

# **CHILD LABOUR AND SCHOOL ATTENDANCE IN SOMALIA**

**ABDULKADIR HASSAN MOHAMUD**

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## DECLARATION

This research paper is my original work and has not been submitted for a degree in any other university.

Signature ..... Date .....

Abdulkadir Hassan Mohamoud

X51/79979/2012

This research paper has been submitted for examination with my approval as university supervisor.

Signature \_\_\_\_\_ Date \_\_\_\_\_

**Dr. Anthony Wambugu**

## **DEDICATION**

This research paper is dedicated to my loving parents, whose words of encouragement and push for tenacity ring in my ears.

## **ACKNOWLEDGEMENT**

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## **ABSTRACT**

This study uses data from Somalia to analyze child activity status. Using multinomial logit model, the study set out to analyze what determines a household decision to put a child in one of the four states – schooling, working, combining schooling and work, or doing nothing for 7-15 year old children. The study results show that the parent’s education considerably increases the likelihood that a school-age child will specialize in school attendance. The results also show that an increase of the number of members in the household raises the probability that a school-age child will “study only” or “work and study” relative to the child being “School only”.

Another fascinating finding of the study is that as children age the probability of attending school only increases and the probability of working only and working and attending school declines. The significant and positive gender coefficient suggests that female child is more likely than male child to combine schooling with work. Furthermore, the study finds that the children residing in urban areas have a higher probability to be combining school and work than children from rural areas. The results show children from the north east and northwest are more likely to be in work only than a child from south central regions. However, this study’s central message is that child labour adversely affects the child’s schooling.

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## **LIST OF ACRONYMS**

EMIS	Education Management Information System
FRS	Federal Republic of Somalia
ILO	International Labour Organization
MICS	Multiple Indicator Cluster Survey
MLM	Multinomial Logit Model
ML	Maximum Likelihood
MLE	Maximum Likelihood Estimator
MOE	Ministry of Education
NGO	Non-Governmental Organization
PAPFAM	Pan-Arab Project for Family Health
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UPE	Universal Primary Education

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background

Employment of children is a widespread global phenomenon. According to the ILO (2013) 264 million children of ages 5 to 17 years were in employment in 2012 (Table 1). Child employment refers to involvement of a school-aged child in paid employment that adversely affects their schooling, mental, moral or social development (ILO, 1999).

Almost 64% of the employed children globally in 2012 were engaged in child labour. Child labour is defined based on three conventions: ILO Convention 138 on the Minimum Age for Admission to Employment (ILO, 1973), the UN Convention on the Rights of the Child (UN, 1989) and ILO Convention 182 on the Worst Forms of Child Labour (ILO, 1999). Following these three conventions, child labour is work that can cause harm to child's health, physical and social development. However, activities engaged in by children as part of natural socialization process are not regarded as child Labour (Grimsrud, 2003).

Some of the children are engaged in child labour that is hazardous work. Hazardous work is a sub category of child Labour. It is any activity /work by children that by its nature or conditions, leads to adverse effect on the health of a child. Over 50% (85.3 million) out of 168 million children in child labour in 2012 were engaged in hazardous work (ILO, 2013). Although statistics indicate decline in child employment, hazardous work and child labour, it is revealed that the activity rates in the latter two are extremely high (above 50%).

**Table 1.1: Children in employment, child labour and hazardous work, 2000-2012.**

(Children between 5-17 years)

<b>Year</b>	<b>Total Children (000) (a)</b>	<b>Children in Employment (000) (b)</b>	<b>Activity rate % of Children in Employment (%) (c)</b>	<b>Child Labour (000) (d)</b>	<b>Activity rate % of Child Labour (%) (e)</b>	<b>Hazardous Work (000) (f)</b>	<b>Activity % of Hazardous Work (%) (g)</b>
2000	1,531,400	351,900	23.0	245,500	69.76	170,500	69.45
2004	1,566,300	322,729	20.6	222,294	68.87	128,381	57.75
2008	1,586,288	305,669	19.3	215,209	70.40	115,314	53.58
<b>2012</b>	<b>1,585,566</b>	<b>264,427</b>	<b>16.7</b>	<b>167,956</b>	<b>63.52</b>	<b>85,344</b>	<b>50.81</b>

Source a,b,c,d,f from: Global estimates and trends 2000-2012 / International Labour Office, International Program on the Elimination of Child Labour (IPEC) - Geneva: ILO, 2013 marking progress against child labour. Source e, g from: the combination of columns of  $e=d/b$  and  $g=f/b$ .

**Table 1.2: Children in employment, child labour and hazardous work by region, 2000-2012**

**Children between 5-17 years age group**

<b>Region</b>	<b>Total Children (000)</b>	<b>Children in Employment (000)</b>	<b>Activity rate (% of Children in Employment)</b>	<b>Child Labour (000)</b>	<b>Activity rate (% Child Labour) (e)</b>	<b>Hazardous Work (000)</b>	<b>Activity rate (% Hazardous Work)</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>		<b>(f)</b>	<b>(g)</b>
<b>Asia and Pacific</b>	835,334	129,353	15.5	77,723	60.08	33,860	43.56
<b>Latin America and the Caribbean</b>	142,693	17,843	12.5	12,505	70.08	9,638	77.07
<b>Sub Saharan Africa</b>	275,397	83570	30.3	59,031	70.63	28,767	48.73
<b>Middle East and North Africa</b>	110,411	13,307	12.1	9,244	69.46	5,224	56.51

*Source a,b,c,d,f from: Global estimates and trends 2000-2012 / International Labour Office, International Programme on the Elimination of Child Labour (IPEC) - Geneva: ILO, 2013 Marking progress against child labour. Source e, g from: the combination of columns of  $e=d/b$  and  $g=f/b$ .*

Table 1.2 shows that among children aged 5-17 years in 2012, the incidence of child labor were highest in Sub-Saharan Africa (SSA). Of the 83.5 million children in employment in SSA, 59 million (70.63%) were engaged in child labour. The most pronounced horrible forms of child labour are found in agriculture and domestic service (ILO, 2013).

This study focuses on the activity status of children in Somalia. Table A1 in the appendix shows that, 1.012 million children (39.8 percent of total children) in Somalia aged 5-14 years were economically active on full time basis. School attendance in Somalia stood at 48.9% compared to its neighboring countries such as Ethiopia, Djibouti and Kenya whose school attendance rate are 54.0%, 67.4% and 74.9% respectively.

Child labour is a concern for several reasons. First as noted by Bhargava (2003) child labour occurs at a formative age and may deprive children of nutritious food, playtime and education. Child labour may also be a barrier to child schooling and therefore reduce future welfare improvements. Psacharopoulos (1997) argues that, working children lose their ability of education attainment. Thus a vicious cycle is created where child Labour leads to more child Labour. Second, if child Labour depresses wages of adults household may be forced to supplement adult earning with earnings of child labourers (Binder and Scrogin, 1999). Finally, long run economic growth depends on current human capital investment in children and therefore if child labour reduces child schooling, it can be adversely affect economic growth (Betcherman, et al 2004).

To combat child labour, several initiatives have been undertaken. First, the ILO Convention No. 138 and 182 have been ratified by many countries in SSA. This being a step towards eradication of the worst forms of child labour in SSA (ILO, 2012). Second to ensure safety and health for

children, several governments have identified work that should not be undertaken by children because it is hazardous (ILO, 2013). Third, governments have engaged in expanding and improving access to basic education (ILO, 2013).

In Somalia, the government of the Federal Republic of Somalia participated in ratification of International Labour Organization (ILO) Convention No. 138 and 182 as well as recognizing the importance of education in economic growth, (UNDP, 2012). The FRS set and endeavored to achieve UPE as one of the main policy priorities since its advent. Further, the government signed two action plans to reduce incidence of child labour and also put in place a plan to support a comprehensive strategy to enable 1 million additional children attend school (FRS, 2013).

## **1.2. Problem Statement**

School age going children are expected to be in school learning. This is important because education investments enhance growth and welfare (Binder and Scrogin, 1999). However, in Somalia low school enrollment and high incidence of child labour are major problems. Somalia with 49% incidence of child labour is the highest in the world (UNICEF, 2014). In addition, Somalia has the world's lowest primary school enrollment rates as only 42 % of children of primary school age are in school of which only 36% are girls (FRS, 2013). There is concern in Somalia that unless the child labour problem and low school enrollment is addressed, it can adversely affect the welfare of children (FRS, 2013).

Owing to the low school enrollment rates in Somalia as well as the high incidence of child labour, this study sought look at the factors that determine child labour and schooling status in Somalia. Thus the purpose of this study is to fill this gap in the literature on child labour to better understand the determinants of child labour participation and schooling in Somalia.

### **1.3. Research Question**

This study seeks to answer the following research question: How are child characteristics, household characteristics and community characteristics related to child participation in child labour or schooling or both child labour and schooling in Somalia?

### **1.4. Research Objectives**

The general objective of this study is to examine the determinants of child labour participation and primary school enrollment in Somalia. The specific objectives of the study are:

- a) To analyse the determinants of child labour participation and primary school enrollment in Somalia.
- b) To draw policy implications to reduce child labour participation and improve school enrollment in Somalia.

### **1.5. Justification of the Study**

The government of the Federal Republic of Somalia (FRS) aims to reduce the incidence of child labour and enroll one million additional children in school toward achievement of universal primary education (FRS, 2013). However, little progress has been achieved by the FRS towards reduction of child labour. Out of a population of 9.2 million people, the number of school going children who are not attending school together with youth of ages 6-18 years is estimated to be about 4.4 million (FRS, 2013).

The Federal Government of Somalia has pledged through signing two action plans to reduce cases of child labour and ratified the convention on the rights of the children, and the UN is working with them towards this goal (MOHR 2012). FRS however, lacks the necessary information to inform policies to reduce child labour in Somalia. This study through its findings

will provide empirical evidence to inform policy aimed at reducing child labour and promoting primary school enrollment in Somalia. Various studies focusing on child labour in SSA, have identified education levels among the parents, age of the child, child's birth order, gender of the head of the household, household size and poverty levels as determinants of child labour and school enrolment (Grootaert, 1999; Lavy, 1996; Nielsen, 1998; Jensen and Nielsen, 1997; Moyi, 2010). However, no such evidence exists for Somalia.

## **1.6. Outline of the Study**

The remainder of the study is organized as follows. Chapter two reviews both theoretical and empirical literature on determinants of child labour participation and primary school enrollment. Chapter three explains the methods and procedures that were used to answer the research question. A theoretical framework is specified followed by an empirical framework. The data used in the study are described. The empirical results are presented in chapter four. Chapter five contains conclusion and policy implications.



# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **2.1. Introduction**

This chapter reviews theoretical and empirical literature on determinants of child labour and school enrollment. The theoretical literature review covers the competing explanations of child labour. The empirical literature review examines previous empirical studies on determinants for child labour. The chapter ends with an overview of the reviewed literature.

### **2.2. Theoretical Literature Review**

Child labour is work that is harmful to children or abuses children physically, emotionally and morally or limits their education access (Grimsrud, 2003; Khanam, 2008). Several explanations of child labour are advanced in the literature (Basu and Van, 1998; Bhalotra and Heady, 2003; Fan, 2004).

Basu and Van (1998) developed a model of child labour based on two axioms: the luxury and substitution axiom. Child labour according to luxury axiom, is a result of insufficient income from the adults in a family. Thus the likelihood of children working when parental income is below subsistence level is very high. This affects mainly children from poor households since their enrolment to school are low despite the fact that schooling could reduce future poverty. Children fail to attend school because poor households cannot afford schooling and the additional earnings from child labour help sustain the household. This means that incentives to reduce reliance on child labour income and lower education costs could reduce child labour. The model leads to the hypothesis that poverty leads to child labour.

According to the substitution axiom, child labour is more readily available and cheaper than adult labour. This axiom treats child labour and adult labour as substitutes in production. Consequently, prevalence of child labour depresses wages of adults. This forces households to supplement adult earning with earnings of child labour. This suggests that child labour is determined by the level of adult wage rate.

Bhalotra and Heady (2003) challenged the Basu and Van (1998) argument that poverty leads to child labour. According to them child labour in the farm increases with the size of the family landholding and land-rich families will have low enrolment rates in school for their children. Most of their children will be more likely to work in the family farms. They referred to this as wealth paradox. This behavior may result from labour market failure. On the other hand landowners unable to hire labour on their farms tend to deny their children opportunity to attend school and instead use them in the farm. The authors also point out that if a child stands to inherit the land, then the value of the child's effort increases, thereby further contributing to child labour.

In contrast to Basu and Van (1998) and Bhalotra and Heady (2003), Fan (2004) argued that child labour may not necessary adversely affect children's schooling. An increase in child labour productivity can enhance children's schooling by providing additional resources to increase household expenditure on children's education. This positive effect of child labour on schooling may outweigh the negative impact of child Labour in form of reduced study time.

### **2.3. Empirical Literature Review**

The factors that influence a child to attend school or work can be classified into four categories: opportunity cost of child time, child characteristics, household characteristics and community characteristics. Child characteristics include age, gender and birth order of the child. Household characteristics include household income, parental education and family size while community characteristics include the distance from home to school, the quality of school, the residential location, infrastructure, and neighborhood.

#### **2.3.1. Opportunity cost of child's time in School**

Opportunity cost is one of the factors that influences a household decision of whether to send their children to school or work in the form of foregone earnings. Delap (2001) observed that children who spend more time working will have less time left schooling. Psacharopoulos (1997) while studying educational attainments of children who work in Bolivia and Venezuela with those who do not found that child labour leads to two years of less schooling on average. Ravallion and Wodon (1999) on the other hand found that the reduction of child labour in Bangladesh accounts for about one quarter to one eighth of the increase in school attainment.

#### **2.3.2. Child Characteristics**

The age, birth order and gender of a children's are expected to affect whether a child attends school or work. Most studies in developing countries found that when children reach a particular age they are less likely to attend school than work. For example, Tharmmapornphilas (2006) found that in Thailand, age is significant and positively related the number of hours boys work but for girls age had no significant impact on hours worked. Khanam and Rahman (2007) found that in Bangladesh child work significantly increases with age. Similar result was obtained by

Edmonds (2006). However, Okurut and Yinusa (2009) found that in Botswana age of the child negatively and significantly influence child labour and schooling attendance.

Gender of the child has also been found to influence child labour and schooling. For example, Binder and Scrogin (1999) found that in Mexico, boys participate in labour force more than girls. On the other hand girls participated in household work more than boys. In Bangladesh, girls were found to be more likely to combine school and work than boys (Khanam, 2008). On the contrary, Grootaert (1999) and Ray (2002) found that boys in Cote d'Ivoire and in Peru and Pakistan respectively are more likely to combine school and work than girls.

Birth order of a child has been shown to be an important determinant of child labour and schooling. In Bangladesh, first born children were found to have higher likelihood of working than younger siblings (Khanam and Rahman, 2007). This result was also established by Emerson and Souza (2008) for Brazil. In Mexico, Binder and Scrogin (1999) found that children born earlier are more likely to participate in the labour force and household activities than those born later. In contrast, Behrman and Taubman (1986) established that first-born children were considered more schooling and were less likely than other children to participate in labour force. Being a first born according to Patrinos and Psacharopoulos (1997) has a positive and significant effect on schooling. In Kenya, Moyi (2010) found that older children (first birth order) had more likelihood of working. Physical development could be the reason as well as expectation of higher wages and higher schooling costs.

### **2.3.3. Household Characteristics**

Child labour and schooling decisions are also significantly influenced by household characteristics. In Bangladesh, Khanam (2004) and Khanam (2008) found that the likelihood of a school aged child to specialize in study increases with parent's level of education.

Similarly, Huebler (2008) found that children from households headed by educated parents were more likely to be in school compared to children in households with parents that lack basic formal education. Further, children in households with uneducated parents were found to be more probable to engage in child labour than those from families where parents have formal education. Olaniyan (2011) reported similar results for Nigeria where enrollment rates for children with educated parents were high compared to uneducated parents who prefer sending their children to participate in the labour force.

Education of the parent effect on schooling and child labour may differ by gender of parent. For example, Kurosaki, *et al.* (2006) found that in rural Andhra Pradesh, India, child's mother education level was very significant and largely contributed in reducing child labour and increasing school enrollment rates than child's father education level. The effect of the child's mother education level doesn't favor either boys or girls, it is similar. On the other hand father's education level tends to favor boys over girls. In contrast, Gallego and Sepulveda (2007) while looking into the gender differences on child labour in Columbia established that the level of education of the household head's partner had a positive effect for boys and none for girls.

#### **2.3.4. School and Community Characteristics**

School attendance and child labour are also influenced by school and community characteristics. Several studies found that lack of adequate schools, inaccessibility of existing schools due to long distance covered/travelled by school going children and limited personnel in school (teachers), reduces school attendance and increases child labour.

Lavy (1996), Nielsen (1998) and Grootaert (1999) found that school quality determines probability of schooling and working. Limited opportunities for schooling as well as irrelevant curriculum were found to be negatively associated with school attendance (Bamber and Tett, 2000). In contrast, Grootaert (1999) in Cote'dvore found that a distance exceeding 5 Kilometers from home to school significantly reduce child school attending. In addition, the study also established significant regional differences in school enrollment especially in rural areas. Wahba (1998) also noted that child labour supply can be influenced significantly by the system of education and also showed that children sought employment because of challenges either associated with long distances to school or despite nearness to school, low quality education.

Similarly, studies conducted in other developing countries (Bonnet 1993, Hanushek and Lavy 1993 and Fergany 1998) found that the problem of overcrowding is prevalent in most schools. In addition there is inadequate sanitation as well as qualified teachers' shortage. These factors motivate parents to be pessimistic on sending their school going children to school; instead, they rather choose to engage their children in other fields such as agriculture as a form of learning a new skill consequently supplementing the family income. In rural Tanzania, Kondylis and Manacorda (2012) found that the nearness of a school to child's residence increased school

attendance. However, the authors found that the distance to nearest school had no significant impact on child labour participation.

### **2.3.5. Substitutability between child labour and adult labour**

The substitution axiom suggests that in production both child labour and adult labour are substitutes. The girl child labour substitutes her labour provided by her mother which include household chores and taking care of her younger siblings (Connelly, DeGraff and Levinson 1996). Also, Fan (2004) found that a rise in child labour does not essentially affect the children's human capital negatively since the negative influence of child labour on reducing study time is outweighed by the positive effect of increased financial resources on education and also emphasizes subsistence constraint such that if parental income is low, without subsistence constraint, child labour is likely to increase given children's higher relative productivity.

## **2.4. Overview of the Literature Review**

From the theoretical literature review there are different views by Basu and Van (1998); Bhalotra and Heady (2003) and Fan (2004) on child labour. First, child labour may be as a result poverty (Basu and Van, 1998). Second, Bhalotra and Heady, (2003) argued the wealth paradox may explain child labour phenomenon. However, Fan (2004) argued that child labour does not affect child schooling negatively.

The empirical literature review has shown that child labour is determined by children characteristics, household characteristics and community characteristics. Children characteristics found to determine child labour include gender of the child, age and birth order. Household characteristics includes parent's education level, and household income while community

characteristics includes the distance to the nearest school, the quality of schooling, and the cost associated with schooling.

Several studies have used single equation binary response models to analyze child labour and child schooling participation. Such a model recognizes only two possibilities, in case of child labour, either the child works or not while in the case of schooling, the child either attends school or does not. A few studies employ multiple response models to analyze child labour and child schooling participation. Since, it is not possible to determine whether the child activity categories are ordered or sequential in the response, the studies use multinomial logit model.

Previous studies on child labour exist for SSA countries (e.g, Grootaert, 1999; Lavy, 1996; Nielsen, 1998; Jensen and Nielsen, 1997; Moyi, 2010). This study provides empirical evidence on the determinants of child labour participation and schooling in Somalia as no study exists on this topic using data from Somalia. The study used multinomial logit to model the activity status of children: whether a child attends school only, child attends both school and work, child does not attend either school or work, and child attends work only.



# CHAPTER THREE

## METHODOLOGY

### 3.1. Introduction

This chapter presents the theoretical framework, econometric specification of the model, estimation procedure and interpretation of the model parameters. The final section will detail the data and measurement of variables used in analyzing the determinants of child labour participation and schooling in Somalia.

### 3.2. Theoretical Framework

The study adopts the theoretical model by Khanam and Ross (2011) based on Becker (1965), Becker and Lewis (1973) and Rosenzweig and Evenson (1977). Assume a household maximizes a utility function

$$U = (C, L, S; X) \dots\dots\dots (1)$$

Where C is consumption, L denotes child leisure time, S denotes child schooling and X is a set of household, individual and community characteristics of a child.

The time constraint can be expressed as;

$$T = S + E + L \dots\dots\dots (2)$$

Where T is total time available, spent on schooling(S), work (E) and leisure (neither school nor work) (L)

The household budget constraint

$$P_C C + P_S S = N + W_C E + M \dots\dots\dots (3)$$

Where  $P_C$  is price of consumption,  $P_S$  is price of schooling,  $N$  denotes non labour income of household,  $M$  denotes household labour income (other than child labour income) and  $W_C$  is child wage rate.

Combining (2) and (3) yields the full-income constraint

$$P_C C + P_S S + W_C L + W_C S = N + W_C T + M \quad \dots\dots\dots (4)$$

Maximizing the utility function (1) subject to the budget constraint (4) yields the households demand for functions for  $S$ ,  $L$  and  $E$ , with  $P_C, P_S, W_C, X, N$  and  $m$  as arguments.

$$S = f(P_C, P_S, W_C, X, N) \quad \dots\dots\dots (5)$$

$$L = f(P_C, P_S, W_C, X, N) \quad \dots\dots\dots (6)$$

$$E = f(P_C, P_S, W_C, X, N) \quad \dots\dots\dots (7)$$

### 3.3. Econometric Model Specification

This study identified four states for child work and schooling activities (child attends school only, child attends both school and work, child does not attend either school or work and child attends work only). It is assumed that the child’s activity is informed by the net gain from the activity. This net gain is represented by Eq. (8)

$$V^*_{ij} = X'_i \beta_j + \epsilon_{ij} \quad \dots\dots\dots (8)$$

Where  $V^*_{ij}$  is a latent variable representing the  $i^{\text{th}}$  individual net gain from choosing the  $j^{\text{th}}$  ( $J=1, 2, 3, 4$ ) activity.  $X$  is a matrix of child characteristics such as age, sex; household characteristic such as parent’s education, family size, family income, and community characteristics.

Suppose  $Y_i$  represents the observed child activities with  $j$  mutually exclusive child activities and probabilities  $P_{i1}$ ,  $P_{i2}$ ,  $P_{ij}$  respectively. In this study, four child activity categories ( $j= 4$ ) are considered.

$$Y_i = \begin{cases} 1, & \text{if the child attends school only} \\ 2, & \text{if the child attends both school and work} \\ 3, & \text{if child does not attend either school or work; and} \\ 4, & \text{if the child attends work only} \end{cases}$$

The child activity choices are associated with the following probabilities:

$$\Pr(y_i = j|x_i) = P_{ij} = \frac{\exp(x_i\beta_j)}{1+\sum_{j=1}^J \exp(x_i\beta_j)} \dots\dots\dots (9)$$

The study imposes the constraints on the  $\beta$ 's, such as  $\beta_1 = 0$  or  $\beta_j = 0$ . The choice is arbitrary.

If  $\beta_1 = 0$ , then  $\exp(x_i\beta_1) = \exp(x_i0) = 1$ .

Adding this constraint to the ML model results in the probability equation:

$$\Pr(y_i = 1|x_i) = P_{ij} = \frac{1}{1 + \sum_{j=2}^J \exp(x_i\beta_j)}$$

Generally, for an outcome variable,  $Y_i$  with  $j$  categories, the probability of observing a certain category can be written as:

$$Prob(y_i = j|x_i) = P_{ij} = \frac{\exp(x_i'\beta_j)}{1+\sum_{j=1}^{j-1} \exp(x_i'\beta_j)} \text{ for } j > 1 \dots\dots\dots (10)$$

Since the dependent variable  $Y_i$  is multinomial, one of the response categories is used as a baseline or reference. This study considers the child attending school only as a baseline and

calculates the probability of child attends work only; child attends both school and work or does not attend either school or work.

### **3.4. Estimation and Interpretation of parameters**

The multinomial logit model was estimated using Maximum Likelihood Estimation (MLE) method. The desirable attribute of MLE is that it yields consistent and asymptotically efficient parameter estimates (Long, 1997). Some of the expected estimation issues as a result of the nature of the data (cross-sectional in nature because it is collected by observing many subjects at the same point in time) include heteroscedasticity and multicollinearity. Since the data is obtained by observing subjects at the same point in time, the variances of the error terms in regression models usually vary across observations implying presence of heteroscedasticity (Sofya, 2009).

The study estimated the marginal effects<sup>1</sup> of the respective explanatory variables. It is appropriate to compute marginal effects as it is not appropriate to interpret logit indexes since the interest is on an observed outcomes (child attends school only, child attends both school and work, child does not attend either school or work and child attends work only). The marginal outcome of an independent variable is the expected change in the likelihood due to change in that independent variable.

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<sup>1</sup> Marginal effect is the slope of the curve and its value depends on the values of all independent variables and on the coefficients of each outcome (Long, 1997).

### **3.5. Data and Measurement of Variables**

#### **3.5.1. Source of Data**

The study used the Somali 2006 Multiple Indicator Cluster Survey (MICS). The survey was implemented by UNICEF Somalia in collaboration with the Pan-Arab Project for Family Health (PAPFAM) project of the League of Arab States. This is the third MICS survey. The first MICS was conducted in 1995 covering Somaliland only. The second MICS was conducted in 1999. The objective of MICS surveys is gauge the Health and Education condition of women and children in Somalia. Details about the survey 2006 can be found in UNECEf Somali (UNECEf, 2007). The 2006 MICS covered the whole of Somalia thus nationally representative. A total of 5,969 households were sampled in the survey.

The survey employed four stages of sample selection. First, there was a selection of clusters in each zone as follows: 60 clusters in Somaliland, 60 clusters in Puntland and 130 clusters in Central South Somalia. The second step was to select districts in each zone. Proportional probability to size was used to select the districts; within the districts, permanent and temporary settlements were selected. To ensure that nomads were included in the sample, temporary settlements were included in the sample. The third stage involved selection of clusters within the temporary settlement. The last stage was to select the households randomly.

The information collected by questionnaires were about the household, the parent or guardian, and the eligible children (6–18 years). The questionnaires also provided information on education among school-age children, focusing on factors influencing household decisions about schooling. The main objective of the MICS is to provide planners and policy makers with reliable and detailed information needed to monitor the situation of women and children.

Information on child mortality, nutrition, child health, child protection, water and sanitation, education, reproductive health, knowledge of HIV/AIDS and fertility is included.

### 3.5.2. Measurement of Variables

**Table 3.1: Measurement of the variables**

<b>Variable</b>	<b>Measurement</b>
Child activity status	1 = if child attends school only 2 = if the child attends both school and work; 3 = if the child does not attend either school or work; and 4 = if the child attends work only
<b>Individual /Child Characteristics</b>	
Age of child	Age of child in year (7-15 years)
Age Square	Square of age of child
Male	1 if a child is a male, 0 otherwise.
<b>Household Characteristics</b>	
Household Size	Number of household members both children and adult
Father has no formal education	None = 1 if father has no education, 0 otherwise
Father has primary education level	Primary =1 if father has Primary education, 0 otherwise
Father has secondary education level	Secondary = 1 if father has Secondary education,0 otherwise
Mother has no formal education	None = 1 if mother has no education, 0 otherwise
Mother has primary education level	Primary =1 if mother has Primary education, 0 otherwise
Mother has secondary education level	Secondary = 1 if mother has Secondary education,0 otherwise
Wealth quintile 1	1 if Wealth quintile 1, 0 otherwise
Wealth quintile 2	1 if Wealth quintile 2, 0 otherwise
Wealth quintile 3	1 if Wealth quintile 3, 0 otherwise
Wealth quintile 4	1 if Wealth quintile 4, 0 otherwise
Wealth quintile 5	1 if Wealth quintile 5, 0 otherwise
<b>Community Characteristics</b>	
Place of Residence	Urban=1, Rural=0
South Central	South Central = 1 if household reside in south central region, 0 otherwise
North West	North West=1 if Household reside in North west regions, 0 otherwise.
North East	North East = 1 if Household reside in North east regions, 0 otherwise.
Time to fetch water	It is a measure of time (minutes) spend by a child to fetch water from source and back

# **CHAPTER FOUR**

## **EMPIRICAL RESULTS**

### **4.1 Introduction**

This chapter explains the empirical results from empirical investigations of the study. The first section is about the descriptive results in the study. The second part presents the multinomial logit regression results. These include estimated coefficients and marginal effects of the explanatory variables.

### **4.2 Descriptive statistics**

In this part the descriptive statistics of the sample used in the study are presented. This study has focused on the effects of household, individual and community characteristic on child labour and school enrollment in Somalia.

Table 4.1 shows the maximum value, minimum value, mean value and the standard deviation of all the variables of study by category of child activity. It is observed that all the variables except household size have minimum value of zero and a maximum of one. These are dummy variables. Household size has minimum value of 2 members and a maximum of 16 members.

#### **Child Characteristics**

Looking at the gender of the child, on average 60.64 percent of all children going to school only are males with females being 39.36 percent. For children working only, 45.04 percent are males with females being 54.96 percent. For the children going to school and working 58.78 percent are males with 41.22 percent being female. Lastly, of the children neither going to school nor working, 48.22 percent were males while 51.78 percent were females. The 13–15 years age



group dominates the total number of school going children only with a proportion of 95.70 percent. However this is different for the categories of child working only. With the 7–9 years age group having a proportion of 54.72 percent against the 34.25 percent for 10–12 years age group and the 13–15 years age group having a proportion of 11.03 percent. For children going to school and working category, the 10–12 year age group tops with proportion of 45.02 percent followed by 7–9 years age group at 36.02 percent with the 13–15 year age group with 18.96 percent.

### **Household Characteristics**

Looking at the household wealth status, the richest household have the highest proportion of the children attending school only at 40.43 percent with the poorest having the least proportion of children in that category at 9.80 percent. However, the opposite is the case for children working only where the richest households have the least proportion of 9.90 percent.

On the father's education characteristic, the household with the father who has no education has the highest proportion of children attending school only at 87.11 percent. This finding is replicated in all the child's activity categories of child working only 82.39 percent, child working and attending school and child not working 70.97 percent, and not attending school 91.08 percent. Similarly regarding mother's education, the households with the mother having no education has the highest proportion of children attending school only at 89.08 percent. This finding is replicated in all the child's activity categories of child working only 89.19 percent, child working and attending 74.31 percent and child not working and not attending school 94.3 percent.

## **Community Characteristics**

For the children going to school only, urban areas have the highest proportion of 60.64 percent against 39.36 percent for rural areas. On the other hand the proportion of children working only in the rural areas is 74.61 percent against the urban areas proportion of 25.39. On the regions perspective, central south has the highest proportion of children going school only at 42.16 percent. The results are replicated for children going to work only outcome as well as children going to school and working.

The minimum time spent by the child to fetch water is zero minutes with the child taking the longest time to fetch water being 125 minutes. On average, for the child going to school only category, the average time taken to fetch water for children going to school is 28.32 minutes while the time taken to fetch water for the child working only is 39.72 minutes and for those children working and going to school category, the average time spent fetching water is 29.42 minutes.

**Table 4.1: Descriptive statistics of the variable, Somalia**

Variable	Child activity															
	School only				Work only				School & work				None			
	Min	Max	Mean	Std dev	Min	Max	Mean	Std dev	Min	Max	Mean	Std dev	Min	Max	Mean	Std dev
<b>Child characteristics</b>																
Male	0	1	0.6064	0.4887	0	1	0.4504	0.4976	0	1	0.5878	0.4923	0	1	0.4822	0.4997
Female	0	1	0.3936	0.4887	0	1	0.5496	0.4976	0	1	0.4122	0.4923	0	1	0.5178	0.4997
Agegroup1 (7-9)	0	1	0.014	0.1175	0	1	0.5472	0.4978	0	1	0.3602	0.4801	0	1	0.2996	0.4581
Agegroup2 (10-12)	0	1	0.0289	0.1677	0	1	0.3425	0.4746	0	1	0.4502	0.4976	0	1	0.0193	0.1377
Agegroup3 (13-15)	0	1	0.957	0.2028	0	1	0.1103	0.3133	0	1	0.1896	0.392	0	1	0.6811	0.6811
<b>Household characteristics</b>																
Household size	2	16	8.0289	3.0094	2	16	7.2226	2.3443	2	16	7.8475	2.6103	2	16	6.3629	2.7242
Father - no education	0	1	0.8711	0.3351	0	1	0.8239	0.3809	0	1	0.7097	0.454	0	1	0.9108	0.2851
Father - pry education	0	1	0.0528	0.2236	0	1	0.1053	0.3069	0	1	0.1228	0.3282	0	1	0.0488	0.2154
Father - sec education	0	1	0.0761	0.2652	0	1	0.0708	0.2565	0	1	0.1676	0.3735	0	1	0.0404	0.197
Mother- no education	0	1	0.8908	0.312	0	1	0.8919	0.3105	0	1	0.7431	0.437	0	1	0.943	0.2319
Mother - pry education	0	1	0.0794	0.2704	0	1	0.0879	0.2831	0	1	0.1826	0.3864	0	1	0.0468	0.2111
Mother - sec education	0	1	0.0299	0.1703	0	1	0.0202	0.1407	0	1	0.0743	0.2622	0	1	0.0103	0.1008
Poorest quintile	0	1	0.098	0.2974	0	1	0.2817	0.4499	0	1	0.1068	0.3088	0	1	0.1852	0.3885
Poor quintile	0	1	0.1097	0.3126	0	1	0.2354	0.4243	0	1	0.1307	0.3371	0	1	0.1987	0.3991
Middle quintile	0	1	0.1667	0.3728	0	1	0.21	0.4074	0	1	0.1699	0.3756	0	1	0.2043	0.4032
Richest quintile	0	1	0.4043	0.4909	0	1	0.099	0.2987	0	1	0.3414	0.4742	0	1	0.1986	0.399
<b>Community characteristics</b>																
Rural area	0	1	0.3936	0.4887	0	1	0.7461	0.4353	0	1	0.45	0.4976	0	1	0.6211	0.4851
Urban area	0	1	0.6064	0.4887	0	1	0.2539	0.4353	0	1	0.55	0.4976	0	1	0.3789	0.4851
North west region	0	1	0.3319	0.471	0	1	0.2667	0.4423	0	1	0.2416	0.4281	0	1	0.2414	0.428
North east region	0	1	0.2465	0.4311	0	1	0.2154	0.4111	0	1	0.24	0.4271	0	1	0.2158	0.4114
Central south region	0	1	0.4216	0.4939	0	1	0.5179	0.4997	0	1	0.5184	0.4997	0	1	0.5427	0.4982
Time to fetch water	0	125	28.3222	34.6768	0	125	39.7209	34.8097	0	125	29.4108	33.7822	0	125	34.7791	34.8641

### **4.3 Econometric Results**

The factors determining child activity status in Somalia were analyzed by use of Multinomial Logit model. Modelling child's activity choices a multinomial logit model is estimated for the probability that a child will "work only", or combine work and school, or be in "neither" category as against "study only". Table 4.2 illustrates the results of the multinomial logit estimation. The factors that influence a child to go school or work can be classified into three categories: Child characteristics (age and gender), household characteristics (household income, parental education and family size) and community characteristics (the distance from home to school, the residential and regions).

#### **4.3.1 Children Characteristics**

The marginal effect of the dummy variable for gender of child is significant (p-value = 0.000). All other variables set at their mean values, the probability of a male child to be in "work only" or "neither work nor school" is 4.27 percentage points and 2.39 percentage points higher than for female child respectively. The probability of male child to be in "School and Work" is 3.57 percentage points higher than for a female child.

These findings corroborate the finding of Grootaert (1999) for Cote d'Ivoire and Ray (2002) for Peru and Pakistan. They found that there is a higher probability for boys to combine school and work than girls. However, the findings are in contrast with Khanam (2008) who found that in Bangladesh, girls were more likely combine school and work than boys.

Child age dummy variables have statistically significant marginal effects (p-value = 0.000). The result revealed that the probability of a child in age group (10-12) to be in work only or

combining school and work is 11.59 percentage points and 18.21 percentage points higher than for a child in age group (7-9). On the other hand, a child in age group (10-12) was 46.46 percentage points less probable to be in neither school nor work than a child in age group (7-9). The probability of a child in age group (13-15) to be in neither school nor work is 4.35 percentage points higher than a child in age group (7-9). A child in age group (13-15) to be in work only or combining school and work was 22.21 percentage points and 4.21 percentage points lower than for a child in age group (7-9).

This finding differs from other developing countries. Studies found that when children reach a particular age they tend to favor work than attend school (Grootaert, 1999; Jensen and Nielsen, 1997). In this study the probability of attending “school only” increases and the probability of “working only” and “working and attending school” declines with child age. These findings are in agreement with Okurut and Yinusa (2009) study in Botswana where they found that age of the child negatively and significantly influence child labour and schooling.

#### **4.3.2 Household Characteristics**

The size of the household, positively and significantly influences the probability of the child attending school only (p-value = 0.000) as well as the likelihood of attending school and working (p-value = 0.000). This study finds that an additional household member reduces the likelihood of child to be in work only by 0.84 percentage points and increase the probability of combining school and work by 0.91 percentage points. An increase in the household size by one member reduces the chance of the child to be in neither work nor school by 2.42 percentage points. The findings are similar with those of Patrinos and Psacharopoulos (1997) who found that in Peru a

child from large family is more likely to be participating in child labour than a child from a small family.

The marginal effect of parent education dummy variables for those children working only was insignificant ( $p\text{-value} > 0.05$ ) however, for those in the category of school and work and also for those neither in school nor working it had a statistically significant effect ( $p\text{-value} < 0.05$ ). The probability of a child whose father is primary educated to be in work only or combining school and work is 0.39 percentage points though not significant and 1.8 percentage points higher than for a child whose father has no formal education. The probability of a child whose father is primary educated to be neither in school nor work is 6.7 percentage point than to a child whose father has no formal education.

The probability of a child whose father is secondary educated to be in work only or neither school nor work is 1.01 percentage points and 7.49 percentage points respectively less than a child whose father has no formal education though the effect is not significant for those in the work only category. The probability of a child whose father is secondary educated to be combining school and work is 3.48 percentage points higher than for a child whose father has no formal education.

On the other hand the possibility of a child whose mother is primary educated to be in work only or neither school nor work respectively are 0.72 percentage points though insignificant and 9.38 percentage points lower than for a child whose mother has no formal education. The probability of a child whose mother is primary educated to be combining school and work is 5.45 percentage

points higher than for a child whose mother has no formal education. The probability of a child whose mother is secondary educated to be in work only or combining school and work respectively is 1.46 percentage points though insignificant and 8.52 percentage points respectively higher than a child whose mother is has no formal education. The probability of a child whose mother is secondary educated to be neither in school nor work is 14.51 percentage points lower than for a child whose mother is has no formal education.

The wealth status of a household dummy variables have statistically significant marginal effects ( $p$ -value = 0.000) for those either in the categories of work only or combining school and work category but not for those neither in school nor work. The probability of a child from a poor household to be in work only is 5.8 percentage points greater than a child from a rich household. The probability of a child from poor household to combine school and work or to be neither in school nor work was 3.56 percentage point and 0.7 percentage points respectively lower than for a child from a rich household though insignificant for those neither in school nor work.

The probability of a child from the poorest household to be in work only is 8.42 percentage points higher than a child from a rich household. On the other hand, the probability of a child from a poor household to combine school and work or to be neither in school nor work is 5.91 percentage points and 0.27 percentage points respectively lower than a child from a rich household though insignificant for those neither in school nor work.

The probability of a child from a middle income household to be in work only is 2.93 percentage points higher than for a child from a rich household. The probability of a child from a middle income household to combine school and work or to be neither in school nor work was 2

percentage points and 0.74 percentage points respectively lower than for a child from a rich household however, the effect is insignificant for those neither in school nor work category.

Turning to the richest income household, the probability of a child to combine school and work or to be neither in school nor work is 5.91 percentage points and 0.27 percentage points higher than a child from a rich household though, for those neither in school nor work the effect is insignificant. The probability of a child from richest income household to be in work only is 8.42 percentage points lower than for child from a rich household. Therefore, this study finds that children from low household income will be more likely to work rather to be school only. This finding is consistent with the study findings by Fan (2004) who argued that if parental wealth is low and without subsistence constraint, child labour is likely to increase given children's higher relative productivity.

### **4.3.3 Community Characteristics**

Children from the urban areas have positive significant probability of attending school only. The study found that the probability of a child from urban area to be in work only or neither school nor work is 1.98 percentage points and 2.1 percentage points respectively lower than a child from rural areas. The probability of a child from urban area to be combining school and work is 2.11 percentage points higher than a child from rural areas.

The result show that the North east region dummy has statistically significant marginal effect (p-value = 0.000). The probability of a child from North east zone to be in work only is 1.77 percentage points higher than for a child from south central zone. The probability of children from north east region to be combining school and work or to work only is 0.53 percentage



points and 1.77 percentage points respectively higher than for a child from south central region though insignificant for those combining school and work.

The probability of children from North West region combining school and work or neither school nor work is 4.21 percentage points and 0.67 percentage points respectively lower than a child from south central region though not significant for those neither in school nor working.

The probability of children from North West region to be in work only is 3.55 percentage points higher than a child from south central region.

The time spent to fetch water, negatively influences the probability of the child neither to be in school nor work though insignificant ( $p\text{-value} > 0.05$ ). In particular an additional minute spent in fetching water reduces the probability of child to be neither school nor work by 0.001 percentage points and no change for those working or in either school or work.

**Table 4.2: Multinomial logit estimates for all children  
(The reference category is Study only).**

Child activity Variable	Work				School and Work				None			
	Coef.	Marginal Effects	z	P> z	Coef.	Marginal Effects	z	P> z	Coef.	Marginal Effects	z	P> z
<b>Child characteristics*</b>												
Male	-0.9099	-0.0427	-11.44	0	-0.2727	0.0357	10.37	0	-0.6128	-0.0239	-5.04	0
Agegroup2 (10-12)	-1.4026	0.1159	25.11	0	-0.4586	0.1821	42.82	0	-3.5933	-0.4646	-34.25	0
Agegroup3 (13-15)	-0.0149	-0.2221	-43.15	0	-5.1561	-0.0421	-9.61	0	-4.0031	0.0435	4.15	0
<b>Household characteristics**</b>												
Household size	-0.5103	0.0084	11.79	0	0.0130	0.0091	14.56	0	-0.1514	-0.0242	-28.74	0
Father – pry education	-0.7506	0.0039	0.63	0.529	-0.5882	0.0180	3.17	0.002	-0.9092	-0.0673	-7.08	0
Father – sec education	-0.9351	-0.0101	-1.36	0.174	-0.5202	0.0348	6.04	0	-1.0129	-0.0749	-7.39	0
Mother – pry education	-0.7866	-0.0072	-1.09	0.275	-0.2156	0.0545	10.38	0	-0.9743	-0.0938	-10.24	0
Mother - sec education	-0.4603	0.0146	1.15	0.249	0.2377	0.0852	10.14	0	-1.0159	-0.1451	-8.74	0
Poorest quintile	1.1113	0.0842	12.3	0	-0.0214	-0.0591	-8.31	0	0.4440	-0.0027	-0.28	0.779
Poor quintile	0.7848	0.0582	8.62	0	0.0496	-0.0356	-5.37	0	0.3016	-0.0070	-0.77	0.442
Middle quintile	0.2805	0.0293	4.81	0	-0.1059	-0.0200	-3.6	0	0.0402	-0.0074	-0.95	0.344
Richest quintile	-0.8729	-0.0565	-7.96	0	-0.2617	0.0229	4.41	0	-0.3593	0.0141	1.79	0.074
<b>Community characteristics***</b>												
Urban area	0.0031	-0.0198	-3.4	0.001	-0.1702	0.0211	4.02	0	-0.3958	-0.0210	-2.85	0.004
North west region	0.0031	0.0355	7.72	0	-0.6179	-0.0421	-9.69	0	-0.2278	-0.0067	-1.15	0.252
North east region	-0.2157	0.0177	3.57	0	-0.2778	0.0053	1.2	0.23	-0.4536	-0.0452	-7.35	0
Time to fetch water	-0.0018	0.0000	0.2	0.838	-0.0017	0.0000	0.2	0.838	-0.0021	-0.0001	-1.73	0.084

\*Reference group of age is age (7-9 years) and reference group gender is female child

\*\*Reference group of father's/mother's education level is None education and the reference group of wealth status is Rich

\*\*\*Reference group of dummy region is South central and reference group for residence is rural residence

Note: Number of obs=28976

LR chi2(48) = 15847.28

Prob > chi2 = 0.0000

Pseudo R2 = 0.2702

Log likelihood = -21402.61

## **CHAPTER FIVE**

### **SUMMARY CONCLUSION AND POLICY IMPLICATION**

#### **5.1 Summary and Conclusion**

Somalia has high prevalence of child labour and low primary school attendance rates. However, despite the concern about child labour and schooling, there is no empirical study on what determines child labour and schooling in Somalia. This study utilized Multinomial logit model to analyze what determines child labour participation and schooling in Somalia using the Somali 2006 Multiple Indicator Cluster Survey (MICS).

The empirical findings of this study provide evidence that male children are more likely to combine school and work than female children. This result compares with most of previous studies on child labour in developing countries. The empirical results also show that the likelihood of attending school only increases as the age of the child increases and the probability of working only or combining school and work declines with age. Some studies in developing countries finds that when children reach a particular age they are more likely to work than attend school only.

Children of educated parents are more likely to combine school and work than a child of parents with no formal education. The empirical result also show that an increase in the number of household members increases the probability that a school-age child will be in work only or combine school and work.

Household wealth has significant influence on child labour participation. This provides some support for the “Luxury Axiom” of Basu and Van (1998). The luxury axiom stated that child

labour is a result of insufficient income from the adults in a family. Thus children are likely to work when parental income is below subsistence level. The enrollment rates to school for school going children from poor households is therefore less likely. Instead this children have higher probability to work relative to attending school only than children from rich household.

The study also found evidence of spatial differences in child activity status in Somalia. In particular, it found that urban children have a higher probability to be combining school and work than children from rural areas. In addition, children from the north east and northwest are more likely to be in work only rather than children from south central regions.

## **5.2 Policy Implications**

This study findings provide important direction for policy makers to reduce child labour and improve primary school enrollment. Banning children from working and implementing policies making school attendance compulsory may not be effective in having large effect on child Labour in the short run without improving economic conditions is likely to leave the family worse off. Since the wealth status of the family is the key factor that forces children out of school into labour market, government should improve the economic conditions, develop policies and programs to enhance household welfare. The evidence shows that parents' education significantly rises the chances that a school-age child will specialize in study. Thus education policy should take into account this intergenerational benefit of education investment.

There is need for spatial focus in policy given regional differences in child labour and schooling. In particular, policy formulation should focus more on urban settings since the study found that children from urban areas have a higher possibility of combining school and work. In addition, policy should focus on North West and North East regions as they had a higher probability of

children to be in work only compared to those from south central region. Such policy should be geared towards incentivizing children in urban areas as well as North West and North East regions to go to school.

### **5.3 Areas of Further Research**

A number of areas require research to provide the necessary information to examine the determinants of child labour participation and schooling in Somalia

The Somali 2006 MICS data is cross-sectional in nature thus it is not possible to use it to make any causal inferences on schooling and child labour. Therefore, an extension of this study could involve the collection and analysis of longitudinal data, which could contribute to understanding causal relationships by collecting information on the timing and sequence of various events.

Another area for future study is to inclusion of school variables. This would allow for an analysis of the effects that school quality and distance to school have on school attendance and/or child labour. Past studies on the school variable found that school quality had a large an effect on who attends schools in developing countries (Lavy, 1996) The potential findings of such a study would highlight the importance of access to schools in combating child labour.

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## APPENDICES

**Table A1: Statistics on Working Children and Education in Sub Saharan Africa**

Countries	CHILDREN		
	Working (5-14 years) %	Attending School (5-14 years) %	Combining work and School (5-14 years) %
Angola	25.7 (694,458)	65.4	22.1
Benin	31.5 (850,785)	58..2	20.0
Botswana	-	-	-
Burkina Faso	37.8 (1,258,003)	43.4	13.6
Burundi	27.2 (633,126)	60.9	26.0
Cameroon	36.5 (1,749,094)	80.4	34.1
Cape Verde	3.2 (2,392)	90.1	1.7
Central African Republic	51.1 (602,932)	53.9	33.4
Chad	53.0 (1,535,025)	39.6	30.7
Comoros	35.6 (56,840)	44.2	23.9
Côte d'Ivoire	39.8 (2,181,894)	53.6	24.3
Djibouti	12.3 (23,693)	67.4	10.2
Eritrea	-	-	-
Ethiopia	22.0 (5,545,319)	54.0	17.0
The Gambia	36.4 (180,954)	65.7	29.6
Ghana	43.5 (2,731,596)	83.1	39.8
Guinea-Bissau	47.3 (219,734)	56.9	34.6
Kenya	32.5 (2,943,310)	74.9	32.3
Liberia	16.6 (136,340)	75.9	14.0
Madagascar	22.1 (1,206,992)	69.1	15.4
Malawi	33.6 (1,401,759)	79.5	36.1
Mali	46.4 (1,700,782)	42.0	20.5
Mauritania	18.2 (172,936)	48.6	10.8
Mozambique	22.5 (1,526,560)	69.5	22.4
Namibia	-	-	-
Niger	47.8 (1,561,570)	51.7	26.3
Nigeria	36.3 (1,894,046)	61.7	28.1
Rwanda	6.1 (142,523)	82.9	6.1
Senegal	14.9 (510,420)	53.6	8.3
Sierra Leone	48.1 (872,561)	63.0	35.7
Somalia	39.8 (1,012,863)	48.9	20.2
South Africa	-	-	-
South Sudan	45.6 (463,624)	31.5	10.9
Tanzania	27.9 (2,691,262)	75.4	22.3
Togo	44.1 (718,962)	88.5	43.2
Uganda	31.1 (2,631,389)	84.2	35.3
Zambia	28.1 (992,722)	65.2	27.6

**Source:** Understanding Children's Work Project's analysis of statistics from MICS3 Survey, 2006