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Education, Training and Youth Unemployment in Kenya

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Joy Kiiru, Eldah Onsomu and Fredrick Wamalwa¹

Abstract

Young people in Kenya constitute 30% of total population while youth unemployment constitutes 78% of total unemployment. In nearly all developing countries the rate of urban unemployment in the 15-24 age group is at least double the rate of all other age groups. These high rates of urban unemployment in this age bracket are also seen in developed countries, although the rates are far lower than those of developing nations (Livingstone, I. and Ord, H.W., 1985). Literature also acknowledges that the unemployment rate understates the extent to which labour is ‘underutilized’ (Bosworth and Westaway (1987), Bregger and Haugen (1995), Mitchell and Carlson (2001). This is because unemployment rate does not capture the underutilization of labour that occurs when employed persons would like to work more hours at the prevailing wage rates than they actually work. The main objective of this study was to empirically analyse the factors explaining why some youths would be openly unemployment or underemployment while others are able to secure full employment. We also seek to determine the role of education and training in explaining youth unemployment. Data from the Kenya Integrated Household Budget Survey (KIHBS) 2005 / 2006 is used for the analysis. We find that education and training are still important buffers against unemployment despite the unemployment challenges experienced by educated youths. We also find that the buffer level of education against unemployment is at least university level of education. This implies that those with secondary level of education or below may have problems securing employment especially in the urban areas. This issue is discussed at length within the context of “qualification escalation phenomena” otherwise known as the “diploma disease”. Other important findings include the gendered nature of youth unemployment and that open unemployment is more of an urban phenomenon than rural. The paper recommends innovations in the education system to deal with the problem of qualification escalation while making learning relevant in the job market. We also recommend gender mainstreaming in employment policies to ensure that both male and female youths benefit from government employment interventions. Lastly the paper recommends that dealing with the few employment vacancies calls for policy makers to pursue policies that stimulate economic growth and job creation.

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1. INTRODUCTION

Young people in Kenya constitute 30% of total population while youth unemployment constitutes 78% of total unemployment. In 1999, 32.8% of unemployed were youth aged 15-19 years; 29.9% were aged 20-24 years, while 15.5% were 25-29 years (CBS, 2002). In nearly all developing countries the rate of urban unemployment in the 15-24 age group is at least double the rate of all other age groups. These high rates of urban unemployment in this age bracket are also seen in developed countries, although the rates are far lower than those of developing nations (Livingstone, I. and Ord, H.W., 1985).

One of the ways that the Kenyan government has tackled unemployment in the past is through increasing investment in human development and encouraging job creation in all sectors including the informal sector. However, unemployment has persisted, increasing steadily over time, especially among the youth (Central Bureau of Statistics, 2002). The following table shows some unemployment statistics over a period beginning 1978.

Table 1: Unemployment rates by Age and Sex, 1978, 1989, 1998/99 and 2005/06

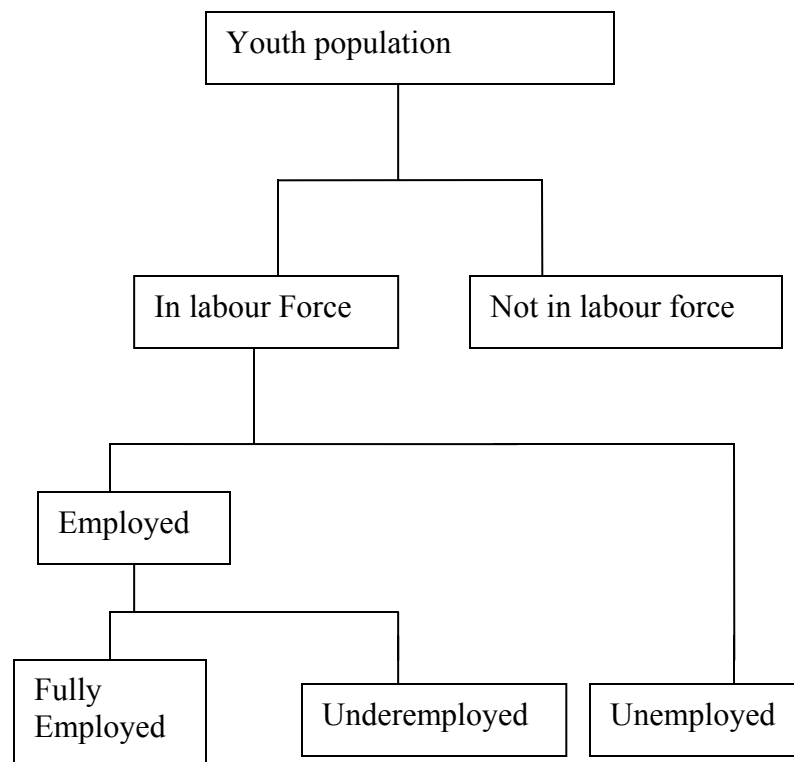
	1978*	1986*	1989**			1998/99***			2005/06****		
Age	Total	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
15-19	26.6	36.2	13.2	11.9	12.5	21.8	26.4	24.3	22.4	27.7	25
20-24	18.5	29.2	12.5	9.8	11.1	19	33.9	27.1	21	27.3	24.2
25-29	4.8	8.6	6.3	5.7	6	8.2	21.6	15.5	13.5	17.9	15.7
30-34	2	2.7	3.6	4.1	3.8	4.8	16.8	10.8	6.1	9.2	7.5
35-39	1.8	2.1	2.8	3.4	3.1	5	11.8	8.4	6.9	8.3	7.6
40-44	0.7	0.7	2.6	3.3	2.9	7.8	10.6	9.1	6.4	6.4	6.4
45-49	1.1	2	2.5	3.4	2.9	4.9	12.5	8.2	4.9	6.5	5.7
50-54	1.4	0.9	2.7	4.4	3.5	6.3	11.1	8.7	4.9	4.4	4.7
55-59	1.5	4.1	3.2	5	4	14.2	12.7	13.5	4.8	3.2	4
60-64	3.2	-	4.2	7.7	5.9	7.5	15.7	11.7	4.2	0.8	2.5
Total	6.7	9.7	6.5	6.6	6.5	9.8	19.3	14.6	11.2	14.3	12.7

*Sources: * Vandermoortele, 1991: Urban unemployment rates only ** Analytical Report Volume IX, Kenya 1999 Population and Housing Census ***1998/99 Labour force survey, **** Kenya Household Integrated Budget Survey (KIHBS) 2005/06*

1.1 Youth underemployment

Literature acknowledges that the unemployment rate understates the extent to which labour is ‘underutilized’ (e.g. Ross (1985), Bosworth and Westaway (1987), Bregger and Haugen (1995), Mitchell and Carlson (2001), Denniss (2003)). This is because unemployment rate does not capture the underutilization of labour that occurs when employed persons would like to work more hours at the prevailing wage rates than they actually work. The underemployed are distinguished from the unemployed by the fact that at least some employment is held. The following figure presents a conceptual framework for labour market activity which shows the three main components of (time-related) labour underutilization: underemployment, unemployment and employment.

Figure 1: Labour Supply Activity Framework



Source: Adapted with modifications from Wilkins 2004

Underemployment is significant for policy as far as whether the underemployed are more likely to suffer unemployment related economic hardships like poverty and generally low welfare status. The policy significance of underemployment is greater the more

underemployment is associated with the low incomes, high rates of poverty and other adverse outcomes that are in evidence for the unemployed. If, on the other hand, the underemployed tend to reside in high income households and experience good welfare outcomes then the policy concern is reduced.

Studies have shown that while unemployment clearly has greater adverse consequences, underemployment is nonetheless associated with significant detrimental effects on important outcomes as health (Wilkins 2004). It is for this reason that youth underemployment is also of great significance to policy especially in developing countries. Underemployed youth tend to mainly work in the informal sector where incomes are already low even for the fully employed. Understanding the factors that influence youth underemployment is therefore of great significance to the policy maker.

1.2 Vocational Training and employment in Kenya

Every year, many students leave or drop out of the regular educational institutions in Kenya. Studies have shown that at primary level, close to 40% of the graduates do not progress to secondary level. At secondary level, only about 10% of the graduates proceed to university level (Onsumu et al 2009). Technical and vocational training in Kenya offers programmes that target those students who do not progress to higher levels of education. The aim is to provide the students with skills and competencies for engagement in wage employment or self-employment.

In Kenya, these technical training programmes are known as Technical, Industrial, Vocational, and Entrepreneurship Training programmes (TVET). The government of Kenya considers investments in TIVET a way to reduce unemployment and poverty. For example, the sessional Paper No. 1 of 2005 on Education and Training Policy Framework as well as Vision 2030 blue print assert that the government is committed to reforming the TIVET sector with a view to ensuring relevance of the programmes offered and also the adequate supply of critical skills and competencies, for both local and global labour markets.

There is therefore awareness among policy makers and the international community that technical and vocational education and training (TVET)² can play a critical role in national development. Research has shown that there are a number of potential benefits behind the push for TVET. For example, up-to-date knowledge and skills contribute to higher productivity (Middleton, 2001). Other studies have also shown that skills acquired by one individual can have positive spill over effects on the productivity of other individuals so that social benefits of training exceed private benefits (Ziderman, 2003; Kimenyi et al., 2006). It is therefore the case that, high quality TVET can complement entrepreneurship development programmes that aim to promote self-employment.

1.3 The Research problem

It is often argued that young people with limited employable skills are more likely to be underemployed, unemployed and tend to voluntarily quit their jobs than older workers (O'Higgins, 1997; Fine and Crouch, 1994; Chae, 2001; Lee and Chung, 2003). If the major constraint to employment for the youth is lack of skills, it is therefore expected that increasing education and training levels would decrease unemployment rates for the youth. Consequently rapid educational expansion and increased access to schooling are expected to systematically result in economic growth and reduced poverty as supported by human capital development and modernisation theories.

In response, many countries have responded by investing in education and training. For instance, since independence, the government of Kenya has implemented several policies aimed at expanding education and training with the aim of reducing unemployment rates among the youth. Some of these policies include, promotion of vocational training centres, free primary education and subsidised secondary education.

Although Kenya has implemented various interventions to address the challenge of youth empowerment through human capital development many Kenyan youth still remain unemployed. Recently the government of Kenya has also recognised that besides

² Technical and Vocational Education and Training (TVET) takes different forms in various countries. In most countries it is referred to as TVET; in others Vocational Education and Training (VET) while in Kenya it is Technical Industrial Vocational Education and Training (TIVET).

skills development, youth still need financial capital in order to be self employed. The Youth development Fund aims at assisting young people to engage in productive entrepreneurship. Key policy documents including Vision 2030, Economic Recovery Strategy for Wealth and Employment Creation (ERSW) and the National Youth Policy document have also acknowledged the problem of youth unemployment and prescribed policies to deal with it.

In spite of these efforts, unemployment and under-employment among the youths still remain to be a big problem. Many youths in Kenya still remain unemployed and vulnerable to crime and social unrest. Youth unemployment and under employment is therefore a threat to the gains made so far in human capital investments.

In order to deal with the challenges of unemployment and underemployment, policy makers need to know the factors behind them in order for policy to effectively intervene in the labour market. Many of the studies dealing with youth unemployment have mainly dwelled on the issue of causes and policy implications. This study mainly deals with factors that determine the factors

1.4 Research Objectives

The broad research objective of this study is to empirically analyse the factors explaining youth unemployment, underemployment and employment in Kenya. Specifically we aim to:

- a) Empirically analyse the factors that contribute to youth employment, including part time employment (underemployed), full time employment and open unemployment;
- b) Determine the role of education and training in explaining youth unemployment in Kenya
- c) Draw policy implications for dealing with youth unemployment based on the findings of the study.

1.5 Organisation of the study

The rest of the study is organised as follows; section two is a review of literature, both theoretical and empirical. Section three details the methodology used in the study and it also includes the theoretical framework and the empirical model. In section four we present and discuss the results of the study, while the last section is mainly the conclusion and policy implications.

2. LITERATURE REVIEW

2.1 Theoretical literature review

Human capital and modernization theories underpin the role of education and training on unemployment reduction. Human capital refers to the skills, education, health and training of individuals. The best-known application of the idea of "human capital" in economics is that of Mincer and Gary Becker (1964). In their view, human capital is similar to "physical means of production ", e.g., factories and machines: one can invest in human capital (via education, training, medical treatment) and one's outputs depend partly on the rate of return on the human capital one owns. Thus, according to Becker (1964) human capital is a means of production, into which additional investment yields additional output.

Following Becker (1964), the human capital literature often distinguishes between "specific" and "general" human capital. Specific human capital refers to skills or knowledge that is useful only to a single employer or industry, whereas general human capital (such as literacy) is useful to all employers. Economists view firm specific human capital as risky, since firm closure or industry decline lead to skills that cannot be transferred. The concept of human capital can be infinitely elastic, including immeasurable variables such as personal character or connections with insiders (via family or fraternity). This theory has had a significant share of study in the field proving that wages can be higher for employees on aspects other than Human Capital.

Neoclassical labor economics

The neo-classical labor economics distinguishes three types of unemployment namely:- structural, frictional, and cyclical unemployment. Structural unemployment is long-term and chronic unemployment arising from imbalances between the skills and other characteristics of workers in the market and the needs of employers. It involves a mismatch between workers looking for jobs and the vacancies available often despite the number of vacancies being similar to the number of unemployed people. In this case, the unemployed workers lack the specific skills required for the jobs, or are located in a different geographical region to the vacant jobs. Structural unemployment is usually a result of structural change. The government can mitigate the problem by providing an infrastructure that offers training in these areas so that the demand for these jobs can be met. Frictional unemployment may be regarded as a subset of structural unemployment; mainly reflecting temporary unemployment spells as the result of job mobility, search and matching difficulties in connection with new entries to the labor market and job separation due to employers' dissatisfaction with individual workers.

Cyclical unemployment differs from structural and frictional unemployment by basically being tied to short-term economic fluctuations. An illustration of the importance of structural unemployment as compared to cyclical is that variations in unemployment rates tend to be much larger between cycles than within cycles.

2.2 Empirical Literature

Empirical literature has provided three approaches through which unemployment and schooling are linked in the economic literature. First, unemployment is a component factor of uncertainty about future earnings and, is a result, as an element that affects the demand for education. While previous studies have focused on the opportunity cost and expected earnings as main determinants of the demand for education, later studies have introduced unemployment as another important factor that determines demand for education (for instance see Willis, 1979). These studies generally find that a decrease in the unemployment of a specific educational level (say secondary level), leads to an increase in demand for schooling for the specific level.

The second array of literature focuses on the impact of unemployment on educational participation and dropouts. The explaining factors fall into two levels; micro (household or individual characteristics) and at the macro-level. On one hand, evidence based on macro or aggregate data has revealed that following completion of compulsory schooling, school leavers are more likely to participate in higher education when unemployment is high (Clark, 2002). The argument advanced is that the higher is the local unemployment rate, measured in terms of local labour market conditions; the lower is the opportunity cost of investing in education. This has been referred to as the parking theory (Pastore 2005) implying that young people park themselves at higher levels of education while with the hope of finding employment opportunities after completion.

On the other hand, studies that follow micro-data show mixed relationship between unemployment and participation in education. An increase in unemployment among the household heads could lead to lower school enrolment to support family income. In addition, one reason why local unemployment rate may not increase, but rather reduce the number of people enrolled in post compulsory education might be lower expected earnings. These observations are based on theories that emphasize future returns as the major decision-making factor to enrol in school. Under these economic models, the principal concern in making enrolments decisions is wealth maximization for the entire household. Hence, costs of school and the future benefits that accrue are important factors that influence schooling decision making processes by households. This suggests that the impact of unemployment on educational participation is equivocal.

Other related studies focus on the relationship between unemployment spells, incidence and duration and schooling. The incidence of unemployment has been found to be highly correlated with individual's education achievement. Generally, as the level of education rises, the probability of unemployment decreases. Thus, education provides individuals with a stronger labour market success and higher earnings. This has also been confirmed for Ethiopia (Serneels, 2007); Bosnia and Herzegovina (Tiongson and Fares, 2007); Poland (Pastore, 2005); Germany and United Kingdom (Berlin and Isengard, 2003); European countries (Fernando et al, ND); Belgium, England, Italy, Portugal, Spain and the Netherlands (Rita and Ruiz-Quintanilla, 1996).

Using a probit estimation, recent findings by Lam et al (2008) provide a strong evidence of the importance of schooling and ability in early labour market outcomes. They estimate significant effects of schooling on the probability of being employed during the first four years after leaving school and find that those who leave school with Grade 12 or higher are 16 points more likely to find work than those who completed grade 10 or less. They found that controlling for literacy and numeracy skills considerably reduces the estimated impact of schooling suggesting the labour market reward for such skills. This finding is consistent with evidence gathered by the International Labour Organization to suggest that youth become more employable if they possess *core skills* such as literacy and numeracy, social and interpersonal skills, ICT skills as well as *relevant specialized skills* that will allow them to work in a particular occupation (ILO, 2005³; ILO, 2008a⁴).

Serneels (2007) also uses a probit model to explain incidence of unemployment in Urban Ethiopia and finds that education has a positive and significant effect on employment, with especially the youth having junior and senior secondary more likely to be unemployed compared to youth with tertiary education. The study further estimates duration of unemployment and finds that junior secondary educated are more likely to have longer durations of unemployment, senior secondary graduates have shorter durations of unemployment while primary and tertiary have no effect.

Research has also attempted to document trends in the extent of underemployment (e.g. Bregger and Haugen (1995), Sorrentino (1995)) and examine the factors associated with, or determinants of, underemployment (e.g. Leppel and Clain (1988), Ruiz-Quintanilla and Laes (1996)). Some of the findings are that the underemployed are, compared with the fully employed, more likely to be female, young (less than 25 years of age), and single. The probability of being underemployed was also higher for persons working in less skilled occupations (sales and personal service workers, plant and machine operators, labourers and related workers) and for those working in the recreation and personal services and construction industries.

³ ILO report adopted by the International Labour Conference entitled '*resolution concerning youth employment*' (2005)

⁴ Improving skills and productivity of the youth

Wilkins (2004) finds that sample means of the variables for life satisfaction, income support receipt, income, experience of financial difficulty and employment histories imply that outcomes are, on average, worst for the unemployed and best for the fully employed. According to Wilkins 2004, for most of these outcomes, the underemployed are very close to midway between the unemployed and fully employed. Furthermore, among the employed, mean job satisfaction was found to be significantly lower for the underemployed compared with the fully employed and, for males, the mean wage rate is also significantly lower for the underemployed.

Educational attainment is not the only factor affecting employment and earnings. At every educational level, whether jobseekers are successfully employed may depend on issues ranging from an occupation's size to geographic location. In addition, workers' earnings vary by type of training and choice of occupation, among other things. Studies show that the impact of education in enhancing employability varies across countries. Studies by Halchuk (2006) for Australia and Berlin and Isengard (2003) for Germany found that unemployment rates do not fall steadily as the level of education increases, but rather depend on whether someone has a vocational qualification. Pastore (2005), Van et al (2005) and Berlin and Isengard, 2003 found that attainment of vocational training does not enhance employability in Vietnam, UK and Poland respectively. However, the World Bank in its World Development Report (2007) highly underscores the importance of skill formation through vocational education based on the evidence gathered from countries with a strong skill formation such as Germany, Austria and Switzerland.

Elsewhere, the impact of education on employability has been observed to vary across locations and gender. Among Indigenous Australians, Halchuk (2006) finds that in major urban locations, all but one education variable are statistically significant for females, but for men education has no statistically significant impact on employability. In remote areas, females' level of education has no significant impact on employability.

On the other hand, research has shown that all other factors constant, education and training remain key factors that enhance the youth's employability. Wald (2000) provides a useful insight which supports the argument that education and training remain a key factor that enhances the youth's employability. The author observes that unlike the adult workers, the youth do not have the advantage of attributes such as general market

experience and company seniority. Hence, in the midst of lack of these attributes, education is the only attribute that has a greater impact to enhance their employability.

This study has a slightly different approach from the studies reviewed herein. In this paper the youth may not necessarily be maximising utility in being underemployed, employed or openly unemployed. It is assumed that there is a minimum income requirement that is necessary for survival by the youth. Imposing a basic income requirement before the youth's rational choice of utility maximisation principle implies that the youth may accept to be employed or under employed in "inferior" sectors of the economy, so as to meet the basic income for survival.

Whether the youth will be fully employed, under employed or openly unemployed is conditioned by different factors. These factors that influence youth employment status are the focus of this study. This analysis will be useful in helping the policy maker to understand the factors influencing youth unemployment. Further the study will help policy makers understand how education relate with youth unemployment. The information generated from this study will therefore be useful in designing policies addressing youth unemployment in the country.

3. METHODOLOGY

3.1 Theoretical framework

Suppose Q_p denote youths' employability as proxied by their level of education, training, and other endowments. $Q_p - Q_s$ denotes available employment opportunities for the youth, Y_f denotes income accruing to the youth while C_1, \dots, C_n denote youths' consumption of a variety of goods and services. Further assume a well behaved utility function. Then the youths' utility maximization problem can be set as:

$$Max : U = U(Q_p - Q_s, C_1, \dots, C_n / \varpi_1)$$

Where ϖ_1 refers to the vector of household level contextual factors affecting youths' utility maximization. The utility function is also subject to other macro economic

variables. Given the optimum level of education and training, youth's preferences for the labor market can be derived by tracing the attributes of available employment opportunities. Preferences for employment are thus, the derived outcomes of youths' *revealed preferences*. The point of interest is having 'n' varieties of employment opportunities in a given locality with 'n' or more attributes.

The next important variable worth considering is risk. To study the linkage between youth's preferences for labor market attributes and risk, the notion of *Roy's safety first* model (Roy 1952) is integrated into the utility-based derivation of youth's preference for employment. The youths safety-first strategy is making a *lexicographic optimizer* i.e. a youth who aims at meeting the target minimum survival level of income as first priority objective and maximizes expected returns given his level of education and training as second priority.

For the purpose of the analytical frame work of the safety first model, FN_{income} (subsistent level of income) for each youth is computed as the sum of the value of labor income V_{live} and annual estimated income from other unearned risk free income sources Y_{NF} i.e.

$$V_{live} + Y_{NF} = FN_{income}$$

The decision of the youth considering survival first depends on the extent to which they are able to fulfill basic needs $Basic_{req}$ from their internal endowment (labor income plus expected risk free income) denoted as FN_{income} . The youths' objective is thus to minimize the probability that FN_{income} falls short of $Basic_{req}$ i.e.

$Min P(FN_{income} < Basic_{req}) \Rightarrow P(FN_{income} - Basic_{req} < 0)$, is the youths survival motive

Accordingly, the youth will be more extravagant (or more selective) when it comes to preferences for employment if $FN_{income} > Basic_{req}$ and they will take more cautionary measures (opt for less than expected jobs) if $FN_{income} < Basic_{req}$. Thus, it can be hypothesized that employment opportunities (regardless of type) are more

important for vulnerable youths who are unemployed and their income is below basic requirements while for other youths who are less vulnerable will be more concerned with the quality of employment opportunities and job stability and thus are expected to be more discriminatory on available job opportunities.

Youth's survival employment (inferior employment options) can therefore be attributed to missing labour markets and the need to acquire basic survival income. Hence missing labour markets may imply that the youth take up what ever employment opportunity is available, regardless of their education and skills.

It therefore follows that not all youth will be maximizing income or utility in their employment choices but rather some will choose some employment options as a precautionary measure so that basic income does not fall below basic requirement. And therefore, with a variation in satisfaction, the youth no longer choose sectors simply on the basis of income or utility maximization

3.2 Multivariate Analysis

We use a multivariate analysis to analyze the factors that influence the youth to be either employed, unemployed or under employed. Our main data source is the Kenya Integrated Household Budget Survey (KIHBS) 2005 / 2006. The KIHBS, being a multipurpose household survey, includes a wide variety of modules on various aspects of household characteristics. In this analysis we rely primarily on the household roster that contains basic demographic information, the employment, education, and farming modules.

We rely on mainly one econometric model to analyze youths' employment. The multinomial logit model would be used to analyze the factors influencing whether a youth will be fully employed, underemployed or will remain openly unemployed.

Model specification

With a distribution of pecuniary benefits among the employment options, the youth are likely to set a reservation level of total benefits that they could get from a given occupation among the available employment options. The youth will thus choose

occupations that yield the highest reservation level of total benefits, since the reservation level also measures the expected long run flow of benefits.

It therefore follows that there is a function U , containing attributes of employment alternatives and the characteristics of individual youth that describe a youth's valuation of the total benefits of choosing a given employment option.

The function, U , has the property that an employment alternative is chosen if its total benefits is greater than the benefits of all other alternatives in the individual's choice set. Alternatively, this can be stated as: alternative, ' i ', is chosen among a set of alternatives, if and only if the benefits of alternative, ' i ', is greater than or equal to the benefits of all alternatives, ' j ', in the choice set, C . This can be expressed mathematically as:

$$\text{If } U(Z_i, \phi_t) \geq U(Z_j, \phi_t) \forall j \Rightarrow i \succ j \forall j \in C$$

Where U is the mathematical benefits function, Z_i, Z_j are vectors of attributes describing alternatives i and j , respectively ϕ_t is a vector of characteristics describing individual t , that influence his /her preferences among alternatives $i \succ j$ means the alternative to the left is preferred to the alternative to the right, and $\forall j$ means all the cases, j , in the choice set that is, if the benefits of alternative i is greater than or equal to the benefits of all alternatives, alternative i will be preferred and chosen from the set of alternatives, C .

Suppose ϕ_t is the vector of characteristics of youth reflecting their endowments, concerns and preferences and Z_{ij} is a vector of attributes of available employment alternatives. Then benefits from different employment alternatives are given by:

$$U_{emp} = f(Z_{ij}^1 \dots Z_{ij}^n / \phi_t)$$

Let the probability that the i^{th} youth “chooses” the j^{th} alternative be P_{ij} and denote the “choice” of the i^{th} youth by $Y_i' = (Y_{i1}, Y_{i2}, \dots, Y_{ij})$ where $Y_{ij} = 1$ if j^{th} employment alternative is selected and all other elements of Y_i' are zero.

If each youth is observed only a single time the likelihood function of the sample of values Y_{i1}, \dots, Y_{ij} is

$$L = \prod_{j=1}^T P_{i1}^{Y_{i1}} P_{i2}^{Y_{i2}} \dots P_{ij}^{Y_{ij}}$$

Assuming that the errors across the different employment types (ε_{ij}) are independent and identically distributed leads us to the following multinomial logit (MNL) model:-

$$P(y_i = t) = \frac{\exp(x_i' \beta)}{1 + \exp(x_{i2}' \beta_2) + \dots + \exp(x_{ij}' \beta_j)}, j = 1, 2, \dots, z$$

The MNL indicates how the youth’s probability of being in a given employment alternative is conditioned by different household and macroeconomic related factors. The sign of the marginal effects and the sign of the coefficients is not the same because the sign of the marginal effects will depend not only on the respective coefficients but also on the relative size of the expected value of the coefficients across the choices and the value of the coefficient in the choice set (Greene, 2000) *i.e.*

$$\frac{\partial P_j}{\partial X_j} = P_j \left[\beta_j - \sum_{k=0}^j P_k \beta_k \right] = P_j [\beta_j - \bar{\beta}]$$

Thus, in the case of MNL model, the sign of the relationship based on the coefficients is not predictable until the marginal effects are computed. For this reason, we are also reporting the marginal effects.

Because $\sum_0^j P_{ij} = 1$, a restriction is needed to ensure model identification. The restriction usually applied is that $\beta_1 = 0$. This means that care is necessary in the Interpretation of the coefficients from the multinomial logit model.

Specifically the coefficient for the j^{th} alternative is interpreted as the relative risk of choosing alternative j rather than alternative i.e.

$$\frac{P[y_i = j]}{P[y_i = 1]} = \exp(x_i' \beta_j)$$

The interpretation varies according to which alternative is normalized to have a zero coefficient and hence one needs to choose a natural base category. In our case, fulltime employment is the base outcome in the multinomial logit model.

3.3 Description of variables

The variables considered to explain youth preferences for employment are described in the following table along with the expected signs based on theoretical predictions.

Table 2: Variable definition

Variable	Description
Employment status	0 open unemployment, 3 under employment 1 full employment (reference dummy)
Age	Age of youth in years
Agesq	Squared age of youth
Econ	Per capita adult equivalent household expenditures (represented 3 dummy variables) Low income (0 (reference dummy), Middle income 1, High income 2

Table 2: Variable definition (cont')

Variable	Description
Edu (education and training variable)	Captured in two ways as follows: Dummy variable and years of formal schooling Dummy 1 (prim) Primary education (reference dummy) Dummy 2 (sec) Secondary education Dummy 3 (voc) vocational training (whether youth has had vocational training besides formal training) Dummy 4 (ter) Tertially Education Edu Years of formal schooling
Loc	Whether youth lives in rural or urban location presented as a dummy variable 1= urban, 2 = rural
Mart.	Marital status of youth. It's a dummy variable equal 1 if youth is married, 0 otherwise
Size	Size of household where youth comes from
Prov1	Whether youth is from Nairobi Province (dummy variable)
Prov2	Whether youth is from Central province (dummy variable)
Prov3	Whether youth is from Coast province (dummy variable)
Prov4	Whether youth is from Eastern Province (dummy variable)
Prov5	Whether youth is from North Eastern Province (dummy variable)
Prov6	Whether youth is from Nyanza Province (dummy variable)
Prov7	Whether youth is from Rift Valley province (dummy variable)
Prov8	Whether youth is from Western Province (dummy variable)

4. RESULTS AND DISCUSSION

The results of this study are divided into two sections. In the first section, we present the descriptive statistics while the second section presents the results of the multinomial logit estimation.

4.1 Descriptive Statistics

The data shows that the youth population constitutes about 31% of the population with about 51% of the youth being female. Education wise, 65% of the youth have primary level of education, while 33% have secondary education and only 1% have university⁵ education. Female youth have lower levels of education as compared to male youth. Sixty four percent of the youth are in the rural areas where majority work in the agricultural sector. IFAD (2007) estimates that in sub-Saharan Africa and South Asia, up to 70 percent of the youth live in rural areas and that half of the youth population entering the labour force work in agriculture. Fifty five percent of the youth population are single.

The data shows that 75% of the youth are fully employed while the rest are either openly unemployed or under employed. Majority of the employed youth work as unpaid family workers (35%) followed by paid employee (34%) and then own account worker (27%). Many of the jobs held by the youth are in the informal sector. Although the number of those considered employed is large, the reported employment status under estimates the magnitude of the unemployment challenge in Kenya. Majority of the employed are occupied in the informal, agricultural and precarious activities. Previous studies (Manda and Odhiambo, 2003; Manda, 2002) have shown that the informal sector in Kenya is generally characterized by low quality jobs and low earnings; underemployment; insecurity and safety hazards. Recent studies have shown that a large number of individuals who are working could be categorized as working poor because their labour earnings were below the poverty line (Pollin et al., 2007). ILO also draws attention to the growing number of youth who are ‘working poor’, that is, those although employed; they live on less than US\$2 a day (see ILO, 2006a).

⁵ These percentages do not reflect the number of youth who have completed the respective level of education, but rather they reflect the last school attendance level by the youth. For instance, of the 7,758 youth whose highest level of education is primary, only 46% have completed standard eight, the rest have dropped out at various levels of primary education. For secondary, out of 3,982 only 73% have completed form four. Lastly only 111 youth out of a total of 150 have completed university

4.2 Multinomial Logit regression results

The multinomial model results show the factors that influence whether a youth will be fully employed, unemployed or under employed. Tables 3 and 4 report these results.

Table 3: Multinomial logit results

Variable	Coefficient for open unemployment	Coefficient for partial unemployment
Edu	.565*	.334
Edusq	-.067*	-.008
Sec	.427***	.085
Voc	.119	-.127
Ter	.122	.179
Age	.318***	-.271**
Agesq	-.009***	.005**
Gender1	.866***	.469***
Mart.	-.025	-.113
Loc1	.799***	-.529***
Econ1	-.165*	.016
Econ2	-.548***	-.430***
Size	.066***	.019*
Prov2	-.462***	.130
Prov3	.180	.100
Prov4	-.325**	.243
Prov5	2.055***	.532
Prov6	-.264**	.966***
Prov7	-.331*	.365*
Prov8	.016	1.148***
Constant	-3.067**	2.619**

NOTES: ***-Significant at 1%; **- Significant at 5% and *- Significant at 10%. Figures in parentheses are the standard errors.

Source: Authors' calculations from 2005/06 KIHBS data.

Table 4: Marginal effects of the MNL regression model

Variable	<i>Dy/Dx</i> Open unemployment	<i>Dy/Dx</i> partial employment
Edu	.19*	.00682
Edusq	-.0033	-.00614
Sec	.077***	-.006
Voc	.027*	.051*
Ter	.015	.021
Age	.067***	-.049***
Agesq	-.002***	.001***
Gender1	.137***	.030***
Mart.	-.00014	-.015
Loc1	.170***	-.098***
Econ1	-.030*	.008
Econ2	-.080***	-.037**
Size	.011***	.00006
Prov2	-.079***	.035
Prov3	.030	.006
Prov4	-.064**	.047
Prov5	.044***	-.059
Prov6	-.095***	.178***
Prov7	-.059**	.064*
Prov8	-.054*	.202***

Source: Estimations from 2005/06 KIHBS data

Overall, the estimated MNL model is highly significant in explaining youth employment options. The χ^2 value is 1213 which is statistically significant at 0.00 level. The Pseudo-R² is equal to .12.

The results confirm that the relative importance of the different employment options varies across the youth depending on their constraints, endowments and regional environment. The results show that economic background matters for youth unemployment. Youth from well off households are likely to be fully employed as compared with youth from poor backgrounds (So long as they are already in the labour force). This result could be explained by the fact that youths from well-off backgrounds may have better social networks or “connections” and also better education as compared to youths from worse off socioeconomic backgrounds, thus making them more competitive for employment. Also youths from well off backgrounds may benefit from gainful employment in family enterprises or may have capital to be gainfully self employed. On the other hand poorer youths may have lesser education and lesser capital therefore making them vulnerable in the job market.

The forgoing result relates to youth’s socioeconomic background and employment. On the other hand, the location of youths, whether in rural or urban areas matters for employment. Youth in the rural areas are more unlikely to be in open unemployment as compared to youths in urban areas. This result could be attributed to the fact that youth in the rural areas could easily join the agriculture sector and petty trade, opportunities which youth in urban areas may not have. Youth in urban areas may have problems with petty trading for various reasons including the relatively higher capital requirements and competition from more established traders. Also youth migrate from rural areas to urban areas in search of “superior” employment opportunities and may become choosy when faced with other inferior employments in cities and may choose to remain openly unemployed as they wait for “better” employment opening. Overall, studies have shown that Increases in educational attainments have caused rural-urban migration thereby worsening the unemployment levels as migrants compete for limited white collar jobs in urban areas (Manda, 2003).

Interestingly the youth in Coast province are more likely to be in open unemployment or partial employment as compared to being in fulltime employment than youth in Nairobi Province. Coast province is a significant economic zone in Kenya, with many tourist attractions. The province is home to other economic activities like mining and other activities associated with the Indian Ocean. These notwithstanding, a

significant number of youths in this province remain openly unemployed. This result may point to the need to re-examine policies guiding access and exploitation of economic resources by local youths and the local community in general. There may also be need to examine social economic characteristics like culture, education attainment and other parameters that may influence involvement in gainful economic activities by local communities and youths in general.

Interestingly female as opposed to male youths are more likely to be in open unemployment as compared to being in fulltime employment. This results points to the gendered nature in unemployment. This may point to gender disparities in access to socioeconomic resources and other gender roles in employment. It is therefore important to mainstream gender in employment policies and other human capital development interventions.

An interesting result is that of the role of education in reducing unemployment. A marginal increase in the level of education is likely to increase the chances of the youth being in open unemployment as compared to being in fulltime employment. However the trend is reversed at very high levels of education⁶. Our results show that this trend is reversed way above the basic education (Primary and secondary). This could be attributed to two main factors. First, the youth who are unable to find white collar employment continue to acquire more education as they wait for a job opening. The effect of this is an increase in the supply of highly trained youth, thus causing employers to raise their employment qualifications. Another explanation is that as the youth acquire more education they raise their expectations of the kind of jobs they are looking for. Some youth who feel that they have lacked a job befitting their level of education may choose to remain unemployed or go back to school to accumulate more education. This is sometimes called the parking theory since it implies that young people “park” themselves at institutions of higher learning as they await a job offer to come. Similar studies by Domadenik and Pasore 2006, found that tertiary education is an important buffer against the risk of unemployment for young people in Poland and Slovenia. The problem of high buffer levels of education can only be dealt with by increasing employment opportunities.

⁶ Our study puts the buffer level of education at 28 years of schooling which is not less than a masters degree qualification.

If there were adequate gainful employment avenues then the opportunity cost of more education would increase given the forgone wage earnings. This will imply that many youth would choose to work and forgo further education.

The results show that vocational training may not guarantee fulltime employment for the youth, but may make it possible for youths to be partially employed. Onsumu (2009) notes that the quality of skills development in the Technical Industrial and Vocational Education and Training (TIVET) programmes in Kenya is generally low, with emphasis on theory and certification rather than on skills acquisition and proficiency testing. On the other hand youth polytechnics that are designed to provide practical training, linked with production, are often small training centers that provide local youth with an opportunity to learn practical skills, usually in masonry, carpentry, tailoring, dressmaking, knitting, home economics and livestock raising (GoK, 2004). Moreover, it has also been argued that youth with technical know how may lack enterprising capital. This is one of the reasons why the government of Kenya invented the Youth Enterprise Fund in 2009. This is a fund that is meant to provide funding to youth who have entrepreneurship ideas but lack the capital to turn their ideas in to gainful employment.

The data also reveals that older youths are more likely to be in partial employment as compared to being in fulltime employment. This is a remarkable source of idleness and vulnerability to antisocial behavior. For example after the disputed 2007 elections, majority of the people who took up to the streets in violent protests were the older youths, who were to a large extent idle and poor and therefore easy targets for political manipulations. The results also indicate that being female as compared to being male increases the chances of being under employed as compared to being in fulltime employment. This is also another issue of gender issues in employment. The youth in Nyanza, Rift valley and Western provinces are likely to be in some part time employment as compared to the youth in Nairobi Province, who are more prone to open unemployment. The

Given their effect on youth' employment, interventions in the areas of education, training and entrepreneurship may change the relative importance of the different employment options for the youth. Educated youth with high expectations on the kind of job they "deserve" will only take up some jobs considered "inferior" as a survival

measure. Also intervention aimed at creating more employment opportunities in the different sectors will increase the demand for labour, and are likely to lower the buffer level of education with the overall impact of reducing the demand for higher education.

4.3. Conclusion and Policy Implications

Youth unemployment is currently a big policy issue in Kenya and also in many developing countries. Even though governments have increased their expenditures in areas relating to human capital development, many educated youths are finding it difficult to secure employment. Unemployment may result to resources “waste”, especially if investments in form of human capital development go unutilised or under utilised. Employment can also lead to poverty if governments can not afford adequate social protection for the unemployed.

In a bid to increase employment, the government of Kenya has put forward several policy measures that have seen economic growth since the year 2003. Although the economy grew at over 5 percent between 2003 and 2007, wage employment did not grow as fast. Instead, there has been significant growth of the informal sector. For instance, the country created close to 500,000 jobs during (2003-2007), with more than 70% of these jobs in the informal sector (Gok, 2007). The informal and non wage sector in Kenya also employs about 85% of the workforce.

This study has revealed several issues concerning youth unemployment, education, and training. First we emphasize that education is important for employment, however due to competition on few employment opportunities the buffer level of education is far beyond basic level of education and therefore secondary school leavers are finding it difficult to find employment especially in urban areas. We also find that open employment for the youth is much more pronounced in the urban areas than in the rural areas. This does not imply that there are more employment opportunities in the rural areas, but rather it is because youth in the rural areas reported being employed in the agriculture sector, or informal sector, or other non wage sector⁷. Many youth who may

⁷ The debate on “good versus bad jobs” and “disguised unemployment” points that some reported employment may not be significant for welfare especially if the unemployed are not able to earn a decent level of income to lift them out of poverty. The agriculture sector in the rural areas especially among the small scale farmers may be characterized by “disguised unemployment”.

not want the kind of employment offered in the rural agriculture sector may migrate to urban areas in search of better employment and they may be unwilling to take up “any job” once in the urban centers.

The reality that jobs are not easy to come by even in urban areas has increased the demand for higher education as youth hope that with an extra academic qualification they may be able to find a job. This is what has caused the buffer level of education to increase as employers with few openings are faced with many potential employees with high qualifications. This has increased competition by jobseekers who think that by earning an extra qualification they become more competitive in the job market. There is therefore increased demand for extra academic papers and other related qualifications as evidence of better training. This rush on more academic papers is what we refer to as “diploma disease” after Dore (1976) who first discussed the problem.

The problem with diploma disease is that employers faced with a large pool of well educated candidates will normally offer job descriptions which may not necessarily demand a particular high level of education. These offers are normally accompanied by a wage that may match the job description but not commensurate with the education attainment of the employee. Since there exists a large pool of equally qualified or “better” potential applicants, those who get these kind of jobs count themselves lucky and may not complain or be assertive regarding bad employment contracts.

In his seminal work on the “escalation of academic qualification” which he labelled “diploma disease” published in 1976, Dore describes the escalation of academic qualification phenomenon as the move towards achieving higher levels of education, in order to stay competitive within the work environment. His analysis has served to raise several questions related to the usefulness of an education system. Dore (1976) argues that an education system that is used as criterion for judging on the job performance may imply that not all schooling is education. Instead, much of the schooling is mere qualification earning. According to Dore (1976) education implies learning, which has either mastery in a particular area as its object or just learning for pleasure. On the other hand schooling (as popularly seen) implies certification for job attainment or career advancement as its primary goal. It is this type of schooling system, which serves to fuel the qualification escalation phenomenon (diploma disease).

According to Dore (1976), countries in which education qualification has become deeply entrenched as a measure of potential to deliver in a job, has resulted in several social ills including social uprisings, a widening in the gap between rich and poor, and an increase in the educated yet unemployed.

Many initiatives have been put in place to deal with the diploma disease as well as the unemployment problem. For example, the government of Kenya started technical training institutes so that school leavers who can not find jobs at preference terms, have the option to train further in order to be able to create employment for themselves and may be for others. Technical training programmes in Kenya are commonly known as Technical Industrial and Vocational Education and Training (TIVET). However TIVET though well meaning has faced a lot of challenges in Kenya. There is still some kind of stigma surrounding those who join these institutions as they is the impression that they “have failed” or have joined a training programme of last resort. On the other hand governments faced with heavy education budgets may invest inadequate resources in TIVET. Thus TIVET programmes may be under funded and thus compromised on quality.

The importance of TIVET in employment and skills creation is huge and immense benefits would accrue if the programmes were strengthened. On the other hand TVET is not a panacea for industrialization and job creation. It is critical that the government articulates policies that stimulate growth of the economy and high-performance enterprises that demand high skilled labour, while creating employment opportunities that call for further technical education and training.

Dore (1976) also discussed two 'modest' proposals aimed at alleviating the diploma disease while assisting individuals gain entry into the workforce. The proposals encompass transforming the entire work and education system. In his first proposal, it is suggested that individuals start their careers earlier in life. It is recommended that much of the selection of potential employees should be done within the work organisations mainly since many prospective employees will have interacted with the same organisations either through internships or attachments during their training and study periods. He further recommends that all tertiary education and training should be transformed in to advanced career learning and learners could join either full-time or

part-time. The second proposal by is based on providing a specific job selection test whenever there is need to recruit. The essential component of these suggested tests is that they should be tests that cannot be crammed for. Dore, (1976) does not under-estimate the weight of his proposals. He agrees that they are not easy and may require a total restructuring of not only the education system, but virtually all aspects of society in order for them to be implemented successfully.

This study therefore concludes that despite the challenges facing education and training, they remain very important buffers for unemployment. The challenge faced by policy makers in this regard is the transformation of the education and training system to avoid many of the current problems while addressing issues of economic growth as well as job creation. Some of the policies that the government of Kenya has taken lately may be commendable steps. For example if the “Kazi kwa Vijana initiative” (Jobs for the Youth), can improve infrastructure and open up remote areas; then it will be possible to motivate private investments if previously impassable areas become accessible and other crucial infrastructure like water and electricity are installed. Though the initiative is yet to undergo the test of time it has the potential to stimulate long run economic growth and employment if well managed.

Policy recommendations

These are some key policy recommendations emanating from this study: The results have shown that youth unemployment is gendered. The face of unemployment among the youth is more female than male. This is not only an employment issue since gender disparities in access to resources has far reaching implications on overall social welfare given the role of women in national development. Still gender for its own sake is an issue and has been recognized by the Millennium Development Goals (MDGs) as meriting attention. More so the MDGs aim at attaining gender parity in employment. There is therefore need to mainstream gender issues in employment policies and interventions. For example policy makers should refrain from assuming that policies are gender neutral. A policy will have engendered impact as long as it does not consider the gendered context of its implementation. For example, if the youth fund targets youths who are entrepreneurs, and if there were gender differences in entrepreneurship then it might

increase the gender inequalities in access to both the resource and the related benefits. Still if the “Kazi kwa Vijana programme” (Jobs for the youth Initiative) targets public works that require more of muscle power, then they automatically leave out the bulk of the unemployed youths who are women.

By engendering employment policies it implies looking at every policy through a gender lens to see how possible impacts from the policies affect both men and women. The aim of gender mainstreaming is to ensure that policies promote benefits to both men and women and thus the overall society.

The problem of unemployment may not be adequately solved by redistribution of resources alone in a small developing country with inadequate resources for social protection. There is therefore an urgent need of job-creating-economic-growth. Policy makers have a challenge to mobilize resources to invest in underutilized sectors of the economy like the agriculture sectors among others.

The other policy recommendation pertains to TIVET programmes. These programmes are very important for skills training and job creation. They should therefore be adequately integrated into the national development strategies including employment and socio-economic development. For example, TIVET should give priority to training for such sectors as tourism, agriculture, information communication technology and modern infrastructure development that are the main drivers for the attainment of the Vision 2030. TIVET should also train for high level technical skills necessary for efficient financial and transport and communication systems; reliable water and energy supply, and food security. The measures towards improving TIVET should also take into account regional and international policies of skills development, particularly International Labour Organization, Education for All and Millennium Development Goal.

If TIVET were to raise up to these challenges then more resources need to be devoted in to the programme. There is need to equip TIVET learning institution with proper equipments and well trained and adequate personnel.

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Definition of key terms as used in the study

Youth: In Kenya, the National Youth Policy defines a youth as someone between 15 and 30 years (GoK, 2007).

Fully employed youth: Youth who are not in school and are working 29 hours or more in a week. This is the definition used by the central bureau of statistics.

Openly unemployed youth: Youth who are not in school and are working 0 hours in a week

Underemployed youth: Youth who are not in school and are working less than 29 hours in a week