በተመለከተ ነው

ይህ ጥናት በወልቂጤ ዩኒቨርሲቲ የድህረ ምረቃ ተማሪ በልማት ኢኮኖሚክስ የማስተርስ ዲግሪ ለመፈፀም የሚያስችል ማስተር ስነ-ስርዓትን ለመስራት የተዘጋጀ ጥናት ነው። የዚህ ጥናት ዋና ዓላማ በወልቂጤ ከተማ የህጻናት ጉልበት ተሳትፎና ማህበራዊ ኢኮኖሚያዊ ተፅዕኖ በደኅንነታቸው ላይ ያስከተለው ችግር ለማየት ነው።

የተወደዳችሁ እና የተከበራችሁ የእናንተ ሃሳብ በምርምሩ ውጤት ላይ ትልቅ ሚና አለው። እንግዲህ በቅንነት ምላሽ እንድትሰጡ እጠይቃችኋለሁ። የምታቀርቡት መረጃ ለትምህርት ዓላማ ብቻ እንደሚውል ላረጋግጥላችሁ እወዳለሁ።

የመጠይቁ አጠቃላይ አቅጣጫዎች

እባክዎ ለጥያቄ ጠያቂው መሰረት ሁሉንም ጥያቄዎች በአግባቡ ይመልሱ፤ በቀረበው ቦታ ላይ መልሶቹን አስቀምጥ እና በተሰጡት ሳጥኖች ውስጥ የእራዬት (✓) ምልክት ያድርጉ።

ክፍል 1 የህጻኑና የቤተሰብ ሁኔታ

1. እድሜ /የህጻኑ/ _____
2. ያታ ወንድ ሴት
3. የትውልድ ቦታ ወልቂጤ ከወልቂጤ ውጪ
4. ሁለቱም ወላጆችህ በሕይወት አሉ? አዎ አይደለም
5. ለጥያቄ ቁጥር አራት መልስዎ አይደለም ከሆነ ማነው የሞተው?
 አባት እናት ሁለቱም
6. ከማን ጋር ትኖራለህ/ሽ?
 ከሁለቱም ወላጆቹ ከእናቴ ከአባቴ
 ብቻዬን ዘመድ አዝማድ ከሌሎች

7. ወላጆችህ/ሽ አሁን በወልቂጤ ይኖራሉ?

አዎ

አይደለም

8. የቤተሰብ መሪ (የወላጆችህ/ሽ ወይም የሞግዚትህ/ሽ) ጾታ ምንድነው?

ወንድ

ሴት

9. የአባትህ የትምህርት ደረጃ ምን ይመስላል?

ምንም ያልተማረ

ማንበብና መጻፍ የሚችል

1-6ኛ

7-12 ኛ

ዲፕሎማ

ዲግሪ

10. የእናትህ የትምህርት ደረጃ ይመስላል?

ምንም ያልተማረ

ማንበብና መጻፍ የምትችል

1-6ኛ

7-12 ኛ

ዲፕሎማ

ዲግሪ

11. የቤተሰብ የገቢ ምንጭ በዋናነት የሚገኘው ከማን ነው?

ከእናት

ከአባት

ከልጅ

ከዘመድ

ከሌሎች

ከሁሉም

12. የቤተሰብህ/ሽ ጠቅላላ ገቢ ቤተሰብህ/ሽን ለማስተዳደር የሚያስችል በቂ ገንዘብ ይመስልሃል/ሻል?

አዎ

አይደለም

ክፍል ፪ የልጁ የሥራ ሁኔታ

13. የህጻኑ ዋና እንቅስቃሴ ምንድነው?

ትምህርትና ስራ

ሌላ

14. በምን ሰዓት ስራ ትጀምራለህ/ሽ? _____ መቼ ትጨርሳለህ/ሻለሽ?

15. በሳምንት ውስጥ ለስንት ሰዓት ትሠራለህ/ሽ?

ሳምንቱን ሙሉ ስድስት ቀን አምስት ቀን
 አራት ቀን ሶስት ቀን ሁለት ቀን
 አንድ ቀን

16. በበዓላት ቀን ትሠራለህ/ አዎ አልሰራም

17. በቀን ስንት ሰዓት ታርፋለህ?

ከ8 ሰዓት በታች 8 ሰዓት 9 ሰዓት
 10 ሰዓት 11 ሰዓት 11 ሰዓት በላይ

18. ምን አይነት ሰራተኛ ነህ?

የሙሉ ጊዜ ሰራተኛ የማታ ሰራተኞች ግማሽ ቀን ሰራ
 ጊዜያዊ ሰራተኛ ሌላ ካለ (ግለጽ) _____

19. ከአሁኑ ሥራህ/ሽ ጋር የሚያጋጥምህ/ሽ ችግር አለ?

አዎ አይደለም

20. ለጥያቄ ቁጥር 19 መልስህ አዎ ከሆነ ዋና ዋናዎቹን ችግሮች እና የችግሮቹን ምክንያቶች ምንድናቸው?

ድብደባ ዛቻ ማስፈራራት
 ጾታዊ ጥቃት ሌላ _____

ክፍል ፫ የህፃናት ማህበራዊ-ኢኮኖሚያዊ ውጤትን የሚወስኑ ምክንያቶች

21. ሥራ እንድትጀምር/ሪ ያደረገህ/ሽ ዋነኛው ምክንያት ምንድን ነው?

ከቤተሰብ መለየት በጓድኞቹ ግፊት
 የቤተሰብ ዝቅተኛ ገቢ የሚደግፈኝ ሰው የለኝ
 ወላጆች ሞት ምክንያት በሞግዚቶች/በወላጆች ግፊት

ሌላ ካለ (ግለጽ) _____

22. በወላጆቻችሁ/በሞግዚቶቻችሁ እንድትሰሩ ካስገደዱትሁ፣ ይህን እንዲያደርጉ ያደረጋቸው ምንድን ነው?

☐ የኢኮኖሚ ችግር ☐ በአካባቢው ት/ቤት አለመኖር

☐ የገቢ ምንጭ ባለመኖሩ ሌላ ካለ (ግለጽ) _____

23. ስራ ማቆም የምትችል ከሆነ ሥራህን/ሽን ማቆም ትፈልጋለህ/ሽ?

☐ አዎ ☐ አይደለም

24. መልስህ አዎ ከሆነ ለምን ማቆም ትፈልጋለህ/ሽ?

☐ መሥራት ስለማልፈልግ ☐ የጤና ችግር

☐ የሥራ አካባቢ ስለማልወደው ☐ ትምህርት ቤት ለመሄድ ይደክመኛል

☐ አካላዊ በደልን ስለማልወድ

ክፍል ፬ የልጁ የሥራ ተሳትፎ

25. አሁን እየሰራህ ነው? ☐ አዎ ☐ አይደለም

26. ተራ ቁጥር 26 መልስ አዎ ከሆነ የእርስዎ የሥራ ሁኔታ ምንድን ነው?

☐ ብረታ ብረት ስራ ☐ ሬስቶራንት ☐ የታክሲ ስራ

☐ ጫማ ጠራጊ ☐ ሎተሪ አከፋፋይ ☐ የቤት

ስራተኛ ሌላ _____

27. እየተማርክ ነው? ☐ አዎ ☐ አይደለም

28. ተራ ቁጥር 28 መልስ አዎ ከሆነ መቼ ነው የምትማረው?

☐ ዘወትር ☐ ማታ ማታ

☐ በየሳምንቱ ሌላ ካለ(ግለጽ) _____

29. ትምህርት የምትማርና የምትሠራ ከሆነ ሥራህ በትምርትህ ላይ ተጽዕኖ ያሳድራል?

☐ አዎ ☐ አይደለም

30. እየሠራህ ከሆነ ምን ታገኛለህ?

ገንዘብ

ቁሳቁስ

ምግብ

ሌላ ካለ(ግለጽ) _____

31. እየሰራህ ከሆነ ገቢ የምታገኘው መቼ ነው?

በየወሩ

በየቀኑ

በየሳምንቱ

በዓመት

ሌላ ካለ (ግለጽ) _____

32. ምን ያክል ገቢ ታገኛለህ

ከ100 ብር በታች

100 ብር

150 ብር

300 ብር

500 ብር

1000 ብር

ከ1000 በላይ

ጊዜ ሰጥታችሁ ስለሞላችሁ አመሰግናለሁ!

ለወልቄጤ ከተማ ለህፃናት ወላጆች/ጠባቂዎች

1. ስለ ሕፃናት ጉልበት ምን የሚያውቁት ነገር አለ?

2. ወደ ሥራ እንዲገባ ያደረጉት ዋና ዋና ምክንያቶች ምንድን ናቸው?

3. ህፃናቱ ደህንነታቸውን አደጋ ላይ የማይጥሉ ከሆነ ለእናንተ ልጆች አስተማማኝ እስከሆነ ድረስ ስራ ቢሰሩ ምን ችግር አለው?

4. የህፃኑ የሥራ እንቅስቃሴ በህፃኑ የትምህርት ስኬት ላይ ምን ተፅዕኖ አለው?

5. ህፃናት በስራ ላይ የገጠማቸውን ችግሮች ለመፍታት ምን መደረግ አለበት ይላሉ?

ጊዜ ሰጥታችሁ ስለሞላችሁ እናመሰግናለን!

ለሴቶች ህጻናትና ወጣቶች እና ለሰማኝ ሴክተር

1. ስለ ሕፃናት ጉልበት ብዝበዛ ምን ይላሉ?

2. ትምህርት ለልጆች የወደፊት ዕጣ ወሳኝ ሚና የሚጫወት ይመስልዎታል? እንዴት?

3. ህጻናቱ ደህንነታቸውን አደጋ ላይ የማይጥሉ እስከሆነ ድረስ ስራ ቢሰሩ ምን ችግር አለው?

4. ልጆች ወደ ስራ እንዲገቡ የገፋፋችሁ ዋነኛ ምክንያት ምንድን ነው ይላሉ?

5. የህፃናት ጉልበት ብዝበዛ ለመፍታት/ለመታደግ ምን መደረግ አለበት ይላሉ?

ከወላጆች _____

ከመንግስት _____

6. እንደ አጠቃላይ በህጻናት ጉልበት ብዝበዛ የሚሉት ካለ

ለመጠይቁ ጊዜ ስለሰጡኝ አመሰግናለሁ!

Appendix 2. Tables of Statistical Analysis

Result of Logistic Regression

```
. logit CLP Age Sex Plife Sincome Inc Mprob Attschool Waffect Gwage WG
```

```
Iteration 0: log likelihood = -269.34417
Iteration 1: log likelihood = -128.49352
Iteration 2: log likelihood = -124.2845
Iteration 3: log likelihood = -124.19815
Iteration 4: log likelihood = -124.19795
Iteration 5: log likelihood = -124.19795
```

```
Logistic regression               Number of obs   =       393
                                LR chi2(10)        =     290.29
                                Prob > chi2         =     0.0000
Log likelihood = -124.19795       Pseudo R2       =     0.5389
```

CLP	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Age	.0483294	.0808168	0.60	0.550	-.1100685	.2067273
Sex	-.6585202	.4931407	-1.34	0.182	-1.625058	.3080178
Plife	1.168767	.5615022	2.08	0.037	.0682425	2.269291
Sincome	-.4132486	.1164235	-3.55	0.000	-.6414346	-.1850627
Inc	.9493515	.4192078	2.26	0.024	.1277193	1.770984
Mprob	.3685587	.1261	2.92	0.003	.1214074	.6157101
Attschool	3.167018	.4139358	7.65	0.000	2.355719	3.978317
Waffect	-1.790363	.3660078	-4.89	0.000	-2.507725	-1.073001
Gwage	.2304073	.3005146	0.77	0.443	-.3585904	.819405
WG	-.0011618	.0026532	-0.44	0.661	-.006362	.0040384
_cons	-1.803147	1.408126	-1.28	0.200	-4.563024	.9567298

Odds Ratio

```
. logit CLP Age Sex Plife Sincome Inc Mprob Attschool Waffect Gwage WG, or
```

```
Iteration 0: log likelihood = -269.34417
Iteration 1: log likelihood = -128.49352
Iteration 2: log likelihood = -124.2845
Iteration 3: log likelihood = -124.19815
Iteration 4: log likelihood = -124.19795
Iteration 5: log likelihood = -124.19795
```

```
Logistic regression               Number of obs   =       393
                                LR chi2(10)        =     290.29
                                Prob > chi2         =     0.0000
Log likelihood = -124.19795       Pseudo R2       =     0.5389
```

CLP	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
Age	1.049516	.0848185	0.60	0.550	.8957728	1.229647
Sex	.5176167	.2552579	-1.34	0.182	.1969002	1.360725
Plife	3.218021	1.806926	2.08	0.037	1.070625	9.672539
Sincome	.6614978	.0770139	-3.55	0.000	.5265365	.8310522
Inc	2.584033	1.083247	2.26	0.024	1.136234	5.876632
Mprob	1.44565	.1822963	2.92	0.003	1.129085	1.850971
Attschool	23.73659	9.825423	7.65	0.000	10.5457	53.42703
Waffect	.1668996	.0610866	-4.89	0.000	.0814534	.3419808
Gwage	1.259113	.3783817	0.77	0.443	.6986604	2.269149
WG	.9988389	.0026501	-0.44	0.661	.9936582	1.004047
_cons	.1647795	.2320304	-1.28	0.200	.0104305	2.60317

.

Marginal effects after logit

. mfx

Marginal effects after logit

y = Pr(CLP) (predict)
= .43483795

variable	dy/dx	Std. Err.	z	P> z	[	95% C.I.	]	X
Age	.0118771	.01987	0.60	0.550	-.027065	.050819		13.8804
Sex*	-.1626451	.12083	-1.35	0.178	-.399477	.074186		.725191
Plife*	.2542596	.1015	2.50	0.012	.055316	.453203		.875318
Sincome	-.1015575	.02864	-3.55	0.000	-.1577	-.045414		1.69211
Inc	.2333068	.10353	2.25	0.024	.030386	.436228		.183206
Mprob	.0905747	.03097	2.93	0.003	.029883	.151266		2.01527
Attsch~l*	.6590174	.05797	11.37	0.000	.545394	.772641		.396947
Waffect*	-.4198296	.07504	-5.59	0.000	-.566913	-.272747		.664122
Gwage	.0566235	.07408	0.76	0.445	-.088566	.201813		.603053
WG	-.0002855	.00065	-0.44	0.661	-.001564	.000993		85.8931

(*) dy/dx is for discrete change of dummy variable from 0 to 1

.

. logit CLP Age Sex Plife Sincome Inc Mprob Attschool Waffect Gwage WG, vce (robust)

Iteration 0: log pseudolikelihood = -269.34417
Iteration 1: log pseudolikelihood = -128.49352
Iteration 2: log pseudolikelihood = -124.2845
Iteration 3: log pseudolikelihood = -124.19815
Iteration 4: log pseudolikelihood = -124.19795
Iteration 5: log pseudolikelihood = -124.19795

Logistic regression	Number of obs	=	393
	Wald chi2(10)	=	103.40
	Prob > chi2	=	0.0000
Log pseudolikelihood = -124.19795	Pseudo R2	=	0.5389

CLP	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
Age	.0483294	.0919391	0.53	0.599	-.1318679	.2285267
Sex	-.6585202	.485058	-1.36	0.175	-1.609216	.292176
Plife	1.168767	.4174002	2.80	0.005	.3506774	1.986856
Sincome	-.4132486	.1236788	-3.34	0.001	-.6556547	-.1708426
Inc	.9493515	.4518811	2.10	0.036	.0636808	1.835022
Mprob	.3685587	.1127828	3.27	0.001	.1475085	.5896089
Attschool	3.167018	.3866138	8.19	0.000	2.409269	3.924767
Waffect	-1.790363	.3782117	-4.73	0.000	-2.531644	-1.049081
Gwage	.2304073	.2615343	0.88	0.378	-.2821905	.7430051
WG	-.0011618	.0020887	-0.56	0.578	-.0052555	.002932
_cons	-1.803147	1.425865	-1.26	0.206	-4.59779	.9914962

Heteroskedasticity

```
. hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of CLP

chi2(1) = 0.07

Prob > chi2 = 0.7845

Multicollinearity

```
. vif
```

Variable	VIF	1/VIF
Attschool	1.88	0.532951
Sex	1.78	0.561903
WG	1.64	0.608650
Wafect	1.40	0.714648
Inc	1.14	0.877396
Gwage	1.13	0.886684
Mprob	1.12	0.889205
Age	1.07	0.931836
Sincome	1.07	0.935181
Plife	1.04	0.959030
Mean VIF	1.33	

Correlation between independent variables

```
. corr CLP Age Sex Plife Sincome Inc Mprob Attschool Wafect Gwage WG
(obs=393)
```

	CLP	Age	Sex	Plife	Sincome	Inc	Mprob	Attsch~l	Wafect	Gwage	WG
CLP	1.0000										
Age	-0.0651	1.0000									
Sex	-0.3646	0.0714	1.0000								
Plife	0.0690	-0.1064	0.0092	1.0000							
Sincome	-0.0828	0.0249	-0.1879	0.0869	1.0000						
Inc	0.2593	-0.1479	-0.2235	-0.0004	0.0823	1.0000					
Mprob	0.2885	0.0507	-0.2226	0.0618	-0.0058	0.1712	1.0000				
Attschool	0.7309	-0.0730	-0.4675	-0.0087	0.0094	0.2510	0.2275	1.0000			
Wafect	-0.5238	0.0379	0.1656	-0.0564	-0.0471	-0.0675	-0.1125	-0.5132	1.0000		
Gwage	0.0707	-0.1211	0.1081	-0.0564	-0.0368	0.0778	-0.0016	0.0763	-0.0607	1.0000	
WG	-0.3052	-0.0189	0.5532	-0.0503	-0.0969	-0.1631	-0.0595	-0.3950	0.2180	0.2396	1.0000

Goodness of fit

```
. estat gof, group(10)
```

Logistic model for CLP, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

```
number of observations =    393
number of groups =      10
Hosmer-Lemeshow chi2(8) =   22.71
Prob > chi2 =           0.0038
```

.

Normality

```
. swilk resid
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
resid	393	0.89836	27.542	7.883	0.00000

. sum

Variable	Obs	Mean	Std. Dev.	Min	Max
Age	393	13.88041	2.164992	7	17
Sex	393	.7251908	.4469871	0	1
Place	393	.1450382	.3525882	0	1
Plife	393	.8753181	.330779	0	1
Plive	393	2.737913	.7388717	0	3
var6	393	3.648855	1.501311	0	5
Pplace	393	.1501272	.3576514	0	1
HSex	393	.3765903	.4851484	0	1
Mstatus	393	.3842239	.8033447	0	3
Fedu	393	1.70229	1.145274	0	5
Medu	393	1.491094	1.147556	0	5
Mwork	393	3.170483	1.162309	0	5
Fwork	393	2.264631	.9642571	0	5
Sincome	393	1.692112	1.677998	0	5
Inc	393	.1832061	.4651343	0	2
CLP	393	.437659	.4967308	0	1
var17	393	2.534351	1.712638	0	5
WH	393	2.501272	1.611699	0	6
Twork	393	.346056	.818997	0	5
Hday	393	.6386768	.4809963	0	1
Rest	393	1.386768	1.648446	0	5
Nwork	393	.7659033	1.249962	0	4
Prob	393	.7633588	.425562	0	1
Mprob	393	2.015267	1.341934	0	4
Wexp	393	1.618321	1.335111	0	5
Intr	393	2.063613	1.009407	0	5
Reason	393	2.648855	1.579155	0	5
Fcomp	393	1.402036	1.260141	0	3
Kprob	393	.9872774	.818997	0	3
Wstop	393	.7073791	.4555458	0	1
var31	393	2.050891	1.893182	0	5
var32	393	.6412214	1.138846	0	4
Cwork	393	1	0	1	1
Wcond	393	2.534351	1.712638	0	5
Attsschool	393	.3969466	.4898884	0	1
var36	393	2.157761	1.05972	0	3
Waffect	393	.6641221	.4728985	0	1
Geting	393	.1017812	.4842645	0	3
Gwage	393	.6030534	.7458667	0	4
WG	393	84.28753	66.18559	4	250