

The KENYA INSTITUTE for PUBLIC POLICY RESEARCH and ANALYSIS

Employment Distribution of Youth Graduates Across Economic Sectors in Kenya

Dickson Khainga and Juliana Mbithi

DP/214/2018

THE KENYA INSTITUTE FOR PUBLIC POLICY RESEARCH AND ANALYSIS (KIPPRA)

YOUNG PROFESSIONALS (YPs) TRAINING PROGRAMME

Employment Distribution of Youth Graduates Across Economic Sectors in Kenya

Dickson Khainga and Juliana Mbithi

Kenya Institute for Public Policy Research and Analysis

KIPPRA Discussion Paper No. 214 2018

KIPPRA in Brief

The Kenya Institute for Public Policy Research and Analysis (KIPPRA) is an autonomous institute whose primary mission is to conduct public policy research leading to policy advice. KIPPRA's mission is to produce consistently high-quality analysis of key issues of public policy and to contribute to the achievement of national long-term development objectives by positively influencing the decision-making process. These goals are met through effective dissemination of recommendations resulting from analysis and by training policy analysts in the public sector. KIPPRA therefore produces a body of well-researched and documented information on public policy, and in the process assists in formulating long-term strategic perspectives. KIPPRA serves as a centralized source from which the Government and the private sector may obtain information and advice on public policy issues.

Published 2018 © Kenya Institute for Public Policy Research and Analysis Bishops Garden Towers, Bishops Road PO Box 56445-00200 Nairobi, Kenya tel: +254 20 2719933/4; fax: +254 20 2719951 email: admin@kippra.or.ke website: http://www.kippra.org

ISBN 9966 817 01 3

The Discussion Paper Series disseminates results and reflections from ongoing research activities of the Institute's programmes. The papers are internally refereed and are disseminated to inform and invoke debate on policy issues. Opinions expressed in the papers are entirely those of the authors and do not necessarily reflect the views of the Institute.

This paper is produced under the KIPPRA Young Professionals (YPs) programme. The programme targets young scholars from the public and private sector, who undertake an intensive one-year course on public policy research and analysis, and during which they write a research paper on a selected public policy issue, with supervision from senior researchers at the Institute.

KIPPRA acknowledges generous support from the Government of Kenya and the Think Tank Initiative of IDRC.





Abstract

Youth araduates pursue jobs whose choices are influenced by various factors as espoused in the occupational choice theory on which this study is underpinned. The study uses a snowball methodology to select a sample of 304 respondents with Diploma, Bachelors, Masters and PhD degrees who graduated between the period 2008 to 2018. Multinomial logit was used to analyze factors influencing employment distribution of youth graduates across various sectors of the economy. The key findings of the study reveal that the private sector is the largest employer of youth graduates followed by the public sector, and the NGOs. Self-employment is the least absorber of youth graduates. The majority of youth employed in the public sector have Masters and Bachelors degrees compared to those in the private sector who hold Diploma and Bachelors degree. The need for career growth, income, experience and networking are the key reasons for seeking employment among young graduates. Moreover, requisite and relevant skills, education level, nature of employment, and search duration were found to be significant in determining employment of youth graduates. The study recommends creating an enabling environment for the private sector to continue expanding, given that it absorbs most of youth graduates. Secondly, there is need for close collaboration between industry and academia right from curriculum formulation stage to the time skills are transmitted to learners. This calls for regular interaction between the academia and industry to enable students interact with mentors and be guided into relevant career paths. There is also need to invest more on internships and apprenticeships to equip the youth with relevant skills for the job market. It is hoped that this study will help inform government in targeting its investments to create more job opportunities.

Abbreviations and Acronyms

AfDB	African Development Bank
AUC	African Union Commission
CEE	Central and Eastern Europe
EAC	East Africa Community
ILFS	Integrated Labour Force Survey
ILO	International Labour Organization
KIHBS	Kenya Integrated Household Budget Survey
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
MSE	Micro and Small Enterprises
OECD	Organization for Economic Cooperation and Development
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
STEP	Skills Towards Employability and Productivity
TVET	Technical and Vocational Education Training

Table of Contents

Abstractiii
Abbreviations and Acronymsiv
1. Introduction1
1.1 Background1
2. Literature Review
2.1 Theoretical Literature Review5
2.1.1 The Classical Theory of unemployment5
2.1.2 Hayek Theory of unemployment
2.1.3 Theory of innovations
2.1.4 Search Theory of unemployment7
2.1.5 Occupational Choice Theory7
2.2 Empirical literature Review
3. Methodology11
3.1 Empirical Framework11
3.2 Data Type and Source13
4. Research Findings15
4.1 Descriptive Analysis15
4.2 Labour Distribution by Sector17
4.3 Degree Inflation
4.4 Motivation for Job Search among the Youth 20
4.5 Determinants of Labour Distribution23
5. Conclusion and Recommendations27
References
Appendices
Appendix 1: Multinomial logistic regression estimation results
Appendix 2: Youth labourforce distribution by industry
Appendix 3: Year of graduation by education attainment
Appendix 4: Education, age and gender statistics
Appendix 5: Employment type
Appendix 6: Employment sector by educational attainment
Appendix 7: Gendered regression analysis

1. Introduction

1.1 Background

Youth unemployment is a growing cause of concern for policy makers and planners around the world. Youth, who are defined by the Constitution of Kenya 2010 (Article 260) as those persons who have attained the age of 18 but have not attained the age of 35, have been central in global, regional and national development agenda. The Sustainable Development Goals (SDGs) recognize youth as an engine of change, and therefore advocate for tapping the youthful workforce in driving growth in the world. Goal eight (8) aims at promoting full and productive employment and decent work for all, including young people by 2030. Further, it seeks to substantially reduce the proportion of youth not in employment, education or training by 2020. Agenda 2063 of the African Union also envisages a continent where development is driven by its people, with more focus on youth and women (African Union Commission, 2015).

World youth unemployment averaged about 14 per cent during the period 2014-2016 compared to lows of 12 per cent in 2007 (ILO, 2016). This trend has also been observed in Africa where youth unemployment rate rose slightly to 12.89 per cent over the same period. In the East Africa region, Kenya has the highest rate of youth unemployment at 39.1 per cent followed by Tanzania at 24.0 per cent with Rwanda having the lowest at 17.1 per cent (EAC Secretariat, 2013). According to the Kenya Integrated Household Budget Survey (KIHBS) 2015-16 labourforce basic report, total unemployment rate in the country stood at 7.4 per cent, with youth constituting about 85 per cent of the unemployed (KNBS, 2018). Kenyan youth amounted to around 70 per cent of the Kenyan population as at 2009, which is about two-thirds of Kenya's workforce.

Analysis of the market entry trends in Kenya show that over one million youth enter the labour market annually without any skills, some having either dropped out of or completed primary and (or) secondary school and not enrolled in any college (Kenya Country Report, 2014). A further 155,000 join the labour market annually after completing training in Technical and Vocational and Education Training (TVET), or at universities. The question, however, is 'Where do these youth go?'

Labour distribution takes any of the following approaches: (i) formal and informal, (ii) agriculture, industry and services, or (iii) self-employment, private and public sectors (Pauna, 2009; Ahmad and Azim, 2010; Nyaga, 2010; Tocco et al., 2013; Broadberry et al., 2013; McCullough, 2016; Neffke et al., 2017). Most developing economies are characterized by both formal and informal sectors, with the latter constituting the larger proportion (Obare, 2015). The formal sector refers to an economic zone that is legally sanctioned, marked by regular work and regulated through state intervention. On the contrary, the informal sector is basically characterized by unregulated markets, intensive labour, low capital inputs, self-employed workers and few hired employees, and possibly unpaid family members. In Kenya, for instance, the labour market is characterized by a relatively small formal wage sector and a large informal wage and self-employment sectors (AfDB 2012). Specifically, in 2017, the informal sector accounted for 83.1 per cent of total employment while the formal sector only accounted for 17.9 per cent (KNBS, 2018).

According to estimates of STEP survey 2013, Kenyan youth labourforce falls under five categories: wage workers (formal), wage workers (informal), self-employed, employers and unpaid workers, with most being in informal wage employment and self-employment. The more educated youths are likely to be in formal wage employment or employers while less educated ones tend to be self-employed or in informal wage employment. Analysis by gender shows that men tend to be engaged in wage employment while women tend to be self-employed (Figure 1.1).

In Kenya, the services sector absorbs the majority of youths, followed by industry and agriculture (KNBS, 2018). Further analysis of specific sectors has shown that as at 2017, education absorbed the majority of the labourforce, followed by agriculture, manufacturing, wholesale and retail trade, construction and public administration and defence.

The three broad sectors (agriculture, industry and services) can further be categorized into four: public, private, non-government organizations and self-

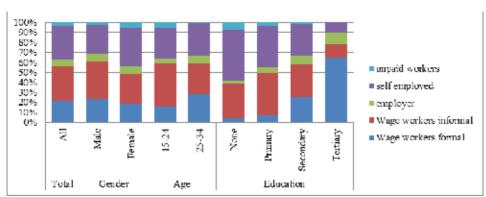


Figure 1.1: Distribution of youth labour force by age, gender and educational level

Source: Estimates based on STEP Survey, 2013

employment sub-sectors. The public sector in Kenya has remained relatively stagnant in generating employment since implementation of stringent public service reforms in the 1990s (Government of Kenya, 2001). These reforms sought to reduce the wage bill and encourage development-related expenditure by retrenching some existing workers and freezing new recruitment. Similarly, the high cost of doing business in the country has limited the capacity of the private sector to create substantial amounts of quality jobs, which has contributed to the expansion of self-employment and informal sector (Nyaga, 2010). Self-employment is defined as people earning neither a salary nor a wage but earn their income by operating their business and/or exercising their profession on their own account and risk (Parker, 2004).

The Government of Kenya has a goal to industrialize by the year 2030 (Government of Kenya, 2007). To meet the requirements of a rapidly industrializing economy, the government has invested in training and education to create a globally competitive and adaptive human resource base that can guarantee high labour productivity (Government of Kenya, 2012). Despite the various government efforts, high unemployment rate among youth persists in the country. This can be attributed to the 'failure' of most of these initiatives to accelerate creation of employment opportunities especially in the informal sector for youth as anticipated. In addition, the economy's growth has not been sufficient enough to create productive employment opportunities to absorb the increasing youth labourforce transitioning from learning institutions to the labour market (KIPPRA, 2017). Further, the agricultural sector has not been attractive for most skilled and semi-skilled youth, notwithstanding limited access to factors of production such as land and capital. The services sector has continued to experience cyclical unemployment, leaving a huge proportion of youth labour force unemployed.

Despite the increase in Kenya's employment to population ratio since 2009, this change has been more significant among older cohorts (KNBS, 2018). Although Kenya's youthful population presents a perfect window for the economy to benefit from the demographic dividend, exclusion of skilled, semi-skilled and unskilled youth from productive economic and social life presents a demographic challenge in terms of increased poverty, crime and inequalities in the society. Understanding the demographic characteristics and distribution of the youth labourforce across the various sectors is, therefore, important for purposes of planning and effecting interventions geared towards reducing unemployment. This is because it will guide the government in targeting youth empowerment programmes and initiatives to sectors with high propensity to absorb the youth. This study, therefore, sought to investigate the distribution of youth employment in the Kenyan economy. Specifically, the study aims to establish the distribution of youth graduates across various economic sectors in Kenya, analyse reasons for seeking work among

the Kenyan youth, and identify the factors that influence youth distribution in the various economic sectors in Kenya. These objectives answer the following research questions: what is the distribution of youth labourforce across public, private, NGOs and self-employment in Kenya?; what motivates Kenyan youth to seek employment?; what factors influence youth labourforce participation across public, private, NGOs and self-employment in Kenya?

The scope of the study is limited to graduates aged 18 to 35 years, as defined as youth under the Constitution of Kenya 2010.

The rest of the study is organized as follows: Section Two provides a review of both theoretical and empirical literature review. Section Three and Four provide the methodology and findings of the study, respectively, while Section Five concludes the study and presents policy recommendations.

2. Literature Review

2.1 Theoretical Literature Review

2.1.1 The Classical Theory of Unemployment

The classical theory posits that the labour market consists of demand and supply of labour as analyzed by Pigou (1933) and Solow and McDonald (1981). Derived demand for labour from declining portion for marginal product of labour is a negative function of real wage, meaning that if wages increase, the quantity demanded for labour will decline, and vice versa. The supply function is derived from workers choice on whether to spend time working or on leisure, which is a positive function of real wage; that is, a rise in real wages makes workers allocate more hours on work than leisure. At equilibrium real wage rate, the economy achieves full employment. However, full employment does not mean there is no unemployment as frictional unemployment at the going real wage rate due to the dynamic nature of labour markets, information availability, and random fluctuations in demand for labour. From this school of thought, unemployment would not exist apart from frictional obstructions if it were not for fixing wage rate higher than the equilibrium level.

Full employment can be maintained by sufficiently flexible decline in wages Jonung (1989). Jonung (1989) highlights that affordable credit to businesses is the most effective measure in addressing unemployment, thus advocating for government support for private investments and its own interventions financed by taxation. He further stipulates that advertisement and employment agencies can reduce frictional unemployment. He also argues that cyclical unemployment caused by lack of effective demand can be solved by raising the wages of workers so that they can buy more, but this would lead to job losses due to increased wages. Investing capital in projects with low rates of return causes cyclical unemployment and, therefore, public works is the best policy initiative to fight cyclical unemployment.

Wage reduction is a poor policy to increase employment. He noted that increase in wages can be because of increased labour productivity, and wage reduction only reduces workers' productivity. In the short run, wage reduction does not create employment while wage increase in the long run may stimulate substitution effect of labour for machines, and this leads to increase in labour productivity, hence unemployment.

2.1.2 Hayek Theory of unemployment

Unemployment is a result of discrepancy between distribution of labour between industries and the distribution of demand among their producers (Nishhiyama and Leube, 1984). This could be due to distortion of relative prices and wages in the labour market. Therefore, unemployment is caused by deviation from equilibrium wages and prices, which would tend to establish themselves in a free and stable market. Expansionary monetary and fiscal policies and trade unions lead to a mismatch between labour demand and supply, which distorts the structural changes of the economy and therefore misdirecting economic resources to other alternatives. Trade unions set higher wages than the market wages, and therefore leads to unemployment especially in industries that generate lesser profits. Analysis of Hayek's theory of unemployment argues that unemployment is mainly due to misallocation of economic resources and can be corrected if wages and prices are determined by equilibrium of demand and supply.

2.1.3 Theory of innovations

Theory of innovations reflects the attempt to understand the role of knowledge and technology in driving productivity and economic growth. Theory opines that investments in research and development, education and training and new managerial work structures are key in driving economic growth. This echoes the Kenya Vision 2030 development plan that emphasizes on transition to a knowledge-based economy to create more employment opportunities especially for the youth who are technologically savvy. Theory of innovations explores the various ways in which an entrepreneur can make profits, amidst risk. These ways include finding markets, acquisition of productive agents, skillful combination of factors of production, and successful sales policy and innovations. This is consistent with the proposition that entrepreneurial profits will increase employment (Mouhammed 2010; Ekelund and Hebert, 2007).

Innovation creates more jobs relative to destruction of employment. Innovation of a new product by an entrepreneur and finding new markets and methods of production requires increased investments. Domestic investment expenditures increase demand on economic resources and their prices. Labour and materials necessary for production will be sourced, thus leading to increased wages and drop in youth unemployment, assuming that employment will outweigh employment destruction due to innovation (Mortensen and Pissarides, 1994 and Manuelli, 2000). This aids to address the demand-driven macroeconomics factors of youth unemployment. The concept of innovation covers five areas of development: introduction of new product, new method of production, new market, new source of supply of raw materials, or manufactured goods and organization of an industry; creation or breaking of a monopoly. These combinations are embodied in productive enterprises which use the unemployed population, unsold raw materials, new technologies, and idle productive capacity. However, credit and finance are key catalysts for innovation. This supports the initiatives the Government of Kenya has taken to ensure easily accessible funds to the youth to create their own employment opportunities (Schumpeter, 1934). Besides, entrepreneurial leadership triggers the process of economic development. This underscores the government initiatives to set up institutions such as the National Youth Service and youth development centres to train the youth on entrepreneurial skills.

2.1.4 Search Theory of unemployment

Since its inception, search theory has provided a rigorous yet tractable framework that addresses the central challenge of classical theory that there exists a market where buyers and sellers of labour meet and trade at a single price. The theory states that firms are constantly searching for productive workers and workers search for high-paying jobs (Trehan, 2001). At the point when both agents match, a worker will leave the unemployment pool. However, if the worker realizes later that his/her productivity is worth higher wages and firms are paying high wages, on average, then the worker's reservation wage will increase. Consequently, the unemployment rate will start rising gradually, indicating a mismatch has occurred again. Moreover, heterogeneity in labour force is the main cause of friction within the labour market, thus hindering quick achievement of equilibrium due to inefficient allocation of workers to available vacancies. Heterogeneity of labour services across various sectors of the economy makes it hard for employers to distinguish productive from unproductive workers. This theory takes into account the time it takes for a job seeker to find an acceptable job.

2.1.5 Occupational Choice Theory

Developed by Eli Ginzberg in 1952, this theory presumes occupational choice to be a decision-making process that extends from pre-puberty until the late teens when one makes a definitive occupational commitment and that some educational, preparatory and exploratory decisions along the way have the quality of irreversibility. However, individuals may seek to change fields of endeavor because of changes within themselves or work environments related or unrelated to their original choice. He contends that people make occupational choices that fit between their changing desires and circumstances in an optimal manner (Ginzberg, 1952). The theory posits that in search of employment, a potential worker will weigh the benefits of a job before making that choice. These benefits include potential earnings and non-pecuniary returns compared to costs incurred in training/acquiring requisite skills for the job or foregone earning in case of moving from one job to another.

To better understand the factors that influence the mobility of labour across various sectors of the economy, residential choice of youth and existence of market imperfections such as information asymmetry may have significant impact on occupational choice of the youth. Johnson (1991) established that individuals are faced by an occupation-residence choice paradigm, whereby their choice of engaging in farming poses a restriction on their residential choice and, likewise, their choice of a farm residence reduces their employment opportunities across sectors. Similarly, experience determines the extent to which an individual would leave current employment in search for another. There exists a link being the feedback mechanism between the original career and work experience. Generally, the decisions of youth to exit agriculture and enter other sectors of the economy are based on comparison of different occupational choice utilities.

2.2 Empirical Literature Review

A huge body of literature exist which examines the influence of some determining factors of occupational choice on one's choice of occupation. This study builds on previous literature in Kenya by Nyaga (2010), Wamuthenya (2005), Kabubo (2003), Wambugu (2002) and Mwabu and Evenson (1996) who estimated the determinants of occupational choice in Kenya. The studies examined the effect of factors such as education, age, skills match, parental background, gender, experience and wage on participation in employment across various sectors in the country. Wamuthenya (2005) and Nyaga (2010) focused on urban employment sectors that are gender-disaggregated. These studies adopted various approaches in categorizing the sectors of employment: formal versus informal (Nyaga, 2010), agriculture, services and industry (Tocco et al. 2013; Broadberry et al. 2013; Pauna, 2009), and public, private, NGOs and self-employment (Nyaga, 2010).

Education is a main factor determining the probability of participation in various employment sectors relative to remaining inactive (Kabubo, 2003; Sackey, 2005; Baah-Boateng, 2009; Forster, 2013; Tocco et al. 2013; Forster, 2013; Nyaga, 2010). According to the human capital theory, education and training improve the productive capacity of a population, hence raise the chance of being employed. The high correlation of education with participation in employment may also reflect signaling effects of education, since employers face imperfect information on the true ability of potential employees. Following a standard estimation of returns to education, an additional year of education increases hourly earnings by 4.4 to 6.5 per cent. This is similar to Ghana where a similar exercise shows that an additional year of education increases monthly earnings by 3 to 7 per cent.

Age has also been identified as a major factor influencing occupational choice (Tocco et al., 2013; Wambugu, 2002). As Escudero and Maurelo (2013) note, increase in age is associated with high level of experience. However, physical and mental abilities tend to decline as workers age (Chung et al., 2015). Other studies have opined that there is no consistent evidence that younger workers are generally more productive than older workers (Health and Safety Executive, 2011; Benjamin and Wilson, 2005).

Gender of an individual influences their participation across the various sectors of employment (Baah-Boateng, 2009; Wambugu, 2002; Nyaga, 2010). The distribution of gender roles in society tends to allocate female chores that are home-oriented, such as gardening, child care and water collecting unlike their male counterparts who can move to far areas to look for job opportunities (African Development Bank, 2014). Further, women are naturally weaker compared to men and hence tend to participate in less involving work.

Skills mismatch, which is mainly a product of deficient education policy strategies or lack of opportunities for acquisition of new skills, is one of the largest challenges facing youth in the Kenyan labour markets. Performance of employees having a skills mismatch is mostly unsatisfactory and has adverse effects on organization's performance, hence reduces one's chances of being employed (Khan, 2012).

Marital status has been found to influence the participation, employment and earnings of both men and women (Bardasi and Taylor, 2008; Wambugu, 2002; Matsoso, 2015; Balleer et al., 2009; Aleksandra et al., 2014; Ahmad and Azim, 2010). A study conducted in France by Robin and Jacquemet (2010) found that married men participate in the labour market more than their unmarried counterparts. Similar findings for women were established in South Africa where marriage reduced the probability of women's participation in the labour market (Ntuli, 2007). Findings from Nigeria, however, refute the above findings, whereby Fadayomi and Ogunrinola (2005) established that married men had higher participation rate compared to their unmarried counterparts.

In summary, most of the studies reviewed categorize employment sectors into agriculture, services and industry. However, these three sectors can be further categorized into public, private, self or NGOs depending on the ownership structure. This study, therefore, focused on the latter classification in order to capture the uniqueness of each sector. From the review, age, gender, education, marital status and skills match are the main factors that influence the participation of individuals across the various sectors of employment.

3. Methodology

3.1 Empirical Framework

Traditionally, occupational choice models are used in estimating the likelihood of occurrence of certain outcomes such as being employed. Consequently, simple binary models such as probit and logit or multivariate specification can appropriately be used (Tocco, Bailey and Davidova, 2013; Bourguignon et al., 2003). The multinomial logit methodology has been extensively used for studying the outflows of labour from agriculture (Ingham and Ingham, 2004; Bojnec and Dries, 2005; Van Herck, 2009; Tocco et al., 2012). This study thus uses a multinomial logistic regression to determine the factors that influence youth employment across various economic sectors in Kenya. In this specification, the dependent variable is categorical and can take more than two mutually exclusive unordered outcomes (j=0, ..., m). The model is expressed as (Greene, 2003):

prob
$$(Y_i = j) = \frac{e^{\beta_j x_i}}{\sum_{k=0}^m e^{\beta_j x_i}}$$
, for j=0... m

where Y_i is the outcome for a youth i to be employed, conditional on the explanatory variables X_i ; *j* is one of *m* alternatives of sectors of employment defined in this study as self-employment, public sector, private sector and NGOs. X_i is a vector of characteristics which affect the selection of occupational choice (employment sector) such as: individual and household characteristics such as age, gender, education attainment, location, job satisfaction, nature of employment, search duration and skills match as shown in Table 3.1. Assuming $\beta_o = o$, the remaining coefficients β_i measure the change relative to the reference group Y = o.

Dependent variable	Measurement		
Employment sectors	o=self-employment 1=public sector 2=private sector 3=NGOs		
Independent variables	Measurement	Expected sign	Remarks
Gender	Dummy variable (0 if female, 1 if male)	+ Male – female	Females have high chances of being inactive than males (Escudero and Maurelo, 2013)

Table 3.1: Variable measurements

Search duration	Count (number of months it takes a youth to find a job since graduating)	-	Longer unemployment duration itself decreases the finding rates of workers (true duration dependence) (Heckman and Singer, 1984)	
Skills mismatch	Dummy variable (1 if an employed youth graduate is applying the skills attained during studies in their job, o otherwise)	-	Performance of employees having a skill mismatch is mostly unsatisfactory and it has adverse effects on organization's performance (Khan, 2012)	
Experience	Number of months a youth graduate has been in workforce	+	Work ability tends to increase as cognitive ability improves (Chung et al., 2015)	
Age 20-24	Dummy variable +/- (Youth cohort aged between 20 to 24) 0=n0 1=ves		Increase in age is associated with high level of experience (Escudero and	
Age25-29	Dummy variable (Youth cohort aged between 25 to 29) 0=no 1=yes		Maurelo, 2013) As workers age, physical and mental abilities tend to	
Age30-35	Dummy variable (Youth cohort aged between 30 to 34) 0=no 1=yes		decline (Chung et al., 2015)	
Diploma	Dummy variable (Graduate hold a diploma1) 0=no 1=yes	+	Education and training improve the productive capacity of	
Bachelors	Dummy variable (Graduate hold a Bachelors degree) o=no 1=yes		a population, hence raise chance of being employed (human capital theory)	
Masters	Dummy variable (Graduate hold a Masters degree) 0=no 1=yes			
Location	Dummy variable (o if youth graduate lives in rural areas, 1 if urban)	-	Youths living in rural areas are expected to have high employment rates due to their ability to engage in farming activities and run small businesses (self-employed)	

Job satisfaction	Dummy variable (1 if a youth graduate is contented with current employment, o otherwise)	+	
Nature of employment	Dummy variable (o if a youth graduate is in a contract, 1 if permanent)	-/+	Temporary contracts with no prospect of permanence decrease job satisfaction (labour market theory). This is because employees miss on aspects such as the ability to obtain a mortgage, pensions, the stability of family life, etc
Permanent employment cannot be terminated unless in event of misconduct, permanent disability or death.			

3.2 Data Type and Source

The study used primary data for a sample of diploma and degree graduates, aged between 18 and 34 years. The study targeted youth who graduated within the last 10 years, both in employment (public, private NGOs and self-employed) and unemployed across various sectors in the country. A non-probability sampling strategy was adopted, where a snowballing method was used. The initial respondents were identified from a pool of Young Professionals at KIPPRA aged below 35. With strict adherence to the sampling frame, they then forwarded the questionnaires to their former colleagues at their previous work stations or schoolmates whom they graduated with at their former institutions of higher learning. Similarly, recipients of the questionnaire were required to fill and forward the questionnaire to their colleagues that graduated with them same year in the same institution. After a month, the database had grown to 304 respondents; that is 27 diploma holders, 180 Bachelors, 94 Masters graduates and 3 PhD holders. Since it was very difficult to reach out to all the graduates across the country, snowballing approach provided the platform on which the study could reach as many varied young graduates across the country without bias to institution or course studied. In addition to the primary data, secondary data from the Kenya National Bureau of Statistics (KNBS) was obtained. This involved desk reviews

and use of semi-structured online questionnaire to collect data for analysis to draw appropriate conclusions.

4. **Research Findings**

4.1 Descriptive Analysis

Kenya's labour market is dynamic in nature. Of those sampled, 59.2 per cent had Bachelors degree, and 30.9 per cent had Masters degree. Majority of those with Bachelors degree (20%) had completed their studies five years ago while seven (7) per cent are 2010 university graduates. Majority of Masters graduates in the sample (31%) graduated within 2017 with 12 per cent having graduated four years ago. For the Diploma holders, who were 8.9 per cent of the sample, majority finished their studies in 2010 as illustrated in Appendix 3.

Disaggregated descriptive statistics from the sample indicate that most Diploma graduates were male aged 20-24 years followed by female aged 30-34 years. On average, youth aged between 20 and 24 years old with a Bachelors degree were women (65%) compared to 26 per cent aged 30-34 years while 65 per cent of Masters holders were female compared to 35 per cent male aged 30-34 years as shown in Appendix 4. Most of the female graduates were single compared to their male counterparts. We can infer that young people seem to first establish a stable source of livelihood as a precondition for making other transitions. These transitions are based on accumulated skills and experience necessary to gain employment and support family. Young people are more likely to postpone marriage or form personal relationships and/or beget children when faced with uncertain employment prospects.

Variable	Mean	Std error
Working hours	8.6	0.12
Monthly pay	78,620.30	3,474.92
Search duration in	15.2	1.2
months		
Experience in months	4.7	0.12
Number of jobs held	1.9	0.11
before		
Dummies	Percentage	
Male (gender)	57.24	
Female (gender)	42.76	
Married	39.14	
Single	60.86	

Table 4.1: Descriptive statistics

Skills match	75.13
Age20-24	8.55
Age25-29	59.54
Age30-34	31.91
Diploma	8.88
Bachelors	59.21
Masters	30.92
PhD	0.99
Rural (Location)	21.59
Urban (Location)	78.41
Job satisfaction	57.89
Contract	46.70
Permanent	43.96
Casual/Temporary	9.34

Young population is an integral part of labour supply in any country, ranging from skilled to semi-skilled. They seek employment to generate income for upkeep and self-development. The income earned forms part of the utility derived from employment, thus their monthly/annual earnings for work done is one of the motivating factors for work. However, average time taken on a daily basis determines one's wage in various sectors depending on the nature of the contract. In this study, the average daily hours spent working was 8 hours which coincides with official working time in public service in Kenya. On average, those on contract spent 7.9 hours per day while those on permanent employment spent 8.8 hours. On average, monthly wage was Ksh 78,600 before statutory deductions. Those on contract earned on average Ksh 86,124. Although it takes less time to get permanent jobs compared to contract jobs, the relatively higher mean monthly compensation for permanent jobs makes them very competitive for the youth to secure.

Gendered disaggregation reveals that females take less time (15 months) to find work compared to their male counterparts (20 months), despite working more hours and earning less than men for similar jobs as indicated in Appendix 5. Graduates aged 20-24 years get work faster than their elderly counterparts. It takes an average of 8.6 months for them to secure employment compared to 16 months it would take a graduate aged between 25-29 years. This implies that employers prefer hiring younger graduates to older ones. This could be explained by the variation in wage between these age groups, where employers pay younger graduate employees (20-24 years) less than they pay graduate employees aged 25-29 years (Ksh 53,555 < Ksh 85,275) despite having similar experience and qualifications. A possible reason could be due to one's perceived obligations and the ability to negotiate employment terms.

4.2 Labour Distribution by Sector

Majority of those employed in the private sector were Bachelors degree graduates compared to those employed in the public sector who were mainly Masters degree graduates. Those who were self-employed were mainly Bachelors degree holders (75%). Most PhD holders were mainly working in NGOs. On average, the private sector employs more Diploma holders across the sectors. Employment patterns across the private sector and NGOs seem similar, with both employing more of Bachelors degree graduates compared to holders of other qualifications.

Further, most of the females were employed in the private sector (45%) followed by 35 per cent in the public sector, 13 per cent in NGOs and 8 per cent in selfemployment. Most male graduates were in the private sector (47%) compared to 42 per cent in the public sector, 9 per cent in NGOs and 2 per cent in selfemployment. Most of the graduates across the three age sets defined in this study were employed in the private sector; that is 20-24 years (67%), 25-29 years (44%) and 30-34 years (48%). Notably, across all the age sets, few graduates were in selfemployment compared to NGOs that employed more 20-29 years old graduates compared to 30-34 years (3%). The public sector absorbed 46 per cent of the graduates aged 30-34 years compared to 22 per cent of 20-24 years as indicated in Appendix 6.

Figure 4.1 shows the employment trends in various sectors since 2010 for young graduates. Graduates preferring self-employment started rising in 2011 until 2014 when it took a downward trajectory. Graduate absorption into the public sector was rising, though at insignificant rate until 2014 before slowing down to 23 per cent in 2015. It has since oscillated at 11 per cent during 2016-17. Private sector graduate absorption trend has remained steady for the last eight years compared to NGOs, which has been on a slow upward trajectory with a downward spike in 2014 before rising again. It should, however, be noted that the NGOs employ few of the graduates compared to the other sectors of the economy. Generally, employment in the public, private and NGOs has improved and stayed steady in the last three years compared to 2010-2012 period.

The large share of youth in the private sector as shown in Figure 4.2 may be explained by the greater employment opportunities in the sector and fewer average years of experience required compared to the public sector (KIPPRA, 2013). The

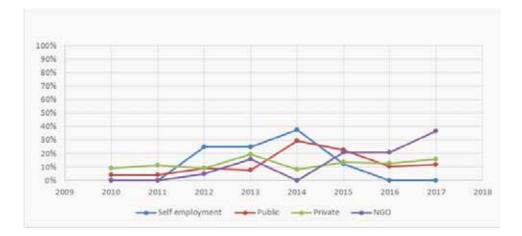


Figure 4.1: Young graduate employment trends by sectors

public sector also employs a big proportion of youth (40%). According to a report by World Bank (2016), youth prefer public sector employment due to job security and pension benefits. On the contrary, very few youths are self-employed (4%). This may be partly attributed to lack of capital and experience that is needed to transition into self-employment (Faggio et al., 2014; Chlosta, 2012). A detailed analysis of specific industry distribution is shown in Appendix 2.

4.3 Degree Inflation

Degree inflation refers to a phenomenon where, as the percentage of the population that has attained a Bachelor's degree increases, the value of a university degree

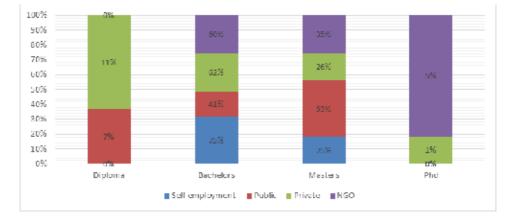


Figure 4.2: Youth labour force distribution by sectors

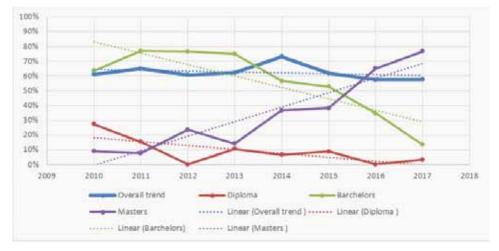
continues to decline (Moore, 2016). This occurs when there is a relatively large number of candidates holding Bachelor's degrees and competing for relatively few job opportunities. Consequently, businesses may change the minimum job specifications for positions that usually do not require candidates to hold a Bachelor's degree. To distinguish themselves in the market, these graduates tend to strengthen their qualifications by obtaining a Master's or Doctorate degree.

Degree inflation has been a common phenomenon not only in developing countries but also in developed economies such as the United States of America. Moore (2016) noted that although degree inflation motivates more young people to attend college to compete in the job market, it may even be harming them as they are forced to accept low paying jobs while struggling to pay off their college loans. This results to inefficiencies in the US labour market. A recent study by Fuller and Raman (2017) emphasized on the negative effects of degree inflation, noting that it is undermining U.S. competitiveness and hurting America's middle class.

In Kenya, graduate unemployment has been on the rise, with many employers citing skills mismatch and lack of labour market information by university graduates as the main cause (Ministry of Education, 2017). This trend is supported by this study's findings that show a steady decline in employment rate for Bachelors degree graduates (Figure 4.3).

The number of employed youth with a Masters degree has been rising, which could be attributed to many youth advancing education to escape the 'degree inflation' trap.

Figure 4.3: Employment status by year of graduation and level of education



Similarly, employment rates for Diploma graduates has been declining, though not as sharp as for Bachelors degree holders. The major challenge facing Diploma graduates has been mismatch between training outcomes and industry expectations and perception of the sub-sector as the last resort for failures.

4.4 Motivation for Job Search among the Youth

Generation of employment opportunities in developing countries for young people is a major challenge. Job opportunities are scarce while the number of youth graduating from institutions of higher learning is ballooning. Most of youth seek career growth when looking for employment opportunities as opposed to fringe benefits, mentorship/networking and work experience. This is because career growth is associated with steady remuneration growth. Income is also a key factor that the youth consider when seeking employment as shown in Figure 4.4.

As the Kenyan economy expands, job mobility becomes a norm, thus affecting employee's organizational commitment. Young people's desire for career growth has to be balanced against their attitudes towards their current jobs. The results above reveal that women consider income more than men when seeking work. NGOs were found to be very attractive to graduates seeking career growth compared to public and private sectors. Moreover, Bachelors degree holders were more concerned with career growth compared to Diploma and Masters degree holders among the young graduates. An opportunity for career growth at work place is an important determinant in talent retention and employee turnover at the work place. The relationship between career growth and employee outcome depends on one's motivation for work; that is commitment to pursue career or fear

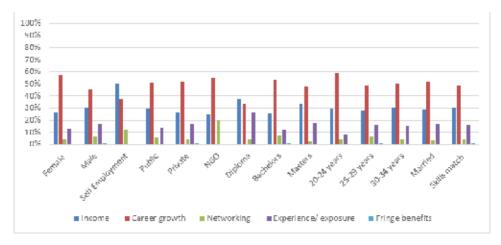


Figure 4.4: Reasons for seeking employment among the youth

of being unemployed. Weng et al. (2010) argue that career growth is the extent to which an employee perceives presence of a conducive environment to meet career-related needs, and reinforces one's achievements through promotion and compensation. It is, therefore, incumbent on employers to marry the expectations of the youth and their occupational commitment to deliver expected outcomes. The degree to which an organization facilitates career growth through skilling the youth, meeting their career goals, developing their professional abilities, and inclusive reward system would enhance emotional attachment to their chosen occupation in their sectors, and spur economic growth.

The urge to gain experience/exposure in a particular field of specialization increases the chances of youth in securing better jobs. Experience is partly gained through on-job training or performing the actual tasks. Over the decades, training has been defined as development of the knowledge, skills, and abilities that employees require to perform their jobs competently (Nordhaug, 1989). Training is a critical concern for young graduates who lack necessary mastery of basic skills for performing technical assignments in various sectors such as manufacturing, agriculture and services, among others. Study findings show that male graduates sought jobs to earn more experience compared to their female counterparts, while the private sector provided better exposure for graduates eying jobs in other sectors compared to the public sector. It is, however, evident that very few graduates who sought work to gain experience from NGOs. Most of the graduates who sought work to gain experience were Diploma holders followed by Bachelors and Masters degree graduates.

Over the recent years, the government has sought to institutionalize internship programmes for fresh graduates to expose them to industry expectations as they build their careers for the labour market. Moreover, the Public Service Commission (PSC) in its succession management strategy will introduce a three (3) year Young Professional Programme to facilitate employment of highly qualified and talented youth into substantive positions in the public service to fill the gaps arising from the ageing service, and skills flight and areas with skills shortage thus contributing to the technical capacity of the service (Government of Kenya, 2017). This will facilitate mainstreaming of youth perspectives and provide career opportunities to the youth. This is consistent with the findings of Callanan and Benzing (2004) who established that completion of an internship assignment was linked to finding career-oriented employment.

Young graduates are keenly motivated by income when joining the labourforce. The findings above reveal that male graduates consider income more than females when seeking work while self-employment was very attractive for those seeking income compared to public and private sectors. Diploma graduates were more

concerned with income compared to Bachelors and Masters holders among the young graduates. However, employers consider levels of their experience and technical know-how when determining their compensation packages. It is the income earned that trickles down to sustaining their livelihood and capacity development for betterment of their skills at the work place. To achieve a decent life for youth joining employment, most governments in developing countries use minimum wages to cushion them against economic shocks such as inflation and low pay from employers in disguise of under-experience. However, the implication of minimum wages is reduced employment among the youth (Kalenkoski, 2016). Minimum wage reduces lifetime income of graduates by delaying their entry into the labour market with higher pay. It, therefore, behooves the state to adapt inclusive youth-friendly labour laws that allow absorption of fresh graduates into various productive sectors of the economy while incentivizing the employers who take up youth, either on internship/apprenticeship or mentorship programmes. This would not only reduce pressures on existing social protection programmes but also reduce dependency burden in the society.

Transitioning to adulthood with the help of a mentor at work place helps in steering youth towards intrinsically rewarding careers. A good proportion of the sampled graduates would prefer to be mentored within effective professional networks in their early career engagements. Further, most male graduates with Bachelors degree sought to establish networks compared to their female counterparts. The NGOs provide better opportunities for networking and mentoring compared to other sectors among graduates with job matching skills. Mentors can link young graduates with information and resources not readily available from their extant personal networks, which might inform their options in advancing their careers. This is supported by findings by Zippay (1995) who noted that effective networking and mentorship programmes are positively related to the likelihood of fulltime employment. Networking among employees forms the basis for future engagement even after one moves out of current employment to other organizations. These are important linkages for youths who are more dynamic in the labour market and keep searching for greener pastures as revealed in this study. Therefore, internships, apprenticeships and even seasonal employment opportunities should incorporate a mentoring component in addition to building technical knowhow. These initiatives will build future talent pipeline for various sectors of the economy to tap and retain the youth.

Fringe benefits, which refer to benefits enjoyed by an employee in kind from an organization, such as bonuses, allowances and holiday packages, was not an important motivation for young people when searching for work. Indeed, these are peripheral benefits whose relevance tends to increase with the age of the worker and duration he/she has stayed in the organization.

4.5 Determinants of Labour Distribution

The skills an individual earns either during formal schooling or from experience in participating in a particular task forms part of one's human capital. These skills influence one's ability to secure different types of meaningful employment in various sectors of the economy not limited to formal but informal as well. In this study, we sought to establish how skills influence the choice of sectors youth seek employment from. The study established that requisite and relevant skills to perform assigned duties were significant in influencing the choice of public and private sector employment relative to self-employment. Skills match with industry expectation increases the likelihood of youth to find employment in the public sector by 0.428 relative to self-employment, while a negative relationship exists for the private sector with 0.439 reduction in chances. This is consistent with findings of Nyaga (2010) who established that only minimum education and possibly special skills are desired to obtain a job opportunity in the private sector. This could be attributed to the fact that employment in the public service is highly competitive while the private sector seems to employ and retrain the recruits irrespective of their prior training in institutions of higher learning. Skills mismatch has been established to have adverse effect on performance of organizations, making labour markets to be very competitive. Therefore, there is need for closer collaboration between the industry and academia to equip the youth with necessary skills sets for gainful employment.

The age of prospective employee is important in efforts to acquire a paid job. Increase in age is associated with high level of experience (Escudero and Maurelo, 2013). However, as workers age, physical and mental abilities tend to decline (Chung et al., 2015) thus reducing their mobility between industries. In this study, youth in the age bracket of 24-29 years are more likely to find work in the NGOs compared to being self-employed. It is, however, important to note that youth in this age bracket are less likely to find work in the private sector. OECD evidence suggests that men even up to the age of 28 years may have problems in settling into stable work. For instance, the transition to stable work for men with lower educational qualifications could last to age 35 (OECD, 1996). The wide age span used in many African countries to define youth, for policy purposes, is likely to reflect the difficulties that most young people in these countries have in making the economic transition from dependence to independence.

The family is a foundation for a stable social life and motivates an individual to search for gainful employment to provide basic needs. Transition from formal education system to employment is not automatic. The duration an individual stays out of employment or takes to find employment reduces his/her likelihood to find paid jobs relative to self-employment. Similarly, search duration reduces chances of finding employment in NGOs by 0.002 compared to being self-employed. This implies that longer duration of searching for work would likely increase chances of one venturing into business or involuntary work that is not salaried.

Variable name	Public sector	Private sector	Non- Governmental Organizations
Gender	0.074	-0.069	-0.005
	(0.0870)	(0. 0879)	(0.0111)
Search duration	0.014	-0.012	-0.002**
	(0.0107)	(0.0106)	(0.0009)
Skills mismatch	0.428***	-0.439 ^{***}	0.011
	(0.0925)	(0.0915)	(0.0093)
Experience	-0.004	0.003	0.001
	(0.0239)	(0.0241)	(0.0024)
Age20-24	-0.075	-0.052	0.128
	(0.1879)	(0.1818)	(0.1485)
Age25-29	0.044	-0.084	0.034 ^{**}
	(0.0973)	(0.0965)	(0.0159)
Diploma	-0.275 ^{***}	0.341 ^{***}	-0.0652***
	(0.0989)	(0.1002)	(0.0989)
Bachelors	-0.358***	0.364 ^{***}	-0.0056
	(0.0865)	(0.0866)	(0.0865)
Location	-0.269 ^{**}	0.272 ^{**}	-0.0035
	(0.1206)	(0.1193)	(0.1206)
Job satisfaction	-0.229 ^{**}	0.237 ^{**}	-0.0078
	(0.1030)	(0.1029)	(0.1030)
Contract	-0.362***	0.356***	0.0067
	(0.1024)	(0.1048)	(0.1024)
Permanent	0.160*	0.131	0.0290
	(0.0948)	(0.0956)	(0.0948)
Base outcome	Self employment		

 Table 4.2: Factors that influence youth employment in various sectors of the economy

Note: The reference group is "Self Employment", while ****, ** and * represent significance levels at 1, 5 and 10 per cent respectively. Standard errors are in parenthesis

Education and training improve the productive capacity of a population, hence raise one's chances of being employed. Seeking formal employment requires certain levels of training. Among the sampled graduates, their level of education was key in their choices of sectors of their current employment. Having a diploma and degree increases the likelihood of finding work in the private sector by 0.341 relative to being self-employed. These results are consistent with findings of Kabubo (2003) that affirmed the importance of education in the probability of participation in these employment sectors relative to remaining inactive. However, holding a Bachelors degree decreases the likelihood of being employed in the public sector by 0.358 relative to being self-employed. This could be attributed to the degree inflation phenomenon, leading to a rising demand in post-graduate studies in the country, as established for the case of the U.S. by Moore (2016).

Rural areas are expected to offer high employment opportunities due to their ability to engage youth in farming activities and small businesses along agricultural value chains. However, limited access to factors of production such as agricultural land and capital, coupled with factor market restrictions, force the youth to abandon agriculture in search of other livelihoods. This study indicates that living in rural areas decreases likelihood of finding employment in public sector relative to selfemployment by 0.269 compared to increased chances of being absorbed in the private sector. This could be alluded to the fact that most public service jobs are dominant in urban centres unlike in the villages. Moreover, most graduates upon completion of their studies tend to migrate to urban townships to seek employment in other sectors of the economy which is consistent with the findings Benzu and Holden (2014) in their study on why rural youth are abandoning agriculture in Ethiopia.

The choice to remain in employment is hinged on the kind of motivation the employee derives from the employment. It is the satisfaction one gets from performing a task that will influence one's decision to hop from one sector to another. From our sampled graduates, the satisfaction they derive from their current employment was significant in their employment choices. Job satisfaction increased the likelihood of one being absorbed in the private sector unlike in public service relative to self-employment. This implies that youth derive more satisfaction in self-employment relative to public service, which necessitates provision of an enabling environment for private enterprises to thrive.

Wage and salaried jobs, with legal contracts and a degree of job protection motivates youth to accept both long/short term and seasonal engagements irrespective of other employment benefits. Notably, the public sector was found to offer a relatively larger degree of job security compared to the private sector. Contractual conditions and work arrangements that predispose youth to job insecurity negatively affect labourforce distribution. The study established that contractual jobs within the public and private sectors are not attractive to graduates, who would rather prefer permanent terms of service relative to selfemployment. These findings resonate with those of Elder and Kone (2014) that young people in Liberia will keep changing jobs for better working conditions until they get a permanent job.

An analysis including interaction variables was also conducted but the results were not different (Appendix 7).

5. Conclusion and Recommendations

Youth account for the largest proportion of the Kenyan population, and more so the unemployed. Further analyses of the market entry trends in the country show that the number of youth who enter the labour market annually, with or without skills, exceeds those absorbed into the labour market. These probes the question, "where do these youth go?" This study sought to establish how youth graduates are distributed across economic sectors in the country, mainly public and private sectors, NGO sector and self-employment.

Overall, the findings indicate that employment for Diploma and Bachelors degree graduates has been declining over the years. Further, most graduates are employed in the private sector with very few being self-employed. This implies that the private sector has a huge graduate absorption capacity, and therefore the need to create an enabling environment that will enable the sector to continue expanding. This can be achieved by ensuring favourable regulations to improve the ease of doing business, and encourage both domestic and foreign direct investments that will create employment opportunities. There is also need to instill entrepreneurial skills and mentor college and university students to embrace self-employment.

Further analysis on what motivates the youth to search for employment revealed that career growth, income, experience and networking are the major reasons. The major factors determining employment among youth graduates include skills match, education level, nature of employment and search duration. This study, therefore, recommends creation of a strong academia-industry linkage right from curriculum formulation to the time skills are transmitted to the learners. Secondly, regular interaction forums between academia and industry will create a platform for students to interact with mentors and be guided into relevant career paths. In addition, the government and private sector should invest more on internships and apprenticeships, which play a crucial role in equipping the youth with relevant skills for the job market.

The private sector was found to offer a low degree of job protection to youth graduates, who cited the public sector as more job-secure and offering benefits such as pension. The study recommends improvement of employment terms especially within the private sector to motivate youth and ensure high levels of job satisfaction.

References

- AfDB, OECD Development Centre, UNDP and UNECA (2012), African Economic Outlook 2012. available at http://www.africaneconomicoutlook.org/].
- African Development Bank (2014), Analysis of Gender and Youth Employment in Rwanda. ESTA and RWFO, May 2014 www.afdb.org.
- African Union Commission (2015), Agenda 2063: A Shared Strategic Framework for Inclusive Growth and Sustainable Development and a Global Strategy to Optimize the use of Africa's resources for the benefit of all Africans.
- Ahmad, R. and Azim, P. (2010), "Youth Population and the Labour Market of Pakistan: A Micro Level Study", *Pakistan Economic and Social Review*, Vol. 48, No. 2: 183-208.
- Ahmad, R. and Azim, P. (2010), "Youth Population and the Labour Market of Pakistan: A Micro Level Study Pakistan", *Economic and Social Review*, 48 (2): 183-208.
- Aleksandra S.D., Branislav S.D, Tanja A, Tamara J, Dragoslav P, Andjelija I, Kristina K, Srecko F. (2014), "Analysis of the Labourforce Composition on Cruisers: The Danube through Central and Southeast Europe", *Journal of Transport Geography*, 39: 62-72.
- Aleksandra, W., Dominik, B. and Joan, T. (2014), Employment Flexibility, Job Security and Job Satisfaction of Knowledge Workers in Poland. Doctoral Working Paper Series DWP14-004.
- Baah-Boateng, William (2009), Labour Market Discrimination in Ghana: A Gender Dimension.
- Balleer, A., Gómez-Salvador, R. and Turunen, J. (2009), Labourforce Participation in the Euro Area: A Cohort-based Analysis. ECB Working Paper No. 1049.
- Bardasi, E. and Taylor, M. (2008), "Marriage and Wages: A Test of the Specialization Hypothesis", Economica, 75(299): 569-591.
- Benjamin, K. and Wilson, S. (2005), Facts and Misconceptions about Age, Health Status and Employability. Health and Safety Laboratory, Buxton, Report HSL/2005/20.
- Benzu, S. and Holden S. (2014), "Are Youth in Ethiopia Abandoning Agriculture?" *World Development*, 64: 259-272.

- Bojnec, S. and L. Dries (2005), "Causes of Changes in Agricultural Employment in Slovenia: Evidence from micro-data", *Journal of Agricultural Economics*, 56(3):399-416.
- Bonhomme, S. and J. M. Robin (2010), "Generalized Non-parametric Deconvolution with an Application to Earnings Dynamics", *Review of Economic Studies*, 77(2): 491-533.
- Broadberry S., Bruce M. S., Campbell B. and Leeuwenn, V. (2013), "When did Britain Industrialize? The Sectoral Distribution of the Labourforce and Labour Productivity in Britain, 1381-1851", *Explorations in Economic History*, 50: 16-27.
- Callanan, G. and Benzing, C. (2004), Assessing the Role of Internships in the Career-oriented Employment of Graduating College Students. Education + Training, 46(2): 82-89.
- Chlosta, S., Patzelt. H., Klein, S. and Dormann, C. (2012), "Parental Role Models and the Decision to become Self-employed: The Moderating Effect of Personality", *Small Business Economics*, 38(1): 121-138.
- Chung, J., Park, J., Cho, M., Park, Y., Kim, D., Yang, D. and Yang, Y. (2015), A Study on the Relationships between Age, Work Experience, Cognition, and Work Ability in Older Employees Working in Heavy Industry. *J Phys Ther Sci.*, 27(1): 155-157.
- EAC Secretariat (2013), East Africa Community Youth Policy. Arusha: EAC Secretariat.
- Ekelund J. Robert and Robert F. Hebert (2007), *A History of Economic Theory and Method.* Fifth edition, Long Grove, Illinois: The Waveland Press. Business School.
- Elder, S. and Koné, S. K. (2014), Labour Market Transitions of Young Women and Men in Sub-Saharan Africa, Work4Youth Publication Series No. 9, Geneva: International Labour Organization.
- Escudero V. and Maurelo E. L. (2013), Understanding the Drivers of the Youth Labour Market in Kenya. ILO Research Paper No. 8.
- Fadayomi, T. and Ogunrinola, I. (2005), Determinants of Labourforce Participation in Nigeria: The Influence of Household Structure. mimeo.
- Forster, Andrea G. (2014), "Vocational Education and Employment over the Life Cycle", *Sociological Science*, 3: 473-494.

- Fuller, J. and Raman, M. (2017), Dismissed by Degrees. *Accenture, Grads of Life*, Harvard Business School.
- Ginzberg, E. (1952), "Toward a Theory of Occupational Choice. Occupations", *The Vocational Guidance Journal*, 30: 491-494.
- Government of Kenya (2007), Kenya Vision 2030. Nairobi: Government Printer.
- Government of Kenya (2012), Sessional Paper No. 10 on Kenya Vision 2030. Nairobi: Government Printer.
- Greene, W. H. (2003), Econometric Analysis. New Jersey: Prentice Hall.
- Health and Safety Executive (2011), An Update of the Literature on Age and Employment. RR832 Research Report. Retrieved from: http://www.hse. gov.uk/research/rrpdf/rr832.pdf on May 12, 2018.
- Heckman, J. J. and B. Singer (1984), Social Science Duration Analysis in Longitudinal Analysis of Labour Market Data. ed. by J. J. Heckman and B. Singer. New York: Cambridge University Press.
- Ingham, M. and H. Ingham (2004), Labour Flows into and out of Polish Agriculture: A Micro-level Analysis. Lancaster University Management School Working Paper, the Department of Economics, Lancaster, UK.
- International Labour Organization ILO (2016), World Employment Social Outlook: Trends for Youth.
- Johnson, T. G. (1991), The Market for Farm Family Labour, Ames: Iowa state University Press.
- Jonung, L. (1989), "Knut Wicksell on unemployment", *History of Political Economy*, 21(1): 27-42.
- Kabubo, J. (2003), Wage Determination and the Gender Wage Gap in Kenya: Any Evidence
- Kalenkoski, C. M. (2016), The Effects of Minimum Wages on Youth Employment and Income. *IZA World of Labour*, 243.
- Kenya Institute for Public Policy Research and Analysis KIPPRA (2013), A Comparative Study on Public-Private Sector Wage Differentials in Kenya.
 Retrieved on 20 March from: http://www.src.go.ke/pdfdocuments/ annual%20reports/wage-diffentials-study-february-2013.pdf
- Kenya National Bureau of Statistics KNBS (2018), Kenya Integrated Budget Household Survey. Nairobi: Government Printer.

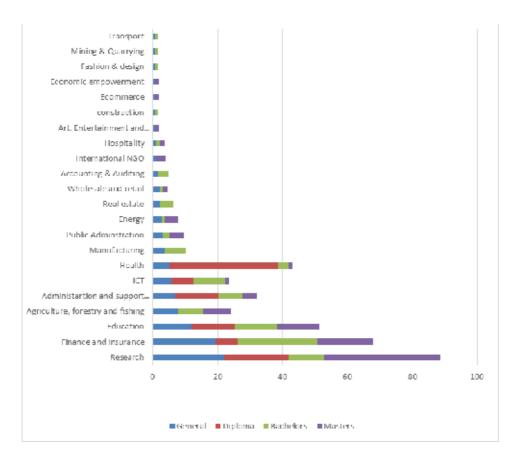
- Khan, M. (2012), "The Impact of Training and Motivation on Performance of Employees", *Business Review*, 7(2): 84-95.
- KIPPRA (2017), Kenya Economic Report 2017. Nairobi: Kenya Institute for Public Policy Research and Analysis.
- Manuelli, R. (2000), Technological Change, the Labour Market, and the Stock Market," NBER Working Paper 8022.
- Matsoso, N. (2015), The Effects of Marital Status on Labour Market Participation, Employment and Wages in Lesotho. Retrieved from: http://hdl.handle. net/10413/14143 on 12 May 2018.
- McCullough, E. B. (2017), "Labour Productivity and Employment Gaps in Sub-Saharan Africa". *Food Policy*, 67, 133-152.
- Ministry of Education (2017), Graduates Report. Retrieved from: https://www. standardmedia.co.ke/article/2001231157/report-quality-of-kenyangraduates-from-public-universities-wanting
- Moore, J. (2016), The Economics of Degree Inflation. Retrieved from: https:// stanfordcomparativeadvantage.files.wordpress.com/2017/01/mooredegree-inflation.pdf
- Mortensen, D. and Pissarides, C. (1994), "Job Creation and Job Destruction in the Theory of Unemployment". *Review of Economic Studies*, 61(3): 397-415.
- Mouhammed, Adil (2010), "Unemployment and the Entrepreneur". *International Journal of Economics and Research*, 1(1): 1-14.
- Mwabu, G. and R.E. Evenson (1996), "A Model of Occupational Choice Applied to Rural Kenya". *African Development Review*, 9(2): 1-14.
- Neffke, Frank, Otto, Anne and Weyh, Antje (2017), "Inter-industry Labour Flows". Journal of Economic Behavior and Organization, 142(10):1016.
- Nishiyama, C. and Leube, K. (1984), *The Essence of Hayek*. Hoover Institution: Stanford University, Stanford, CA.
- Nordhaug O. (1989), "Reward Functions of Personnel Training". *Human Relations*, 42 (5): 373-388.
- Ntuli, M. (2007), Exploring Gender Wage Discrimination in South Africa, 1995-2004: A Quantile Regression Approach. IPC Working Paper Series No. 56.
- Nyaga, R. K. (2010), Earnings and Employment Sector Choice in Kenya. AERC Research Paper 199. Nairobi: African Economic Research Consortium.

- OECD (1996), Growing into work: youth and the labour market over the 1980s and the 1990s, OECD Employment Outlook 1996. Organization for Economic Cooperation and Development, Paris.
- of Gender Discrimination? AERC Research Paper No. 132. African Economic Research Consortium, Nairobi.
- Pauna, C. (2009), "Labour Reallocation in Transitional Economies–Twenty Years Later", *Romanian Journal of Economic Forecasting*, 4: 180-194.
- Pigou, A. C. (1933), *The Theory of Unemployment*. London: Macmillan.
- Sackey, H.A. (2005), Female Labourforce Participation in Ghana: The Effects of Education. AERC Research Paper No. 150. Nairobi: African Economic Research Consortium.
- Schumpeter, J. (1934), *Theory of Economic Development*. Cambridge, MA.: Harvard University Press.
- Solow, R. M and McDonald, I. M. (1981), "Wage Bargaining and Employment". *American Economic Review*, 71(5): 896-908.
- Tocco, B., Bailey, A. and Davidova, S. (2013), The Reallocation of Agricultural Labour across Sectors: An Empirical Strategy for Micro Data. Factor Markets. Working Paper.
- Trehan, B. (2001), "Unemployment and Productivity", *Economic Letter*. Federal Reserve Bank of San Francisco, Number 28, 12 October, 1-3.
- Van Herck, K. (2009), A Comparative Analysis of Rural Labour Markets. SCARLED Project.
- Wambugu, A. (2002), Education, Employment and Earnings in Kenya. InA. Wambugu, Essays on Earnings and Human Capital in Kenya, PhDDissertation, Department of Economics, Goteborg University, Sweden.
- Wamuthenya, R.W. (2005), Determinants of Formal and Informal Sector Employment in the Urban Areas of Kenya. Final Report presented at AERC Biannual Workshop, Johannesburg, South Africa, 3–8 December.
- Weng, Q. X., McElroy, J. C., Morrow, P. C. and Liu, R. (2010), "The Relationship between Career Growth and Organizational Commitment", *Journal of Vocational Behaviour*, 77(3): 391-400.
- Zippay A. (1995), "Expanding Employment Skills and Social Networks Among Teen Mothers: Case Study of a Mentor Programme". *Child and Adolescent Social Work Journal*, 12:51–69.

Appendices

Variable name	Public sector	Private sector	Non-Governmental Organizations
Gender	2.181**	1.884*	1.757
	(1.083)	(1.069)	(1.204)
Search duration	0.133 ^{**}	0.078*	-0.021
	(0.049)	(0.043)	(0.069)
Skills mismatch	2.694 ^{**}	0.545	2.085 [*]
	(1.174)	(1.11)	(1.242)
Experience	0.143	0.159	0.205
	(0.306)	(0.299)	(0.316)
Age19_24	1.567	1.655	3.913 ^{**}
	(1.446)	(1.32)	(1.702)
Age25-29	-15.172 ^{***}	-15.428***	-13.228***
	(0.838)	(0.833)	(1.146)
Diploma	13.421 ^{***}	14.92 ^{***}	-2.359
	(1.478)	(1.469)	(1.542)
Bachelors	-1.91	-0.353	-1.391
	(1.343)	(1.323)	(1.377)
Location	-1.152	0.992	0.176
	(1.372)	(1.371)	(1.413)
Job satisfaction	0.161	1.132	0.252
	(1.078)	(1.036)	(1.145)
Contract	-0.645	1.133	0.91
	(1.592)	(1.554)	(1.651)
Permanent	0.198	0.824	1.855*
	(1.042)	(1.03)	(1.126)
Base outcome	Self-employment		

Appendix 1: Multinomial logistic regression estimation results



Appendix 2: Youth labourforce distribution by industry

Year of graduation No. of years Diploma **Bachelors** Masters 2010 19% 7% 1% 8 12% 9% 2% 2011 7 6 0% 14% 4% 2012 15% 20% 6% 5 2013 12% 15% 15% 2014 4 2015 19% 17% 20% 3 4% 2016 10% 23% 2 15% 10% 31% 1 2017 100% 100% 100%

Appendix 3: Year of graduation by education attainment

Age	Educati	Education, age and gender statistics				
	Diploma		Bachelors		Masters	
	Male	Male Female Male Female M		Male	Female	
Age 20-24 years	80%	20%	35%	65%	0%	100%
Age 25-29 years	38%	62%	53%	47%	46%	54%
Age 30-34 years	33%	67%	74%	26%	35%	65%

Appendix 4: Education, age and gender statistics

Appendix 5: Employment type

Employment Type	Working hours	Mean wage	Search duration
Permanent	8.8	86,124.46	11.3
Contract	7.9	73,747.65	13.6
Age 20-24 years	9.0	53,555.56	8.6
Age 25-29 years	8.6	76,880.57	16.1
Age 30-34 years	8.6	85,275.69	15.3
Female	8.7	76,867.60	15.0
Male	8.6	79,861.06	19.3

Appendix 6: Employment sector by educational attainment

Education level	Self-employment	Public	Private	NGO
Diploma	0%	7%	11%	0%
Bachelors	75%	41%	62%	60%
Masters	25%	53%	26%	35%
PhD	0%	0%	1%	5%
Female	8%	35%	45%	13%
Male	2%	42%	47%	9%
Age 20-24 years	0%	22%	67%	11%
Age 25-29 years	5%	37%	44%	14%
Age 30-34 years	3%	46%	48%	3%
No. of jobs held before	2	2	4	1

Appendix 7: Gendered regression analysis

mlogit Emp_sector gen_Age24 gen_Age29 gen_Dipl gen_Bsc duration_location duration_Age24 duration_Age29 gen_skils Jobsat_Exper duration_Dipl duration_Bsc gen_contract gen_Permanent , baseoutcome(0) vce (robust

.mfx, predict (p outcome (1))

Marginal effects after mlogit

y = Pr(Emp sector = = public sector) (predict, p outcome (1))= .42619746

variable dy/dx Std. En	rr.z P>z [9	95% C.I.]	X
gen_A~24*4301885	.07854 -5.48 0.00		
gen_A~29*2237576	.30976 -0.72 0.470		.345679
gen_Dipl* .554314	.169 3.28 0.00	1 .223078 .88555	.061728
gen_Bsc*0370731	.3481 -0.11 0.915	719335 .645189	.296296
durati~n .0110718	.0138 0.80 0.422	2015978 .038121	8.59259
durat~24 .1100901	.04309 2.55 0.011	.025631 .19455 .	.62963
durat~29 .086595	.03619 2.39 0.017	.015673 .157517	6.49383
gen_sk~s* .4111734	.21588 1.90 0.057	011953 .8343 .	320988
Jobsat~r* .6257945	.07398 8.46 0.000	.480791 .770798	.012346
durati~l1242566	.05249 -2.37 0.018	22713702137	6 1.02469
dura~Bsc0724392	.03716 -1.95 0.051	145279 .0004 :	5.81481
gen_co~t*3245501	.20685 -1.57 0.117	729976 .08087	.197531
gen_Pe~t*0941372	.25837 -0.36 0.716	600529 .412254	4 .246914

(*) dy/dx is for discrete change of dummy variable from 0 to 1

.mfx, predict (p outcome (2))

Marginal effects after mlogit

```
y = Pr(Emp_sector==private_sector) (predict, p outcome (2))
= .57055786
variable dy/dx Std. Err. z P>z [95% C.I.]
                                                 Х
```

gen_A~24* -.5680036 .07857 -7.23 0.000 -.722004 -.414003 .012346 gen_A~29* .2264759 .3107 0.73 0.466 -.382482 .835434 .345679 gen_Dipl* -.5485976 .16851 -3.26 0.001 -.878877 -.218318 .061728

(*) dy/dx is for discrete change of dummy variable from 0 to 1

.mfx, predict (p outcome (3))

Marginal effects after mlogit

```
y = Pr(Emp_sector==NGO) (predict, p outcome (3))
= .00324467
```

variable dy/dx Std. Err. z P>z [95% C.I.] X

gen_A~24* .9981921 .00096 .1041 0.000 .996314 1.00007	.012346
gen_A~29*002755 .00514 -0.54 0.59201282 .00731	.345679
gen_Dipl*0057164 .00287 -1.99 0.04601134200009	.061728
gen_Bsc* .0063593 .01238 0.51 0.607017901 .03062	.296296
durati~n0004444 .00021 -2.16 0.03100084800004	8.59259
durat~240141491 .00607 -2.33 0.02002604900225	.62963
durat~29 .0004404 .00048 0.91 0.363000509 .00139	6.49383
gen_sk~s* .0027344 .00444 0.62 0.538005965 .011434	.320988
Jobsat~r*0035907 .0017 -2.11 0.035006929000252	.012346
durati~l003267 .00152 -2.15 0.032006246000288	1.02469
dura~Bsc0003333 .00046 -0.73 0.466001229 .000562	5.81481
gen_co~t*0027971 .00188 -1.49 0.137006483 .000888	.197531
gen_Pe~t*0045004 .00251 -1.79 0.073009419 .000418	.246914

(*) dy/dx is for discrete change of dummy variable from 0 to 1

ISBN 9966 817 01 3

Kenya Institute for Public Policy Research and Analysis Bishops Garden Towers, Bishops Road PO Box 56445, Nairobi, Kenya tel: +254 20 2719933/4, 2714714/5, 2721654, 2721110 fax: +254 20 2719951 email: admin@kippra.or.ke website: http://www.kippra.org