

# Determinants of Youth Unemployment; Evidence from Ethiopia

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## Abstract

Background: Youth employment presents a particular challenge to Ethiopia; the country faces growing youth landlessness in rural areas and insignificant rural job creation, potentially leading to an increase in migration to urban areas. Objective: The main objective of this study is so to identify and describe the determinants of youth unemployment in Ethiopia. Design: The sampling technique employed was multistage stratified cluster sampling. Results: The study is made based on the 2011 Ethiopian Demographic and Health Survey (DHS) which was conducted by Central Statistical Agency (CSA) of Ethiopia. The analyses result revealed that about 10.4

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*Index terms*— EDHS, youth unemployment, ethiopia

## 1 Introduction

employment is one of the main challenges of the modern era in both the developed and developing countries. Especially youths, which the United Nations defines as, those between the ages of 15-24, are more affected by unemployment. Young people are more vulnerable to lack experience, social networks or other qualifications that would make them difficult to find employment. In most regions youth were nearly three times more likely to be unemployed than adults (ILO, 2012). This is particularly worrying against the background that youths represent a large proportion of the world's population like Ethiopia. In 2010, the 1.2 billion young people in the world constituted 18 percent of the global population (UN, 2010). Their energy and motivation, creativity and talent present a great potential for companies to prosper and an enormous opportunity for economic and social development.

Many policy makers know about the benefits of investing in youths. Governments are targeting on policies and educational programs to improve opportunities for young people to enter the labor market, but still the problem is rampant. UN claims that Policy makers must ensure that educational curricula prepare young people for the job market, providing them with professional, entrepreneurial and job-search skills" (UN, 2007:39), acknowledging that matching school curricula with recent workplace requirements is a difficult task.

Youth unemployment is a pressing issue in Ethiopia where almost two-thirds of the population is younger than 25 years. Being Ethiopia among the countries with a rapidly growing population coupled with a still backward economy, the proper management and efficient utilization of its work force is essential. In this respect, the capacity of the economy in absorbing the potential labour force needs to be monitored regularly, and appropriate employment policy should consequently be adopted. The level of unemployment of a country is widely used as an overall indicator in evaluating the current performance of its economy.

The problem of unemployment is a global issue at the moment that every nation is striving to control it at its minimum level. However, in developing nations it is getting worse mainly due to the unbalanced relationship between the rate of economic development and the rapid population growth. Ethiopia is no exception in this regard, and its recent urbanization is aggravating the problem because of the urban migration of people with scarce or nil real working prospects, which therefore often slip into some form of underemployment or remain idle for productive work.

A high level of unemployment indicates the failure of a country's economy to use its labour resources effectively. There can be various factors explaining unemployment, such as a low level of general economic activity, recession,

46 inflation, rapid changes in technology, disability, willingness to work and discrimination. In the case of Ethiopia,  
47 several factors contribute to the causes of youth unemployment.

48 Many young people end up facing extended periods of unemployment, or significant underemployment in  
49 jobs that fail to offer career opportunities. The analysis of occupational status and unemployment is therefore  
50 essential both in tackling present difficulties and foreseeing future changes. The goal of this study is therefore to  
51 conduct an analysis so can identify the various possible factors which are associated with youth unemployment  
52 in Ethiopia.

## 53 2 II.

### 54 3 Research Question

55 "Why do a substantial number of youths in Ethiopia remain unemployed despite years of government programs  
56 on youth employment?"

57 The main objective of this study is to identify and describe the various possible determinants of ? To examine  
58 the socio-demographic factors that affect the participation of the young population to the labour force, as well  
59 as those which contribute to the high level of unemployment.

60 ? To describe the prevalence of youth unemployment across the regions and urban/rural districts in Ethiopia.

61 ? To estimate the likelihood of being unemployed among youths in Ethiopia given his/her background and or  
62 individual characteristics.

63 ? To draw conclusions from the ongoing experience in order to make recommendations for programmes geared  
64 towards enhancing employment creation in the country.

## 65 4 III.

### 66 5 Methods

#### 67 6 a) Data

68 Ethiopia is one of the least urbanized countries in the world; only 16 percent of the population lives in urban  
69 areas. The majority of the population lives in the highland areas. The main occupation of the settled rural  
70 population is farming, while the lowland areas are mostly inhabited by a pastoral people, who depend mainly on  
71 livestock production and move from place to place in search of grass and water. The population has increased  
72 steadily over the last three decades, from 42.6 million in 1984 to 53.5 million in 1994 and 73.8 million in 2007.  
73 There were slight declines in the population growth rates over these periods, from 3.1 percent per annum in 1984  
74 to 2.9 percent in 1994 and 2.6 percent in 2007. More than 80 percent of the country's total population lives in  
75 the regional states of Amhara, Oromiya, and SNNP (CSA, 2010).

76 The dataset used in this study has been taken from the Ethiopia Demographic and Health Survey (EDHS)  
77 conducted by central Statistics Agency (CSA) in 2011. The survey utilized multistage cluster sample based on  
78 the 1994 Population and Housing Census sample frame and was designed to obtain and provide information on  
79 the basic indicators of the health and demographic variables. The study design is cross-sectional, that is data on  
80 the independent and outcome variables is collected at the same point in time. There is no follow up time during  
81 a data collection process.

#### 82 7 b) Study Variables i. The Response Variable

83 The response variable to this study is employment status of youth in Ethiopia. According to International Labour  
84 Organization's (ILO's) definition, those persons who are simultaneously "without work", "currently available for  
85 work" and "seeking work" are considered as unemployed. For the purpose of this study, the response variable,  
86 "employment status" is dichotomized as "unemployed" and "employed". Therefore, the outcome for the  $i$ th  
87 individual is represented by a random variable  $Y_i$  with two possible values (unemployed and employed).

88 ii. Explanatory Variables/Factors Based on the reviewed literatures, some of the common Socio-economic and  
89 demographic predictors which are expected to influence the occupational status of young men and women in  
90 Ethiopia used under this study are: iii. Logistic Regression Analysis Logistic Regression is a popular modeling  
91 approach used when the dependent variable is categorical (nominal or ordinal scale). The model allows one to  
92 predict the log odds of outcomes of a dependent variable from a set of variables that may be continuous, discrete,  
93 categorical, or a mix of any of these (Hosmer and Lemeshow, 2000). The most attractive feature of a logistic  
94 regression model is that it neither assumes linearity in the relationship between the covariates and the outcome  
95 variable, nor does it require normally distributed variables. It also does not assume homoscedasticity and in  
96 general has less stringent requirements than linear regression models. Thus logistic regression is used in a wide  
97 range of applications leading to categorical dependent data analysis (Agresti, 2002). A binary logistic regression  
98 is a special type of logistic regression model which is used to describe the relationship between one or more  
99 independent variables and a binary outcome variable that has only two possible values.

100 The response variable in this study is dichotomous which is Bernoulli random variable with two possible values,  
101  $y_i = 1$  with probability of unemployed  $P_i = P(y_i = 1|X_i)$  and  $y_i = 0$  with probability of employed,  $1 - P_i =$   
102  $1 - P(y_i = 1|X_i)$ .

103 The logistic model is defined as follows. Let  $1 \times n$   
 104  $Y$  be a dichotomous outcome random variable as explained above and let  
 105  $X = (X_1, X_2, \dots, X_k)$  denote the collection of  $k$ -predictor variables.  $P_i = P(y_i = 1 | X_i)$   
 106  $= \frac{e^{X_i \beta}}{1 + e^{X_i \beta}}$ ,  $i = 1, 2, \dots, n$ .  
 107  $\beta = (\beta_0, \beta_1, \dots, \beta_k)$  is a vector of unknown coefficients with dimension of  $(k + 1) \times 1$ .

## 108 8 X

109 Where,  $X$  is called regression matrix, and without the loading column of 1's, is termed as predictor data matrix.  
 110 Then, the conditional probability that the  $i$ th individual is unemployed given the vector of predictor variables  
 111  $X_i$  is denoted by  $P_i = P(y_i = 1 | X_i)$ . The expression  $P_i$  in logistic regression model can be expressed  
 112 in the form of:  $P_i = P(y_i = 1 | X_i) = \frac{e^{X_i \beta}}{1 + e^{X_i \beta}}$ ,  $i = 1, 2, \dots, n$ . **3.1**

113 Where  $P(y_i = 1 | X_i)$  is the probability of  $i$ th individual is unemployed given his/her individual characteristics  
 114  $X_i$ , and  $\beta = (\beta_0, \beta_1, \dots, \beta_k)$  is a vector of unknown coefficients with dimension of  $(k + 1) \times 1$ .

115 However, the relationship between the probability of  $i$ th individual is unemployed and his/her characteristics  
 116 are non linear. In order to make meaningful interpretation, it should be written as a linear combination of  
 117 predictors. This is computed using the logit transformation which is given by:  $\text{logit}[P_i] = \log \left( \frac{P_i}{1 - P_i} \right) = X_i \beta$   
 118 where  $X_i = (1, X_{i1}, X_{i2}, \dots, X_{ik})$ ,  $i = 1, 2, \dots, n$ ;  $j = 0, 1, \dots, k$ . **3.2**

119 The parameter  $\beta_j$  refers to the effect of  $X_j$  on the log odds that  $Y = 1$ , controlling the other  $X$ 's in the  
 120 model.  
 121

## 122 9 iv. Parameter Estimation

123 The most commonly used method of estimating the parameters of a logistic regression model is the method of  
 124 Maximum Likelihood (ML) instead of Ordinary Least Squares (OLS) method.

## 125 10 Consider the logistic model $P(y$

126  $i = 1 | X_i) = \frac{e^{X_i \beta}}{1 + e^{X_i \beta}}$ . Since the observed values of  $Y(Y_i, i = 1, 2, \dots, n)$   
 127 are independently distributed as Bernoulli random variables, the maximum likelihood function of  $y$  is the joint  
 128 density function given by:  $L(\beta | Y) = \prod_{i=1}^n P(y_i = 1 | X_i)^{y_i} (1 - P(y_i = 1 | X_i))^{1 - y_i}$   
 129  $= \prod_{i=1}^n \left( \frac{e^{X_i \beta}}{1 + e^{X_i \beta}} \right)^{y_i} \left( \frac{1}{1 + e^{X_i \beta}} \right)^{1 - y_i}$ . **3.3**

130 The maximum likelihood estimates of the parameters  $\beta$  are obtained by maximizing the log-likelihood function  
 131 which is given by:  $\log L(\beta | Y) = \sum_{i=1}^n y_i \log \left( \frac{e^{X_i \beta}}{1 + e^{X_i \beta}} \right) + \sum_{i=1}^n (1 - y_i) \log \left( \frac{1}{1 + e^{X_i \beta}} \right)$ .

## 132 11 3.4

133 The maximum likelihood estimate of the parameter is found by the derivation of the log-likelihood function with  
 134 respect to each  $\beta_j$ 's and set each equation to zero which is given as:

## 135 12 v. Assessment of the Fitting of Logistic Regression Model

136 After fitting the logistic regression model or once a model has been developed through the various steps in  
 137 estimating the coefficients, there are several techniques involved in assessing the appropriateness, adequacy and  
 138 usefulness of the model. First, the importance of each of the explanatory variables will be assessed by carrying  
 139 out statistical tests of the significance of the coefficients. Then the overall goodness of fit of the model will  
 140 be tested (Agresti, 1996). The Pearson's Chi-square, the likelihood ratio tests (LRT), Hosmer and Lemeshow  
 141 Goodness of fit Test and the Wald tests are the most commonly used measures of goodness of fit for categorical  
 142 data (Hosmer and Lemeshow, 1989).

143 a. Goodness of Fit of the Model Assessing goodness of fit involves investigating how close values are predicted  
 144 by the model with that of observed values (Bewick et al., 2005). The comparison of observed to predicted  
 145 values using the likelihood function is based on the statistic called deviance.  $D = -2 \sum_{i=1}^n y_i \ln \left( \frac{y_i}{\hat{p}_i} \right) + (1 - y_i) \ln \left( \frac{1 - y_i}{1 - \hat{p}_i} \right)$   
 146 where  $\hat{p}_i = P(y_i = 1 | X_i)$ .

## 147 13 3.6

148 For purposes of assessing the significance of an independent variable, the value of  $D$  are compared with and  
 149 without the independent variable in the equation as given below:  $D = D_0 - D_1$

150 Where  $D_0$  -deviance of model without the explanatory variable and  $D_1$  -deviance of model with the  
 151 explanatory variable included.  $D$  has a chi-square distribution with degree of freedom equal to the difference  
 152 between the numbers of parameters estimated in the two models.

## 153 14 b. Likelihood-Ratio Test

154 The  $2G$  test statistic is defined as two times the natural log of the ratio of likelihood functions of two models  
 155 evaluated at their Maximum Likelihood Estimates (MLEs). The likelihood-ratio test uses the ratio of the

156 maximized value of the likelihood function for the full model ( $L_1$ ) over the maximized value of the likelihood  
 157 function for the reduced model ( $L_0$ ). Therefore, the likelihood-ratio test statistic is given by:  $G^2 = -2 \ln \frac{L_0}{L_1}$   
 158  $L_1 = -2 \{ \ln L_0 - \ln L_1 \}$  3.7

159 where  $L_0$  is the likelihood function of the null model and  $L_1$  is the likelihood function of the full model  
 160 evaluated at the MLEs. This natural log transformation of the likelihood functions yields an asymptotically  
 161 chi-squared statistic with degree of freedom equal to the difference between the numbers of parameters estimated  
 162 in the two models (Menard, 2002).

### 163 15 c. The Hosmer and Lemeshow Test Statistic

164 This goodness-of-fit statistic is used to assess the fit of a logistic regression model. Hosmer and Lemeshow's  
 165 goodness of fit test divides subjects into deciles based on predicted probabilities and then computes a chi-square  
 166 from observed and expected frequencies. Using this grouping strategy, the Hosmer-Lemeshow goodness-of-fit  
 167 statistic,  $\chi^2$  is obtained by calculating the Pearson chi-square statistic from the  $g \times 2$  Table of observed and  
 168 estimated expected frequencies. A formula defining the calculation of  $\chi^2$  is as follows:  $\chi^2 = \sum_{k=1}^g \frac{(O_k - E_k)^2}{E_k}$   
 169  $g = 10$

### 170 16 3.8

171 Where  $E_k = nP_k$ ,  $V_k = nP_k(1 - P_k)$ ,  $g$  is the number of group,  $O_k$  is observed number of events in  
 172 the  $k$ th group,  $E_k$  is expected number of events in the  $k$ th group, and  $V_k$  is a variance correction factor  
 173 for the  $k$ th group. If the observed number of events differs from what is expected by the model, the statistic  $\chi^2$   
 174 will be large and there will be evidence against the null hypothesis that the model is adequate to fit the data.  
 175 This statistic has an approximate chi-square distribution with  $(g-2)$  degree of freedom.

### 176 17 d. The Wald Test

177 For each explanatory variable in the model there will be an associated parameter. The Wald test, described  
 178 by Agresti, 1996; is one of a number of ways of testing whether the parameters associated with a group of  
 179 explanatory variables are zero. If for a particular explanatory variable, or a group of explanatory variables, the  
 180 Wald test is significant, then would conclude that the parameters associated with these variables are not zero, so  
 181 that they should be included in the model. If the Wald test is not significant then these variables can be omitted  
 182 from the model. Wald  $X^2$  statistics can be used to test the significance of individual coefficients in the model  
 183 and are calculated as follows:  $Z^2 = \frac{\beta^2}{\text{se}(\beta)^2} \sim X^2(1)$

184 3.9

185 Each Wald statistic is compared with a  $X^2$  distribution with 1 degree of freedom.

### 186 18 e. R Squared Statistic

187 A number of measures have been proposed in logistic regression as analog to  $R^2$  in multiple regressions. The  
 188 maximum value that the Cox and Snell  $R^2$  attains is less than 1. The Naglekerke  $R^2$  is an adjusted version of  
 189 the Cox and Snell  $R^2$  and covers the full range from 0 to 1, and therefore it is often preferred. The observed  
 190 response for a few of the cases may not seem to correspond to the model fitted to the bulk of the data. Cases  
 191 that do not follow the same model as the rest of the data are called outliers, and identifying these cases can be  
 192 useful. Single cases or small groups of cases can strongly influence the fit of logistic regression model. The most  
 193 useful and important method of perturbing the data is deleting the cases from the data one at a time. Cases  
 194 whose removal causes major changes in the analysis are called influential (Sanford, 2005).

195 DFBETA(S) is a diagnostic measure which measures the change in the logit Coefficients for a given variable  
 196 when a case is dropped. If DFBETAs is less than unity it implies no specific impact of an observation on the  
 197 coefficient of a particular predictor variable, while DFBETA of a case is greater than 1.0, is considered as potential  
 198 outlier.

199 Cook's distance is a measure of the influence of a case. It is a measure of how much the residual of all cases  
 200 would change if a particular case were excluded from the computation of the regression coefficients. Cook's  
 201 distance less than unity shows that an observation had no overall impact on the estimated vector of regression  
 202 coefficients.

203 Analog of Cook's influence statistics of a case greater than 1.0 indicates that a potential outlier, while the  
 204 value of the leverage statistic less than one shows that no subject has a substantial large impact on the predicted  
 205 values of a model.

206 Multicollinearity: refers to a situation where there is either an exact or approximately exact linear relationship  
 207 among the predictor variables. In other words Multicollinearity is the degree of redundancy or overlap among  
 208 explanatory variables. The existence of multicollinearity makes it hard to get coefficient estimates with small  
 209 standard error (Gujarati, 2004).

210 IV.

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## 19 Results and Discussion

Results in this chapter are presented in two separate sections. The first section displays the descriptive results and the second section reveals results of the Logistic Regression Model.

### 20 a) Descriptive Results

During the 2011 Ethiopian DHS, complete information regarding occupational status is collected on a total of 2,858 youths aged between 15-24 years old. Thus, the result shows that about 298 (10.4 percent) of the young population is jobless as displayed in the Table ??1 below. As shown Table ??2 below, employment status of youth is significantly associated with region of residence (P value<0.05). The higher (33.6 percent) among unemployed youth is observed in Amhara region followed by Tigray (25.5%). Likewise, employment status of youth is also significantly associated with exposure to mass media (p-value<0.05). Accordingly the highest prevalence (96.6 percent) among unemployed youth is resided to rural parts of the country.

Similarly, childhood immunization status is significantly associated with availability of electric power (p-value<0.05). Accordingly, high prevalence (90.6 %) among unemployed youth is those whose community has no electric power. Table ??2 also shows that the proportion of employment status of youth varies significantly with access to market information (P-value<0.05). With regard to this, the higher (68.9%) of the unemployed population has no access to market information. According to the 2011 Ethiopia DHS, youth employment status is also significantly differs with educational level (P-value<0.05). The higher (54.2 percent) of unemployed youth have no educational background.

Previous Sector of participation is significantly associated with youth employment (P-value<0.05). The higher (90.9 percent) among unemployed youth have no work experience. Moreover, sex of the youth is significantly associated with his/her employment status (P-value<0.05). The higher (88.3 percent) of unemployed youth are female.

### 21 c) Results of Binary Logistic Regression Model

A Binary Logistic Regression Analysis is used to identify the most important determinant factors which are associated with the occupational status of youth in Ethiopia. Before giving interpretation to results of the model, we should check whether or not the model fits the data well.

i. The Hosmer-Lemshow Test If the p-value of the Hosmer-Lemshow Goodness of fit test statistic is greater than  $\alpha=0.05$ , we fail to reject the null hypothesis that there is no difference between observed and predicted values, implying that the model fits the data at an acceptable level. The value of Hosmer-Lemshow statistic has chi-square value of 8.135 and a p-value of 0.420 indicating that the model has a good fit as shown in Table ??3. This shows that there is no significant difference between the observed and predicted model values and hence the model fits the data well. ii.

## 22 Interpretation for Results of a Binary Logistic Regression Model

After the assessment/ evaluation of the overall model and goodness of fit test, statistical tests of individual predictors are conducted to identify the determinants for occupational status of youth in Ethiopia As shown in Table ??5 below; Region of residence, Educational status of the youth, Access to market information, Age, Gender, Access to electric power, wealth index and Access to market information are found to be the most important determinant factors. Whereas, the other variables such as Educational status of household head, Place of residence, Family size and Sector participation in the past are not associated with occupational status of youths in Ethiopia.

Youths occupational status is significantly vary with his/her educational status (p<0.05). As a result, those who are not educated and primary level are 5.1 percent and 81.5 percent more likely non-occupational respectively, compared to those whose educational level is secondary & above controlling for the other variables in the model.

The result also shows that youths occupational status is significantly differs with age of the youth (p<0.05). Accordingly, a one unit increment of age decreases the likelihood of being unemployed among youth by 15%, controlling for the other variables in the model.

As shown table below, occupational status of youths is also significantly differ with respect to region of residence (p<0.05). Concerning to this, those that resides to Amhara, Tigray and Oromia regional states are 57.2%, 16.5% and 28.8% more likely to be non occupational respectively compared to youths in Addis Ababa controlling for the other variables in the model.

Access to market information is also significantly associated with youths' occupational status as shown in the table below. Thus those who have this access are 86% less likely to be non occupational compared to those who have not getting the access, keeping the other variables constant.

Similarly, youth's occupational status in Ethiopia is significantly differs with respect to family wealth index. With respect to this those whose family is poor are 30.1% more likely unemployed compared to those whose family are medium and above. As shown in the table below, access to electric power is also significantly associated with their current occupational status. Concerning this, those who are in a community have electric power are 86%

less likely non occupational compared to those who are not, controlling for the other variables in the model. Sex is another demographic variable affecting employment status of the youth. Concerning to this, females are 60.8 % more likely unemployed compared to males. DFBETAs are all less than unity implying no specific impact of an observation on the coefficient of a particular predictor variable. The result also shows that cook's distance values are all less than unity showing that an observation had no overall impact on the estimated vector of regression coefficients ?. The result of the maximum value of analog of Cook's influence statistics for each predictor variable is also less than 1.0. Therefore, there is no potential influential observation .

Multicollinearity in logistic regression is detected by examining the standard errors for the ? coefficients. A standard error larger than 2.0 indicates numerical problems, such as multicollinearity among the independent variables. However, none of the coefficients of the independent variables in this analysis had a standard error larger than 2.0.

## 23 V. Conclusions and Recommendations a) Conclusions

The aim of this study is to examine the factors which determine youth unemployment in Ethiopia and suggest way forward towards reduction of the problem. The study uses Binary logistic regression model to analyze the determinants of unemployment in Ethiopia. The dependent variable of the study was youth employment status which was categorized into two categories employed and unemployed. From the findings of this study, this study concludes that E ducational status, Age, Region of residence, Access to electric power, Gender and Access to market information, are all significant factors in explaining the difference in youth employment status in Ethiopia.

The findings of the study show that gender is significant determinant of unemployment and male youth stand a high chance of being employed over being unemployed as compared to female youth. Literacy rates are especially low among women. Participation rates also differ more widely between men and women. Reasons for inactivity include home making for rural women and most often being a student for urban men. Women marry earlier than men -a reflection of the different opportunity structure for men and women. Firstly, women may leave the labour force when marrying, which would explain the number of women unpaid family workers. Secondly, the expectation of marrying early may discourage women's education. The low literacy rate among young women, may, in turn explain their higher level of unemployment, as well as their high participation in the informal economy.

Regional location of the youth people is found be significant. Many factors contribute to the disadvantaged position of youth in the labour market and to the unequal distribution of work between different regions of youth. The current policy emphasis to address the employment challenge through the promotion of the private sector, expanding investment to improve the productivity of agriculture and introducing off-farm non-agricultural activities for the purpose of employment diversification that result the overall macroeconomic stability in the country. The role of the private sector has improved in recent years, but compared to the daunting economic and social problems the country is experiencing, much remains to be done.

Compared to the fast growth in the labour force, the jobs created by medium and large-scale private investments over the last decade are not enough to absorb the number of young people who enter the labour market every year. As long as the realization of the investment projects remains sluggish and consequently also the number of jobs created every year, the opportunities for youth will be narrow. Labour market information and counselling play an important role in providing the efficiency of the labour market. Labour market information is scarce, and moreover is not available to all job seekers. Lack of such services puts new entrants in the job market at a disadvantage. The most popular means of seeking a job are trying to establish an enterprise, checking work sites, relatives and friends and looking at the advertisement board. A higher percentage of youth search for a job on an advertisement board compared to all unemployed and less try to establish an enterprise.

Concerning education, although there is a growing population of high school educated workforce, the majority of the unemployed are uneducated or with limited education. The results on education were supported by the results on impact of skills on youth employment status where unskilled youth were found to be more likely unemployed over being employed.

## 24 b) Recommendations

From the findings the study several recommendation are made, first, the government and policy makers should review job market laws and regulation in order to promote smooth transition of youth from education to job market. The findings of the study show that skilled youth and those with more that primary school education are likely to be unemployed over being employed. It is important for the government to create specific interventions especially in the creation of more formal jobs and strengthening job market regulation relating to youth people to ensure that all youth with education or skills realize their investments in education and contribute to the country development.

The findings of the study also show that gender imbalance is a problem in the job market, the results indicate that male youth are at the advantage side to be employed over being unemployed. The government and policy makers should strengthen the laws and regulation relating to gender balance in the job market in order to give equal chance to the youth with the same level of skills or education.

328 The study also recommends that the government should facilitate formalization of informal employment sector  
329 in order to motivate more youth to engage in different activities which are currently considered to be informal.  
330 This will help to reduce the problem of youth unemployment especially on skilled and educated youth in both  
331 urban and rural areas. The government should give more support and emphasis on those regions with high rates  
332 of unemployment. Additionally, further research on socio-cultural practices, distribution of education, women's  
333 workload, and other related factors should be emphasized. In order to decrease unemployment levels in regions  
334 with lower levels, the socio-economic status of the regions has to be raised. As a consequence, differences in the  
335 level of unemployment between regions would be reduced, and job opportunity would be more uniform across all  
336 regions.

337 Efforts should be made to improve youth who live in rural parts of Ethiopia by providing the access of electric  
338 power. Because electric power is a powerful service to establish private institutions so that job opportunities to  
339 the urban young population would be increased. <sup>1</sup>



Figure 1:

41

Number

Percent

Figure 2: Table 4 . 1 :

42

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Figure 3: Table 4 . 2 :

339

43

Chi-square		df	Sig.
8.135		8	.420

Figure 4: Table 4 . 3 :

45

Covariates	?? ?	S.E.	Wald	df	Sig.	Exp(?? ? )	95% CI for Exp(?? ? )	Lower
Region of residence	-	-	97.330	10	.000*	-	-	-
Tigray	1.642	.757	4.709	1	.030*	5.165	1.172	22.759
Afar	.938	.875	1.150	1	.283	2.555	.460	14.192
Amhara	2.358	.755	9.749	1	.002*	10.572	2.406	46.459
Oromia	1.665	.758	4.825	1	.028*	5.288	1.196	23.374
Somali	.415	1.054	.155	1	.694	1.515	.192	11.958
Benishangul gumuz	.397	.781	.258	1	.611	1.487	.322	6.875
SNNP	.735	.774	.903	1	.342	2.086	.458	9.506
Gambela	-.880	.910	.936	1	.333	.415	.070	2.466
Harari	-.391	1.043	.140	1	.708	.677	.088	5.224
Dire Dawa	-17.502	6.203E3	.000	1	.998	.000	.000	.
Addis Ababa (ref)								
Age	-.095	.037	6.603	1	.010*	.909	.845	.978
Youth's educational level	-	-	8.102	2	.017*	-	-	-
No	.050	.788	1.004	1	.450	1.051	.224	4.927
Primary	.596	.764	6.09	1	.035*	1.815	.406	8.107
Secondary + (ref)								

Figure 5: Table 4 . 5 :

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- 340 [Agresti ()] *an Introduction to Categorical Data Analysis*, A Agresti . 2007. New York: John Wiley And Sons,  
341 Inc.
- 342 [Hosmer and Lemeshow ()] *Applied Logistic Regression*, W D Hosmer , S Lemeshow . 2000. New York: John  
343 Wiley and Sons. (2nd Ed)
- 344 [Breslow and Clayton ()] ‘Approximate Inference in Generalized Linear Mixed Models’. N E Breslow , D G  
345 Clayton . *J. Am. Statist. Assoc* 1993. 88 p. .
- 346 [Englama ()] *Bullion Publication of the Central Bank of Nigeria*, A Englama . 2001. 25 p. . (Unemployment:  
347 Concepts and Issues)
- 348 [Agresti ()] *Categorical Data Analysis*, A Agresti . 2002. New York: Wiley Interscience.
- 349 [Denu et al. ()] *Characteristics and Determinants of Youth Unemployment, Underemployment, Underemploy-*  
350 *ment and Inadequate Employment in Ethiopia, Employment Policies Unit Employment Strategy Department,*  
351 Berhanu Denu , Abraham Tekeste , Hannah Van Der , Deij . 2005.
- 352 [Ilo ()] *Global Employment Trends*, Ilo . 2009a. ILO. Geneva
- 353 [Ilo ()] *Global Employment Trends updates*, Ilo . 2009b. Geneva. ILO
- 354 [Ilo ()] ‘Growth-employment-poverty reduction linkages: a framework for recovery and accelerated progress  
355 towards the Millennium Development Goals’. Ilo . *Economic Report on Africa* 2010. 2010.
- 356 [Hilbe ()] *Logistic Regression Models*, J M Hilbe . 2009. London: Chapman & Hall.
- 357 [ CS A ()] ‘Report on Labor Force Survey’. CS A . *Statistical Bulletin*) 2005. 1999.
- 358 [ CS A ()] ‘Report on Labor Force Survey’. CS A . *Statistical Bulletin*) 2010. 1999.
- 359 [Dantwala ()] *The Definition and Measurement of Unemployment in Developing Countries*, M Dantwala . 1971.  
360 p. .
- 361 [Benefo ()] *The determinants of female non-family work in Africa*, K Benefo , PillaiV . 2003.
- 362 [Bakare ()] *The Determinants of Urban Unemployment Crisis in Nigeria: An Econometric Analysis Department*  
363 *of Economics*, A Bakare . 2011. Nigeria. Adekunle Ajasin University
- 364 [Serneels ()] *the Nature of Unemployment in Urban Ethiopia*, P Serneels . 2004. CSAE Working Paper, University  
365 of Oxford
- 366 [Dendir ()] *Unemployment Duration in Poor Developing Economies: Evidence From Urban Ethiopia*, Seife Dendir  
367 . 2004. Radford University, USA.
- 368 [Falae ()] ‘Unemployment in Nigeria’. S O Falae . *Nigerian Journal of Economics and Social Studies* 1971.
- 369 [Adebayo ()] ‘Youth unemployment and National Directorate of Employment and selfemployment programmes’.  
370 A Adebayo . *Nigerian Journal of Economics and Social Studies* 1999. 41 (1) p. .