

DETERMINANTS OF YOUTH SELF-EMPLOYMENT IN KENYA.

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DECLARATION

This research paper is my original work and has not been presented in any university for award of a degree.

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This research paper is submitted for examination with my approval as the university supervisor:

Signature Date.....

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DEDICATION

I dedicate this work to my dad Isack Sigei, my loving mum Esther Sigei, and my siblings: Jared, Collins, Ninet and Naomi and friend Judith for their immense support, love and prayers and constructive criticism. They are a blessing.

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ABSTRACT

Kenya like many other developing countries faces high unemployment rates. The youth are the most affected by the high unemployment especially in Kenya. Various policy interventions have been put in place to create enabling environment for employment creation in Kenya for example the youth enterprise development and uwezo fund. Self-employment is argued to have a high employment creation potential. However, socio-economic and individual determinants of self-employment in Kenya are not clear. The study sought to: first, empirically examine the relationship between self-employment and socio-economic characteristics among the youth in Kenya. Secondly, it sought to examine differences in the characteristics of young men and women in self-employment in Kenya. Using Kenya Integrated Household Budget Survey data for the 2005/2006 we estimate a binary probit model and apply the non-linear decomposition technique so as to establish the male-female gap in self-employment. The results show that education plays a significant role in determining whether one engages in self-employment or wage employment. Access to electricity and piped water also was established to play a significant. Other factors like gender, area of residence, property ownership and age were also found to affect self-employment. Decomposition results revealed that residence, and access to electricity positively contributes to the differential with respect to youth self-employment status while marital status, vocational training, health status and access to piped water contribute negatively to the differential with respect to youth self-employment status.

CHAPTER ONE:

INTRODUCTION.

1.1 Background of the study

According to the International Labour Organization (ILO), a person of working age (15 or over) is counted as unemployed under three conditions simultaneously (ILO, 1982). First, the person has not worked for one hour or more during the survey reference week. Second, the person should be ready to take up work in the period not exceeding two weeks if work is available. Third, the person should have actively searched for a job in the previous month or has found one starting within the next three months.

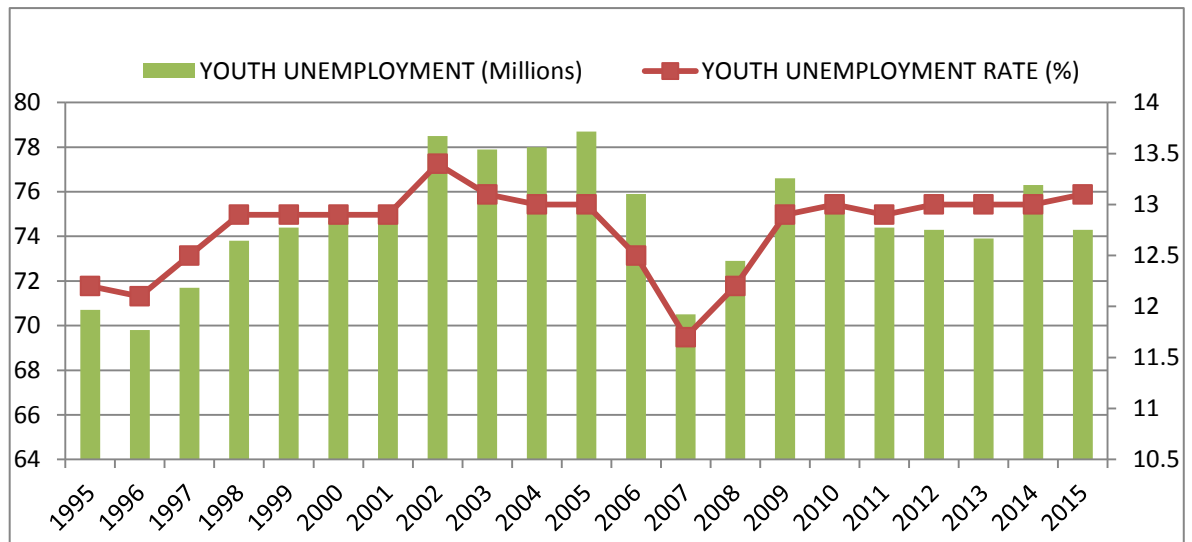
Unemployment among the youth, defined as persons aged (15-35), is a matter of great concern in labour markets across the world. This is because unemployment may have a negative impact on future labour market outcomes. This can be through earning less in subsequent earnings, loss of skills through general human capital depreciation and individuals lowering their reservation wage because of variations in jobs offer arrival rate and constraints in liquidity (Amynah et al., 2007).

Figure 1 show global youth unemployment between 1995 and 2015. The youth employment rose relatively steadily between 1996 and 2001 before a sharp increase in 2002 this could be as a result of slow global economic growth. The trend remained high up to 2005 then started falling in 2006 to its lowest level in 2007; this could be because of the increase in schooling in secondary and tertiary education by the youth (ILO, 2015).

There was a sharp increase in youth unemployment between 2008 and 2010; this coincides with the financial crisis of 2008-2009. The trend then remained relatively flat

from 2010 to 2015 as the world recovered from the financial crisis of 2008-2009. Although the youth unemployment rate has increased slowly since 2010, it resulted in seventy four million unemployed youths in 2015.

Figure 1: Global youth unemployment 1995-2015



Source: Author based on ILO (2015) data.

Africa has a youthful population as compared to other regions in the world. The young in Africa (aged 15 -24) constitute over 20% of the world population while 50% of Africa’s population is not more than 25 years old in terms of age (ILO 2013). According to ILO (2013) youth (aged 15-25) make up 36% of the total working-age population. Sub Saharan Africa youth face high unemployment; 60% of the unemployed in Africa’s are youths (ILO, 2013). Demographic challenges exist in sub Saharan Africa, as its population increase yet access to jobs is problematic (AERC, 2013). Despite the 6 % annual growth rates in the economy in sub-Saharan Africa, the growth in employment opportunities for the youth has not been sufficient to absorb the unemployed youth (ILO, 2012).

1.2 Youth in Kenya's labour market

Available statistics indicate that Kenya's population is youthful. The young (below 35 years) make up about 80% of the total population, while those aged between 15 to 35 years account for about 37% of the total population (KIPPRA, 2013). Table 1 shows that youth working age population (excluding full time students) increased from 61.42% in 1998/99 to 66.29% in 2005/06. The youth aged 15-19 years have the highest proportion while those aged 30-34 have the lowest proportion amongst the youth.

Table 1: Distribution of working Age Population 1998/1999 and 2005/2006

Age cohort	Total Working age population	
	1998/99	2005/06
15-19	21.75	23.29
20-24	15.41	17.61
25-29	12.82	14.18
30-34	11.44	11.20
Total (15-34)	61.42	66.29
35-39	11.08	8.86
40-44	8.23	7.77
45-49	7.21	6.14
50-54	5.35	4.65
55-59	3.54	3.74
60-64	3.17	2.73

Source: KNBS (1999) and KNBS (2008)

Youth unemployment in Kenya is a major problem. According to the Kenya National Bureau of Statistics (2008), the youth unemployment rate is higher than the overall unemployment rate. Table 2 shows that in 2005/2006 youth unemployment was 20.2% compared with overall unemployment of 12.7%. The unemployment rate is highest

amongst the youths of the ages 20-24 and lowest for those between 30 - 34 years. The statistics also show that unemployment rates in 2005/2006 are higher than 1998/1999.

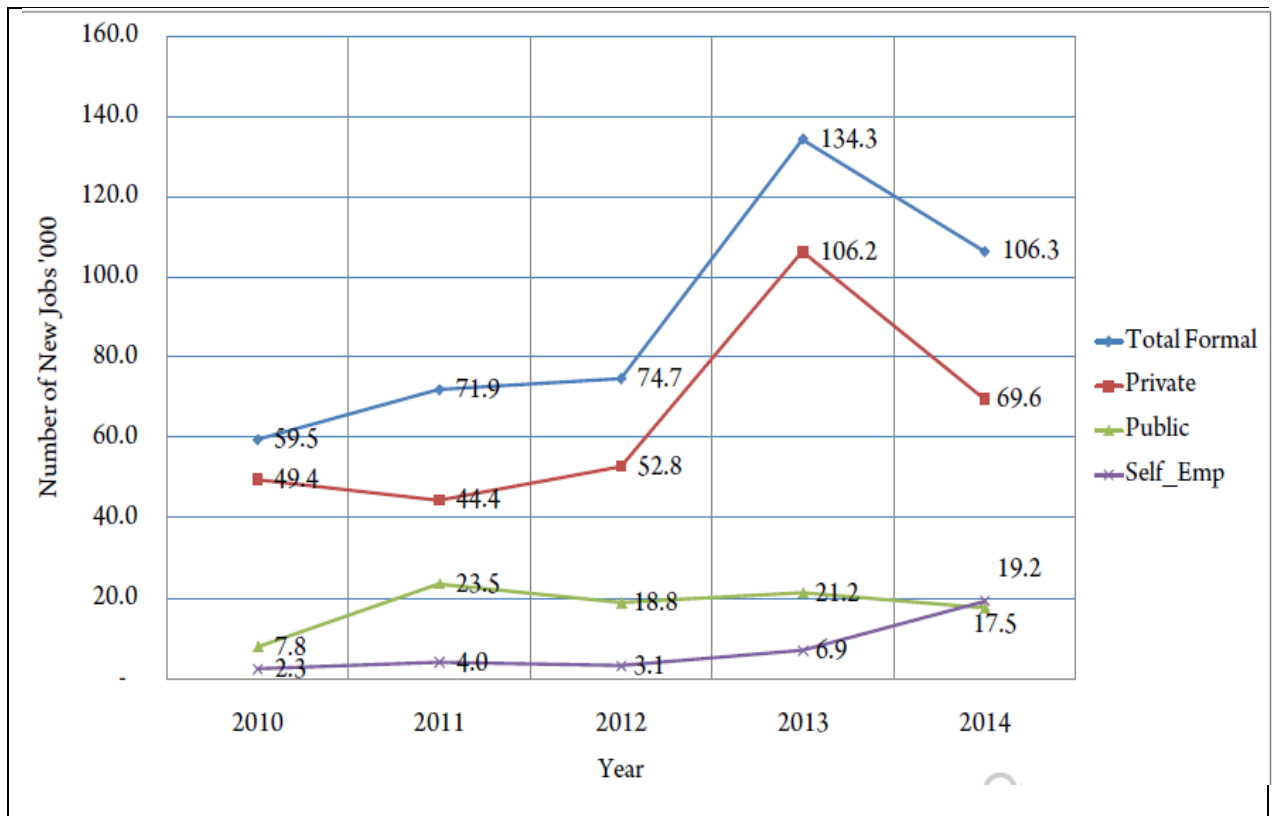
Table 2: Unemployment Rates in Kenya by Age and Sex (1998/1999 and 2005/2006):

Age (years)	1998/99			2005/06		
	Total	Males	Females	Total	Males	Females
15 – 19	24.3	21.8	26.4	19	19.2	18.8
20 – 24	27.1	19	33.9	32.6	31.1	33.8
25 – 29	15.5	8.2	21.6	20.9	20.2	21.5
30 – 34	10.8	4.8	16.8	8.3	8.1	8.5
Av	19.4	13.4	24.7	20.2	19.7	20.7
35 – 39	8.4	5	11.8	6.6	6.6	6.6
40 – 44	9.1	7.8	10.6	5	5.6	4.5
45 – 49	8.2	4.9	12.5	3.5	3.5	3.5
50 – 54	8.7	6.3	11.1	2.1	2.6	1.7
55 – 59	13.5	14.2	12.7	1.4	2	0.9
60 – 64	11.7	7.5	15.7	0.6	1.1	0.2
Av	14.6	9.8	19.3	12.7	11.2	14.3

Source: KNBS (2003 and 2008)

Although trend in creation of new jobs has been increasing for the past five years (2010 to 2015), it has failed to keep pace with the increase in Kenya's labour force. Figure 2 shows that overall employment increased in public and the private wage sector and also in self-employment. Self-employment according to Parker (2004) is defined as persons who earn neither a wage nor a salary but earn their income through exercising their professional and/or business on their own account and at their own risk. The trend was reversed in 2014 for public and the private sectors but self-employment continued the upward trend. The youths stand to benefit more from the new jobs being created as they are the most affected by unemployment.

Figure 2: Public, Private and Self -Employment 2010 – 2014.



Source: KNBS (2015)

1.3 Youth policies in Kenya

The Kenya government has developed policies to create a favorable environment for both public and private sector to contribute to economic growth and job creation. The Kenya constitution enacted in 2010, vision 2030 (GoK, 2007) and other sectorial policies focus on population groups such as the youth, children, women, and persons with disabilities. The youth attract attention because of their large numbers and their potential in development and other transformational processes in the society.

The government of Kenya youth policies focuses on youth and aim at helping the youth overcome financial, skill, equity and gender or disability constraints. More than one million youths enter the labour market annually having no skills as a result of dropping

out of school or never attending school at all (Harry, 2014). In addition, there is mismatch between the required skills in the labour market and what is taught in school such that the skills acquired in school do not meet the expectation of employers (Harry, 2014; David, 2012). To counter this problem the government of Kenya came up with policies that encourage the youth to acquire the necessary skills and provide them with financial assistance to complete school. This was done through the provision of free primary education (GoK, 2004), the Kenya national youth policy (GoK, 2006) and increasing equity in education and access through putting up a Technical and Vocational Education and Training (TVET) centre in every district (GoK, 2012).

Interventions aimed at tackling financial constraints that the youths face has been implemented. The government of Kenya set up the Youth Enterprise Development Fund (YEDF) to focus on enterprise development as a way to empower the youth economically and therefore contribute to Kenya's economic growth (GoK, 2006). In addition to start-up capital, the YEDF fosters linkages in the supply chain and ensures the existence of business development services and also a market for products of the youth.

In addition to YEDF, Uwezo fund was set up with two key objectives (GoK, 2015). First, to provide, expand financial availability and accessibility for the youth, women and persons with disability. Second is to offer mentorship through capacity building program. This was meant to enable youth to make use of the 30% procurement preference given to the youth, women and persons with disability by the government through business opportunities.

1.4 Statement of the Problem

Youth unemployment in Kenya is a major concern for policy makers and other stakeholders (GoK, 2013; Gordon, 2015). This is because, with the high youth unemployment, youths are idle and may end up engaging in criminal activities. The economy also misses out on the youth's contribution towards social, economic and political goals because of high youth unemployment (GoK, 2013).

Previous studies suggest that youth unemployment in developing countries could be reduced through self-employment (Garry, 2013, Wamuyu, 2010). It is also argued that self-employment has a high capacity of generating employment opportunities (Onwumere et al, 2011). However, studies of youth labour market activity in Kenya have focused on determinants of unemployment (Veronica et al., 2013; Wamuthenya 2010) and labour force participation (David, 2012; Harry 2014). It is not clear what factors determine youth self-employment in Kenya and whether the factors are the same for both young men and young women. Therefore, this study seeks to answer the following questions with regard to youth self-employment. What factors predict the probability of youth self-employment in Kenya? Are there differences between young men and young women with respect to the predictors of youth self-employment in Kenya?

1.5 Objectives of the Study

The main objective of this study is to examine the determinants of self-employment among the youth in Kenya.

The specific objectives of the study include:

- To empirically examine the relationship between self-employment and socio-economic characteristics among the youth in Kenya.

- To examine differences in the characteristics of young men and women in self-employment in Kenya.
- To draw implications from the study of results.

1.6 Justification of the Study

Young persons (below 35 years) are an important demographic group in Kenya, comprising about 80% of the population (KIPPRA, 2013). There are more youth in the working age population than any other age cohort, in 2005/2006; youth in the labor force was 66.29% of the total labor force (KNBS, 2008). Those aged between 15-35 years make up about 37% of total population (KIPPRA, 2013). The growth in the Economy growth has not led to creation of enough employment opportunities to absorb youth entering the labour force. About 500,000 youth enter the labour market annually and only about 25% of these get the opportunity to be absorbed, 75% of these youths are left out and therefore remain unemployed (GoK 2006). It is therefore crucial to understand the labour market behavior of the youth since they constitute a larger proportion of the labor force.

Unemployment among the youth is relatively high. Youth unemployment rate has always been above total unemployment rate, for instance the youth unemployment rate was 20% as while the overall unemployment was 12.7% in 2005/2006 (KNBS, 2008). Self-employment plays a significant part in of employment in Kenya (Garry, 2013) and therefore there is need to clearly understand the drivers of self-employment in Kenya and especially among youths. The knowledge of these drivers is a critical pre-requisite to guide the policy makers on the policies aimed at supporting the youth into self-employment (Nadia, 2013).

The study will add to the literature on self-employment by providing information that is currently lacking from the literature on youth labour market activity in Kenya. It will provide empirical evidence on relationship that exists between self-employment and socio-economic characteristics among youth in Kenya. In addition, it will provide empirical evidence on differences in characteristics of young men and women in self-employment in Kenya.

This study will also act as a basis for further research. The factors that emerge as drivers of self-employment in this study can be examined further in future research. For instance if vocational training significantly influences chances of self-employment, future research could examine demand and supply of vocational training.

1.7 Organization of the study

Chapter two reviews the theoretical and empirical literature on youth self-employment and chapter three provides the methodology of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The study examines the factors that determine youth self-employment decisions. This chapter reviews the literature on self-employment with a focus on the drivers of youth self-employment. Section 2.2 reviews the theoretical literature on occupational choice with a focus on self-employment. Section 2.3 reviews empirical literature whereas section 2.4 looks at the overview of the literature.

2.2 Theoretical Literature

Human capital, a measure of the economic value of an employee's skill set is one of the many factors that influence self-employment. Human capital come in different forms, this includes but not limited to education, training and health of individuals. Human capital theory emphasizes the role of going to school and training in tackling unemployment. Education and training improve the productive capacity of a population Becker (1964) and thus individual earnings increase as a result of education and training. The theory predicts that the educated individuals are more productive and hence more likely to be employed; this is because employers want to hire high productivity workers than low productivity workers. The theory also predicts that the educated self-employed workers are expected to perform better in their businesses than their uneducated counter parts because education and training increase their productivity.

In the Lucas (1978) model, individuals possess different levels of entrepreneurial capabilities. Individuals with high entrepreneurial capabilities choose to be entrepreneurs while those with low entrepreneurial capabilities become workers. The

model also predicts that firm size and entrepreneurial capacity are positively related. Individuals with high entrepreneurial capabilities have a higher probability to engage in self-employment unlike those with low entrepreneurial capabilities.

An individual's wealth also influences chances of self-employment. Wealthy individuals have a higher chance to take up self-employment than poor individuals (Banerjee and Newsman, 1993). Wealthy agents become self-employed while poor agents choose to be workers. The agents that are neither rich nor poor, that is, those that are in the middle class choose to be self-employed. This is because they can access loans given that they own something that can act as collateral.

Risk-aversion is another factor that influences self-employment. Risk aversion is the tendency of individuals when faced with uncertainty, to try to minimize that uncertainty. Risk-averse individuals are reluctant to give in to a bargain with an uncertain payoff rather than to a bargain that is more certain, even if expected payoff is lower. Individuals that are risk averse have a lower probability of engaging in self-employment (Kihlstrom, 1979). The risks associated with self-employment are not only financial risks but also risks to career opportunities, family relations and personal well-being. According to Kihlstrom (1979) individuals that are less risk-averse prefer to be entrepreneurs and operate firms that face high-risks unlike those who are more risk averse and prefer to work for a riskless wage. The model assumes free entry for firms. Low risk aversion positively affects the probability of entering self-employment hence young people that are tolerant towards risks have higher chances of engaging in self-employment (Ahn, 2010).

2.3 Empirical studies

Previous studies consider the link between the probability of self-employment and different dimensions of human capital. Some studies find negative relationship between education attainment and youth self-employment (for example Nabamita, 2014; Sharma et al., 2014; Onwumere et al., 2011; Nikolova et al., 2010; Roberta et al., 2004; Clainos, 2013; Thrang et al., 2008; Ishaque et al., 2014). Other studies find positive relationship between education and youth self-employment, (e.g. Blanchflower, 2004; Rees and Shah, 1986; Wiklund and Hellerstedt, 2004) found that as education increases the probability of one engaging in self-employment also increases. The positive relation between education and self-employment can be attributed to the increase in awareness and therefore the capacity to identify self-employment opportunities. Education also increases the managerial capability which is needed in self-employment so as to increase the chances of being successful (Nadia et al., 2013; Wiklund and Hellerstedt 2004). On the other hand, education increases the chances of one being in wage employment and therefore can negatively affect the relationship between education and self-employment (Clainos 2013; Thrang et al., 2008, Ishaque et al., 2014).

The effect of education on self-employment can be non-linear. Poschke (2013), Gindling et al., (2014), found a U-shaped interaction between the self-employment rate and the education level of an individual. An increase in education attainment is results in a decline in the chances of one engaging in self-employment among the youth up to some level where an increase in education attainment results in an increase in probability self-employment among the youth.

Work experience is another dimension of human capital that influences self-employment. Individuals who have been in wage employment for a long period of time have a lower chance of engaging in self-employment as they experience higher opportunity cost of shifting from wage employment to self-employment (Sharma et al., 2014; Nadia et al., 2013). On the other hand, some studies find that experience gained in wage employment increases the probability of one engaging in self-employment (Nikolova et al., 2010; Klepper and Sleeper, 2005; Dobrev and Barnett, 2005; Lazear, 2005). Klepper and Sleeper, (2005) found that individuals tend to start businesses that are similar to those in the industry in which they were previously employed i.e. in areas where they have experience.

Studies have also found that health status of an individual also influences self-employment. There exist mixed results on the role of individual's health on occupational choice. An individual can engage in self-employment other than remain unemployed as a result of one failing to secure a job on account of their poor health (Nikolova et al., 2010). On the other hand an individual may want to remain in wage-employment other than go for self-employment because of the health insurance benefits they receive while being in wage employment (Nikolova et al., 2010; Rees and Shah, 1986; Blanchflower and Oswald, 1998).

Self-employment can also be influenced by financial barriers. Edward (2000), Evans and Leighton (1989), Jing (2008) and Yannis (2005) found that those from wealthy families have a higher probability to be self-employment than those from families that are not wealthy. Individuals who receive a windfall and/or inheritance are more likely to be self-employed than those who do not (Lindh and Ohlsson, 1996; Ozcan 2011; Blanchflower and Oswald, 1998). Wealthier individuals have low risk aversion than the

less wealthy, therefore can take up self-employment easily because more wealth means more collateral to get a start-up loan (Ozcan 2011). In contrast, Hurst and Lusardi (2004) do not find any significant effect of financial constraints on self-employment. Financial constraints according to Hurst and Lusardi (2004) does not prevent one from starting a business but only limits the size of a business individual starts.

Several studies have found earnings differentials for individuals in self-employment and those in wage employment to influence self-employment (Thrang et al., 2008; Hamilton, 2000; Mats, 2006). The difference in predicted earnings in wage-employment and self-employment may push individuals towards self-employment or wage employment. Low earnings in the wage sector may push individuals to self-employment (Mats, 2006). According to Thrang et al., (2008) relationship between predicted earnings and self-employment is positive, this occurs for males because males tend to benefit more when they engage in self-employment than when in wage employment and the opposite happens for the females such that a negative relationship exists between predicted earnings and self-employment because females tend to earn less from the wage sector.

Several demographic variables may influence probability of self-employment. There are contradicting findings on the influence of one's age on self-employment. Some studies find the relationship to be positive (Faggio et al., 2014; Chlosta, 2012; Clainos 2013; Thrang et al., 2008; Mats, 2006; Blanchflower, 2004; Destre, 2003). Such a relationship can be because an individual accumulates social capital (e.g. contacts) and experience that can facilitate the success of the investment in self-employment (Nadia et al., 2013).

On the other hand, some studies find the relationship between age and chance of self-employment to be negative (e.g. Onwumere et al., 2011; Hintermaier and Steinberger, 2005). The young tend to be less risk averse, have more time to recover the initial investment and they also possess the physical and mental strength required unlike the old, and therefore are willing and can take risks by investing in self-employment (Hintermaier and Steinberger, 2005).

Marital status also affects self-employment. Married individuals have more likely to engage in self-employment (Ozcan, 2011; Nadia et al., 2013). This can be attributed to the possibility of the couple or the married individuals working together, economical and emotional support (Nadia et al., 2013). Married couples are more likely to engage in self-employment because of skill-spillover between partners, that is, if the man is self-employed then the chances of the other partner being self-employed increases (Ozcan, 2011). Women participate in self-employment more when they are married than when they are not. Married men are deemed to be risk takers and can therefore take a risk in self-employment because they have family support. Some studies however, find marital status not have an effect on the males with respect to self-employment (e.g. Thrang et al., 2008; Rees and Shah 1986).

Gender also influences probability of self-employment. Some empirical studies show that men engage in self-employment more than women, (Burton et al, 2016; Giulia et al., 2014; Ozcan, 2011; Roberta et al., 2004; Peprah et al., 2015; Nadia et al., 2013, 2013; Nikolova et al., 2010 and Blanchflower, 2004). This can be because of gender differences in levels of risk aversion and level of satisfaction in different occupations (Peprah et al., 2015). According to Yannis et al. (2004), men tend to move to self-employment at higher rates than women for a given level of wealth. Other studies show

that women have high probability than men to be self-employed. High flexibility that is present in self-employment allows one to combine work and other household responsibility (Pernilla et al. 2008). Therefore since women are more engaged in household chores than their male counterparts; they are inclined to self-employment than wage employment.

An individual's area of residence also influences self-employment. A higher level of self-employment is experienced in urban areas (Giulia et al., 2014; Jagannadha, 2009). These can be attributed to the push effects experienced in the urban locations. Low employment opportunities and low wages in the urban areas push workers to self-employment. On the other hand, rural workers have very few better alternatives and therefore engage in self-employment. Individuals in the rural areas are more tolerant to deteriorating labour market conditions so that as labour market conditions go from bad to worse they are not deterred from self-employment (Giulia et al., 2014).

Family background and the occupation of an individual's parents also influence probability of self-employment. Individuals from families where the father, mother or both or any other close relative have ever engaged in self-employed are likely to engage in self-employed (Chlosta, 2012; Nikolova et al., 2010; Dunn et al., 2000). This is probably because parents may provide self-employment guidance, inspiration, and motivation to their children (Chlosta, 2012). The individual also benefits from the business networks their family members have created and therefore can enter self-employment with ease. Chlosta (2012) found that both fathers and mothers have similar influence on the occupational decisions of the siblings, Dunn and Holtz (2000) found that Fathers who are engaged in self-employment have strong effects on the son's self-employment decision while mothers have little influence. Ozcan (2011) found that a

father's have no effect on the female offspring's self-employment decision but only on the male offspring.

The degree of individual risk aversion is another factor that affects self-employment. Various studies show a negative effect of high risk aversion on probability of engaging in self-employment (Raffiee, 2014; Onwumere et al., 2011; Nadia et al., 2013; Rees and Shah 1986; Lindh and Ohlsson, 1996). Self-employment is considered to be more risky than wage employment and therefore individuals that are risk averse mostly take up wage employment while those that are less risk averse engage in self-employment. Men tend to take risk than women and therefore engage more in self-employment than their female counterparts (Pernilla, 2008).

Different estimation techniques have been employed to estimate the effect of different variables on self-employment. The probit model is used in various studies (Peprah et al., 2015; Nabamita et al., 2014; Nikolova et al., 2010). The Heckman method is used by Thrang et al., (2008) to determine the factors that influence the workers' choice between self-employment and wage employment. The binary logistic method was also employed by various authors (e.g. Ishaque et al., 2014; Destre, 2003) to identify the effect of various variables on self-employment. Destre, (2003) also estimates multinomial logit model to distinguish the transitions to self-employment with and without employees for different self-employed individuals. The multinomial logit model is also used to estimate the determinants of self-employment by Ozcan (2011).

2.4 Overview of the literature

The occupational choice models are based on utility maximization where individuals choose an occupation where he/she derives maximum utility. The models postulate that, individuals engage in optimal utility maximizing occupations given their

entrepreneurial capabilities (Lucas 1978), their level of risk aversion (Kihlstrom 1979), and their level of wealth ownership (Banerjee 1993).

The empirical studies on self-employment show that there are many factors that determine the probability of self-employment. From these studies, self-employment depends on socio-demographic make-up and human and social capital, job properties, and labor market experiences, household and the area of location characteristics. While various studies have examined the determinants of self-employment (Gindling et al., 2014; Roberta, 2004; Poschke, 2013) the studies have not targeted the youth. This study extends the literature through examining the relationship between self-employment and socio-economic characteristics among the youth in Kenya and by examining differences in the characteristics of young men and women in self-employment in Kenya.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methods and procedures used in analyzing youth self-employment in Kenya. Section 3.1 presents the analytical framework, section 3.2 presents the probit model, section 3.3 presents decomposition method and 3.4 presents the definition of variables and section 3.5 gives the data source.

3.1 Analytical framework

Assume an individual youth may engage in either self-employment or wage employment. Utility derived from either state can be in terms of income or non-pecuniary benefits (Caliendo et al., 2009).

Let individual utility function be $u(j, y_j, s)$ with states j (state 1 is self-employment; state 0 = wage employment). Given state-dependent pecuniary and non-pecuniary benefits y and vector of individual characteristics s , an individual is in self-employment if

$$[u(1, y_1; s)] \geq [u(0, y_0; s)] \dots \dots \dots 1$$

The utility in state 1 or state 0 is a random variable which can be expressed as follows:

$$u(j, y_j; s) = v(j, y_j; s) + \varepsilon_j \text{ for } j = 0, 1 \dots \dots \dots 2$$

Where ε_j is an independent and identically distributed random variable with mean of zero. The model then follows random utility model put forward by Hanemann (1982). Equation 1 is then re-written using equation 2 to show that an individual becomes self-employed ($j = 1$) if the condition in equation 3 holds:

$$v(1, y_1; s) + \varepsilon_1 \geq v(0, y_0; s) + \varepsilon_0 \dots \dots \dots 3.$$

Therefore, since an individual R will engage in self-employment only if equation 3 holds then a model with probabilities defined as follows can be estimated:

$$y_j = \begin{cases} P_1 \{if R is self employed\} = \Pr\{v(1, y_1; s) + \varepsilon_1 \geq v(0, y_0; s) + \varepsilon_0\} \\ P_0 \{if R is wage employed\} = 1 - P_1 \end{cases} \dots \dots \dots 4$$

Defining $\mu = \varepsilon_1 - \varepsilon_0$ and letting $F_\mu(\cdot)$ be the cumulative distribution function of μ .

Probability that one is engaging in self-employment is $P_1 = F_\mu(\Delta v)$

Where,

$$\Delta v \equiv v(0, y; s) - v(1; y; s)$$

$F_\mu(\cdot)$, is standard normal c.d.f

The probability P_1 is estimated using probit. Probit regressions for self-employment are estimated for males only then for females only and finally for both males and females pooled. These estimates are used for decomposition of the gender differences in self-employment.

3.2 Probit Model

The study uses probit model to model self-employment decision among the youth in Kenya. The model of self-employment is.

$$\begin{aligned} Y_i^* = & \beta_0 + \beta_1 \text{Sex} + \beta_2 \text{Age} + \beta_3 \text{Age}^2 + \beta_4 \text{primary} + \beta_5 \text{secondary} \\ & + \beta_6 \text{secondary plus} + \beta_7 \text{marital status} + \beta_8 \text{area of residence} \\ & + \beta_9 \text{land} + \beta_{10} \text{livestock} + \beta_{11} \text{family back ground} + \beta_{12} \text{health status} \\ & + \beta_{13} \text{water} + \beta_{14} \text{electricity} + \beta_{15} \text{vocational training} \\ & + \varepsilon \dots \dots \dots 5 \end{aligned}$$

Where

Y_i^* denotes a latent variable that measures an individual's propensity to engage in self-employment. It is assumed to be a linear function of individual, household and regional characteristics. β_i are the parameters to be estimated and ε is the error term. A youth is observed as self-employed $Y_i^*=1$ or wage-employed $Y_i^*=0$.

$Y_i=1$ if $Y_i^*>0$ if the individual is self-employed.
 $Y_i=0$ if $Y_i^* \leq 0$ if the individual is wage-employed.

The maximum likelihood estimation (MLE) is employed to estimate the equation. The probit model is used because the dependent variable is dichotomous and satisfies the maximum likelihood estimation technique assumptions.

3.3 Decomposition Method

To examine differences in characteristics of youth both male and female in self-employment in Kenya, decomposition method is used. Following Fairlie (2006), the decomposition for nonlinear equation, say $Y = F(S\beta)$, can be as follows

$$\bar{Y}^m - \bar{Y}^f = \left[\sum_{i=1}^{N^m} \frac{F(S_i^m \beta^m)}{N^m} - \sum_{i=1}^{N^f} \frac{F(S_i^f \beta^f)}{N^f} \right] + \left[\sum_{i=1}^{N^f} \frac{F(S_i^f \beta^f)}{N^f} - \sum_{i=1}^{N^m} \frac{F(S_i^m \beta^m)}{N^m} \right] \dots\dots\dots 6$$

Where N^j is the sample size, \bar{Y}^j is the average probability of the outcome variable, S_i^j is a row vector of independent variables of observation i and β^j is a vector of coefficient estimates. The first term in brackets represents the gender gap that is as a result of differences in distributions of S , and the second term represents the differences in the group processes determining engagement in Y . The second term also captures a section of the gender gap caused by group differences in un-measurable or unobserved variable.

To estimate the contribution of every variable differences in gender, we assume that $N_m = N_f$ and that there is a one-to-one matching of male and female observations. Using coefficient estimates from a probit regression for a pooled sample $\hat{\beta}^*$, the independent contribution of S_1 to gender difference is expressed as:

$$\frac{1}{N_f} \sum_{i=1}^{N_f} F(\hat{\alpha}^* + S_{1i}^m \hat{\beta}_1^* + S_{2i}^m \hat{\beta}_2^*) - F(\hat{\alpha}^* + S_{1i}^f \hat{\beta}_1^* + S_{2i}^m \hat{\beta}_2^*) \dots \dots \dots 7$$

Contribution of S_2 can also be expressed as:

$$\frac{1}{N_f} \sum_{i=1}^{N_f} F(\hat{\alpha}^* + S_{1i}^f \hat{\beta}_1^* + S_{2i}^m \hat{\beta}_2^*) - F(\hat{\alpha}^* + S_{1i}^f \hat{\beta}_1^* + S_{2i}^f \hat{\beta}_2^*) \dots \dots \dots 8$$

The contribution of every variable to gender difference is therefore equal to change in the average predicted probability from replacing the female distribution with the male distribution of that variable while holding the distributions of the other variable constant.

3.4 Definition of variables

The dependent variable for estimating equation 5 is Y_i^* following (Peprah et al., 2015; Nabamita et al., 2014; Nikolova et al., 2010) takes two categories, it takes the value of one if a youth is self-employed and zero if the youth is in wage employment.

Sex of youth: This is measured as a dummy variable with value 1 if one is male and 0 otherwise. The effect of the sex of the youth on self-employment is expected to have mixed results. This is because there is a high level of flexibility in self-employment, this high flexibility allows one to combine work and other household responsibility and therefore, since women are more engaged in household chores than their male counterparts, they are more enticed to be self-employed than to be in wage employment

(Pernilla et al., 2008). More so, women are more likely to join self-employment because of their lifestyle and family considerations, unlike men who will join because of financial matters (Christopher et al., 2009). On the other hand, male youths are more probable to be self-employed than their young female counterparts because of gender differences with respect to levels of risk aversion (Peprah et al., 2015).

Age: This is measured by the number of years one has. Age of an individual is expected have mixed effects on self-employment. As one grows older, he/she accumulates more capital and experience that is needed for the transition into self-employment. The capital in terms of social capital and wide range network of contacts that can facilitate the success of the investment in self-employment, (Faggio et al., 2014; Chlosta 2012; Thrang et al., 2008); Destre, 2003; Clainos 2013; Blanchflower 2004). On the other hand, the young tend to be less risk-averse and possess the being self-employed (Hintermaier and Steinberger, 2005). We introduce the square of age to cater for non-linearity effect of age on the probability of an individual engaging in self-employment.

Education of youth: This is measured as a dummy variable with 1 if one has no education and 0 otherwise, 1 if one has primary education and 0 otherwise, 1 if one has secondary education and 0 otherwise, and 1 if one has tertiary education and 0 otherwise. Education of the youth is expected to have mixed effects self-employment because it increases ones probability of being in wage employment for some (Roberta et al., 2004; Clainos 2013; Thrang et al., 2008, Ishaque et al 2014). It also increases an individual's productivity and therefore the chances of one being wage employed other than being in self-employment (Becker, 1964). Probability of being in self-employment is also increased by schooling for some individuals (Blanchflower 2004; Rees and Shah 1986; Wiklund and Hellerstedt 2004) this is because educated individuals increase their

capacity to identify self-employment opportunities as they pursue education and possess better managerial abilities.

Vocational training: This is measured as a dummy variable with 1 if one has gone for vocational training and 0 if otherwise. Vocational training is expected to have a positive effect on self-employment since it improves skills of individuals and also increases his or her productivity (GoK, 2012).

Marital status: This is measured as a dummy with 1 if one is married and 0 otherwise. The probability of married youths to engage in self-employment is expected to be higher than that of unmarried youth, (Ozcan 2011; Nadia et al., 2013). This can be attributed to possibility of working together and stronger emotional support from the spouse (Nadia et al., 2013).

Area of residence: The districts are coded and added to the sample by matching district codes. The variable is added to find the effects of district economic conditions on the probability of an individual deciding to be self-employed. It is expected that youths in rural areas have a higher chance self-employment. Individuals in the rural areas are more tolerant to deteriorating labour market conditions so that as labour market conditions turn from bad to worse they are not deterred from engaging in self-employment, unlike urban workers who are deterred from self-employment. In addition, rural workers lack better alternatives other than self-employment (Giulia et al., 2014).

Family background: This is measured as a dummy variable with 1 if one has a parent who is self-employed and 0 if otherwise. Individuals who come from families where the father, mother or both engage in self-employment are highly probable to go for self-employment (Duhn et al., 2000; Chlost 2012). Therefore the presence of parents

engaging in self-employment increases the probability of self-employment for the children. This can be because children get access to key resources (human and financial capital) from the parents.

Health status: This is measured as a dummy with value 1 if one faces any form of illness and value 0 otherwise. The health status of an individual if poor is expected to have mixed results. It can increase the probability of self-employment because self-employment is more flexible in terms of working hours, the kind of work and the location (Pernilla et al., 2008). On the other hand, an individual may be deterred from resigning from wage employment and become self-employed because of the health insurance they benefit from being in wage employment (Nikolova et al., 2010).

Access to water and electricity: These measures the influence accessibility to water and electricity has on self-employment. These are measured as a dummy with 1 if one has access to electricity on 0 if otherwise, 1 if one has access to piped water and 0 if otherwise. Accessibility to infrastructure for instance electricity and water are expected to affect self-employment positively (Taryn 2011).

Wealth: This measures effect of wealth ownership on likelihood of self-employment. Since direct measure of an individual's wealth is unavailable, the study will use ownership of assets such as land and livestock. This is measured as a dummy with 1 if one owns land and 0 if otherwise, 1 if one has livestock and 0 if otherwise. Individuals with wealth are expected to have higher probability of being self-employed than those without (Evans and Jovanovic, 1989; Evans and Leighton, 1989; Nadia et al., 2013). Individuals with wealth can access loans and use the wealth as collateral and therefore, can get the much needed startup capital.

3.5 Data source

The data to be used in this study will be drawn from Kenya Integrated Household Budget Survey (KIHBS) 2005/2006. The KIHBS contains wide variety of data capturing various aspects of household characteristics including basic demographic information. A total of 1,343 randomly selected clusters with a total sample of 13,430 households were surveyed, the clusters were stratified from all districts in Kenya. The clusters were sampled from a set of 540 urban clusters and 1,260 rural clusters. Each cluster comprised of 10 households that were selected with equal probability.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF EMPIRICAL RESULTS.

4.0 Introduction

This chapter presents the results of the study and the discussion of the results. First, we present the descriptive statistics and secondly present the Probit estimations. We use Probit model to establish the determinants of youth self-employment in Kenya using data from the Kenya Integrated Household Budget Survey (KIHBS) 2005/2006.

4.1 Descriptive Statistics

We explored the various characteristics of both dependent and independent variables which comprise of gender, age, education, and marital status, area of residence, land, house, vehicle, livestock ownership, family background, health status, water, electricity and vocational training. We assessed their respective means, standard deviation, minimum and maximum values. The summary statistics are as described in the table 3.

Table 3: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
Self employed	32,456	0.769	0.422	0	1
Age of respondent in years	32,456	23.18	5.775	15	35
Primary education	32,456	0.558	0.497	0	1
Secondary education	32,456	0.319	0.466	0	1
Above secondary education	32,456	0.0206	0.142	0	1
No formal education	32,456	0.102	0.302	0	1
Male respondents	32,456	0.510	0.500	0	1
Married	32,456	0.329	0.470	0	1
Has vocational training	32,456	0.153	0.360	0	1
Health status (sick)	32,456	0.227	0.419	0	1
Owens livestock	32,456	0.567	0.495	0	1
Land owners	32,456	0.394	0.489	0	1
Have access to electricity	32,448	0.217	0.412	0	1
Access piped water	32,456	0.376	0.484	0	1
Rural resident	32,443	0.591	0.492	0	1

Source: Author's estimates from the 2005/06 KIHBS data.

From these statistics, out of 32,448 youths that were interviewed 76.9% are self-employed while 23.1% are engaged in wage employment. The mean age of the youth was 23.18 while the minimum age was 15 years whereas the maximum age was 35 years. Of the 32,448 individuals that were interviewed 51% were male while the rest were female respondents. Those who are married comprised of about 33% while the rest were not married.

Education comprised of those with no formal education, those with primary education, those with secondary education and those with more than secondary education. From the statistics, those with primary level of education was 55.8% among the respondents while those with secondary education, above secondary education and no education comprised of 31.9%, 0.02%, and 0.10% of the respondents respectively.

The economic status of the individuals was captured through ownership of properties. These properties included land and livestock. The results as indicated in Table 3 show that 56% of the youth owned livestock while 44% did not. In addition, 40% owned land while 60% did not. It was also established that 78% of the respondents had no access to electricity while 22% had access to electricity. 62.4% of the respondents did not have access to piped water while 37.6% had access to piped water. The results further show that 59.1% of the youth that were interviewed were from the rural areas. Statistics show that of the 32443 youth that were interviewed 59.1% were from the rural areas while those from the urban areas comprised of 40.1% of the respondents.

4.2 Correlation Analysis.

Table 4 reports the pairwise correlation coefficients between the dependent and independent variables. The relationship between the employment status of an individual is negatively related with health, livestock, land and non-education while positively related with age, gender, marital status, vocational training, secondary, above secondary school, and place of residence. Gender is negatively related with marriage, health status non-education livestock and land while positively related with age, vocational training and also primary, secondary and above secondary education are positively related. Employment status and primary education have the weakest correlation while access to piped water and place of residence has the strongest correlation.

Table 4: Correlation Matrix

	EmpSta	Gender	AGE	MART	Voc	HealSta	Pri	Sec	Sec +	Non_Educ	Res	Livest	Land	Elec	Water
EmpSta	1														
Gender	0.200	1													
AGE	0.206	0.015	1												
MART	0.104	-0.092	0.543	1											
Voc	0.272	0.069	0.185	0.137	1										
HeaSta	-0.003	-0.070	0.092	0.100	0.004	1									
Pri	-0.099	0.002	-0.168	-0.074	-0.208	0.032	1								
Sec	0.147	0.050	0.060	0.006	0.301	-0.029	-0.130	1							
Sec+	0.103	0.056	0.057	0.016	0.098	-0.009	-0.160	-0.103	1						
NonEduc	-0.103	-0.098	0.142	0.095	-0.153	-0.003	-0.405	-0.262	-0.058	1					
Res	0.265	-0.001	0.023	0.009	0.204	0.014	-0.169	0.239	0.134	-0.141	1				
Livest	-0.275	-0.019	-0.037	-0.037	-0.162	0.012	0.128	-0.169	-0.106	0.092	-0.496	1			
Land	-0.197	-0.002	-0.037	-0.079	-0.105	0.001	0.156	-0.098	-0.066	-0.067	-0.483	0.515	1		
Elec	0.237	-0.017	0.036	-0.012	0.241	-0.047	-0.241	0.281	0.203	-0.122	0.418	-0.413	-0.304	1	
Water	0.241	0.025	0.043	-0.010	0.179	-0.017	-0.137	0.205	0.123	-0.136	0.477	-0.392	-0.287	0.446	1

Where

Emptsta: Employment status; MART: Marital status, Voc: Vocational training, HealSta: Health Status, Res: Residence, Livest: Livestock Ownership, Land:

Source: Author's estimates from the 2005/06 KIHBS data.

4.3 Discussion of Regression Results

4.3.1 Probit Estimates

The Probit regression estimates are presented in Table 5. The Wald χ^2_{13} statistic of 7611.17 with an associated p-value of 0.000 in the model shows that null hypothesis of the regression parameters in the Probit model are equal to zero and is rejected and thus we conclude that the coefficients for all the variables included in the model are not simultaneously equal to zero.

In addition, the Pearson χ^2_{9826} which is a measure of the models goodness of fit indicated that the estimated model is significant ($\chi^2_{9826}=19646.90$, p-value=0.00). The model also shows that the overall rate of correct classification was 79.37%, with 94.06% of the employed status group correctly specified and only 30.58% of the unemployed status group correctly classified.

Presented in Table 5 are the probit coefficients and the marginal effects. For interpretation purposes the marginal effects coefficients are used since the probit coefficients don't have an intrinsic substantive interpretation attached to them.

The results indicate that the sex of respondent is positively related to the probability of being self-employed. A male youth has 16.8 percentage points higher probability than a female youth of being self-employed. This can be linked to the differences in the levels of risk aversion and levels of self-satisfaction in different occupations as noted by Peprah et al (2015).

Age of a respondent is also positively related to self-employment. An additional year of age increases probability of being self-employed increases by 0.82 percentage points. This is consistent with the study done by Faggio et al. (2014), Destre (2003) and Mats (2006). As an individual gets

old they accumulate social capital, for instance contacts and experience that can enhance success in self-employment (Nadia et al., 2013).

Vocational training of a youth was found to be significant with respect to self-employment. It was expected that a youth with some level of vocational training would be more likely to be self-employed. According to the results if a youth has no vocational training the probability of being involved in self-employment increases by 17.3 percentage points, while if one has vocational training, the probability of being involved in self-employment increases by 82.7 percentage points.

Education attainment increases the probability of being self-employed. A primary school graduate's probability of engaging in self-employment increases by 7.7 percentage points. A secondary school graduate's chance of engaging in self-employment is 7.4 percentage points higher than for an individual without education. A youth with tertiary education or more has 12.8 percentage points higher chance of participating in self-employment than those with no education. This can be attributed to the case where individuals have acquired the skills that are essential to begin their own enterprises.

The youth's area of residence was found to have a significant effect on self-employment probability. A youth in an urban area has 5.8 percentage points chance of participating in self-employment than a youth from a rural-area. This finding is in line with the finding of Giulia et al. (2014) and Jagannadha (2009). Lack of employment opportunities or low wages may compel individuals to resort to self-employment to be able to sustain the high level of expenditure mainly on commodity consumption.

The results of the study clearly indicate the effect of inheritance and wealth in influencing an individual's probability of engaging in self-employment. If a youth has any livestock or land the probability of engaging in self-employment is 11.1 percentage points and 4.5 percentage points respectively. This can be based on the argument that these items act as collateral for an individual seeking startup capital so as to engage in self-employment.

Access to electricity and water play a significant role in self-employment decisions among the youth in Kenya. The results of the study show that if youth have access to electricity and piped water the likelihood of engaging in self-employment is 5.6 percentage points and 7.5 percentage points higher than for those who do not have access to electricity and water respectively. This can be because water and electricity are inputs into production and therefore individuals who have access stand a better chance of engaging in self-employment.

Table 5: Probit Estimates

Variables	Coeff	t-stat	mfz	S.E
Intercept	-2.733***	(-50.60)	-	-
Sex of respondent (1=male, 0=female)	0.530***	(30.07)	0.168***	(0.004)
Age in years	0.0640***	(36.14)	0.0082***	(0.0003)
Marital status (1 = Married, 0 = not married)	-0.171***	(-8.15)	-0.0005	(0.005)
Vocational training (1 = Has vocational training, 0 = no vocational training)	0.429***	(19.00)	0.173***	(0.007)
Health status (1 = Sick in past 4 weeks, 0 = not sick in past 4 weeks)	-0.0120	(-0.59)	-0.004	(0.005)
Primary education	0.168***	(5.31)	0.077***	(0.007)
Secondary education	0.0167	(0.49)	0.074***	(0.009)
Above secondary education	0.0386	(0.63)	0.128***	(0.019)
Residence (1 = Urban, 0 = rural)	0.225***	(9.38)	0.058***	(0.006)
Livestock (1 = Owns Livestock, 0 = does not own livestock)	-0.351***	(-15.41)	-0.111***	(0.006)
Land ownership (1 = Land owners, 0 = does not own land)	-0.124***	(-5.39)	-0.045***	(0.005)
Access electricity (1 = Electricity connected, 0 = electricity not connected)	0.203***	(8.71)	0.056***	(0.007)
Access water (1 = Uses piped water, 0= does not use piped water)	0.251***	(14.49)	0.075***	(0.005)
Number of observations	32435			
Pseudo R^2	0.1918			
Wald χ^2_{13} (p-value)	7611.17 (0.0000)			
Log pseudo likelihood	-19227.431			
Pearson χ^2_{9826} (p-value)	19646.90 (0.0000)			
Sensitivity	30.58%			
Specificity	94.06%			
Correctly classified	79.37%			

t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Author's estimates from the 2005/06 KIHBS data.

4.3.2 Decomposition of Male-Female Gap in Self-Employment

Table 6 reports the estimates of the employment status differentials by gender using a non-linear decomposition technique as suggested by Farlie (2006). The results show the individual contributions in employment status by sex is significant and that the differential between male and females is -0.142. The proportion of the difference explained by the model is -0.0148 while -0.127 is unaccounted for by the model.

Table 6: Blinder Oaxaca Decomposition of Employment Status Differentials

	Employment status	
	Coeff	t-stat
Female respondents	0.159 ^{***}	(57.05)
Male respondents	0.301 ^{***}	(107.58)
Difference in employment status	-0.142 ^{***}	(-31.74)
Explained difference in employment status	-0.0148 ^{***}	(-8.19)
unexplained difference in employment status	-0.127 ^{***}	(-28.30)
Number of observations	41797	

t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Author's estimates from the 2005/06 KIHBS data

Table 7 shows that the largest factor explaining the male-female employment status disparity is access to electricity. Access to electricity accounts for 0.003 of the male-female gap in the probability of being self-employed. Land ownership accounts for 0.0003 of the male-female gap in the probability of being self-employed. Above secondary schooling accounts for - 0.0008 this means that as the gap between male and females reduces as females attain education that is above the secondary level. Residence also contribute to the male-female gap in self-employment, it accounts for 0.001 of the male-female gap this shows that the gap increases with more females in the rural areas. Marital status also contributes to the gender gap with respect to youth self-

employment. Married females engage more in self-employment than those who are not married therefore, being married reduces the gender gap by 0.015.

Health status and access of water contribute negatively to the male-female gap in self-employment status. The male female reduces by 0.001 with respect to health status and by 0.0001 with respect to access to piped water. Vocational training to the females reduces the he male-female gap in the probability of being self-employed by 0.0013, this shows that as females go for vocational training the gap is reduced.

Table 7: Employment Status Differentials by Gender

	Employment status			
	Explained differences		Unexplained differences	
	Coeff	t-stat	Coeff	t-stat
Intercept	-	-	-0.126***	(-5.18)
Age in years	-0.0021**	(-3.25)	0.007	(0.33)
Marital status (1 = Married, 0 = not married)	-0.015***	(-14.63)	-0.057***	(-18.28)
Vocational training (1 = Has vocational training, 0 = no vocational training)	-0.0013***	(-4.12)	0.002	(1.07)
Health status (1 = Sick in past 4 weeks, 0 = not sick in past 4 weeks)	-0.001*	(-2.18)	-0.007**	(-3.25)
Primary education	0.0002	(1.73)	0.014***	(3.86)
Secondary education	-0.0001	(-0.41)	0.001	(1.49)
Above secondary education	-0.0008*	(-2.45)	0.001	(0.52)
Residence (1 = Urban, 0 = rural)	0.001***	(4.46)	0.003	(0.57)
Livestock (1 = Owns Livestock, 0 = does not own livestock)	0.0004	(1.56)	0.017*	(2.30)
Land ownership (1 = Land owners, 0 = does not own land)	0.0003	(1.90)	0.006	(1.20)
Access electricity (1 = Electricity connected, 0 = electricity not connected)	0.003***	(8.61)	0.025***	(9.68)
Access water (1 = Uses piped water, 0 = does not use piped water)	-0.0001	(-0.36)	-0.012**	(-2.78)
Number of observations	32435			

t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Author's estimates from the 2005/06 KIHBS data

CHAPTER FIVE:

SUMMARY, CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and policy recommendation of the study. Section 5.2 summarizes the study while section 5.3 gives the conclusion and policy recommendations.

5.2 Summary of the Findings

The status of youth employment is a very important policy issue not only in Kenya but also in many developing countries. The Kenyan government has placed emphasis in supporting youths by implementing projects and programs to promote youth self-employment. This study analyzed the determinants of youth self-employment in Kenya using Probit model with data from the Kenya Integrated Household Budget Survey 2005/06.

The results show that there are several determinants of youth self-employment. First, education plays a significant role in determining whether one engages in self-employment or wage employment. Individuals with education are more likely compared to those with no education to engage in self-employment. Second, individuals with vocational training are more likely compared to those with no vocational training to be self-employed. Third, access to electricity and piped water plays a significant role as a determinant of self-employment among the youth in Kenya. Individuals with access to electricity and piped water have a higher chance of engaging in self-employment than those who do not have access. Other factors like gender, area of residence, property ownership

(land and livestock), and age are also found to affect self-employment engagement by the youth. Older youths are more likely to engage in self-employment compared to younger youths.

The decomposition results show that age, marital status vocational training, residence, and access to electricity significantly explain the employment status differentials between males and females. We also establish that that residence, and access to electricity has a positively contribute to the differential with respect to youth self-employment status.

5.3 Conclusion and Policy Recommendation

Self-employment is an important aspect in solving the unemployment problem in Kenya especially amongst the youth. To promote self-employment of the youth especially the government should promote education and vocational training. Property ownership in the country should also be encouraged among the youth as this gives them an advantage of accessing loans and therefore can acquire the much-needed start-up capital. Government giving the youth women and person with disabilities to access a third of all government tenders is a good sign by the government to promote entrepreneurship and therefore self-employment. The government has also shown a good gesture towards promoting self-employment by reducing the interest of loans from the banks. This has made access to finance easy though more can still be done. From the decomposition results we conclude that geographical location contributes positively to the male-female gap in self-employment status. It is also established that health status, age and marital status and the level of education contribute to the male-female gap in self-employment and therefore vocational training should be encouraged especially for females and health provisions should be improved.

5.4 Areas for Further Research

The current study has looked at the determinants of self-employment among the youth in Kenya and also the differences in the characteristics of young men and women in self-employment. The results have shown that there exists male-female gap in self-employment and therefore future studies should look at gender differential in self-employment at a disaggregated level such as per county or per region. This will ensure that policies are developed that can help in addressing the gap.

REFERENCES

- African Economic Research Consortium. (2013). Youth and Unemployment in sub-Saharan Africa. Senior Policy Seminar Report Kigali, Rwanda: African Economic Research Consortium.
- Ahn T. (2010). Attitudes toward risk and self-employment of young workers. *Labour Economics* 17(2): 434–442.
- Amynah, G. and Robert, P. (2007). The Matthew Effect of Unemployment: How Does It Affect Wages in Belgium? (Working Paper No.07-19) Roosevelt, Brussels.
- Arulampalam, W. (2001). Is Unemployment Really Scarring? Effects of Unemployment Experiences on Wages. *The Economic Journal*, 111(475): 585-606.
- Banerjee and Newman, A. (1993). Occupational Choice in The Process of Development. *Journal of Political Economy*, 101(2): 274 – 298.
- Becker, G.S. (1964). Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education. National Bureau of Economic Research. The University of Chicago Press Ltd. London.
- Blanchflower, D. G and Oswald A. J. (1998). What Makes an Entrepreneur? *Journal of Labor Economics*, 16(1): 26-60.
- Blanchflower, D. G. (2004). Self-Employment: More May Not Be Better (Working Paper No 10286). National Bureau of Economic Research.
- Burton, M. D., Sorensen, J. B., & Dobrev, S. D. (2016). A careers perspective on entrepreneurship. *Entrepreneurship Theory and Practice*, 40(2): 237-247.
- Caliendo M., Frank M. F. and Kritikos A. S. (Feb., 2009). Risk Attitudes of Nascent Entrepreneurs- New Evidence from an Experimentally Validated Survey. *Small Business Economics*, 32 (2): 153-167.

Chen J. (2008). Wealth Constraints and Self-Employment: Evidence from Birth Order. (Working Paper No.40). Economics Research Paper Series

Chlosta, S., Patzelt, H., Klein, S., and Dormann, C. (2012). Parental role models and the decision to become self-employed: The moderating effect of personality. *Small Business Economics*, 38(1): 121-138.

Christopher, D. and Andrew, H. P. (2009). Why Do Individuals Choose Self-Employment? (Discussion Paper No.3974). Institute for the Study of Labor.

Clainos, C. (2014). An Economic Analysis of the Determinants of Entrepreneurship: The Case of Masvingo Informal Businesses. *Russian Journal of Agricultural and Socio-Economic Sciences*, 3(15): 17-21.

David, B. (2012). Youth Skills Development, Informal Employment and the Enabling Environment in Kenya: Trends and Tensions. *Journal of International Cooperation in Education*, 15 (2): 69-91.

Destre, G., & Henrard, V. (2004). The Determinants of Occupational Choice In Colombia: An Empirical Analysis. Cahiers De La Maison Des Sciences Economiques, Université Paris.

Dobrev, S. D. and Barnett W. (2005). Organizational roles and transition to entrepreneurship. *Academy of Management Journal*, 48 (3): 433–449.

Douglas, E.J. and Shepherd, D. (2002). Self-employment as a Career Choice: Attitudes, Entrepreneurial Intentions, and Utility Maximization. *Entrepreneurial Theory and Practice*, 26(3): 81-90.

Dunn, T. and Douglas, H. (2000). Financial Capital, Human Capital, and the Transition to Self-Employment: Evidence from Intergenerational Links. *Journal of Labor Economics*, 18 (2): 282-305.

Edward, J. (2000). Self-Employment and Liquidity Constraints: Evidence from Finland. *Scandinavian Journal of Economics*, 102(1): 123-134.

Evans, D. S. and Leighton, L. S. (1989). Some Empirical Aspects of Entrepreneurship. *American Economic Review*, 79(3): 519-535.

Evans, D., & Jovanovic, B. (1989). An Estimated Model of Entrepreneurial Choice under Liquidity Constraints. *Journal of Political Economy*, 97(4): 808-827.

Fairlie R. W. (2006) An extension of the Blinder-Oaxaca decomposition technique to logit and probit models. Yale University, Discussion Paper no. 1917

Gary, S. F. (2013). Self-Employment in the Developing World: A Report to the High-Level Panel of Eminent Persons. Cornell University and IZA.

Gindling T H and Newhouse D (2014). Self-Employment in the Developing World. *World Development*, 56 (21): 313–331.

Giulia, F. and Olmo, S. (2014). Self-employment and entrepreneurship in urban and rural labour markets. *Journal of Urban Economics*, 84 (6): 67–85.

Gordon B and Themrise K (2015). Youth employment in sub-Saharan Africa: Taking stock of the evidence and knowledge gaps. International Development Research Centre and the Master Card Foundation.

Government of Kenya. (2004). A Policy Framework for Education, Training and Research. Ministry of Education, Science and Technology Sessional Paper 2004. Government Printers.

Government of Kenya. (2006). The Kenya National Youth Policy. Nairobi. Government Printer.

Government of Kenya. (2006). Government Financial Management: Youth Enterprise Development Fund Regulations. Nairobi. Government Printer.

Government of Kenya. (2007). Kenya Vision 2030. Nairobi: Government Printer.

Government of Kenya. (2012). A Policy Framework for Education and Training Reforming Education and Training Sectors in Kenya. Ministry of Higher Education Science and Technology. Sessional Paper No 14. Nairobi Government Printer.

Government of Kenya. (2013). Kenya Population Situation Analysis. Nairobi. Government Printer.

Government of Kenya. (2015). Kenya Uwezo Fund Act, 2015. Nairobi. Government Printer.

Hamilton Barton H. (2000). Does Entrepreneurship Pay? An Empirical Analysis of the Returns to Self-Employment. *Journal of Political Economy*, 108(3): 604-631.

Hanemann Michael (1984). Welfare Evaluations in Contingent Valuation Experiments with Discrete Responses. *American Journal of Agricultural Economics*, 66(3): 332-341.

Harry, L. K. (2014). Policies, Mechanisms and Schemes for Integration of Youth into the Workforce and Job Creation. Kenya Country Report. Abidjan, Ivory Coast.

Hintermaier, T. and Steinberger, T. (2005). Occupational Choice and the Private Equity Premium Puzzle. *Journal of Economic Dynamics and Control*, 29: 1765–1783.

Hurst E. and Lusardi A. (2004). Liquidity Constraints, Household Wealth and Entrepreneurship. *Journal of Political Economy*, 112(2): 319-347.

International Labour Organization (1982) Resolution concerning statistics of the economically active population, employment, unemployment and underemployment. The Thirteenth International Conference of Labour Statisticians.

International Labour Organisation. (2012). The Youth Employment Crisis: Time for Action. International Labour Conference, 101st Session, 2012 Report V. Geneva, Switzerland. International Labour Office

International Labour Organisation. (2013). Global Employment Trends for Youths 2013: A Generation at Risk. Geneva, Switzerland. International Labour Office.

- International Labour Organisation. (2015). Scaling up investments in decent jobs for youth. Global Employment Trends for Youths 2015: Geneva, Switzerland: International Labour Office,
- Ishaque M. and Motin B. (2014). Determinants of Self-employment in Ghana: Empirical Evidence from the Wa Municipality. *American Open Economics and Entrepreneurship Development Journal*, 11(1): 1 – 11.
- Jagannadha P. (2009). The Dynamics of Self-employment in a Developing Country: Evidence from India. Presented at the Summer Conference 2010 on Opening up Innovation: Strategy, Organization and Technology. Imperial College London Business School, June 16 - 18, 2010. Max Planck Institute of Economics.
- Kenya Institute for Public Policy Research and Analysis (2013). Creating an Enabling Environment for Stimulating Investment for Competitive and Sustainable Counties. Kenya Economic Report. Nairobi, Kenya.
- Kenya National Bureau of Statistics. (2008). Labour Force Analytical Report :Based on the Kenya Integrated Household Budget Survey (2005/2006). Nairobi: Government Printer.
- Kihlstrom, R. and Laffont J. (1979). A General-Equilibrium Entrepreneurial Theory of Firm Formation Based on Risk Aversion. *Journal of Political Economy*, 87(4): 719-748.
- Klepper S. and Sleeper S. (2005) Entry by Spinoffs. *Management Science*, 51 (8): pp.1291-1306.
- Lindh T. and Ohlsson H. 1996), Self-Employment and Windfall Gains: Evidence from the Swedish Lottery. *The Economic Journal*, 106(439): 1515-1526
- Lucas, R. (1978). On the Size Distribution of Business Firms. *Bell Journal of Economics*, 9(2): 508-523.
- Mats Hammarstedt (2006). The predicted earnings differential and immigrant self-employment in Sweden. *Applied Economics*, 38(6): 619-630.

Nabamita D., Saibal K., and Sanjukta R. (2014). Education and Self-Employment: Asian Immigrants in the United States Labor Market. Discussion Paper No. 8152. Institute for the Study of Labor.

Nadia S., Sandrina B., and Nuno C. (2013). Individual Determinants of Self-Employment Entry: What Do We Really Know? Paper No. 48403. Munich Personal RePEc Archive (MPRA).

Nikolova, Viktoriya and Bargar, Michael S. (2010). Determinants of Self-Employment in the United States. *Undergraduate Economic Review*, 6(1): 1-20.

Onwumere J, Alamba C., and Onwusiribe, C. (2011). Determinants of Self-employment and Capital among Agribusiness Households in Abia State, Nigeria. *Journal of Agriculture and Social Research*, 11(2): 174-182.

Ozcan, B. (2011). Only the lonely? The influence of the spouse on the transition to self-employment. *Small Business Economics*, 37(4): 465-492.

Parker, C.S. (2004). *The Economics of Self-employment and entrepreneurship*, New York. Cambridge University Press.

Peprah, J. Clifford A. and Isaac K. (2015). Savings, Entrepreneurial Trait and Self-Employment: Evidence from Selected Ghanaian Universities. *Journal of Global Entrepreneurship Research*, 5 (1): 1-17.

Pernilla A., Eskil W. (2008). A Gender Perspective on Self-Employment Entry and Performance as Self-Employed. Discussion Paper No. 3581. IZA.

Poschke M. (2013). Who Becomes an Entrepreneur? Labor Market Prospects and Occupational Choice. *Journal of Economic Dynamics and Control*, 37: 693–710.

Raffiee J., Jie F. (2014). Should I Quit My Day Job? A Hybrid Path to Entrepreneurship. *Academy of Management Journal*, 57(4): 936–963.

Rees H. and Shah A. (1986) An empirical analysis of self-employment in the UK. *Journal of Applied Econometrics*, 1 (1): 95-108.

Republic of Kenya (2003). Report of the 1998-99 Labour Force Survey. Central Bureau of Statistics, Government Printer Nairobi.

Roberta R, Carlo P. and Matteo A. (2004). An Empirical Study of the Determinants of Self-Employment in Developing Countries. *Journal of International Development*, 16(6): 803–82.

Sharma L. and Madan (2014) Effect of Individual Factors on Youth Entrepreneurship: A Study of Uttarakhand State, India. *Journal of Global Entrepreneurship Research*, 2(3): 1-17.

Taryn, D. (2011). The Effects of Rural Electrification on Employment: New Evidence from South Africa. *The American Economic Review*, 101 (7): 3078-3108.

Thrang T.Q. and Gerard D. (2008). Determinants of self-employment: The case in Vietnam. Documents de travail du Centre d'Economie de la Sorbonne.

Veronica E. and Elva L. M. (2013). Understanding the drivers of the youth labour market in Kenya: Research Paper No.8. Geneva ILO. International Labour Office.

Wamuthenya W.R. (2010). Determinants of Employment in the Formal and Informal Sectors of the Urban Areas of Kenya. Institute of Social Studies The Hague, Netherlands.

Wamuyu, M. (2010). Hitting the Target, Missing the Point: Youth Policies and Programs in Kenya: Woodrow Wilson International Center for Scholars, Washington, DC.

Wiklund, J., Delmar F. and Hellersted K. (2004). Selection of the Fittest? How Human Capital affects High-Potential Entrepreneurship. Swedish Foundation for Small Business Research.

Yannis G. and Howard J. (2004). Gender Differences in Self-Employment. Working Paper No.8. Federal Reserve Bank of St. Louis.

Yannis G., John G.S., and Nikolaos T. (2005) Self-Employment Longitudinal Dynamics: A Review of the Literature *Economic Issues*, 10(2): 51-84.