

**DYNAMIC ANALYSIS OF EDUCATIONAL ATTAINMENT, CAREER CHOICE
AND UNEMPLOYMENT IN KENYA**

NAFISA AYUKA

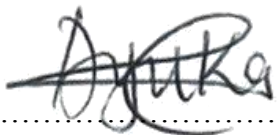
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**A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF ECONOMICS IN
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DECLARATION

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

Signature 

Date 10/11/2020

Nafisa Ayuka

X50/13417/2018

This research report has been submitted with my approval as the University Supervisor

Signature

Date 10/11/2020

Dr. Sule Odhiambo

School of Economics

University of Nairobi

DEDICATION

I dedicate this Research paper to my daughter and son, close friends and family for being supportive throughout the entire time of my study, to the Director, St. Joseph Development Programmes Fr. Ngondwe Ponsiano SJ for being considerate and flexible on my working hours that enabled me to study.

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I am grateful to God for His mercies and favour that I have been able to successfully complete this course.

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I would also wish to thank Fr. Francis and Regina for financial support that enabled me to achieve my Master's Degree; for sure it would have been impossible without your support. May God bless you.

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ABSTRACT

Despite transformations of the higher education system over the last decades, there has been increase in the enrollment to the low prospective by large proportion of the students. Consequently, this significantly reduces skills in the country. Therefore, the choice of career by students greatly affect the ultimate profession. This study sought to find out the role of the level of education and course of study impact on the chances of getting employed in Kenya. Secondly, the study sought to determine the factors that affect career choice among university graduates. Using a multinomial logit model, the choice of career was found to be mainly dependent on factors such as skills development, gender, age, age Squared, education level, place of residence, marital status, parental advisory and school type. Further, the study findings showed that having primary and secondary education reduces the log likelihood odd ratio of getting employment while having college and undergraduate education was associated with significant reduction in the log likelihood of getting employment. Career chosen was also found to have a significant effect on employment. This study proposes that it is time that students should be encouraged to undertake other technical skills in order to increase the chances of getting employed in Kenya. Moreover, there is need to encourage the graduates not to seek for jobs in the urban areas but also shift focus on rural areas especially with the eve of devolution. Finally, there is need for students to put focus on these areas of study unlike formerly when the focus was mainly skewed to courses such as accounting and engineering. In conclusion, the study proposes a further study to carried out on the role curriculum and change on curriculum on employment comparing developed and developing nations.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Although Kenya has seen transformations of the higher education system over the last decades, there has been increase in the enrollment to the low prospective by large proportion of the students. Consequently, this significantly reduces skills in the country. In addition, the course choice by students has been impressive relative to the course substitution when students are not able to do the course they chose (Mizener and Williams, 2009). This makes the process of choosing a career of study by students vital for the success in various professions since the ones pursuing such options are the future of the given profession. Therefore, the choice of career by students greatly affects the ultimate profession.

Career choice is referring to the track of people's work life, domain of employment, position or even where one starts and continues to finalize his term of work life (Cevher, 2015). It affects your one's development in each area of work one wants to remain because it equips you with skills and experience to perform (Taşlıyan, & Duzman, 2011). The study by Ng, Gossett, Chinyoka and Obasi (2016), noted that decision on career is key when it comes to the chances of getting an employment opportunity. This calls for proper career decision-making due to its overall effect on the level of employment in the country. Unemployment is associated with low economic growth, vices in society such as corruption, nepotism, and tribalism. Some graduates with sufficient skills and training remain unemployed and this raises the question on the role of career choice in getting employed. Consequently, there is possibility that knowledge, innate

abilities, skills, and interests play an important role in choice of career which in turn affect their probability of getting employed (Ibrahim & Mahyuddin, 2017).

In country like Kenya where education is highly esteemed and directly associated with employment, the choice of career becomes an important element to avoid increased level of those who are not employed. Majority of the parents have impoverished themselves to invest in the education of their children. The bright future of the children is seen to depend on the quality education of the children. This has become the new model for the modern learned society. Parents also expect their children to take care of them in their old age or sunset days. Bearing this in mind, it therefore becomes important for proper career choice which increases the probability of getting employed.

It is key to note that although there are many who are seeking for jobs with different courses and levels of education, there continues to be a high proportion of them who are not employed. Majority of the people graduating from the universities are youths and this calls for action. The problem has continued to increase in many nations in the developing countries including Kenya. This has caught the attention of the world and many international organizations are acting. The 8th goal in the sustainable development goals (SDGs) is to promote employment which is productive and characterized by decency for every Kenyan by the year 2030. Its objective is to ensure reduction in young people without employment, education, and training by 2020.

The increasing competition in the global market and need for professionalism in the labour market has pushed education to be at centre stage of social and economic policy agenda. According to OECD increasing investments in education, standards and access will enhance fairness. Possessions of the academic credentials are associated with increase in chances of

employment and high wages and hence provide currency of opportunity (Dore, 1976; Collins, 1979; Bowles & Gintis, 1976).

Education is one of the societal aspects because it is associated with increased productivity as well social individual benefits. Education is provided privately or by public in line to the program guided by the right ministry in the respective government. According to Watts (1997) career guidance is key part of the system of education in helping students to get clarity in articulating their aims and aspirations in their career life. This regarding the demand by the labour market in addition to giving students the basis to negotiate with their employers and anyone else who demand their services. They need the opportunity to be fully informed about the relationship between their career and its applicability in the labour market (Dawkins, 1988). This creates an environment to allow transition from the school to workplaces.

1.1.1 Trend in Education in Kenya

The table below shows the educational level for the various age-groups in Kenya from those with no education or illiterate to those who have studied to the university and college level.

Table 1: Trends in Education in Kenya

Background Characteristics	No Education	Some Primary	Completed Primary	Some Secondary	Completed Secondary	More than Secondary
Age	%	%	%	%	%	%
6-9	37.9	61.9	0.0	0.0	0.0	0.0
10-14	3.7	93.5	0.6	2.0	0.1	0.0
15-19	2.1	46.3	9.5	35.6	5.0	1.3
20-24	2.6	16.5	20.6	17.5	25.5	17.3
25-29	3.5	17.7	26.3	8.1	24.7	19.5
30-34	4.3	21.9	27.0	7.2	22.6	16.6
35-39	4.7	22.6	29.5	7.6	21.9	13.5
40-44	6.0	21.7	26.8	7.8	24.6	12.8
45-49	5.5	18.4	26.3	7.7	28.2	13.7
50-54	8.9	15.8	28.4	8.4	24.0	13.7
55-59	12.7	19.9	27.9	9.6	20.2	9.6
60-64	19.3	26.1	25.9	6.8	13.7	8.1
65+	32.4	30.9	20.1	5.1	6.2	4.9

Source: KDHS (2014)

For those aged 6-9 years majority of them accounting for 61.9 percent had some primary education which means they were continuing with their primary education while 37.9 yet to join school and thus considered to be children. The age group 10-14 years saw increase in the number of those who had some primary education 93.5 percent with 3.7 percent having not gone to school. The rest were in secondary school starting their academics for the second level of education of education in Kenya.

Most teenagers 15-19 were found to be having some primary education accounting for 46.3 percent and 35.6 percent had some secondary education. At least 5.0 had completed their secondary school and thus qualified for unskilled labour while the least percentage of 1.3 had transited to tertiary level. Majority aged 20-24 years had joined and completed their secondary education consisting of 25.5 percent of those factored in the survey and their 17.3 percent who

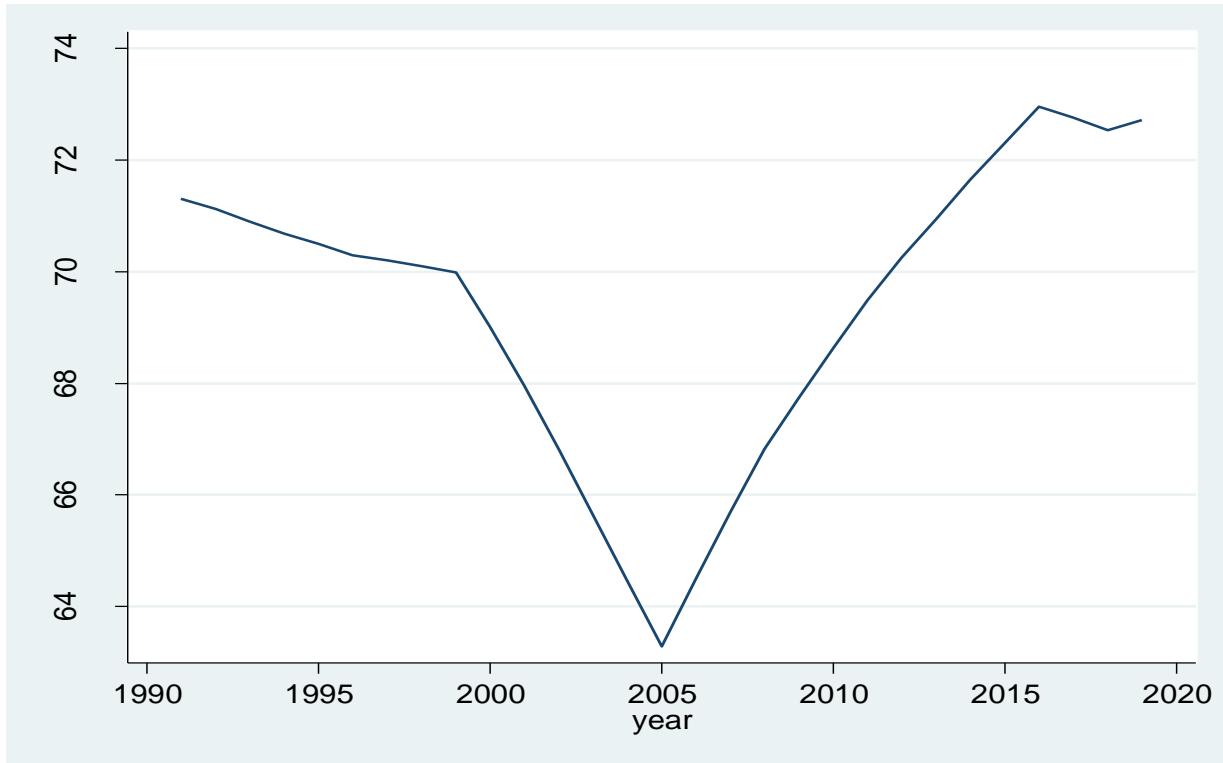
had joined colleges and universities. The rest were continuing with their early secondary and late primary education while the rest had some primary education with 17.5, 20.6 and 16.5, respectively.

Those in their late twenties which are represented by the age group 25-29 years, 24.7 percent were done with secondary education and those in colleges and universities increased to 19.5 percent. Those with primary education completed are 26.3 percent and those with some primary education increased to 17.7 percent. The age group 30-34 years consisted of those who 39.2 percent of those who had completed secondary education and joined to universities. The rest were in high school continuing, primary, or even not acquired any education implying that they are illiterate. Those statistics showed that there was increase an in the number of those who had no education as age increased. Those who were above 65 years consisted of majority having only completed primary education, some primary and others with no education and they accounted for 83.4 percent in that age group. The aged 35-39 years had the highest percentage of those who had completed primary education accounted for 29.5 percent while majority of those who had gone past secondary education were aged 25-29 years for approximately 20 percent.

1.1.2 Employment trends for the time 1991-2019

The diagram below shows the behavior of employment levels in Kenya as a proportion of the entire population over the period 1991-2019. The vertical axis shows the level of employment as a ratio of the entire population in Kenya over the specified period while the horizontal axis shows period for the data used in plotting the graph.

Figure 1: Employment trends in Kenya for the time 1991-2019



Source: World Development Indicators (2020)

From the diagram there was decline in the employment levels from 1991 to around 2000 before sharply reducing to 2005. At that period there was poor economic performance with reduction in the number of jobs being created in the economy when the NARC government has just taken over from President Moi. From 2005 there was increased level of employment with the curve showing sharp increase till 2015. This can be associated with the projects that were implemented with the President Kibaki's government aimed at creating employment opportunities. These included the use of appropriate monetary and fiscal policies to increase economic activities. The government increased the number of initiatives aimed at creating job opportunities in the country with Kazi Kwa Vijana (KKV) being one of them. With continued commitment by the government to solve the youth unemployment challenge, the government through the Ministry of

Youth and Youth Enterprise Development Fund, in 2006 through the national youth policy it allocated funds to youths.

Another initiative in Kenya by the World Bank was the Kenya Youth Empowerment Project which was to enhance the effectiveness of the initial Kazi Kwa Vijana. The Kenya Youth Employment & Opportunities Project (KYEOP) aims at increasing employment and earning opportunities for youth.

1.1.3 Career Choice, Education and Employment

With people going for further studies in the 21st century, the labour market has witnessed increase in the number of those joining the labour market. This has changed the employers' view towards those who are educated (Machin and McNally, 2007). As a result there is a high level of competition for the few jobs in the market and this causes a serious problems of unemployment among graduates (Filmer et al., 2014; Hanapi & Nordin, 2014 and ILO, 2013).

Many view educations as the means in which people are trained and acquire skills for various jobs in the labour markets. This is because those people who possess high educational qualifications are believed to be productive as compared to those who are not educated. According to Spence (1973) the difference between employees cannot be directly explained but it is indirectly traced from the cost of education. Therefore, according to him, the higher the cost one had incurred in financing his education, the more productive the employee was likely to be. Consequently, it acts as a signal to the employers on the ability of the employees to perform in various responsibilities. He went ahead to note that increase in academic levels is rendering low qualifications such as diplomas and certificates irrelevant in the labour market. Increase in academic level will lead to increase in the wages because it signals high level of productivity.

Wolbers(2010) on his study on the relationship between education and employment in Holland for the years 1980 to 1994 concluded that low levels of education are associated with low probabilities of employment.

Increases in the level of education by individuals has a significant effect on their re-employment. According to Nickell (1979), Kiefer (1985) and Juha Kettunen (1997), increased level of education is associated with reduced probability of getting re-employed. Further, Aberg (2003) explains that reduction in the labour demand for the individuals who possess low education level is likely to lead to the decrease in the number of those possessing low qualifications. This however may not be the case for those who are in different economic systems, but it works where the market force clears the labour market.

According to the Survey by the Campaign for UK Social Sciences (2013), those who pursue career in social sciences have high job prospects than those who graduate with the other training and skills in quantitative fields such as engineering, mathematics, technology and Science. This implies that they have a high probability of progressing in their careers and thus promotion to senior positions. The indication is that their earnings are likely to be high compared to those in other fields of study. This seems different from other countries where those who have pursued courses such as engineering have a high probability of getting a well-paying job. Thus, the dynamics of education and career choice in different countries is unique and varies from one country to another.

Many graduates have ended working in the fields they never trained and hence mismatch of skills and the available jobs. The Pakistan study by Farooq (2011) established that at least 11.3 percent of the graduates were employed in jobs they were not skilled in. This implies that the skills they acquired in 3-4 years are rendered irrelevant. Further, the longer the time one takes

not employed makes it difficult for them to get a job. It is thus important for people to make decisions to pursue careers that have high job prospects.

1.2 Problem Statement

Currently, many youths go into unsuitable careers and this is associated with vices such as level of ignorance, lack of experience, pressure from peer, friends advisory, guardian guidance as well as due to prestige attached to certain jobs without adequate information and thus they choose courses without good guidance (Okoro, 2009). Upon graduation, they are not suited for their careers of choice since they find themselves in jobs where they could not maximize their potential. Thus, their contribution to the society is not meaningful and subsequently they become liabilities to their nation. The rate of unemployment in Kenya is 20% with the youth having a rate of about 25%. One of the key factors determining this level of unemployment is perhaps the course of study at tertiary level. However, this has not been empirically tested in Kenya.

Initially some courses such as social sciences used to be looked at as less marketable courses in the country, but this is not the case with many in lucrative courses such as engineering remaining unemployed. The Campaign for Social Science Survey (2013) in UK, established that those who pursue career in social sciences have high job prospects than those who graduate with the other training and skills in quantitative fields such as engineering, mathematics, technology and Science. Some arguably in Kenya regard the institution that one study as one of the reflections of the ease of getting employed by different organizations. A graduate from the University of Nairobi is presumably the most employable compared to other universities. Thus, the reputation of institution that one schools seem to have a role on determining the employability of the graduates in various career choices.

Previous studies did not focus on the choice of career and particularly the course of the study on employment in the labour market apart from the study by Dunga and Mncayi (2016) in South Africa which established that those who graduate with degrees in humanities were likely to take longer looking for jobs than those graduating in other fields such as accounting, mathematics, education and health. This is not very clear in Kenya on whether the career choice has anything to do with the increasing rate of unemployment.

The studies carried in Kenya focused more on the education and employment as well as other factors mentioned such as age, gender, experience among others (Khainga and Mbithi,2018; Elima,2015;). This leaves unexamined role of career choice and employment in the labour market in Kenya. Therefore, there is need to examine relationship effect of educational attainment and career choice on unemployment in Kenya. This study sought to establish the effect of the course of study and level of educational attainment on the likelihood of employment in Kenya. Course of study is the specific field of specialization at tertiary level of education.

1.3 Research questions

1. How does the level of education and course of study impact on the chances of getting employed in Kenya?
2. What are the factors that affect career choice among university graduates?

1.4 Objective of the study

The general objective of this study was finding the role of the career choice on the employment in Kenya.

1.4.1 Specific objectives

The study addressed the following specific objectives:

- I. To ascertain the impact of the level of education and course of study on chances of getting employed in Kenya.
- II. To find out the factors that affect career choice among university students, and how it affects the likelihood of being employed in Kenya.
- III. To draw conclusions and recommendation based on study findings.

1.5 Significance of study

There exist limited studies in this area and especially in Kenya and this study sheds light on the role of career choice on employment. As a result, there is no knowledge on the effect that career choice has on the possibility of securing employment in the labour market in Kenya. Therefore, it is necessary to have adequate knowledge on the role of career choice on employment. As a result, this study determined the factors that affect the choice of career courses at the university level. Secondly, this study determined whether the academic level by the graduates has any effect in the Kenyan labour market in them securing employment. In particular this study explored the relationship between academic level and the possibility of getting a job. Thirdly, the study gave appropriate recommendations on the effects of career choice on employment. Finally, the study results will add to the already existing literature.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section provides the review of the theories that form the basis of this study as well as the empirical studies related to this topic carried out in different parts of the world. The section ends by giving the summary of the literature on what has been addressed and what has not been studied.

2.2 Theoretical Review

The link between career choice and its effect in the labour market has been studied by many especially with basis on human capital theory (Altbeker and Storme, 2013). According to Flourie (2012) the job seekers with higher education qualifications can easily get a job as compared to those who are less qualified academically in the labour market. However not all the graduates are favored by this and thus such statement may not be universal (Moleke, 2006). This is dependent on the career or field of education undertaken. Some people may take longer time searching for jobs after graduation while others get jobs immediately (Coates and Edwards, 2009).

In the theory of human capital, education and work experience are seen to enhance one's efficiency at work. Schultz (1975) noted that educational qualifications and work experience make employees efficient (Card, 2001). In this theory, education, and training play an important role on the productivity of the individuals in the labour market and thus employment depends on the level of education that one possesses. Formal education is seen as key and necessary in improving the productive capacity of people in any given place and nation. According to Becker

(1964) education is a capital among determinant that raises a person's earnings. This is because it improves productivity and competitiveness.

The assertion by Eli Ginzberg (1952) in his occupational choice theory, career choice is process of making decision that stems from pre-puberty to late in teenage. Consequently, one is expected to make sound and definitive commitment regarding their career. He noted that some of the decisions such as academic preparations and decisions related to exploration are usually not reversible; however, people can change the courses they want to pursue given the prevailing conditions. People make decisions about their career given the prevailing circumstances in a way considered optimal (Eli Ginzberg, 1952). According to this theory, people will evaluate the benefits of the jobs before they decide to take it. These include the earnings and the pecuniary benefits compared to the costs of not taking it. According to Johnson (1991) individuals face an occupation-residence choice paradigm. In this case career choice in engaging in farming is restricted on their residential choice. Similarly, their choice of a farm residence decreases employment opportunities in sectors of the economy. In addition, the level of experience affects people's change from one career to another.

Some theories describe the existence of the relationship between education and work. The technical functional theory posits that educational qualification is vital on determining employment because it directly contributes to the productivity of the employees. The idea is that worker with more education are more productive. This is because education equips with training and skills necessary for a given job. This contributes significantly to the productivity and thus and therefore in the final output by the firms. The argument is that formal education enhances cognitive such as quantitative and writing as well as increasing familiarity with facility and technology in the production process (Collins, 1971; Rubinson & Browne, 1994).

The market signal theory suggests that academic certificates signal people's ability and how trainable they are in each job and given field. Education serves as a signal in the job market characterized by imperfect information. However, this does not directly imply productivity and thus it is only but one of the many signals of productivity. Education is correlated with socioeconomic attributes. Employers value education because it signals the extent to which an individual is disciplined, trainability and the ability to absorb new knowledge (Weiss, 1995; Thurow, 1975; Kerckoff, 1976).

2.3 Empirical Review

The conclusion on the study over life cycle by Forster, Herman and Werfhorst (2016) was that higher employment probability was associated with vocational qualifications acquired in the first part of their career life but not later in their career. On the other hand, those who were more academically oriented were more employable in their later career life. This is because having specific skills is an advantage when entering the labor market and hence acquisition of specific skills also makes the vocationally educated less flexible. To address the study objectives, this paper was based on secondary data from the Programme for the International Assessment of Adult Competencies (PIAAC, 2012) for the OECD countries included in this study and employed logistic model for estimation. The use of cross-sectional data made it impossible to separate age, time as well as the effects of cohort. The study did not address the cycle effects why old people with vocational qualifications find it difficult to find jobs.

One of the most recent studies was that of Njogu (2019) who sought to find out factors that affect career choice among students in secondary in Meru country consisting of 19,862 of form four students. The study sought to address the role of parents, guidance services, mass media and

school policy using qualitative and quantitative research designs to achieve the objectives. The study findings indicated that there was a positive and significant relationship between career chosen by students and the four factors. Career guidance services help students in identifying their strengths and weaknesses given their talents and abilities and as a result this significantly affects their career decisions. Mass media had a high level of influence on career choice especially TV and mobile phones since students spend most of their times on these sites. Further study findings showed that policy of the university on combination of subjects to be admitted pursuing a given career played an important role in career choice. It was a key factor in the determination of the career undertaken by the students. This paper failed to investigate the role of parental guidance, social sites (media) and school policy on the career choice.

In his study Quadri (2018) sought to study factors that affect career choice among Librarians in Nigeria using Primary data from a total of 169 questionnaires and the distribution was among 12 libraries. The study findings established that intellectual development about professionalization of librarianship was the determinant of career choice of majority of librarians which is spread in all private and public libraries in Nigeria. The second objective of the study was to establish the perception of the librarians to their professions and the findings showed that people trained in each course career should stay in the profession. Finally, the study concluded that career choice greatly affected librarian's growth in their career. The study objectives were addressed by use of descriptive approach. The study limited the scope only to the librarians yet there are many different professions of career.

The level of education has been one of the factors that contribute towards employment in the labour market. In their study Mpendulo and Mang'unyi (2018) noted that there is a positive relationship between educational level and employment rates in South Africa. The higher the

level of education, the higher the possibility of securing a job. Cross-sectional data was used, and the objectives were achieved using descriptive approach and regression model. The study sample consisted primary data collected from 120 respondents who were employable. This study did not investigate the role of other factors that cause increase in unemployment in the country despite economic growth in the country while moderating role of race. In addition, this study was conducted only O.R Tambo District, Eastern Cape in South Africa with mainly the locals and Indians implying that the sample size was small limiting generalization.

Most of the graduates from the public and private universities are usually distributed between private and public sector. According to Khainga and Mbithi (2018) private and public sectors are the main employers of the Kenyan youths graduating from various universities in Kenya with Non-governmental organizations being the third employers. The rest of the graduates engaged themselves in self-employment. The study was made up of the sample size of 304 graduates with different qualifications including PhD, masters, degrees and diploma qualifications who had graduated within the time period 2008-2018. The study findings indicated that employment among youths was affected by factors such as skills-match, education level, nature of employment and search duration. The study employed multinomial logit model to determine the factors that affect employment among Kenyan youths. This study failed to factor the role of career choice on the youth employment. Further, it did not include factors such as age, level and nature of education.

The study by Brown (2003) sought to determine the relationship between education and employment in the Global economy. The findings of the study were jobs have become more dependent on credential competition. The study noted that education and social inequalities have not had profound economic consequences due to cultural capital, training and motivation, and

thus most people were found to perform well with no effect on the productive efficiency. The level of education increases one's level of competition in the labour market. Women are continually encouraged to engage in various opportunities in the labour market to avoid the widening gap in the job market between men and women. As a result, this leads to a social revolution making it complicated to understand education, efficiency and social justice.

Secondary school qualification in subjects such as mathematics, language and reasoning abilities are not key in the employment markets criteria although grade and academic achievement in school are sometimes used as indicators in the employment markets (Aksoy,1998). Further, the course pursued, or educational level was found not to be key in the entry jobs but rather in the internal jobs by employment and recruitment agencies. The study did not consider the role of course chosen on job prospects but only focused on the educational level.

The discussion paper by Riddell and Song (2011) sought to determine the Impact of Education on Unemployment Incidence and Re-employment Success in US for the time period 1980-2005. The study indicated that education increases the rate of re-employment for those who had been schooling for 12 to 16 years. The study used OLS to estimate this impact. This study also established that education increased the chances of employment for those who were unemployed but not in all circumstances. They therefore concluded that education is a key factor in determination of employment and re-employment in the US labour market. This study did not consider the type of the course chosen and its relevance on employment dynamics in the labour market. It totally ignored the role of other factors such age, marital status among others.

Using primary data in South Africa Dunga and Mncayi (2016) sought to determine the relationship between choice of career and employment length in South Africa among South

African University graduates. The study findings using OLS estimation indicated that graduates in humanity degrees took longer looking for jobs compared to those who had pursued other courses in their study. Despite these findings the study results provide evidence that the most dominated and popular fields were the human resource management, psychology in industries, labour related courses, management of public institutions and administration as well as political science took even longer to get jobs. Those who pursued accounting, mathematics, education and health took the shortest time to secure jobs in South Africa. The study relied on primary data in which questionnaire was the collection tool in the survey carried out in 2015. This study did not take into account factors such as the institution in which the graduates were from, academic qualification, socio-economic background and effect of career choice on employment.

Sakamoto and Woo (2012) in their empirical study arrived at a conclusion that education plays an important role in signaling the competence of an individual to different organization managers in their respective organizations. High level of education attracts high chances of getting employed in addition to increase in the wage levels by those who possess such qualifications. The study was based on the US manufacturing productivity data for the time 1976 to 1996. Using the capital view, the market signal view and credentialist view theories it was found out that the three approaches predicted positive relationship between education and wages. However, the three theories differed on the underlying causes of the differences in the wages in the same academic levels.

The empirical study in Malaysia by Lim et. al (2019) sought to find out the effect of personality of the undergraduates, parental influence and influence of peer on their career choice. The study using a sample of 218 undergraduates in different fields established that personalities were key in career choice by the individuals. The implication was that there is need for self-exploration,

reflection and evaluation of their personality since it is key in choice of their career. Further, the study findings showed that peers and parental influence has a great and significant effect on the choice of career by Malaysian undergraduates. Therefore, it is key to recognize that the influence of parents and friends are key on the career chosen by undergraduates. The study relied on both the Hierarchical Component Model (HCM) and partial OLS to address the study objectives. The study failed to examine demographic variables as factors affecting the choice of career among the undergraduates included in this study sample.

By the use of multinomial logit model, Elima (2015) sought to determine the role of education on the employment status of the youths. The study results using the Kenya Integrated Household Budget Survey (KIHBS) of 2005/2006 established that the youth employment status depends on the youth's educational level. The possession of any level of education from Primary to tertiary level gave Kenyan youths the increased chances of getting employed in Kenya than having zero education. The unmarried youths were found to be more unemployed than those who were married. Similarly, the female youth were more likely to be unemployed than their male counterparts. Age was also found to be an important factor, with the older students likely to be more employed than the younger ones. This study failed to address the role of career choice on employability of graduate workers. It ignored the role of demographic factors such as the area of residence, among others.

Archer and Chetty (2013) sought to determine the employability of the South African graduates using the 2011 graduate exit survey. The findings showed that majority of the graduates were not seeking employment because they were already employed or considering going for further studies. The University of South Africa (Unisa) seemed to support graduates with relevant skills and thus this improved their employability. The study results were mainly presented in tables,

descriptive statistic, and histograms. The study did not consider the role of development of career management skills on employment. In addition, it did not consider the role of socio-demographic factors.

The Turkish study by Ates (2016) investigated factors that affect choice of career among the aviation career students. The study consisted of data for the time 2015 and 2016 with 10,803 students in higher institutions of education. The study investigated factors that affect career choice which included the family members, surrounding environment, legal factors, personal traits, financial and social expectations, professional features, financial and political environment on career planning. Mothers were found to be influential on their children choosing their career in the aviation career while the teaching environment was key in the early career stage of the students. Legal factors are defined as factors regulated by effective laws and hence influencing in career choice by individuals.

Table 2: Summary of empirical literature

Author	Description and strength	Weakness(es)
Forster, Herman and Werfhorst (2016)	<ul style="list-style-type: none"> • This study results show that there was a cross-national difference in the early-career advantage of vocational qualifications which conformed to the theory. The study employed logistic model to achieve the intended objectives. • Logistic model was applied. 	This study used cross-sectional data and therefore, unable to separate age, period, and cohort effects. The study did not address the cycle effects why old people with vocational qualifications find it difficult to find jobs.
Njogu(2019)	<ul style="list-style-type: none"> • Provided evidence that parental guidance services, mass media and school policy are key factors on career choice among students. • Qualitative and quantitative research designs. 	This study did not investigate the role of parental guidance, social sites (media) and school policy on the career choice. Additionally, the study did not compare the factors between private and public schools.
Quadri(2018)	<ul style="list-style-type: none"> • The choice of career among Librarians in Nigeria. • Intellectual development. • Training in a profession. • Descriptive approach. 	The study limited the scope only to the librarians yet there are many different professions of career.
Mpendulo and Mang'unyi (2018)	<ul style="list-style-type: none"> • Using descriptive and regression model in South Africa. • Level of education and training are found to be key determinants of career choice. 	This study did not investigate the role of other factors that cause increase in unemployment in the country despite economic growth in the country while moderating role of race. In addition, this study was conducted in one locality and thus the sample size was small limiting generalization.
Khainga and Mbithi(2018)	<ul style="list-style-type: none"> • In both public and private universities in Kenya, using multinomial logistic model. • Career employment among graduates was found to be affected by skills- 	This study only focused on the distribution of youth employment in private sectors but failed to factor the role of career choice on the youth employment. Further, it did

	match, education level, nature of employment and search duration.	not include factors such as age, level and nature of education.
Brown (2003)	<ul style="list-style-type: none"> • Academic credentials are key in determining employment in the Global economy. • There were still employment inequalities between women and men. • The study was a philosophical one in which it involved critical analysis of relevant theories in this area. 	This study also noted that there was a problem in which educational level did not seem to matter a lot on employment. This complicated the role of education in the labour market to understand education, efficiency and social justice.
(Aksoy,1998).	<ul style="list-style-type: none"> • Course or educational level is not key in the entry jobs but rather in the internal jobs. • Descriptive approach was applied in achieving the study objectives. 	The study did not take into account the role of course chosen on job prospects but only focused on the educational level.
Riddell and Song (2011)	<ul style="list-style-type: none"> • The US study concluded that education is a key factor in the determination of employment and re-employment in the US labour market. • The study applied the OLS model to achieve the objectives 	This study did not consider the type of the course chosen and its relevance on employment dynamics in the labour market. It totally ignored the role of other factors such as age, marital status etc.
Dunga and Mncayi (2016)	<ul style="list-style-type: none"> • In South Africa sought to determine the relationship between career choice and who graduate with degrees in humanities were likely to take long looking for jobs than those graduating in other fields of study. • Those who pursued accounting, mathematics, education and health took the shortest time to secure jobs in South Africa. • OLS Model was applied. 	This study did not consider factors such as quality of schooling education or socio-economic background on the effect of career choice and employment.
Sakamoto and Woo (2012)	<ul style="list-style-type: none"> • Established that high level of education attracts high chances of getting employed in addition to increase in the wag levels by those who possess such qualifications. 	The three theories reviewed had different perspectives on the causes of the differences in the wages given the academic qualification.

	<ul style="list-style-type: none"> • It was based on theoretical review. 	
Lim et. al (2019)	<ul style="list-style-type: none"> • Using Hierarchical Component Model (HCM) and partial OLS in Malaysia peers and parental have influence were found to significantly influence career choice. 	The study failed to examine demographic variables as factors affecting the choice of career among the undergraduates included in this study sample.
Elima(2015)	<ul style="list-style-type: none"> • Using multinomial logit model in Kenya, the study concluded that factors such as age, educational level and marital status were found to have a significant effect on the career employment among youths in Kenya. 	This study failed to address the role of career choice on employability of graduate workers. It ignored the role of demographic factors.
Archer and Chetty (2013)	<ul style="list-style-type: none"> • The study showed that majority of the graduates were not seeking employment because they were already employed or considering going for further studies in South Africa using descriptive approach. 	The study did not consider the role of development of career management skills on employment. In addition, it did not consider the role of socio-demographic factors.
Ates(2016)	<ul style="list-style-type: none"> • Turkish study on family members, surroundings environment, legal factors, personal traits, financial and social expectations, professional features, and political environment on career planning and choice. 	This study totally ignored the role of career chosen on employability in the labour market.

2.4 Overview of the Literature

This section reviewed both the theoretical review of the theories related to the topic of the study and the empirical studies carried out in this area of research. The level of education, training and working experience are found to be critical in productivity of workers. Schultz (1975; Becker (1964). Further the theoretical review provides evidence that these traits play an important role in the employability of individuals in the labour market. The decisions made by the youths about their career choices are always not reversible and thus they should be fully informed about them

before any undertaking to avoid finding themselves in opportunities they never intended (Eli Ginzberg , 1952).

Various studies carried out in different parts of the world shows that the occupational or career choices are affected by factors such as age, peers, parental influence, environment, mass media , the work held by the parents, career guidance services among other factors (Njogu,2019;Forster, et al ,2016; Quadri,2018). Factors such as educational qualifications, work experience, course of study, age and gender are found to be key in the determination of the employability in the market (Archer and Chetty, 2013; Lim et. al, 2019; Dunga and Mncayi, 2016).

It is clear from studies reviewed that they never focused on the choice of career and particularly the course of the study on employment in the labour market apart from the study by Dunga and Mncayi (2016) in South Africa. In their study in South Africa they found out that those who graduate with degrees in humanities were likely to take longer looking for jobs than those graduating in other fields such as accounting, mathematics, education and health who took the shortest time to secure jobs in South Africa. This is not very clear in Kenya on whether the career choice has anything to do with the increasing rate of unemployment. The studies carried out in Kenya focused more on the education and employment as well as other factors mentioned (Khainga and Mbithi,2018; Elima, 2015). This leaves unexamined role of career choice and employment in the labour market in Kenya. Although in review of the previous studies brings out various gaps in the role of education in the career choice, one weakness that stands out that Kenyan market is facing is; graduates who are highly educated and qualified but still not able to secure jobs. This presents an interesting area for research.

There are limited studies carried out in Kenya on factors that determine career choice among the youths as well as the level of employability (Njogu, 2019; Elima, 2015). Further, there was no study carried out showing the relationship between the course of the study and the easiness of obtaining employment. Therefore, there is no clear understanding between the choice of career and the chance of securing employment. This study investigated factors that affect the choice of career among the youths and the role of course chosen on getting employment in Kenya's job market.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section presents the methods used to address research questions in this study. Following this introduction is the theoretical framework, followed by the empirical model, and model specification. The section also outlines the variables used in the study and their definition. Additionally, the chapter presents the diagnostic tests and finalizes by describing the data, data types and sources.

3.2 Theoretical framework

Making decision in career has been previously modeled as a logical, systematic, and objective process (Gelatt, 1962; and Gati, 1986). Contrary to this Mitchell, Levin & Krumboltz (1999) perceived such a decision in career choice based on uncertainty. All these approaches were termed as irrational methods by Philips (1997), who stipulated that individuals are not rational in making career decisions.

Apart from the irrational approaches as termed by Philips (1997), there is no proposed approaches that models career making decisions. This presents a need for more empirical investigations on the processes of modeling real-life career choices. The study therefore chooses to voice Philips (1997) arguments and follow the rational approach in career decision making.

To begin with, suppose that a certain person makes a choice of a certain career (X), among a set of increasing alternative careers J, but subjected to certain constraint, such that $j \in \{1 \dots ,J\}$. Let

X^* represent the preferred career, which is unobservable but actual decision X_j of the person. This specific decision is assumed to be rationally made and maximizes the expected utility for the person but subjected to various restrictions. The expected utility in this study is defined as the expected net return, which is basically the contrast between the expected returns and costs emanating from each alternative career choice X_j . The perception of utility may include monetary (wages) and non-monetary (non-pecuniary).

The ideal career choice for the person given a set of characteristics z is given by:

$$\text{Max}_{j \in \{1, \dots, J\}} r(X_j | z) - c(X_j | z) \dots \dots \dots 1$$

Where, r is the anticipated return, c is the expected cost related with career choice X_j . The underlying assumptions are that the return function is strictly positive, and increases with choice of career, and that the cost function begins with value zero. Furthermore, costs and returns of career choice varies across different persons. The cost and return functions can be represented as follows:

$$r(X_j | z) = r(X_j) \circ F_r(z) \in_r \dots \dots \dots 2$$

And;

$$c(X_j | z) = c(X_j) \circ F_c(z) \in_c \dots \dots \dots 3$$

Where, $\circ F_r(z)$ represents a definite function, which defines impacts of the observed features on expected returns associated with career choice, similarly, $\circ F_c(z)$ is a definite function which represents the impact of the observed features on the expected cost that is associated with career choice. \in_r and \in_c represents the random variables that gives the unobserved heterogeneous

effect of expected returns and expected costs, respectively. To avoid loss of generality, we assume that $X(\epsilon_r) = X(\epsilon_c) = 1$, implying that the unseen heterogeneity has a unbiased effect on the returns and costs that are associated with career choice.

The optimal career choice X_j^* of the person is achieved in such a way that the expected return is maximized (the net return linked with X_j^* ought to be positive and higher than the net returns of the next career choice X_{j-1}^* as per the individual, and at the same time be higher than the expected return from the next higher career choice X_{j+1}^*). This simply means that, on circumstances where the return of X_j^* and X_{j+1}^* are equal, the person is assumed to opt for alternative X_j^* . This is represented in the following equations:

$$r(X_j^*) \circ F_r(z) \in_r - c(X_j^*) \circ F_c(z) \in_c > 0 \dots \dots \dots 4$$

and

$$r(X_j^*) \circ F_r(z) \in_r - c(X_j^*) \circ F_c(z) \in_c > r(X_{j-1}^*) \circ F_r(z) \in_r - c(X_{j-1}^*) \circ F_c(z) \in_c \dots \dots 5$$

and

$$r(X_j^*) \circ F_r(z) \in_r - c(X_j^*) \circ F_c(z) \in_c \geq r(X_{j+1}^*) \circ F_r(z) \in_r - c(X_{j+1}^*) \circ F_c(z) \in_c \dots \dots 6$$

The above equations are similarly expressed as follows:

$$\circ F_c(z) \in_c \left[r(X_j^*) \cdot \frac{\circ F_r(z) \in_r}{\circ F_c(z) \in_c} - c(X_j^*) \right] > 0 \dots \dots \dots 7$$

And,

$${}^{\circ}F_c(z) \in_c \left[r(X_j^*) \cdot \frac{{}^{\circ}F_r(z) \in_r}{{}^{\circ}F_c(z) \in_c} - c(X_j^*) \right] > {}^{\circ}F_c(z) \in_c \left[r(X_{j-1}^*) \cdot \frac{{}^{\circ}F_r(z) \in_r}{{}^{\circ}F_c(z) \in_c} - c(X_{j-1}^*) \right] \dots 8$$

And,

$${}^{\circ}F_c(z) \in_c \left[r(X_{j-1}^*) \cdot \frac{{}^{\circ}F_r(z) \in_r}{{}^{\circ}F_c(z) \in_c} - c(X_{j-1}^*) \right] \geq {}^{\circ}F_c(z) \in_c \left[r(X_{j+1}^*) \cdot \frac{{}^{\circ}F_r(z) \in_r}{{}^{\circ}F_c(z) \in_c} - c(X_{j+1}^*) \right] 9$$

For simplification, lets define:

$${}^{\circ}F(z) = \frac{{}^{\circ}F_r(z)}{{}^{\circ}F_c(z)} \text{ and } \in = \frac{\in_r}{\in_c} \dots \dots \dots 10$$

${}^{\circ}F(z)$ gives the effect of the observed features of z , while \in explains the unobserved impact of the expected returns to cost associated with career choice. Given that ${}^{\circ}F_c(z) > 0$, ${}^{\circ}F_r(z) > 0$, $\in_r > 0$, $\in_c > 0$, and $\in > 0$, substitution equation 10 into equations 7, 8 and 9, and solving, we have the following maximization function:

$$\frac{c(X_j^*) - c(X_{j-1}^*)}{r(X_j^*) - r(X_{j-1}^*)} \cdot \frac{1}{{}^{\circ}F(z)} < \in < \frac{c(X_{j+1}^*) - c(X_j^*)}{r(X_{j+1}^*) - r(X_j^*)} \cdot \frac{1}{{}^{\circ}F(z)} \dots \dots \dots 11$$

Hence, for a person with the observed features z , we have a positive expected return rate at optimal point, while the unobserved person element is restricted to the expected ratios defined by z , i.e, ratio of the marginal cost to marginal returns. The ratio of the marginal cost to marginal returns keep shifting from lower bound to upper bound (lower bound represents the lower career choice, while upper bound represents the next higher career choice).

3.3 Empirical model

From the perspective of the person making the decision, the utility derived, and the choices made are purely deterministic. Despite this, considering the effects of the unobservable contributing factor of utility, there exists some elements of randomness. For this case, the choices can be analyzed using probabilities (Zeithammer and Lenk, 2009).

Emanating from equation 8, the probability that a person chooses career X_j is defined as:

$$\Pr(X_j|z) = \Pr\left[\frac{c(X_j) - c(X_{j-1})}{r(X_j) - r(X_{j-1})} \cdot \frac{1}{\circ F(z)} < \epsilon < \frac{c(X_{j+1}) - c(X_j)}{r(X_{j+1}) - r(X_j)} \cdot \frac{1}{\circ F(z)}\right] \dots \dots \dots 12$$

This is further simplified by first defining the following:

$$\mu_j = \frac{c(X_{j+1}) - c(X_j)}{r(X_{j+1}) - r(X_j)} \text{ and } \gamma_j = \mu_j \cdot \frac{1}{\circ F(z)} \dots \dots \dots 13$$

This implies that in case of a change across individuals in results z , for instance, higher expected costs in X_{j+1} , results to increased threshold $\gamma_j + 1$ which translates to a lower probability to the individual who chooses X_{j+1} and greater probability for the person who chooses X_j . Hence, a change in the observed features z , may result into a change in career choice such that it may lead to a change in the expected proportions of marginal costs and marginal returns. Upon transforming equation 12 through taking the natural logarithm, and making an assumption that $\circ F(z) = \exp(\beta z)$, we have the following equation:

$$\Pr(X_j|z) = \Pr[\mu_{j-1} - \beta z < \ln \epsilon \leq \mu_j - \beta z] \dots \dots \dots 14$$

This function takes a similar form as the ordered probit model, which is identifiable to some level of proportionality. The parameters β and values μ_j can be estimated through maximization of the likelihood function of the ordered probit model. This model establishes the factors that affect career choice among university students, which is given by establishing the marginal effects of the associated probit model. Similarly, we use the same model to establish the likelihood of a student being employed by using employment variable (which is binary, ie. employed or not employed) as the dependent variable and maximizing the likelihood function. The maximize likelihood function is given as follows:

$$L = \prod_{i=1}^n \prod_{j=1}^J [\Phi(\mu_{j-1} - \beta z - \Phi(\mu_j - \beta z))]^{I_{ij}} \dots \dots \dots 15$$

Where, Φ represents the cumulative standard normal distribution function.

3.4 Estimation technique

The study used the following two linear modes, first to establish the factors affecting career choice among university students and to establish the influence of the level of education and course of study on chances of getting employed in Kenya:

$$Y_i = \beta_0 + \sum_n^i \beta_i X_i + \varepsilon_i \dots \dots \dots 16$$

Where, Y is the career choice variable (dependent variable), with categories defined as: accounting and financial management (AFM) is Y₁; marketing, business management and entrepreneurship (MBE) is Y₂; psychology and sociology is Y₃; mathematics and statistics is Y₄; languages and communication is Y₅; law is Y₆; computer sciences and information technology

(CSIT) is Y_7 ; public administration, public management and political studies is Y_8 ; intermediate; health and social work is Y_9 and art and history is Y_{10} . X represented all the explanatory variables which included level of education, employment status, age, gender, residence, work experience, marital status, skills development, parental advisory and type of school. β_0 is the intercept of Y_i , while β_i is the coefficient associated with explanatory variables, respectively. The error term is represented by ε .

In order to establish the influence of level of education and choice of career on employment status, the following linear model was used:

$$Z_i = \beta_0 + \sum_n^i \beta_i X_i + \varepsilon_i \dots \dots \dots 17$$

Where, Z represents employment status (dependent variable), and X_i represents all the other explanatory variable mentioned above, in addition to career choice which in this case is treated as independent variable. Some of the variables included in the empirical literature review have been excluded due unavailability of data.

3.5 Variable definition and measurement

Table 3: Variables Definition and Measurement

Variable Name	Measurement	Expected Sign
Dependent variable		
Career choice	This is a dummy variable represented as: Engineering Manufacturing and Architect; Marketing, business management, Psychology and sociology, Mathematics and statistics, and AFM; Languages and communication; Law; Computer sciences and information technology, Intermediate, Health and social work, Arts and history	
Employment	Binary variable, measured as 1 if an individual is employed, 0 otherwise	
Independent variables		
Gender	This variable is measure as 1 if an individual is male and 0, otherwise	±VE
Age	This is a continuous variable which gives the age of the individual in years	±VE
Level of education	This is a categorical variable categorized as: 1 if primary and secondary 2 if college and undergraduate	±VE

	3 if postgraduate 0 if no education	
Residence	This is a binary variable, measured as 0 if a person is from rural area and 1 if urban	±VE
Work experience	This is a continuous variable measure as the total number of years in employment.	±VE
Marital status	This is a dummy variable defined as follows: 0 if woman is married 1 if the woman is separated/divorced 2 if a woman is widowed/ never married	±VE
Skills development	This is a dummy variable measured as: 0 if did not received any training on skills 1 if the student received training on skills	±VE
Parental Advisory	This is a dummy variable defined as: 0 if the parent does not offer advice on career and education 1 if the parent offers advice on career and education	±VE
Type of school	This is a binary variable measured as: 0 if public schooling 1 if private schooling	±VE

3.6 Diagnostic tests

3.6.1 Heterogeneity effect of labor

Certain differences resulting from urban-rural structure, among other factors such as available employment opportunities and information asymmetry can lead to a split in the available job resources and career stability. For instance, employees in urban areas tend to have high skills, job security and typical years of education as compared to those ones in the rural areas. Due to this limitation, rural employees who depend on agriculture can internalize the external risks in career choices. The study did not carry out heterogeneity test because the data was found to have been collected in urban areas only and not rural areas hence the test was not justified.

3.6.2 Normality test

The normality shows the distribution of the variable observations in relation to the standard normal distribution. The study carried out normality test to check on the distribution of the variables relative to the standard normal distribution. The probability values greater than 0.05 shows normal distribution while values less 0.05 shows that the variable does not follow normal distribution.

3.6.3 Multi-collinearity

This occurs when there is one predictor variable in a data set, with a substantial accuracy level, can be predicted in a linear way by other variables in a multiple regression model. This phenomenon may cause the problem of unreliable regression coefficients. The study used variation inflation factor (VIF) to test the subject.

Data, data types and sources

The study used secondary data, cross-sectional data from the Skills Toward Employment Productivity (STEP) Survey 2016 – 2017, which was obtained from the World bank database. The data contained modules which are aimed to assess the structure of the labor force, skills, training, as well as background characteristics of individuals, and firms.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, AND DISCUSSION

4.1 Introduction

This chapter presents the discussion of the results from descriptive statistics, diagnostics tests which include normality and multicollinearity test, two multinomial logit models and ends with the discussion and interpretation of the results.

4.2 Descriptive statistics

The table below presents descriptive statistics which shows the statistical properties of the variables of the study which include the mean, standard deviation, minimum and maximum values of the study variables. The mean which shows the average values for the variables of the study. The standard deviation shows how positively or negatively the variable observations vary from the mean of the variables. The minimum shows the lowest attainable value of the variables while the maximum shows the highest value of the variables in the study.

Table 4: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Career Choice	4.075812	2.67897	0	10
Education level				
No Education	.0428865	.2026272	0	1
Primary and Secondary	.6312275	.4825341	0	1
College and Undergraduate	.1248074	.3305428	0	1
Postgraduate	.1587057	.3654484	0	1
Employment	.6226221	.484793	0	1
Gender				
Female (1/0)	.5241397	.4994811	0	1
Age	29.5303	9.928461	15	64
Residence				
Urban (1/0)	.8017463	.3987355	0	1
Working Experience	5.095535	5.231802	0	44
Marital Status				
Separated/divorced (1/0)	.0447301	.2067372	0	1
Widowed/ never married (1/0)	.4326478	.4955066	0	1
Skills Development	.1088855	.3115355	0	1
Parental Advisory	.9071888	.2902065	0	1
School Type				
Private schooling (1/0)	.1644349	.3707194	0	1

Most of the variables in this study were binary in nature and thus their means values were mainly less than one such as gender, residence, marital status and school type. Most of the variables included in this study had a mean value of below apart from career choice with mean value of 4.075812, age with 29.5303 while working experience had 5.095535. Age had the highest achievable mean value of 29.5303 while the variable for those with no education had the lowest mean value of 0.0428865 followed by the mean of the separated or divorced which accounted for

0.0447301. The mean of the variables shows on average the expected values for each variable included in the study. It is a measure of central tendency.

The standard deviation as presented in the second column shows how the observation of the variables varies from the mean. It is a measure of dispersion or variations showing the observations vary from their means. As it was the case in the mean, age had the highest standard deviation of 9.928461. This implies that the observations of variable age can be higher than its mean by 9.928461 and this applies to all the other variables. This was followed by working experience and career choice with values of 5.231802 and 2.67897, respectively. The variable for those who had no education had the least value of 0.2026272 followed by those who were either separated or divorced.

The maximum column shows the highest attainable values of the study variables. It is the highest observation that can be achieved by any given variable in the study. Age had the highest maximum value of 64 years which implies that the oldest respondent in the study was 64 years old while those with highest years of working experience had worked for 44 years by the time the data was collected. Career choice had a maximum value of 10 options which implied that there were a total of 10 career options available to the students. The rest of variables were binary in nature and thus 1 was the highest achievable observation. The minimum shows the lowest attainable observations. Age had the highest minimum value of 15 years which meant the youngest person considered in this study was 15 years of age. The rest of the variables had zero as the minimum values.

4.3 Estimation tests

4.3.1 Normality test

The normality shows the distribution of the variable observations in relation to the standard normal distribution. The probability values greater than 0.05 shows normal distribution while values less 0.05 shows that the variable does not follow normal distribution.

Table 5: Shapiro- Wilk Normality Test

Variable	Obs	W	V	z	Prob>z
Career Choice	554	0.91485	31.419	8.325	0.00000
Education level	3,729	0.95427	95.308	11.846	0.00000
Employment	3,890	0.99988	0.270	-3.412	0.99968
Gender	3,894	0.99998	0.037	-8.606	1.00000
Age	3,894	0.90648	202.625	13.826	0.00000
Residence	3,894	0.99873	2.746	2.630	0.00427
Working Experience	2,083	0.82236	218.609	13.724	0.00000
Marital Status	3,890	0.99978	0.477	-1.926	0.97296
Skills Development	3,894	0.99588	8.923	5.697	0.00000
Parental Advisory	3,728	0.99556	9.245	5.781	0.00000
School Type	3,734	0.99757	5.064	4.217	0.00001

From the results presented above, the variables that are normally distributed include employment with a p value of 0.99968, gender had 1.00000 and marital status with 0.97296. The rest of the variables had a mean value less than 0.05 which showed that they did not follow normal distribution.

4.3.2 Multilinearity test

Multicollinearity occurs when the independent variables are related to one another and this may result to unbiased results. To test for this, the study applied Variance Inflation Factor (VIF). The rule in this test is that the mean VIF less than 8.0 indicates the absence of multicollinearity while mean VIF values greater than 8.0 indicates the presence of multicollinearity. The following results were presented below. The problem of multicollinearity is solved by dropping some of the variables based on the value of VIF for the variable.

Table 6: Multicollinearity Test

Variable	VIF	1/VIF
Age	1.60	0.625399
Marital Status	1.35	0.741426
Education level	1.30	0.768283
Working Experience	1.14	0.879632
Skills Development	1.11	0.904625
School Type	1.10	0.911726
Residence	1.06	0.940669
Gender	1.03	0.970464
Parental Advisory	1.02	0.976459
Mean VIF	1.19	

The mean VIF was found to be 1.19 which is far less than 8.0 which implies there was no multicollinearity and thus the independent variables were not related to one another. We can therefore proceed to estimate the models.

4.4 Model results

4.4.1 Multinomial logit model one (Career choice)

Table 7: Career Choice Model Results

	Engineering Manufacturing and Architect	Marketing, business management	Psychology and sociology	Mathematics and statistics, and AFM	Languages and communication	Law	Computer sciences and information technology	Intermediate	Health and social work	Arts and history
VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Gender	0.0960 (0.538)	-1.646*** (0.543)	0.276 (0.342)	-0.329 (0.527)	-0.266 (0.608)	0.0517 (0.66)	-0.458 (0.394)	0.608 (0.412)	0.178 (0.425)	-0.137 (0.556)
Age	0.0517 (0.180)	0.280 (0.182)	0.88*** (0.184)	1.052*** (0.219)	0.577** (0.227)	2.85** (1.307)	1.707*** (0.283)	1.422** (0.606)	0.85*** (0.182)	0.67*** (0.209)
Age Squared	0.00102 (0.00234)	-0.00327 (0.00265)	-0.0118*** (0.00317)	-0.0134*** (0.00353)	-0.00430 (0.00302)	-0.0607* (0.0317)	-0.0264*** (0.00539)	-0.0252* (0.0138)	-0.01*** (0.00290)	-0.008** (0.00365)
Education										
No Education	-1.560** (0.793)	-1.681** (0.720)	18.53*** (0.778)	-3.015*** (0.720)	-3.626*** (0.741)	-3.99*** (0.785)	-2.835*** (0.788)	-2.466*** (0.691)	-2.83*** (0.680)	-3.19*** (0.714)
Primary and secondary level	-2.194***	-2.677***	-2.849***	-3.138***	-3.562***	-3.45***	-1.721***	-2.289***	-2.69***	-2.88***

	(0.810)	(0.700)	(0.572)	(0.685)	(0.773)	(0.818)	(0.609)	(0.709)	(0.664)	(0.758)
College and undergraduate level	0.783	0.411	-1.866**	-2.581**	-2.393*	-17.9***	-0.0855	0.732	-0.495	-15.8***
	(0.947)	(0.762)	(0.844)	(1.276)	(1.239)	(0.760)	(0.835)	(0.813)	(0.856)	(0.753)
Residence	-0.571	-0.353	-0.338	-0.586	0.182	-0.236	0.434	-0.366	0.00878	-0.574
	(0.582)	(0.455)	(0.412)	(0.550)	(0.695)	(0.806)	(0.561)	(0.510)	(0.569)	(0.604)
Marital status										
Separated/divorced	-34.37***	-30.90***	-0.893	-35.58***	-36.41***	-27.1***	-35.17***	-32.81***	-0.834	0.438
	(1.272)	(1.002)	(1.157)	(1.208)	(2.063)	(3.946)	(0.917)	(1.261)	(1.373)	(1.866)
widowed/ never married	0.801	0.934	1.302**	2.845***	6.089***	1.544	1.481**	1.002	1.901***	1.999**
	(0.978)	(0.684)	(0.606)	(0.773)	(1.274)	(1.317)	(0.591)	(0.683)	(0.732)	(0.831)
Skills development	14.61***	2.213***	1.398***	0.819	1.556*	1.674*	0.715	0.897	1.186*	1.187*
	(0.495)	(0.603)	(0.533)	(0.630)	(0.817)	(0.936)	(0.628)	(0.697)	(0.620)	(0.696)
Parental Advisory	-0.668	16.33***	16.67***	0.347	-0.720	15.65***	0.758	-0.0283	16.63***	-0.172
	(0.892)	(0.824)	(0.597)	(1.015)	(1.031)	(0.435)	(1.140)	(1.134)	(0.500)	(1.053)
School Type	0.383	-1.162**	-0.267	-0.932	-0.412	0.248	0.0407	-0.409	-0.700	-0.142
	(0.520)	(0.554)	(0.396)	(0.779)	(0.696)	(0.744)	(0.441)	(0.536)	(0.605)	(0.648)
Constant	-1.979	-20.58***	-29.70***	-18.06***	-15.25***	-49.8***	-26.39***	-19.43***	-31.4***	-11.7***
	(3.580)	(3.153)	(2.851)	(3.579)	(4.214)	(12.99)	(3.883)	(6.566)	(2.941)	(3.259)
Observations	552	552	552	552	552	552	552	552	552	552

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

The above model in table 4.4.1 is for career choice showing the factors that affected the choices of different courses by the students in different courses which have been classified into ten categories. There were 552 observations in each model for the number of respondents in this study. Constant in this case shows the number of people that chose a given course without including other variables in the model. Thus, this implies that the constants for each of the ten models indicated here shows the choice of various career courses by the students without considering other factors that come into play.

Type of school sought to investigate the effect of studying at private school compared to public institution and the findings shows that it affected the choice of Marketing, business management significantly and negatively. The findings showed that studying in private school compared to studying in public reduced the log likelihood ratio of choosing the marketing and business management by 1.162 and this effect was significant. The log likelihood ratio was positive but insignificant on the choice of engineering manufacturing and architect, law and Computer sciences and information technology by 0.383, 0.248, and 0.0407 respectively. However, the effect was negative and insignificant on psychology and sociology, mathematics and statistics, AFM, languages and communication, intermediate, health and social work and arts and history with coefficients of 0.142, 0.267, 0.932, 0.412, and 0.409 and 0.700 respectively.

Parental guidance or advice was found to negatively and insignificantly reduce the log likelihood of four career choices. These included the engineering manufacturing and architect, languages and communication, intermediate and arts and history with coefficients of 0.668, 0.720, 0.0283 and 0.172. Parental guidance positively and significantly increases the log likelihood of choosing marketing, business management and psychology and sociology as career of choice by students

by 16.33 and 16.67 respectively. Further the findings showed that parental guidance increases the log likelihood of career choice of law and health and social work by 15.65 and 16.63 in the respective order. The effect was significant and thus it is worth noting that parental guidance plays a key role on the choice of various career options by parents. One of the most recent studies was that of Njogu (2019) concluded that parental advice, guidance services, mass media and school policy using qualitative and quantitative research designs to achieve the objectives.

There was an important relationship between skills development and the career choice for students in Kenya. Having skills development increases the log likelihood odd ratio of choosing engineering manufacturing and architect by 14.61 while for marketing and business management increases by 2.213 significantly. The log likelihood for choosing psychology and sociology positively and significantly increases by 16.67 but its effect on choice of mathematics and statistics and AFM as a career is insignificant and thus skill development had no effect on making career choices with a coefficient of 0.819. Skills development significantly increases the log likelihood odd ratio of the students choosing languages and communication by 1.556 and law by 1.674. The choice of computer sciences and information technology and intermediate courses was not affected by skills development with insignificant coefficients of 0.715 and 0.897 respectively. The log likelihood odd ratio for choosing health and social work significantly increased by 1.18 due to the skill development while the log likelihood for arts and history increased by 1.187 due to skill development. In his study Quadri (2018) sought to study factors that affect career choice among Librarians in Nigeria, he concluded that career choice greatly affected librarian's growth in their career.

The study considered marital status in two main categories; separated /divorced and widowed/ never married. The log likelihood ratio of choosing engineering manufacturing and architect,

marketing and business management, mathematics and statistics and AFM, Languages, and communication and intermediate and law significantly reduces by 34.37, 30.90, 35.58, 36.41 and 32.81 respectively. The log likelihood ratio for choice of psychology and sociology as well as of health and social work was found to be insignificant with coefficients of 0.893 and 0.834 while the effect was positive and insignificant for the choice of arts and history with coefficient of 0.438.

The log likelihood odd ratio for choice of the ten course options was found to be positively affected by those who had never been married or were single. Being single or widowed increased the log likelihood odd of choosing psychology and sociology by 1.302, mathematics and statistics as well as AFM by 2.845 and for Languages and communication by 6.089. The log likelihood odd ratio for the choice of computer sciences and information technology was 1.481 and for health and social work significantly increased by 1.901 while for arts and history increased by 1.999. Elima (2015) concluded that unmarried youths were found to be more unemployed than those who were married.

The place of residence was found not to have any significant effect on the choice of career by students. Living in urban areas compared to rural areas insignificantly reduces the log likelihood odd ratio for the choice of engineering manufacturing and architect by 0.353, mathematics and statistics and AFM by 0.571, psychology and sociology by 0.338 and marketing and business management by 0.586. The log likelihood odd ratio increased insignificantly for the choice of languages and communication career by 0.182, computer sciences and information technology by 0.434 and health and social work by 0.00878. There was also insignificant decrease in the log likelihood odd ratio of choosing computer sciences and information technology by 0.236 and health and social work by 0.366.

The level of education was found to play an important role in the determination of career choice by the respondents. Having no education and having primary education were found to reduce the log likelihood odd ratio for the choice of engineering manufacturing and architect as career by 1.560 and 2.194 respectively. It was found that, having college education led to the increase in the log likelihood odd ratio for the choice of engineering manufacturing and architect as career by 0.783 which was insignificant. Similarly, having no education and primary education significantly reduces the log likelihood odd ratio of choosing marketing and business management as a course by 1.681 and 2.677, respectively. However, having college education increased the odd ratio by 0.411 but this effect is insignificant. On the contrary, having no education significantly lead to the increase in the log likelihood odd ratio for choosing psychology and sociology by 18.53 and primary education increased the odd ratio by 2.849. In addition; having college and undergraduate degrees significantly reduced the log likelihood odd ratio for choosing psychology and sociology by 1.866 significantly. Having no education, primary education, college and undergraduate degree lead to the significant reduction in the log likelihood odd ration by 3.015, 3.138 and 2.581 respectively. In addition, no education, primary education, college and undergraduate significantly and negatively lead to the reduction in the log likelihood odd ratio of choosing the career in language and communication by 3.626, 3.562 and 2.393 respectively.

Law seems to be a peculiar course of study and all the levels of education are found to be significantly reducing the log likelihood odd ratio choosing law as a career. Particularly, having no education reduces the odd ratio by 3.990, primary education by 3.449 and college as well as undergraduate education by 17.97. The odd ratio for choosing computer science and information technology as a career course was significantly reduced by 2.835 and 1.721 respectively while

the effect of college and undergraduate negatively and insignificantly increase the odd ratio by 0.0855. Intermediate courses are negatively and significantly affected by education level. It was observed that; no education and primary level reduce the log likelihood odd ratio by 2.466 and 2.289 respectively while college and undergraduate degree played no important role on the choice of career with positive odd ratio of 0.732. The odd ratio for the choice of health and social work is negatively and significantly reduced by 2.834 when one has no education and by 2.692 when one has only primary education as their academic qualification. The positive role played by college and undergraduate degree is insignificant and reduces the odd ratio by 0.495. All levels of education are associated with reduction in the level of log likelihood odd ratio by 3.191, 2.881 and 15.81 or having no education primary and secondary education and college and university education respectively. The empirical study in Malaysia by Lim et. al (2019) established that parental influence and influence of peer on their career choice.

Age was found to have a positive effect on the log likelihood ratio of choosing all the ten career options however its effect was not significant for the choice of engineering manufacturing and architect with a coefficient of 0.0517 and marketing and business management with 0.280. There was a positive and significant effect of age on the Mathematics and statistics and AFM by 0.882, languages and communication 1.052 and psychology and sociology by 0.577. Log likelihood ratio for the choice of law significantly increased by 2.852, choice of computer sciences by and information technology by 1.707 and the choice for intermediate courses by 1.422. Also age reduced the log likelihood ratio for choice of health and social work and arts and history by 0.854 and 0.666 respectively. Age squared is the preferred measure for the increase in age and thus this study included it as one of the variables in this study.

Age squared was found to have positive and insignificant effect on engineering manufacturing and architect by increasing the log likelihood ratio by 0.00102, reducing marketing and business management log likelihood ratio by 0.00327 and languages and communication by 0.00430 whose effect is insignificant. Age squared negatively and significantly reduced the log likelihood odd ratio of psychology and sociology by 0.0134, mathematics and statistics and AFM by 0.0118 and choice of law reduced by 0.0607. The log likelihood odd ratio for the choice of computer sciences and information technology significantly reduced by 0.0264, intermediate by 0.0252, arts and history by 0.00762 and health and social work by 0.0104. Essentially, increase in age by one unit leads to the reduction in the choice of the either of the careers.

Gender was found to have insignificant effect on the log likelihood odd ratio of career choice apart from the choice of marketing and business management as career in which gender is found to significantly reduce the log likelihood odd ratio by 1.646. The effect of age on choice of courses such as engineering manufacturing and architect, psychology and sociology, law, intermediate and health and social work were found to have a positive but insignificant on these careers. Gender has played a negative but insignificant role on the choice of career on mathematics and statistics, AFM, languages and communication, computer sciences and information technology and arts and history. The study by Elima (2015) concluded that female youth were more likely to be unemployed than their male counterparts.

4.4.2 Multinomial logit model one (Employment)

Table 8: Determinants of Employment results

Variables	Employment
Career Choice	
Engineering Manufacturing and Architect	-0.00383 (0.117)
Marketing, business management	-0.0448 (0.110)
Psychology and sociology	0.0951 (0.103)
Mathematics and statistics, and AFM	-0.220 (0.136)
Languages and communication	0.292** (0.122)
Law	0.694*** (0.138)
Computer sciences and information technology	0.314*** (0.109)
Intermediate	0.485*** (0.110)
Health and social work	-0.347*** (0.117)
Arts and history	-0.418*** (0.124)
Gender	-0.438*** (0.0403)
Age	0.456*** (0.0184)
Age Squared	-0.00582*** (0.000266)
Education	
Primary and secondary level	-0.330*** (0.0490)
College and undergraduate level	-0.255*** (0.0564)
Residence	-0.163*** (0.0479)
Marital Status	
Separated/divorced	-0.0519 (0.148)
widowed/ never married	-0.594*** (0.0518)

Skills Development	0.592*** (0.0480)
Parental Advisory	-0.909*** (0.116)
School Type	0.172*** (0.0457)
Constant	-6.355*** (0.323)
Observations	8,403

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

The second multinomial logit model shows the effect of choice of career on employment and other factors that affect employment in Kenya. The numbers of observations factored in this model are 8,403. Constant shows the level of employment created when the model is empty. The idea is when the model has not considered other factors that affect unemployment. In our case the level of employment is found be negative with a magnitude of 6.355.

Type of school that one attends was found to play both positive and significant effect on the getting employment in Kenya. The study findings showed that the log likelihood ratio odd for ones who studied in private universities significantly increased by 0.172.

Parental advisory was found to have negative and significant effect on getting employment in Kenya. Receiving the parental advisory was found to have a significant effect on the reduction of the log likelihood by 0. 909. This was against the priori expectations that parental advisory would affect getting employment. The implication is that on matters employment, parents are not the best suited for the assignment.

Skills Development has a positive and significant effect on employment in Kenya as shown in by the results. The study showed that having skills development lead to the increase in the log

likelihood odd ratio 0.592 and this effect was significant. Consequently, this provides evidence that skills development plays an important role in having people get employed.

Marital status was also another factor that we sought to find out how they affect the log likelihood odd ratio of getting employment in Kenya. The effect of being separated/divorced had a negative but insignificant effect on the log likelihood ratio of getting employment in Kenya by 0.0519. However, being widowed/ never married significantly reduced the log likelihood odd ratio by 0.594. The implication of these results is that we have both categories of marital status are not favourable for getting employment.

Place of residence plays an important role on getting employment in Kenya. The study findings showed that living in urban areas experienced a significant reduction in the log likelihood odd ratio for them to get employed by 0.163 compared to those who live in the rural areas. This is even though it was expected that people in urban areas should easily get jobs relative to those in rural areas because of the increased opportunities given the fact that many industries are in urban areas.

Having education is negatively related to the log likelihood ratio of getting employment in Kenya. The study findings showed that having primary and secondary education reduces the log likelihood ratio by 0.330 while having college and undergraduate education is associated with significant reduction in the log likelihood of getting employment by 0.255. This was contrary to the findings by Mpendulo and Mang'unyi (2018) noted that there was a positive relationship between educational level and employment rates in South Africa. To them, the higher the level of education, the higher the possibility of securing a job.

Age of the individuals was found to positively and significantly increasing the log likelihood odd ratio of getting employment by 0.456. On the other hand age squared which measure change in age by one unit was found to have a negative and significant effect on the log likelihood ratio of 0.0058. As people grow old, experience reduced chances of getting employment in the Kenyan market. The findings by Forster, Herman and Werfhorst (2016) was that those who were more academically oriented were more employable in their later career life.

This study also sought to find out the effect of gender on the log likelihood odd ratio. Being a male reduces the log likelihood odd ratio of getting employment by 0.438 compared to being a female in Kenya. The study by Brown (2003) sought to determine the relationship between education and employment in the Global economy showed that there was a widening gap in the job market between men and women.

The choice of the course studied to find out the effect of course of study on employment in Kenya. The findings showed evidence that some courses did not have any significant effect on the log likelihood odd ratio of employment. The choice of engineering manufacturing and architect reduced the odd ratio of getting employment by 0.00383, marketing, business management by 0.0448 and mathematics and statistics and AFM by 0.220. While the choice of psychology and sociology insignificantly reduces the log likelihood odd ratio of getting employment by 0.0951. The choice of computer sciences and information technology increases the log likelihood ratio of getting employment by 0.292, languages and communication by 0.694, law by 0.314 and intermediate courses by 0.485. The effect was found to be positively and significantly have an effect on employment in Kenya. The choice of health and social work and arts and history significantly reduces the likelihood odd ratio of employment by 0.347 and 0.418 respectively. South African study by Dunga and Mncayi (2016) established that graduates in

humanity degrees took longer looking compared to those who had pursued other courses in their study. Those who pursued accounting, mathematics, education, and health took the shortest time to secure jobs in South Africa.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.1 Introduction

This is the last chapter and presents the summary and conclusion which shows how the study objectives have been achieved, the policy recommendations and further areas of research.

5.2 Summary and conclusion

The first objective of this study was to ascertain the impact of the level of education and course of study on chances of getting employed in Kenya. To achieve this objective the study employed multinomial logit model and it was established that education level was negatively related to the log likelihood ratio of getting employment in Kenya. The study findings showed that having primary and secondary education reduces the log likelihood odd ratio of getting employment while having college and undergraduate education is associated with significant reduction in the log likelihood of getting employment. Career chosen was also found to have effect on employment. The choice of engineering manufacturing and architect reduced the odd ratio of getting employment was reduced and also to courses such as marketing, business management and mathematics and statistics and AFM. While the choice of psychology and sociology insignificantly reduces the log likelihood odd ratio of getting employment. The choice of computer sciences and information technology, languages and communication, law and intermediate courses positively and significantly have an increases effect on employment in Kenya. The choice of health and social work and arts and history significantly reduces the likelihood odd ratio of employment.

The second objective of this study was to find out the factors that affect career choice among university students and how it affects the likelihood of being employed in Kenya. Using a multinomial logit model, the choice of career was found to be mainly dependent on factors such as skills development, gender, age, age squared, education level, place of residence, marital status, parental Advisory and school type. Type of either public or private school was found to be playing both positive and significant effect on the getting employment in Kenya. Parental advisory had a negative and significant effect on getting employment in Kenya. Skills Development has a positive and significant effect on employment in Kenya as shown in by the results. The effect of being separated/divorced had a negative but insignificant effect on the log likelihood ratio of getting employment in Kenya but being widowed/ never married significantly reduced the log likelihood odd ratio. Living in urban areas experienced a significant reduction in the log likelihood odd ratio for them to get employed. Education level was found to be negatively related to the log likelihood ratio of getting employment in Kenya. Age of the individuals was found to increase the log likelihood odd ratio of getting employment positively and significantly while being a male reduces the log likelihood odd ratio of getting employment compared to being a female in Kenya

The choice of engineering manufacturing and architect, marketing, business management and mathematics and statistics and AFM reduced the odd ratio of getting employment in Kenya while the choice of psychology and sociology insignificantly reduces the log likelihood odd ratio of getting employment. The choice of computer sciences and information technology, languages and communication and intermediate courses reduces the chance of getting employment. The effect was found to positively and significantly influence employment in Kenya.

5.3 Policy Recommendation

The study findings showed that having primary and secondary education reduces the log likelihood odd ratio of getting employment while having college and undergraduate education is associated with significant reduction in the log likelihood of getting employment. This study proposes that it is time that students should be encouraged to undertake other technical skills in which to increase the chances of getting employment in Kenya.

The findings of this study also showed that living in urban areas reduces the chance of getting employment compared to rural areas. As a result, there is need to encourage the graduates to not to seek for jobs in the urban areas but also shift focus on rural areas especially with the eve of devolution.

The choice of computer sciences and information technology, languages and communication, law and intermediate courses was found to have a positive and significant effect on employment in Kenya. There is need for students to put focus on these areas of study unlike formerly when the focus was mainly skewed to courses such as accounting and engineering.

5.4 Further Areas of Research

This study has mainly focused on the factors that affect the choice of career and how such factors influence the chance of getting employment in Kenya. This study proposes a further study to be carried out on the role curriculum and change on curriculum on employment comparing developed and developing nations.

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