

Youth Unemployment in Kenya: Its Nature and Covariates

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Abstract

Unemployment among the youth is one of the major policy concerns of the Government of Kenya, because it imposes costs on individual youth, their families and the economy. Aware of this policy concern, this study uses a probit model to examine factors that determine unemployment among the youth in Kenya using data from the Kenya Integrated Household Budget Survey (KIHBS) of 2005/06. In particular, it focuses on the impact of individual and household characteristics of the youth on their labour market success. Individual characteristics of the youth are represented by education, age, gender, location, physical health and marital status, while household characteristics include household size and income.

Analysis of KIHBS data shows that most of the youth have low educational attainments and are employed in the agricultural and informal sectors. However, there is an underlying state of unemployment or under-employment among these youth since majority of them earn low wages and have no access to medical and house allowances. In the empirical analysis, the relationship between age and probability of being unemployed is found to be non-linear. The probability of being unemployed increases up to age 18 and then starts to decline. Education is found to be positively related to the probability of being unemployed. In particular, youth with higher education are found to be less likely to be employed. Male youth appear to have a labour market advantage compared to their female counterparts. Estimation results show that single youth are less likely to be employed relative to their married counterparts. Youth from rural areas are more likely to be employed compared to those from urban areas. The study found that youth from higher economic status are less likely to be unemployed. Household size is positively associated with the probability of being unemployed. Lastly, youth from North Eastern Province are found to be most disadvantaged in the labour market.

This study shows that unemployment risks of the youth are influenced by individual and household characteristics. Thus, policies concerning the youth should not treat the youth as a homogeneous group. Second, there is need to improve the current quality of the youth workforce. Since a majority of the youth are concentrated in rural agricultural and informal activities with no social protection, creating decent and productive work should be a policy priority. Similarly, implementing policies aimed at improving the informal and agricultural sectors will

yield dividends in reducing youth unemployment. Lastly, strategies aimed at reducing youth unemployment should address the severe poverty facing rural and urban slum households.

Abbreviations and Acronyms

ASAL	Arid and Semi Arid Lands
ECA	Economic Commission for Africa
ERSWEC	Economic Recovery Strategy for Wealth and Employment Creation
GoK	Government of Kenya
ICT	Information Communication Technology
ILO	International Labour Organization
KIHBS	Kenya Integrated Household Budget Survey
KIPPRA	Kenya Institute for Public Policy Research and Analysis
LMIS	Labour Market Information System
NARC	National Rainbow Coalition
SAP	Structural Adjustment Programmes
UK	United Kingdom
ULFS	Urban Labour Force Survey
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America



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1. Introduction

1.1 Background

According to the United Nations, the term ‘youth’ refers to persons between 15 and 24 years (United Nations, 2007a). Countries and communities vary considerably in their definitions of the youth. For instance, the youth refers to individuals from 12 to 30 years in Uganda; 18 to 35 in Nigeria and Bangladesh (International Labour Organization, 2005) and 15 to 30 years in Kenya (Government of Kenya, 2007a). From a broader sociological point of view, youth is defined as the transition stage from childhood to adulthood, in which case the age at which this transition begins will vary greatly between societies and indeed within the same society (International Labour Organization, 2006a). In general, the operational definition of youth varies widely from country to country and has demographic, political, institutional and cultural elements in it (O’Higgins, 1997).

A key concern among the policy makers today is the rising unemployment among the youth. According to the International Labour Organization (ILO), by 2005, the number of unemployed youth worldwide had increased steadily to approximately 85 million, and approximately 2 million had given up searching for jobs. The ILO report further highlights that youth are three times less likely to be employed compared to adults. Furthermore, unemployed youth make up 44 per cent of the unemployed worldwide, although their share of the total working age population is only 25 per cent (*ibid*)¹.

In Africa, the number of unemployed youth grew by almost 30 per cent between 1995 and 2005, and youth unemployment rate was as high as 19.5 per cent in 2005. Additionally, youth in both developed and developing countries are not only more likely to find themselves among the unemployed but also working longer hours, on short-term and/or informal contracts, with low pay and little or no social protection (United Nations, 2007b). Consequently, questions relating to the integration of young people into decent work have assumed a central position at local and international levels through the joint efforts of governments and international agencies such as the UN, World Bank and ILO.

¹Even among the youth who managed to find a job, working conditions tend to be below what is considered ‘a decent and productive standard’ (ILO, 2006a).

Kenya is among the Africa countries with growing unemployment rates despite several initiatives and policies implemented to reduce poverty and unemployment. At independence, the government addressed unemployment through *Sessional Paper No. 1 of 1965* by ensuring that Kenyans have access to employment opportunities in the public and private sectors (Government of Kenya, 1965). However, employment in formal segment drastically reduced especially in the 1990s following the Structural Adjustment Programmes (SAPs). On coming to power in 2002, the NARC government addressed unemployment through the *Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC)* development blueprint.

Under ERSWEC framework, various policy reforms were undertaken to empower the youth and address the challenges of youth unemployment. Some of these policies include: implementation of Free Primary Education; creation of the Ministry of State for Youth Affairs; and launching of the National Youth Enterprise Fund that provides loans to youth who would like to start or expand business enterprises (Government of Kenya, 2003a). After successfully implementing the ERSWEC, the government recently adopted a new development blueprint covering the period 2008 to 2030 called *Vision 2030* (Government of Kenya, 2008b). Vision 2030 has taken account of reforms under ERSWEC and further incorporated more reforms such as subsidized secondary education, and launching ‘*Kazi Kwa Vijana*’ (Work for Youth) programme, all aimed at addressing the youth unemployment issue.

Table 1.1: Unemployment rates by age and sex, 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	25.0
20 – 24	18.5	29.2	12.5	9.8	11.1	19.0	33.9	27.1	21.0	27.3	24.2
25 – 29	4.8	8.6	6.3	5.7	6.0	8.2	21.6	15.5	13.5	17.9	15.7
30 – 34	2.0	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	5.0	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	2.0	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	5.0	4.0	14.2	12.7	13.5	4.8	3.2	4.0
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

* Vandermoortele, 1991: *Urban unemployment rates only* ** Analytical report volume IX, Kenya 1999 population and housing census (Government of Kenya, 2002b) ***1998/99 Labour Force Survey, **** Kenya Household Integrated Budget Survey (KIHBS) 2005/06

Despite these efforts, unemployment has been persisting. Statistics from the Urban Labour Force Survey (ULFS) show that urban unemployment grew from 7 per cent in 1978 to 9.7 per cent in 1986. Overall, unemployment increased from 6.5 per cent in 1989 to 14.6 per cent in 1998/99. A salient characteristic about unemployment in Kenya is that it has particularly been high among the youth (Government of Kenya, 2003b; and Government of Kenya, 2007c). It is estimated that out of 500,000 youth who enter the market every year, only 25 per cent are absorbed (Government of Kenya and United Nations Development Programme, 2007).

On the other hand, the size of the youth population (those aged 15-29), part of which is within this labour force, has grown over the last four decades (Table 1.2). Total youth population increased from 2,688,900 in 1969 to 10,674,786 million in 2005. The share of the youth population to total population increased from 25 per cent to about 30 per cent during the same period. Female youth constituted a higher proportion compared to the male counterparts, while young adults (age 20-29), who are part of the labour force, accounted for a higher proportion of the total youth population.

Even with the increasingly unemployment rates and growth in youth population, the economy has not been able to create enough jobs to meet

Table 1.2: Profile of youth population in Kenya (15-29)

	Year				
	1969	1979	1989	1999	2005**
Total Population	10,942,705	15,327,061	21,443,636	28,686,607	35,514,542
Youth Population*	2,688,900	4,124,961	5,911,392	8,495,599	10,674,786
By Sex					
Male	1,311,100	2,009,975	2,850,051	4,105,422	5,208,063
(%of total youth)	(49%)	(49%)	(48%)	(48%)	(49%)
Female	1,377,800	2,114,986	3,061,341	4,390,177	5,466,723
(%of total youth)	(51%)	(51%)	(52%)	(52%)	(51%)
By Age					
15-19 years (Teenagers)	1,084,450 (40%)	1,741,845 (42%)	2,378,695 (40%)	3,403,178 (40%)	4,573,740 (43%)
20-29 years (Young Adults)	1,604,400 (60%)	2,383,116 (58%)	3,532,697 (60%)	5,092,421 (60%)	6,101,046 (57%)
Youth pop. to total pop. %	25%	27%	28%	30%	30%

Source: Statistical abstracts, various, ** KIHBS 2005/06, *Ages 15-29 only

the growing labour force. The Economic Recovery Strategy (Government of Kenya, 2003a) launched in 2003 had a target of creating 500,000 jobs per year. However, this target was not met. Estimates based on the Economic Survey of 2008 (Table 1.3) show that every year, close to 467,000 jobs were created from 2003 to 2007 (Government of Kenya, 2007b). However, it is estimated that close to 500,000 young people enter the job market every year (Government of Kenya and United Nations Development Programme, 2005). There are also those in the labour market who are unemployed. As a result, the number of jobs created was inadequate to meet the country's growing labour force supply. Similarly, over 80 per cent of the jobs created under the ERS framework were in the informal sector (Government of Kenya, 2007c), which is characterized by low quality and earnings, underemployment, insecurity and safety hazards (Manda and Odhiambo, 2003; and Manda, 2002).

1.2 Motivation for the Study

The government has implemented several interventions aimed at empowering the youth and addressing the challenge of youth unemployment. Some of these include introduction of free primary education and subsidized secondary education. Yet, majority of the youth in Kenya are still unemployed.

Youth unemployment is a policy concern because it implies costs to the individual, their family and the economy. Lack of decent work, if experienced at an early stage, often compromises a person's future employment prospects (Arulampalam and Gregg, 2001; ILO, 2006a; and Tiongson and Fares, 2007). Inability to find employment creates a

Table 1.3: Total recorded employment ('000)

Sector	2003	2004	2005	2006	2007
Modern establishments					
Wage employment	1,727.30	1,763.70	1,807.80	1,858.40	1,907.30
Self employed and unpaid family workers	65.70	66.30	66.80	67.20	67.40
Total modern establishment	1,793.00	1,830.00	1,874.60	1,925.60	1,974.60
Informal sector	5,546.40	5,992.80	6,396.90	6,814.90	7,475.60
Total	7,339.40	7,822.80	8,271.50	8,740.50	9,449.20
Additional jobs	465.90	483.40	448.70	469.00	708.70
Modern establishments	27.80	37.00	44.60	51.00	48.90
Informal sector	438.10	446.40	404.10	418.00	660.70

Source: Economic surveys, various

sense of vulnerability, uselessness and idleness among young persons (International Labour Organization, 2003). There is a link between youth unemployment and social exclusion (Economic Commission for Africa, 2005); poverty (Manda and Odhambio, 2003); and social problems such as crime, drug abuse, single parent families and hostility towards foreigners (Isengard, 2003). Moreover, the unemployed constitute an economic burden to the employed (Government of Kenya and United Nations Development Programme, 2005). The post-election violence witnessed during the start of the year 2008 in Kenya was partly attributed to the high levels of unemployment among the youth.

The issue of youth unemployment has received little empirical analysis in Kenya. Existing studies by, for instance, Mwabu, Orio and Manda (2003) and Manda and Odhiambo (2003) on employment and labour force participation in Kenya did not explicitly examine the issue of youth unemployment. This study attempts to fill this gap by using an econometric technique to examine the factors determining youth unemployment. 'Youth' is a social group with different characteristics such as age, gender, marital status, levels of education and family background. Their unemployment risks are influenced by these characteristics (Van, Dough and Ann, 2005). Therefore, in order to develop policies and programmes that can respond to the specific needs of the youth, it is important to understand how the different characteristics of the youth determine their unemployment risks.

1.3 Objectives of the Study

The main objective of this study is to explain the concept of youth unemployment in Kenya. Specifically, the research seeks to:

- (i) Examine the nature of youth unemployment in Kenya; and
- (ii) Identify and assess the determinants of unemployment among Kenyan youth.

The paper is organized as follows: Section 2 outlines the theoretical and relevant empirical literature on youth unemployment, followed by the methodology in Section 3. Section 4 discusses the results, while recommendations and strategies for improving youth employment in Kenya are presented in Section 5.

2. Literature Review

2.1 Theoretical Literature

According to neo-classical theory, the labour market, just like any other market, can be described in terms of demand and supply, with equilibrium given by the intersection of the labour demand (by employers) with labour supply (by workers) (Hirsch, 2007). Employers seek to maximize their profits by paying low wages as they can for the worker skills they need. Workers want to maximize their gain (their pay) by accepting the highest paying job that they have prerequisite skills for. Wages are determined by the forces of demand and supply and hence there is equilibrium wage rate, where the quantity of labour required by firms is just equal to the number of workers available. As such, surplus labour will be accompanied by a fall in wages to equilibrium at full employment, and vice versa. Any unemployment in the economy would be purely voluntary, where unemployed people have chosen not to work at the going wage rate. The neo-classical theory assumes a perfectly competitive labour market where there are many employers and workers and, in general, all members of both groups act independently. Embedded in the neo-classical theory is the human capital theory which posits that individuals who invest money and time deserve higher pay because of the accumulated skills that improve their human capital and ultimately their productivity (Becker, 1962).

While the labour market can be described in the neo-classical sense, there are many unique features of the labour market that constrain or limit the applicability of this theoretical framework. New theories have sprung up with emphasis on institutional and sociological forces that influence the labour market process. According to the dual labour-market theory, competitive production does not exist in many industries. There are firms that have enough market power to affect the price charged for their products or services (known as ‘monopoly’ firms) and there are those that cannot produce enough output to affect the price charged for their products or services (known as ‘competitive’ firms). Also, there are two analytically distinct sectors in the economy: the ‘primary’ and ‘secondary’ sector. Jobs in the primary sector are characterized by higher wages and longer tenure at a firm, while jobs in the secondary sector are characterized by shorter tenure and low chance of promotion. Primary jobs are more likely to be in monopoly than competitive firms. The theory assumes limited mobility from secondary to primary market.

The Internal Labour Market Theory is based on the premise that the management in large firms is forced to give up more benefits to workers than it would because of the pressure of powerful, often industry-wide unions. Through trade unions, wages are set through 'rules' and not through the 'price mechanism'. Wage setting through 'rules' forms part of the labour market legislation, which constitutes various laws that the government uses to govern the labour market processes and hence determine labour market outcomes. There are laws, for instance, which specify minimum wage rates and govern the process by which trade unions acquire bargaining rights and the procedures by which they and employers engage in collective bargaining.

The theory further posits that large monopolistic firms, usually in the primary market, introduce rules and regulations that impact on the working of the labour market, where levels of employment and wages are determined by a set of internal rules and procedures (Hirsch, 2007). For instance, as firms grow and adopt sophisticated productive technology, productive skills are learnt 'on-the-job' and not through 'formal educational training' (Becker, 1962). Similarly, firms invest in their workforce either through 'on-job-training' and are, therefore, unwilling to let them go due to the associated costs of training. They value 'experienced workers' and usually assure them of higher salaries to discourage them from shirking and moving out. Thus, jobs at the middle and upper levels are filled internally and promotion and employment is determined by level of seniority, rather than workers' ability (Hirsch, 2007). New workers usually occupy 'entry point jobs' at the bottom of the job ladders. An important distinction, therefore, is made between the internal labour market (workers within the firm) and the external labour market (i.e., workers outside of the firm), with the former sheltered from the supply and demand pressures of the external labour market.

Although the internal labour market model emphasizes the importance of specific on-job-training over general education as a prerequisite for determining the workers productivity, firms still face problems of determining which applicants have the necessary attitudes and orientations to perform. Some of the attributes that firms may resort to include previous job history, recommendations from previous employers, and work experience (Hirsch, 2007). Still, if a clear decision cannot be made on these grounds, employers resort to the use of superficial characteristics that are correlated with traits they value or wish to avoid (*ibid*). Workers are judged by factors that have nothing to do with their productivity. Hence, some traits, often sociological, become an important basis for hiring decisions and hence influence labour market

outcomes. For instance, using the concept of ‘taste for discrimination’, Becker (1971) illustrates that in the USA, white employers prefer to hire white workers to blacks. In this case, race becomes a key attribute. Similarly, those with little education, poor work records, women, youth as well as workers who belong to a certain race and ethnicity become victims of such statistical discrimination (Hirsch, 2007). Often, those who suffer these twin scenarios are women, ethnic minorities, young people as well as workers with little education and previous experience.

2.2 Empirical Literature

The theoretical arguments discussed above identify forces that influence the labour market process, ultimately determining unemployment rates, labour force participation rates and wage rates (labour market outcomes). Thus, forces such as market forces, institutional forces and sociological forces determine unemployment rates.

Market forces include demand and supply factors; institutional forces are the effects that organizations such as corporations, governments, and unions have on the labour market. These forces can be codified as formal rules (e.g., legislation) or exist as informal practices (e.g., behaviours). Sociological forces include, among others, personal and family attributes of the individual worker such as age, location, level of education and marital status that influence his or her employability. These forces point to a set of variables that capture the main determinants of unemployment. This section presents various studies that have empirically examined these determinants, mainly based on sociological forces.

With regard to age, studies find a rising age-unemployment profile among the youth. Older young people have been found to be more likely to be unemployed. Using data from Ethiopian Urban Socio-Economic Survey, Serneels (2007) used a probit model and found older young men to be more likely to be unemployed in Ethiopia. Other studies show that young workers are likely to go into inactivity or unemployment and less likely to come out of unemployment. This is well confirmed for Bosnia and Herzegovina (Tiongson and Fares, 2007); Vietnam (Van, Dough and Ann, 2005) and in European countries (O’Higgins, 1997). There are a number of potential explanations for this observation emerging from literature. First, it is argued that young people are more likely to quit their jobs than older workers. As O’Higgins (1997) points out, their initial experiences in the labour market involve a certain level of ‘shopping around’ to find a ‘good’ job perhaps because the available jobs are not

relevant and appropriate to them. This phenomenon has been empirically observed in Vietnam (Van *et al.*, 2005) and Turkey (Ozdemir and Tasci, 2007). Second, youth 'shop around' for jobs because the opportunity cost of doing so is lower for them than adults (O'Higgins, 1997). They also have low occupational skills, thus command low wages and have a weak sense of duty to support their family (Sang and Bae, 2006).

On the demand side, by being less skilled, youth embody lower levels of investment by firms in training and consequently involve a smaller loss to firms making them redundant. Also, in situations of economic decline or recession that affect the employment base, firms initially react by ceasing recruitment before commencing on a more expensive procedure of redundancy. Since it is young people who constitute a disappropriate segment of jobseekers, they will be more heavily affected by such a freeze in recruitment. However, such 'initial shopping around', although sometimes short-lived, is likely to have lasting adverse effects on future earnings and employment of the youth. There is a strand of literature on the post-unemployment labour market disadvantage of the youth, or what is otherwise known as labour market 'scar'. In this hypothesis, following initial experience of unemployment, many individuals have been found to be vulnerable to subsequent unemployment (unemployment scar), low post-unemployment wages (wage scar) or both. This has been found to be true in Bosnia and Herzegovina (Tiongson and Fares, 2007).

Gender, education, health status and ethnicity are other important attributes that determine labour market success. One generally expects to find a weaker labour market position for females, as a result of supply side difference in such behaviour, discrimination by employers, cultural norms and/or gender related occupational choices by women (Ozdemir and Tasci, 2007; ILO, 2006b; Westergard-Nielsen and Pederson, 1993). Again, this phenomenon is not just common in developing countries. Consistent with this expectation, a broad array of studies, e.g. Ozdemir and Tasci (2007) for Turkey, Van, Dough and Ann (2005) for Vietnam, and Isengard (2003) for German have found female youth to have a higher probability of being unemployed. Other studies have found that females have a higher occurrence of unemployment spells, including a higher probability of temporary layoff employment (Steiner, 1989) for example in German. On the other hand, all other things equal, most studies agree that single females have higher probability to find employment than married women.

Even with the empirical position that females face a weaker labour market position, literature shows their position on the labour market

depends on several factors. They include circumstances in which they live, the structure of the economy and the presence of pro-gender equality policies. In Turkey, Ozdemir and Tasci (2007) found urban areas to provide more flexible and modern lifestyles that increase the chances of finding a job for females. Isengard (2003) found that young males in the United Kingdom are at a higher risk of becoming unemployed compared to their female counterparts because of the growth of service sector employment, which has offered part-time or flexible jobs for females.

The incidence of unemployment is highly correlated with individual's education achievement. The expectation is that education generally provides individuals with a stronger labour market success. Thus, as the level of education rises, the probability of unemployment decreases. This has been confirmed for South Africa (Lam, Leibbrandt and Mlatsheni, 2008); Bosnia and Herzegovina (Tiongson and Fares, 2007); Poland (Pastore, 2005); Germany and United Kingdom (Isengard, 2003); and Belgium, England, Italy, Portugal, Spain and the Netherlands (Claes and Ruiz-Quintanilla, 1996). However, unemployment has been found to increase with the level of education elsewhere. For example, Kouakou (2008) recently found that in Cote D'Ivoire, the level of unemployment is more concentrated among well educated youth. Various explanations have been offered for this. First, in some countries, for instance Cote D'Ivoire, social capital dominates human capital in influencing employability. Second, it has also been observed that educated youth are more likely to queue in unemployment while looking for better jobs that are more paying and those that suit their skills.

The impact of education in enhancing employability varies from country to country. In some countries, vocational skills carry more weight than formal schooling. In Germany, Isengard (2003) found that unemployment rates do not fall steadily as the level of education increases, but rather depend on whether someone has vocational qualification. In Australia, Halchuk (2006) found that undertaking vocational training increases the probability of employment by approximately 98.8 per cent. However, in Poland (Pastore, 2005), Vietnam (Van, Dough and Ann, 2005) and UK (Isengard, 2003), attainment of vocational training has been found not to enhance employability.

Whatever the conclusion, the assessment of the author is that education and training remain key factors that enhance youth's employability. The International Labour Organization has gathered enough evidence suggesting that in the current rapidly changing world, youth become 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 (International Labour Organization, 2008). Wald, Sharpe and Gunderson (2000) observe 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.

An indicator of health status of the youth is included in a number of studies. There is a considerable effect, without exceptions, of an adverse effect of health on employment prospects. Serneels (2007) measured health as height for age and found that it has a negative and significant (at the 10% level) effect. The effect, however, becomes insignificant once a control for household wealth is added, suggesting that part of the welfare effect may be through nutrition and that physical appearance may be used by employers as a screening device. Van, Dough and Ann (2005) find that youth with poor health, mentally and physically, are more likely to be unemployed and under-employed in Vietnam. Halchuk (2006) includes a variable capturing whether an individual participated in physical or sporting activities in the last year as a measure of health status. The study finds that participation in physical and sporting activity enhances employability. According to Halchuk, there are a number of qualities that can be reflected through physical participation in sport that may serve as a signal of employee quality. Halchuk further reckons that positive impacts of physical activity have been shown to reduce stress, improve self-esteem and productivity. In South Africa, Lam, Leibbrandt and Mlatsheni (2008) found youth reported as being in poor or fair health to be 10 points less likely to be working after leaving school compared to those who said they were in good, very good and excellent health condition.

Similarly, studies also show that success in the labour market depends on the individual's nationality. Isengard (2003) finds young Germans to be less prone to unemployment than their contemporaries living in Germany, but do not have German passports. Using a dummy variable to estimate the impact of being indigenous on employment decisions in Australia, Miller (1989) found that being indigenous increases the estimated probability of unemployed by 2.5 times that of a non-indigenous person. The findings by Isengard (2003) and Miller (1989) are partly explained by studies by Halchuk (2006) and Borland and Hunter (2000), which found that difficulty in speaking the local/indigenous language has a significant impact on employment outcomes, thus affecting the non-indigenous or foreigners.

The individual risk of unemployment also depends on the location where an individual lives. Majority of studies reviewed, both from developed and developing countries, confirm that individuals who live in urban areas are less likely to become unemployed compared to their rural counterparts (Serneels, 2007; Ozdemir and Tasci, 2007; Van, Dough and Ann, 2005; and Isengard, 2003). Individuals residing in urban areas are likely to have access to ICT services, become proficient in language (in this case English), have access to support networks and employment services, and have better transportation. Another diagnostic lesson drawn from studies is that an individual's employability, whether urban or rural, is sensitive to and depends on the characteristics possessed by the individual. For instance, youth in urban locations, with higher educational qualifications and other employment related skills and in good health, face bright employment prospects. However, chances are bleak for those not possessing these characteristics.

There is overwhelming evidence suggesting that family background serves as an important factor in determining the employment experience of young persons. This is particularly true in countries where employment opportunities are based more on connections and networks than merit and competence. Families can provide significant social and financial support to enable smoother transition from school to work for youth. Specifically, the significant effects of family economic status, occupation and education of parents, parental divorce, and number of siblings in the family are notable in a number of studies reviewed. Young people who live in better-off families have been found by Van, Dough and Ann (2005) and Serneels (2007) to have a significantly lower probability of being unemployed and under-employed. These youth tend to be in higher education and enjoy better living conditions, which do not require them to work.

A few lessons can be drawn from the above literature review, drawn from different countries (mainly from developed and transition economies). First, there is significant effect of individual and household attributes on individual youth employability. Some of these characteristics include age, gender, level of education, marital status, health status and family background. Second, from a theoretical perspective, the labour market is influenced by market forces, institutional forces and sociological forces. However, all the empirical studies reviewed examined the effect of sociological forces on youth employability.

3. Methodology

3.1 Conceptual Framework

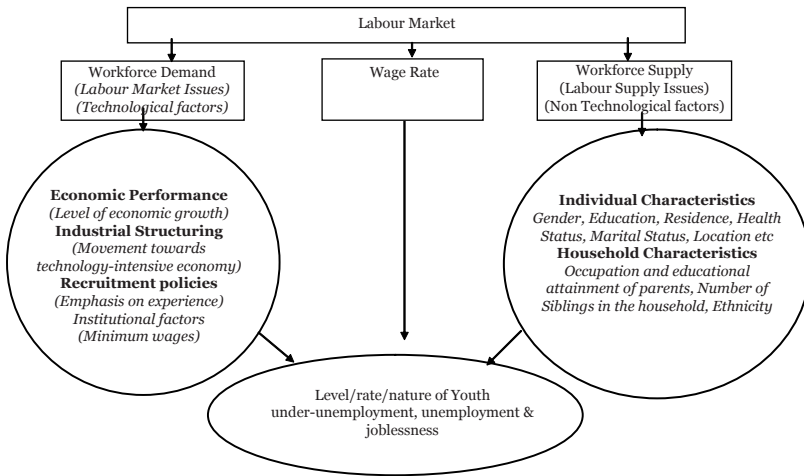
According to the neo-classical theory, the demand for labour is a function of the wage rate. However, from theoretical and empirical literature review, the demand for labour can be determined by other factors that broadly capture the demand and supply side of the labour market. The demand side factors can also be regarded as technological factors. They include, among others, recruitment processes that prefer experienced workers to new labour entrants and industrial restrictions towards technology-intensive economy that enables firms to do business with fewer workers. Closely related to the labour market demand side is the country's economic growth. Often, prolonged poor economic growth negatively affects youth unemployment the same way it affects the overall level of unemployment.

The supply side factor can be regarded as non-technological factors. They include sociological forces and represent demographic and structural variables that affect youth employability, which include age, gender, education, location and family background. Even with the availability of jobs, a youth is unlikely to be unemployed due to age, lack of appropriate skills and experience or family background. In this case, whether a youth is employed or unemployed depends on a complex interaction of technological (workforce demand) and non-technological (workforce supply) factors. Majority of studies that have investigated determinants of unemployment among the youth use variables on the workforce supply side.

3.2 Theoretical Framework

The theoretical framework in this study is based on theories of unemployment. The *neo-classical theory* regards the labour market as any other market, which can be explained in terms of demand and supply where equilibrium is given by the intersection of labour demand with labour supply. The theory further posits that education and training improves the worker's human capital, productivity and earnings (popularly known as the *human capital theory*). Hence, higher education translates to higher productivity, earnings and employability (Becker, 1962). But post neo-classical theories contend that the labour market

Figure 3.1: Conceptual framework for analyzing determinants of youth unemployment in Kenya



Source: Author

cannot be explained in terms of demand and supply. The Internal Labour Market Theory argues that the labour market outcome of a worker does not necessarily depend on his or her human capital but level of working experience, often acquired through on-job-training. Firms invest in internal training of their workers while they are on-job and as a result, they value most experienced workers. Jobs at the middle and upper levels are filled through promotion, and employment is determined by the level of seniority rather than the worker's ability (Hirsch, 2007).

Other theories attempt to explain the labour market from a sociological perspective. According to these theories, despite emphasis on on-job-training as a pre-condition for determining workers productivity, firms still face challenges of obtaining workers with correct attributes. As a result, some resort to using definite or superficial characteristics that are correlated with traits they value or wish to avoid in hiring their workers. Some of these characteristics, often sociological, include past employment history, residence, gender, health status, race, marital status, ethnicity and family background (Hirsch, 2007). Hence, the (un)employment probabilities of the youth can be determined by these characteristics, which may have nothing to do with their productivity. These characteristics also represent the labour market supply side factors (non-technological factors) identified in the conceptual framework section.

3.3 Model Specification

This study uses a probit model to identify how non-technological (labour supply) factors affect youth employability. Specifically, the study uses a probit model to estimate the effects of individual and household characteristics of the youth in Kenya on the probability of becoming unemployed. The probability of a youth being unemployed or otherwise is viewed as being determined by an underlying general response variable as follows;

$$y_i = \beta' X' + \varepsilon_{i1} \text{ where } \varepsilon_i \approx N(0, \sigma^2) \dots \dots \dots (1)$$

where y_i is a binary dummy variable that takes the value of 1 if an individual is unemployed, zero otherwise; β is a parameter vector; X_i is a vector of covariates for individual and ε_i is a normally distributed error term, with the mean of zero and constant variance. Since we are using probit, we can then define the binary response model (Greene, 2002) by transforming βX in equation 1 into probability using a probit model. In the probit model, the interest lies primarily in the response probability function;

$$prob(y_i = 1 | x) = P(y = 1 | x_1, x_2, \dots, x_k) \dots \dots \dots (2)$$

where x denotes a set of explanatory variables and y denotes the binary dependent variable, with outcomes 0 and 1 as already explained. We can then define the binary response model (Greene, 2002) by transforming $X\beta$ into a probability such that;

$$prob(y_i = 1 | x) = F(X_i\beta) \dots \dots \dots (3)$$

By choosing F to be the standard normal distribution, we get the probit model given by the cumulative density function of the standard normal distribution;

$$prob(y_i = 1 | x) = \Phi(X_i\beta) = \int_{-\infty}^{X_i\beta} \frac{1}{\sqrt{2\pi}} \exp\left(\frac{-z^2}{2}\right) dz \dots \dots \dots (4)$$

The standard normal transformation $\Phi(\bullet)$ constrains the probability to lie between zero and one. In order to estimate the above model, we use the likelihood function given as;

$$L = \prod_{i=1}^m \Phi(X_i\beta)^{y_i} [1 - \Phi(X_i\beta)]^{1-y_i} \dots \dots \dots (5)$$

It is, however, more convenient to use a log likelihood function given as;

$$LnL = \sum_i \{y_i \cdot \ln[\Phi(X_i\beta)] + (1 - y_i) \ln[1 - \Phi(X_i\beta)]\} \dots \dots \dots (6)$$

We then look for $\hat{\beta}$ that maximizes the above log likelihood function. We can only interpret the sign and the significance of the coefficients

when we use the probit model. In order to directly interpret both the sign and the magnitude in relation to unemployment probability, we estimate the marginal effects as well. From equation 3, we can derive the marginal effects for the probit model for continuous variables. Differentiating equation 3 with respect to the independent variables yields the probability density function given in equation 7;

$$\partial P(Y = 1 | X) / \partial X_k = \beta_k f(X\beta) \dots \dots \dots (7)$$

Where $f(\bullet) = \frac{\partial F(\bullet)}{\partial F(X\beta)}$

Whereas the marginal effects for discrete variables are computed using the formula;

$$\begin{aligned} & P(Y = 1 | X_k = 1) - P(Y = 1 | X_k = 0) \\ & = F(X\beta | X_k = 1) - F(X\beta | X_k = 0) \dots \dots \dots (8) \end{aligned}$$

4. Empirical Results

The empirical analysis of this study is based on the 2005/06 Kenya Integrated Household Budget Survey (KIHBS) dataset. KIHBS covered over 13,000 households and about 66,000 individuals in all the districts of Kenya. The dataset contains information on various aspects of the youth. The results have been divided into two sections. The first section presents the descriptive statistics of the individual household as well as labour market characteristics of the youth. This will help explain the nature of youth unemployment in Kenya. The second section presents the results of the probit estimation to explain the determinants of unemployment among the youth in Kenya.

4.1 Descriptive Statistics

Appendix Table 1 presents various individual and household characteristics of the youth. There were 14,637 youth who were out of school (representing 22% of the total population) majority (54%) of whom were female. In terms of educational attainment, 65 per cent of these youth had low educational level (primary), 33 per cent had medium (secondary) while a dismal 1 per cent had a high level (university). At a micro level, education yields substantial returns to the individual in terms of earnings and employability (Becker, 1962). At a macro level, countries endowed with a highly skilled and adaptable workforce are able to create and make effective use of new technologies and to embrace change for economic growth. Hence, from a policy perspective, there is need to improve the quality of the youth workforce in Kenya, given that majority of them have low educational attainment. Turning to location, there were more youth (64%) from rural than urban areas. The concentration of the youth in rural areas is similar to other developing countries. In sub-Saharan Africa, up to 70 per cent of the youth live in rural areas, with half of them entering the labour force work in agriculture (World Bank, 2008).

The presence of various filter questions made it possible to estimate the number of employed and unemployed youth.² There

² Respondents were asked 'what they were mainly doing in the last seven days'. This led to separating those who were 'employed' and 'unemployed'. The 'employed' were: (a) those who worked for pay; worked on own or family business; worked on own or family agricultural holdings; and were on leave during the reference week; plus (b) those who were seeking for work, doing nothing, home-makers and had a job, business, or other economic or farming activity to turn to. The 'unemployed' were classified in two categories—*broadly* and *narrowly* unemployed. The '*broadly unemployed*' were those who were: (i) seeking work, doing nothing and home-makers; (ii) had no job, business, or other economic or farming activity to turn to and (iii) were willing to accept a job. The '*narrowly unemployed*' were those: (i) who were seeking work, doing nothing and home-makers; (ii) had no job, business, or other economic or farming activity to turn to; (iii) were willing to accept a job and (iv) had taken actions to seek for a job.

were approximately 9,200 employed youth (Appendix Table 2). Of these employed youth, 36 per cent, 34 per cent and 27 per cent were working as unpaid family workers, paid employees and self-employed (own account workers), respectively. A further analysis of data reveals an underlying element of unemployment and/or under-employment among these employed youth. For instance, approximately 7,500 youth (78% of the employed) were occupied in informal, agricultural and precarious activities (Appendix Table 2). Past studies based in Kenya have shown that occupations in the informal and agricultural sectors are characterized by low quality jobs and earnings, under-employment, insecurity and safety hazards (Manda and Odhiambo, 2003; and Manda, 2002). Additionally, 60 per cent of the employed youth earned no salary or wages, while over 95 per cent had no access to medical and house allowances. This observation is confirmed by a recent study by Pollin, Githinji and Heintz (2007), which found that a large number of working Kenyans could be categorized as working poor because labour earnings were below the poverty line. Therefore, the issue of creating decent and productive work that generates better incomes and guarantees social protection for the youth needs to take centre stage at the policy level.

With regard to the unemployed, there are two types of unemployment: 'those not working' and 'willing to work' (classified as broadly unemployed) and 'those not working', 'willing to work' and 'taken steps to seek work' (classified as narrowly unemployed). There are authors who contest whether the former should be considered as a form of unemployment (Flinn and Heckman, 1983). However, there are many persons who are willing to work but have withdrawn from the market because they cannot find jobs. This is especially true in developing countries where job search is costly, especially in large rural sectors (Borjas, 2000). There were about 3,000 broadly unemployed youth and 1,700 narrowly unemployed youth, showing that close to 1,500 youth had given up searching for work, otherwise known as 'discouraged workers' (Appendix Table 3). Emphasis on the 'search element' can, therefore, underestimate the magnitude of unemployment problem as it is currently in many developing countries.

The descriptive statistics highlight individual, household and labour characteristics of the youth derived from the KIHBS data. This section gives an in-depth descriptive analysis of the variables used in the econometric analysis. Appendix Table 4 presents summary statistics

of the variables used in the estimation. A sample of 14,090³ youth was analysed. The oldest youth was 30 years, while the youngest was 15 years, with the mean age being 22 years. Out of 12,156 youth, 3,100 (25%) were broadly unemployed. Similarly, out of 10,822 youth, 1,623 (15%) were narrowly unemployed. The highest number of years of schooling was 19 while the lowest was 1. The average years of schooling was 8, meaning that majority of the youth have schooled up to primary level. Majority (64%) of the youth are from the rural areas compared to only 36 per cent from the urban areas. There were 0.91 per cent of the youth physically handicapped in a way that prevents them from working.

Average monthly total household consumption expenditure per capita was used to proxy for household economic level where households were categorized in three levels as: low, middle and high levels. Appendix Table 4 further shows that 30 per cent of the youth come from low socio-economic stratum, 32 per cent from middle stratum, while 37 per cent belong to the highest stratum. About 54.6 per cent of the youth are married. The average household size is 6. Interestingly, the smallest household has 1 member, while the largest has 29, denoting a wide variety in household size among Kenyan households.

In terms of province, most of the youth are from Rift Valley (25.3%), followed by Eastern (18.3%), Nyanza (15.4%), Central (11.7%), Western (10.2%), Coast (9.6%), Nairobi (5.0%) and N. Eastern (4.5%).

4.2 Determinants of Unemployment: Probit Results

The probit analysis identifies key factors associated with youth unemployment, while controlling confounding factors. Two sets of estimations are presented. In the first specification, the study seeks to identify factors associated with unemployment when 'broadly defined' by not controlling for provincial disparities, and then control for provinces. In the second specification, the study identifies factors associated with unemployment when 'narrowly defined' by not controlling for provincial disparities, and then control for provinces. Appendix Table 5 shows that there are no variables used in the estimation that are collinear. Appendix Table 6 summarizes the results of the probit estimation with marginal effects. The results are not very different in both estimations and are

³ The total youth deviates from the total presented in Appendix Table 4 because at the estimation level, we dropped youth who did not provide answers to the several questions that were used to generate the estimation variables.

thus explained using the broad unemployment rate, taking into account provincial dummies.

4.2.1 Individual characteristics

Age

Age and age squared have positive and negative signs, respectively, meaning that the relationship between age, and the probability of being unemployed is non-linear. The interpretation is that the probability of being unemployed increases with age but at a decreasing rate, reflecting an inverted U-shaped profile with age. Specifically, our regression results show that the probability of a youth remaining unemployed increases until age 18. Beyond age 18, the probability starts to decline. This finding is consistent with statistics presented in Table 1.1 which show that unemployment has been consistently high among the youth between 15 and 19 years, after which the rates start to decline. This finding is expected because initial experiences of the youth in the labour market is characterized by low occupational skills and weak sense of duty to support their family (O'Higgins, 1997). But as they grow, they accumulate necessary experience and even capital to either engage in paid or self-employment. Similarly, with time, most of them are obliged to work in order to provide for their families.

Education

The variable education has a positive effect. Youth with primary level of education are found to be more employable compared to their counterparts with secondary and vocational education. Having secondary education increases the probability of being unemployed by close to 7.2 per cent relative to having primary education. Similarly, having a vocational skill increases the probability of being unemployed by close to 2.5 per cent. Comparison of these probabilities also shows that those with vocational skills are more likely to be employed relative to those with secondary education.

The positive effect of education on the probability of being unemployed has been observed elsewhere; Serneels (2007) for Ethiopia. An intriguing question is why the relatively educated young are more likely to be unemployed. Although our dataset does not allow us to give a conclusive answer, previous labour surveys and related studies provide some guidance. A study by Kabubo-Mariara (2003) was able to show that in Kenya, acquisition of extra education increases preferences for

wage employment for both male and female as opposed to non-wage employment. In the 1999 labour force survey, when asked their preferred job, 86 per cent of the youth aspired to work in the wage employment sector (Government of Kenya, 2003b). It is not therefore surprising that youth with higher educational levels have a preference for white collar jobs in the wage employment sector as opposed to the readily available jobs in the agricultural and informal sectors. However, jobs in the wage employment sector require some level of prerequisite knowledge, skills and experience, which most youth do not have, despite high educational attainments (Government of Kenya, 2002). Alternatively, those who fail to get a job that befits their level of education choose to remain unemployed, or even go back to school to accumulate more education.

Gender

There appears to be labour market advantage for male youth compared to their female counterparts. The variable 'female' has positive coefficient and is significant, implying that females are more likely to be unemployed. For instance, controlling other factors, being female increases the probability of being unemployed by close to 11 per cent. Although women today have increasingly achieved educational qualifications equivalent to those of men, they still face low labour force participation than their male counterparts. This can be partly attributed to their gender-related occupational choices. For instance, women spend less time in wage employment and devote more time to household production than their male counterparts. This is well supported by our dataset, which shows that women constituted 96 per cent of the home-makers while only 35 per cent of them participated in the paid employment. The second potential explanation is that women seem to choose occupations that are pursued only through school training (like teaching and administration) and as a result, they benefit less from the advantages of the Kenyan dual economy, which offers numerous manual and blue collar jobs.

Marital status

The study gives a distinction between single and monogamous married youth because the number of divorced, widowed or polygamous persons is small in this age group. With regard to marital status, single youth are found to be more likely unemployed. Being single increases the probability of being unemployed by 2.7 per cent. Generally, we expect those youth who are married to be in much need of work to support their families. As a result, they are more likely to even accept low paying jobs.

Physical handicap

Those with physical handicap are more likely to be unemployed. Having no physical handicap reduces the probability of being unemployed by 12 per cent. This finding supports earlier studies that have found that employers use physical appearance as a screening device (Serneels, 2007). However, the study cautions that the lower participation for youth with physical handicap could be attributed to their lower sample percentages compared to those without physical handicap.

Location

The probability of being employed is higher for rural than urban youth. Being an urban youth increases the probability of being unemployed by 16.6 per cent. Although this finding contradicts past studies (Serneels, 2007; Halchuk, 2001; Ozdemir and Tasci, 2007; and Isengard, 2003), it is not surprising. This is consistent with the findings obtained earlier in the descriptive results, which revealed that majority of the youth are employed in agricultural-based activities, mostly found in rural areas. Empirical studies show that unemployment in Kenya is generally an urban phenomenon (Manda, 2002). Urban areas are increasingly receiving a growing number of educated youth, thereby causing a strain on the number of available jobs. From a policy perspective, this points to the importance of developing rural areas in order to reverse rural-urban migration.

The probit coefficients for provincial controls are interesting and are consistent with what we observed from the descriptive data. Youth from other provinces are more likely to be employed compared to those in Nairobi and North Eastern. Youth from North Eastern Province are the most disadvantaged. The probability of being employed is lower in Nairobi and North Eastern relative to other provinces because these provinces are largely less agricultural. Furthermore, Nairobi being the capital city, attracts majority of the youth from other provinces, causing a strain on the available job openings. Similarly, North Eastern Province has attracted low employment creation opportunities because of being an arid and semi-arid region that is poorly developed (Princeton University, 2006).

4.2.2 Household characteristics

Household income level

Household's economic status is associated with the probability of being unemployed. Compared to youth from low economic status households, youth from middle economic households are less likely to be unemployed by 2.9 per cent. The unemployment probability further increases for those who come from high economic stratum to 7.2 per cent. Onsomu *et al.* (2006) observe that poverty in many households is in form of lack of resources and opportunities. They further note that the overall effect of poverty limits the capacity of households to take their children to school. Therefore, households that are better-off are able to invest in their children's education and health, all of which enhance employability⁴. The second possible explanation is that youth from well-off households have access to good social networks that are likely to enhance their employability. There is a growing body of empirical evidence, for instance Kouakou (2008) for Cote D'Ivoire, which suggest that social capital (other than the human capital) is increasingly becoming an important factor in determining employment outcomes. In this case, youth from well-off families, despite having low educational attainment, can mobilize strong social networks to influence their job placement on the labour market. Equally, most qualified youth who cannot pull enough social capital are most likely to remain unemployed. Thus, any strategies aimed at enhancing youth employability should also consider measures of improving the welfare of poor households.

Household size

The regression results show that household size, represented by the number of members in a household, is positively related to the probability of being unemployed. An increase in the household size by one person is associated with a 0.9 per cent increase in the probability of being unemployed. In a country where majority of the people (46%) live below the poverty line (Government of Kenya, 2007c), this finding is closely related to the finding that relates to household economic status. Large households have fewer resources that limit the youth from accessing schooling and better living conditions.

⁴ In Ethiopia, while controlling for household welfare, Serneels (2007) recently found that health has an impact on employability suggesting part of the effect is through nutrition.

5. Conclusion and Policy Recommendations

5.1 Conclusions

Motivated by the current high level of unemployment especially among the youth and the importance of drawing policy attention to the issue of youth unemployment, this study attempts to explain the nature and determinants of youth unemployment in Kenya. Most of the youth have low educational attainment, and unemployment is concentrated among youth with secondary and vocational skills relative to their primary counterparts. The large numbers of the employed youth are occupied in the informal, agricultural and precarious activities, and they exhibit a hidden underlying unemployment or under-employment. This study shows the significant effects of individual and household characteristics as predictors of youth employment. It particularly shows that the probability of being unemployed is determined by individual variables such as age, gender, location, education as well as household variables such as economic status and household size.

5.2 Strategies for Improving Youth Employment in Kenya

Based on the findings of this study, the following strategies should improve the situation of youth employment in Kenya.

Develop policies to reflect the heterogeneity of the youth

Drawing from the analytical results, it is evident that youth is a social group with different characteristics in terms of age, gender, marital status, education, family conditions, and place of residence, among others. Results further show that their unemployment risks are influenced by these individual and household characteristics. Therefore, policies concerning the youth, including those of employment, should avoid considering them as a homogeneous group but recognize that the youth are a diverse social and demographic group, with different needs, and shaped by different sets of factors in the school-to-work transition process. In particular, the study recommends the need to target policies and programmes aimed at improving the status of the youth. In the estimation results, the study found various categories of youth to be facing a labour market disadvantage and hence should be targeted.

Improve the quality of the youth workforce

Given that majority of the youth have attained low education, there is need to improve the workforce by putting in place policies that will ensure that all youth have access to education. The current free primary education and free day secondary education is a great step towards this end. Results also show that the probability of being employed reduces with attainment of a vocational skill compared to only having secondary education. Hence, emphasis should be focused towards strengthening vocational and technical education. Vocational and technical institutions can absorb the current stock of youth with low educational attainments.

Second, education should be linked to the ‘World of Work’. Low employability among educated youth could be due to their preference for highly competitive jobs in the wage sector. However, most of the educated youth do not have relevant knowledge and experience required for these jobs (Government of Kenya, 2003b). Proposed strategies include: (i) developing ‘Labor Market Information System (LMIS)’; and (ii) undertaking ‘Skills Inventory’ so as to transmit information on labour needs and employment opportunities to training institutions. Similarly, ‘tracer studies’ can be undertaken to track education and training graduates (outputs) into the labour market, while giving feedback for review and improvement of skills development programmes.

Improve the agricultural and informal sector

The large numbers of youth are currently occupied in the informal and agricultural sectors. However, the agricultural and informal sectors are mainly characterized by low quality jobs and earnings, under-employment, insecurity and safety hazards, among other challenges. From a policy perspective, there is need for joint efforts by all stakeholders aimed at creating decent and productive work that can generate better incomes and guarantee social protection for the youth. This can be partly achieved through the development and implementation of policies aimed at improving the informal and agricultural/rural sectors.

Strengthen poverty mitigation measures

The study shows the negative relationship between household economic status and the probability of being unemployed. Hence, strategies aimed at reducing youth unemployment should first address the poverty facing

their households. Strategies should be put in place to ensure that poor households are able to offer better living conditions to their children, all of which have been found to influence employability.

5.3 Suggestions for Further Research

This study has investigated determinants of unemployment among the youth by using variables on the labour supply side. Another main problem about unemployment in Kenya is lack of or slow job creation. As a result, the issue of youth unemployment is also a demand side issue. However, there is no data to capture the demand side of the labour market. In order to come up with meaningful policies aimed at tackling youth unemployment, a further comprehensive study that investigates the effect of demand side variables on youth employability should be done.

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Appendices

Table 1: Population and youth profile

	Frequency	%
Population aged 0 to 14	28,383	42.6
Population aged 15 to 30 in school	14,637	9.2
Population aged 15 to 30 out of school	6,160	22.0
Population aged 31 to 99	17,484	26.2
Total	66,664	100.0
For youth out of school		
Gender		
Male	6,735	46.0
Female	7,902	54.0
Total	14,637	100.0
Location		
Rural	9,327	63.9
Urban	5,262	36.1
	14,589 ⁵	100.0
Highest level of education		
None	8	0.1
Primary	7,837	65.2
Secondary	4,018	33.4
University	150	1.2
	12,013	100.0
Household characteristics		
Average number of household members		6
Average number of household members employed		2
Average number of youth per household		3
Average monthly total household consumption exp. per capita (Ksh)		2,902
Proportion of households accessible to transfers		69

Source: Own computations from KIHBS 2005/06

⁵ This total does not add up to 14,637 because of missing values in the dataset. Some questions were not fully answered. This applies to all other cases presented in the tables.

Table 2: Labour market characteristics of the employed youth

(a) Number of the employed youth	Number	Per cent
<i>What was NAME doing in the last 7 days?</i>		
Worked for pay	2,986	32.33
On leave	40	0.43
Sick Leave	25	0.27
Worked on Own/family business	1,611	17.44
Worked on own/family agricultural holdings	3,607	39.06
Seeking work: have activity to turn to	58	0.63
Doing nothing: have activity to turn to	244	2.64
Homemaker: have activity to turn to	637	6.90
Other: have activity to turn to	27	0.29
Total employed youth	9,235	100
(b) Employment distribution of the employed youth		
<i>If working for the last 7 days, what is NAME status of employment?</i>		
Unpaid family worker	2,983	35.7
Paid employee	2,903	34.7
Own account worker	2,290	27.4
Working employer	118	1.4
Apprentice	62	0.7
(c) Main type of activity of the employed youth		
<i>If working for the last 7 or 12 months days, what is NAME main occupation?</i>		
Subsistence agricultural and fishery worker	1,823	24.51
Crop and animal producers	1,772	23.82
Farm-hands and related laborers	918	12.34
Other sales and service laborers	521	7.00
Cleaners, launderers and domestic workers	467	6.28
Street vendors and related workers	449	6.04
Poultry, dairy and livestock producers	347	4.67
Field crop, vegetable and horticulture	289	3.89
Shop assistants and demonstrators	225	3.03
Tailors, dressmakers and related worker	152	2.04
Construction and maintenance laborers	135	1.82
Hairdressers, barbers, beauticians	118	1.59
Cooks and other catering service worker	116	1.56
Transport laborers and freight handler	106	1.43
Total	7,438	100.00

Source: Own computation from KIHBS 2005/06

Table 3: Labour market characteristics the unemployed youth

Number of the employed youth	Number	Per cent
<i>What was NAME doing in the last 7 days?</i>		
<i>Step 1: Seeking work, doing nothing and home-makers and had no activity to turn to:</i>		
Seeking work: have no activity to turn to	773	18.14
Doing nothing: have no activity to turn to	1,369	32.12
Homemaker: have no activity to turn to	2,082	48.85
Other: have no activity to turn to	38	0.89
Total	4,262	100.00
<i>Step 2: For those (i) seeking work, doing nothing and home-makers and; (ii) had no activity to turn to:</i>		
• <i>Main reason for not working?</i> ⁶		
Looking for work	1,942	55.08
Out of season	250	7.09
Retrenchment/redundancy	25	0.71
Temporary layoff	95	2.69
Business closed	79	2.24
Others	1,135	32.19
Total	3,526	100.00
<i>Step 3: For those (i) seeking work, doing nothing and home-makers; (ii) had no activity to turn to and; (iii) were not working due to 'sickness', 'retirement' and 'not in need of work' and/or 'were too young/old to work'</i>		
• <i>Willing to accept a job?</i>		
Yes (<i>Unemployed broad</i>)	3,029	86.00
No	494	14.00
Total	3,523	100.00
<i>Step 4: For those (i) seeking work, doing nothing and home-makers; (ii) had no activity to turn to; (iii) were not working due to 'sickness', 'retirement' and 'not in need of work' and/or 'were too young/old to work' and ; (iv) were willing to work</i>		
• <i>Taken steps to search for a job?</i>		
Yes (<i>Unemployed narrow</i>)	1,723	48.03
No (<i>Discouraged workers</i>)	1,864	51.97
Total	3,587	100.00

Source: Own computation from KIHBS 2005/06

⁶ Those who were not working due to 'sickness', 'retirement' and 'not in need of work' and/or 'were too young/old to work' not considered as unemployed.

Table 4: Summary statistics

	Obs	Mean	Std Dev	Min	Max
<i>Dependent Variables</i>					
Unemployed (Broad definition)	12,156	0.247	0.432		
Unemployed (Narrow definition)	10,822	0.157	0.363		
<i>Independent Variables</i>					
Primary	11,191	0.604	0.432		
Secondary	11,191	0.248	0.432		
Vocational	11,191	0.141	0.348		
University	11,191	0.007	0.083		
Age	13,551	22.99	4.269	15	30
Age squared	13,551	544.775	196.347	225	900
Female dummy (1=female)	13,551	0.528	0.499		
Male dummy (1=Male)	13,551	0.472	0.499		
Not physically handicapped dummy (1=yes)	13,246	0.009	0.095		
Physically handicapped dummy (1=no)	13,246	0.991	0.438		
Rural dummy (1=rural)	13,507	0.647	0.478		
Urban dummy (1=urban)	13,507	0.353	0.478		
Single dummy (1=single)	13,458	0.448	0.468		
Married dummy (1=married)	13,458	0.552	0.498		
Household size	13,507	6.05	3.177	1	29
Economic status: Low status (1=low)	13,507	0.308	0.328		
Middle status dummy (1=middle)	13,507	0.321	0.467		
High status dummy (1=high)	13,507	0.371	0.483		
Nairobi dummy (1=Central)	13,507	0.046	0.195		
Central dummy (1=Central)	13,507	0.104	0.305		
Coast dummy (1=Coast)	13,507	0.092	0.289		
Eastern dummy (1=Eastern)	13,507	0.188	0.391		
North Eastern dummy (1=Coast)	13,507	0.037	0.19		
Nyanza dummy (1=Nyanza)	13,507	0.156	0.363		
Rift Valley dummy (1=Rift Valley)	13,507	0.258	0.438		
Western dummy (1=Western)	13,507	0.119	0.324		

Source: Computed from KIHBS, 2005/06

Table 5: Correlation matrix

	Unemployed	Education	Age	Age Squared	Gender	Handicap	Location	Quintile	Size
Unemployed	1.0000								
Education	0.0346	1.0000							
Age	-0.1312	0.2277	1.0000						
Age Squared	-0.1338	0.2209	0.9959	1.0000					
Gender	0.1324	-0.0291	0.0009	0.0000	1.0000				
Handicap	-0.0039	0.0093	-0.0135	-0.0144	0.0052	1.0000			
Location	0.1409	0.2470	0.1039	0.0993	0.0256	0.0131	1.0000		
Quintile	-0.0369	0.3003	0.1470	0.1414	0.0302	0.0264	0.4665	1.0000	
Size	0.0864	-0.1225	-0.1803	-0.1760	0.0079	-0.0289	-0.2530	-0.3947	1.0000

Table 6: Determinants of youth unemployment 2005: Probit results (Robust standard errors in parentheses)

	Marginal Effects			
	Broadly defined unemployment		Narrowly defined unemployment	
	Without provincial controls	With provincial controls	Without provincial controls	With provincial controls
Secondary	0.083*** (0.1175)	0.072*** (0.0109)	0.046*** (0.0095)	0.045*** (0.0095)
Vocational	0.048** (0.0153)	0.025** (0.0139)	0.039** (0.0122)	0.030** (0.0120)
University	0.004(0.0615)	-0.003(0.0542)	0.013 (0.0453)	-0.001(0.0452)
Age in years	0.063*** (0.0128)	0.054*** (0.0117)	0.050*** (0.0100)	0.050*** (0.0100)
Age in years squared	-0.002*** (0.0003)	-0.002*** (0.0003)	-0.001*** (0.0002)	-0.001*** (0.0002)
Gender (female)	0.102*** (0.0084)	0.110*** (0.0085)	0.013* (0.0072)	0.018** (0.0072)
Marital Status(Single)	0.027*** (0.0100)	0.027*** (0.0103)	0.064*** (0.0527)	0.059*** (0.0566)
Physically handicap? (1=No)	-0.0926** (0.0552)	-0.120*** (0.0579)	-0.000799	-0.122** (0.0087)
Location (1=Urban)	0.193*** (0.0107)	0.166*** (0.0111)	0.149*** (0.0100)	0.129*** (0.0102)
Household Characteristics				
Family Economic Status : (Comparison=low)	-0.033*** (0.0108)	-0.029** (0.0109)	-0.028** (0.0091)	-0.025** (0.0092)
Middle Economic Status (1=middle)	-0.077*** (0.0123)	-0.072*** (0.0125)	-0.057*** (0.0104)	-0.055*** (0.0105)
High Economic Status (1=high)	0.011*** (0.0014)	0.009*** (0.0015)	0.008*** (0.0012)	0.007*** (0.0012)
Household Size				
Regional Dummies (Comparison=Nairobi Dummy)				
Central Dummy (1=Central)		-0.065*** (0.0182)		-0.030** (0.0152)
Coast Dummy (1=Coast)		0.006 (0.0220)		-0.015(0.0168)
Eastern Dummy (1=Eastern)		-0.058*** (0.0180)		-0.050** (0.0137)
North Eastern Dummy (1=Coast)		0.409*** (0.0484)		0.390*** (0.0529)
Nyanza Dummy (1=Nyanza)		-0.088** (0.0165)		-0.069*** (0.0125)
Rift Valley Dummy (1=Rift Valley)		-0.057*** (0.0177)		-0.035** (0.0144)
Western Dummy (1=Western)		-0.050** (0.0186)		-0.071*** (0.0123)
No. of observations	10191	10191	9215	9215
LR Chi2 Square (p-value)	778.78	948.37	518.59	518.59
Prob > chi2	0	0	0	0
Pseudo R2	0.107	0.109	0.96	0.104

*** 1% significance level, ** 5% significance level, * 10 significance level