

**LABOUR MARKET OUTCOMES AND
SUBJECTIVE WELLBEING OF UNIVERSITY
GRADUATES IN GHANA**

BY

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(10173408)

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JULY, 2018

DECLARATION

I hereby certify this thesis as original and my own and that neither part nor the whole has ever been presented in this University or any other institution for an award of any academic degree. All references of others made to the work have duly been acknowledged.

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We, the undersigned supervisors, certify that this is an original work we supervised the candidate to produce. We are also convinced that it (the thesis) meets all required standards set by the University of Ghana for an award of a Doctor of Philosophy Degree.

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DEDICATION

This thesis is dedicated to my parents, Mr. and Mrs. Achuliwor, for investing in my education, to my amazing husband, Khalid Mahmud Diyaudeen, and my adorable twin boys, Hena and Hiera, for their sacrifices and inspiration throughout this study.

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LIST OF ACRONYMS

AFDB	African Development Bank
GDP	Gross Domestic Product
GLSS	Ghana Living Standard Survey
GSS	Ghana Statistical Service
GYEEDA	Ghana Youth Employment and Entrepreneurial Development Agency
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organization
ISSER	Institute of Statistics and Economic Research
KNUST	Kwame Nkrumah University of Science and Technology
LFS	Labour Force Survey
NABCO	Nation Builders Corps
NEP	National Employment Policy
NGO	Non-Governmental Organization
NSS	National Service Scheme
NYEP	National Youth Employment Programme
OECD	Organization for Economic Cooperation and Development
PNDC	People National Defense Council
SCCT	Social Cognitive Career Theory
SHS	Senior High School
SSA	Sub-Saharan Africa
SSS	Senior Secondary School
SWLS	Satisfaction With Life Survey
TUC	Trade Union Congress
UCC	University of Cape Coast
UDS	University for Development Studies
UG	University of Ghana
UNECA	United Nations Economic Commission for Africa
YEA	Youth Employment Agency

ABSTRACT

Economic development in many African countries is characterised with fundamental and structural problems that marginalise the youth and unable to absorb them into the labour market. Youth unemployment has been, and still remains, a pervasive challenge in Ghana, particularly in the light of structural weaknesses and economic challenges. Yearly, universities churn out large numbers of graduates with few opportunities to absorb them into the labour market. The limited opportunities for a sizeable number of the graduates to gain access to employment has impacted negatively on their wellbeing. Long periods of unemployment can cause economic risk at the individual level through loss of earnings and subsequently reduced consumption. Despite the challenges faced by the graduates in obtaining access to the labour market, few studies have examined their labour market outcomes. Ghana lacks reliable data on graduate labour market outcomes especially segmentation and sectoral choice of youth and the linkages between programmes of study, employment aspirations and prospects as well as the transition from university to work. Very little is known about where the majority of university graduates end up in the labour market. There is, therefore, a knowledge gap on the labour market outcomes and the factors determining graduates' entry into the labour market. Using quantitative analytical techniques, this study specifically investigates the determinants of employment, unemployment duration and its implications on subjective wellbeing of university graduates in Ghana. The study conducted a tracer study on 1,470 university graduates using Computer Assisted Telephone Interviews (CATI) to collect data. A probit analysis was employed to determine the factors influencing the employment outcomes of graduates in the labour market and the differences in subjective wellbeing of employed and unemployed graduates.

Survival analysis was conducted to determine the unemployment duration of university graduates in Ghana and the probability of gaining employment.

Despite evidence in literature that females are marginalised in the labour market, the study unearthed that female university graduates are more likely to gain employment after their national service. Having social networks in the form of bonding and linking capital increases employment chances and reduces the duration of unemployment. The results also show that unemployment durations differ according to the programme of study. Engineering and Science graduates were found to be more likely to be employed compared with graduates with Arts and Social Science qualifications. Interestingly, the findings reveal that, even four years after national service, as many as 25 per cent of business graduates remain unemployed. This has policy implications considering that many of the universities concentrate on business-related programmes leading to an over supply of these graduates. Within the same period, no graduate of pure and applied science graduate was found to be unemployed and only 13 per cent of engineering graduates were still without jobs. The study further found that long periods of unemployment spells have implications for the psychological welfare of graduates as employed graduates reported higher levels of subjective wellbeing.

The study therefore recommends that attention should be given to job creation strategies for graduates of Arts and Social Sciences who constitute a higher proportion of graduates from all universities and yet are less likely to find employment. Universities should offer degree courses in high demand career areas where they will be more employable since the study showed that graduates of the sciences and engineering are more likely to find jobs.

Strategies such as job matching should be implemented to strengthen the effective foundation of the labour market to ensure the optimal allocation of jobs such that employment opportunities are given to the most suitable graduate instead of those with the strongest social capital.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Notwithstanding improvements in economic performance experienced in many countries over the past decade, there are still few employment opportunities for the youth. Literature on youth in Sub-Saharan Africa (SSA) describes the youth as a ‘lost generation’ whose transition into the labour market is largely characterised by stagnation (Vigh, 2006; OECD, 2010). According to the International Labour Organisation (ILO), youth unemployment in SSA is substantially higher than the global adult unemployment rate (ILO, 2016). With over 75 per cent of the youth in the labour force, the youth are usually the hardest hit in times of economic crisis resulting in a portion of them being forced into vulnerable employment (AfDB et al., 2014). Although the World Bank projected that African economies were likely to recover from the global financial crisis in the year 2010, with GDP projected to grow at an average rate of 4.3 per cent, the GDP growth rate has not been accompanied with increased employment opportunities and the youth remain marginalised, unemployed and vulnerable (UNECA/AUC, 2010). Opportunities for a sizeable number of the youth to gain access to employment are limited and this has impacted negatively on the economic, social and psychological wellbeing of the youth (Bennell, 2007; ILO, 2005). In addition, Blanchflower and Freeman (2000) claim that, since the 1970s, employment prospects have deteriorated in ‘virtually all OECD countries’ (p. 3) and Ghana is no exception.

The predicament of the youth has likewise not been helped by economic recovery and liberalization policies advocated by international financial institutions in the 1980s with its associated measures on retrenchment and the intermittent freeze on public sector

employment. In addition, economic and labour force deregulation policies introduced as part of the overall liberalization policies have produced deeper social inequalities and polarisation, with the youth being the worst hit (Potter & Lloyd-Evans, 1998). The situation of Ghana's youth is not entirely different from that facing the youth in the rest of Africa and the global south. Over the past three decades, Ghana, like many African countries, embarked on liberalisation policies particularly aimed at ensuring macroeconomic stability and increasing growth through restoring the balance of payments, liberalising business environment, and attracting foreign investment (Brydon, 1999). These policies have contributed to improvements in economic growth but have not been translated to improvement in job creation for the youth (Lall et al., 2016). Youth unemployment has therefore remained a developmental challenge in Ghana.

Researchers have attributed the pervasive challenge of youth unemployment in Ghana in part to the pressure from multilateral institutions such as the International Monetary Fund and the World Bank for government to prune down its governance cost, which has led to massive employment cuts and retrenchments especially in the formal sector (Panford, 2001; Baah-Boateng, 2004). Nonetheless, governments have periodically made attempts to increase the supply of jobs for graduates through various initiatives. The National Youth Employment Program (NYEP), the Ghana Youth Employment and Entrepreneurial Development Agency (GYEEDA) which metamorphosed into Youth Enterprise Agency (YEA) aimed at reducing youth unemployment has not been successful in curbing the unemployment menace as they provide temporary employment to graduates. Currently the government's initiative on addressing graduates unemployment problem includes the establishment of the Nation Builders Corps (NABCO) in 2018 to address graduate

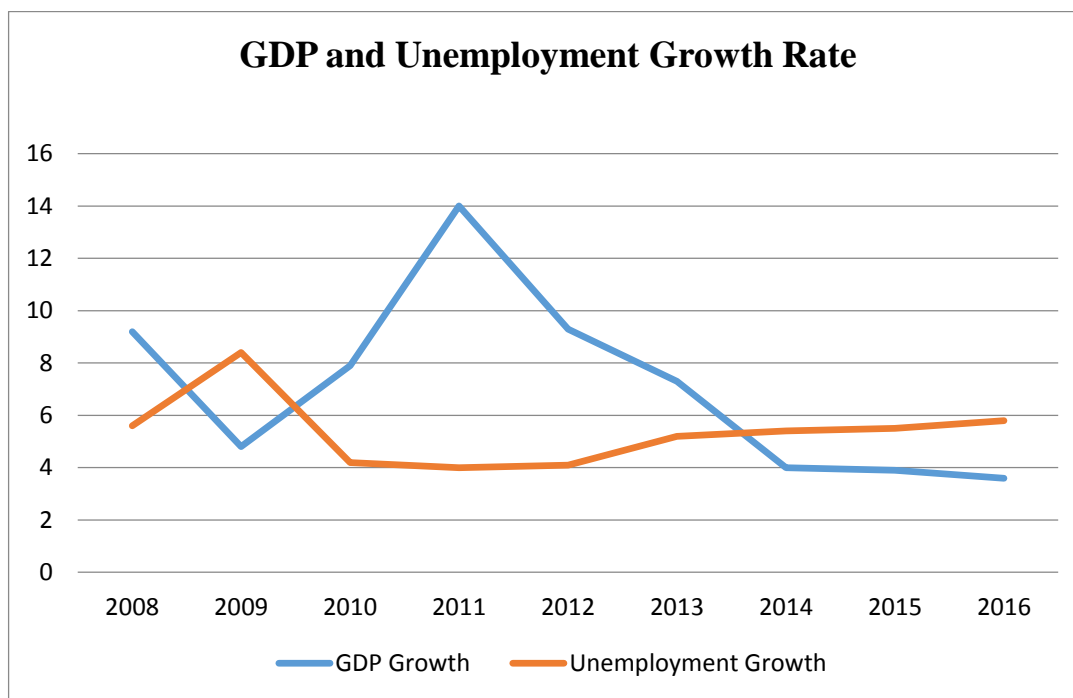
unemployment to solve social problems. Although its impact is still not known, it has been largely criticized in relation to its sustainability and ability of offer long-term solutions as previous initiatives.

On the supply side, literature on graduate unemployment in Ghana suggests that there exist a mismatch between the skills and experiences of educated graduates and available vacancies in the labour market (Baah-Boateng, 2015). Other labour market entry barriers such as insufficient exposure to work (referred to as work experience) and discrimination against young people (Baah-Boateng & Ewusi, 2013) have also been identified. Although the current educational training acquired by the youth inculcates entrepreneurial skills to encourage self-employment, there is a low sign of success in this direction (Samuel, Ernest & Awuah, 2013). The mind-set of graduates is to look for employment in the formal private and public sectors (Chant & Jones, 2005; King & Martin, 2002).

The cumulative effects of these have been the formation of many graduates' unemployment associations across Africa in a bid to have their voices heard (Biney, 2015). In many African countries, youth unemployment has led to political instability (Boot, Wilson & Wolff, 2016; Graham & Mlatsheni, 2015). The effect of this has been heightened by the increased exposure of the youth to global media images of affluence while they are confronted with challenges of employment and securing a fulfilled living. This has resulted in the recent increase in youth rioting and political instability such as the Arab Spring observed in many countries (Boot, Wilson & Wolff, 2016). Okafor (2011), for instance, cautions that youth unemployment is a major threat to democracy in Nigeria and that it is a contributory factor to many social vices such as armed robbery and the terrorism insurgency.

Despite the economic and social implications of youth unemployment, developing countries lack reliable data on youth unemployment needed for labour market analysis partly because there are no institutional processes for tracking and analysing graduate unemployment. Notwithstanding the challenges of unemployment data, Aryeetey and Baah-Boateng (2016) have found that the rate of GDP growth far outweighs the employment growth rate in Ghana for the population aged 15 to 60 years. Figure 1.1 shows an inverse relationship between GDP growth rate and the rate of unemployment growth.

Figure 1.1: GDP and Unemployment Growth Rate in Ghana

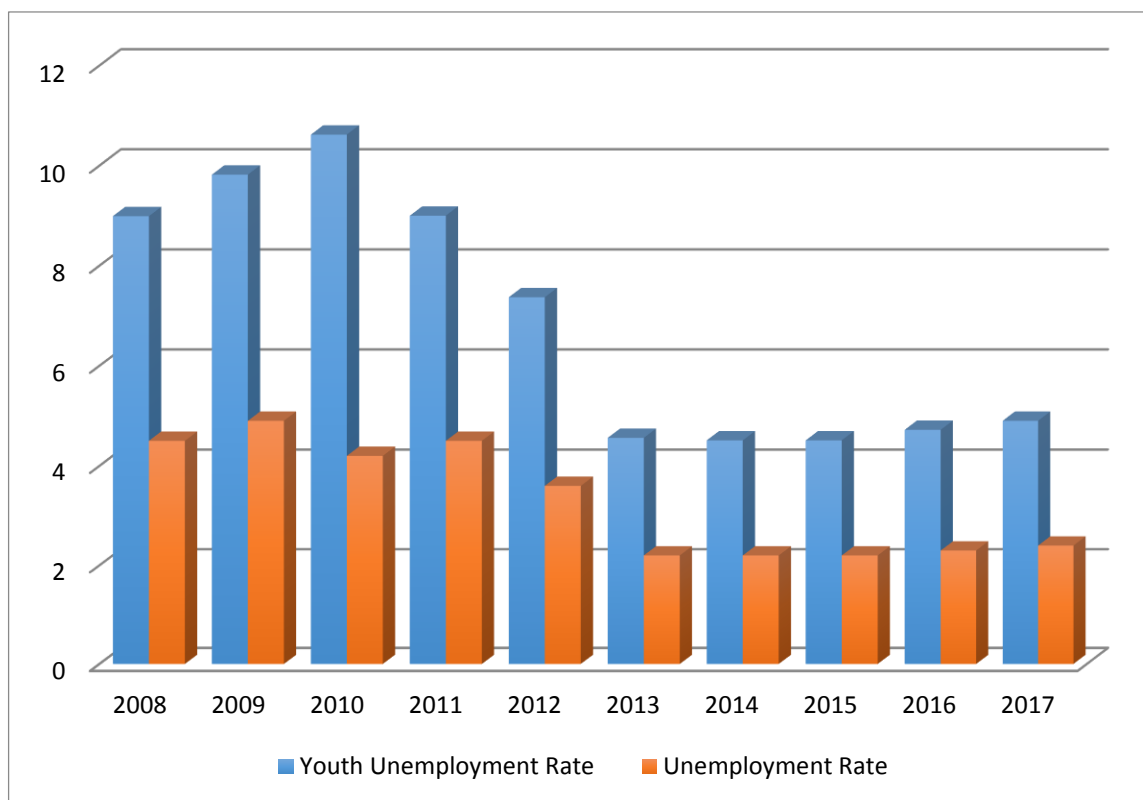


Source: World Development Indicators (2018) and ILO (2016)

From Figure 1.1, unemployment growth rate rises above GDP growth rates from the period 2014 to 2016 and between mid 2008 and 2009. The rising unemployment growth rate has implications for youth unemployment in Ghana. Figure 1.2 shows unemployment rates and youth unemployment rates in Ghana for the period 2008 to 2017. According to the data,

youth unemployment rates have been consistently higher than the general unemployment rates in the country. These statistics portray a gloomy situation for youth in relation to their employment prospects in Ghana.

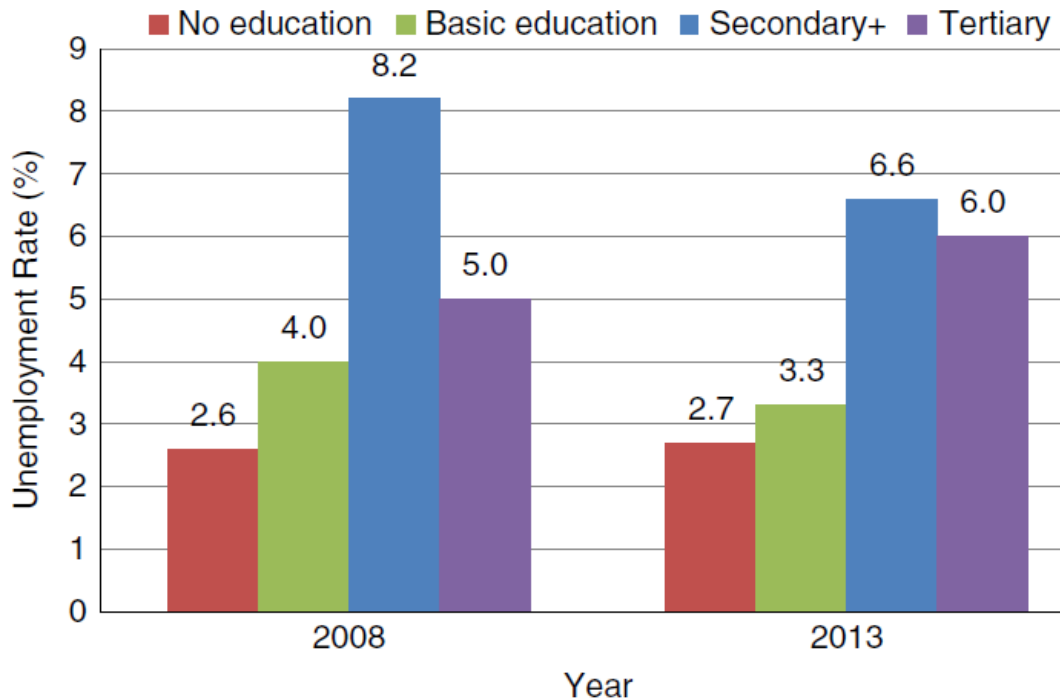
Figure 1.2: Unemployment and Youth Unemployment Rates in Ghana



Source: International Labour Organisation (2017)

Baah-Boateng's (2015) comparative analysis of youth unemployment based on their educational attainment show, surprisingly, that in 2008 and 2013, the educated youth (secondary and tertiary levels) reported higher unemployment rates than the uneducated (see Figure 1.3 below for illustration). This, according to Baah-Boateng (2015), stems from the fact that, while the educated precondition their minds for scarce formal employment, the uneducated work in the informal sectors of subsistence agriculture and other non-technical jobs that have less entry restrictions and require little or no education.

Figure 1.3: Unemployment Rate According to Education



Source: Baah-Boateng (2015)

Due to the challenges graduates face in gaining access to the labour market, resulting in low youth employment rates, studies on transition from school to work have gained grounds in youth literature as this movement has long term welfare implications in their lives. School to work transition is an important phase in the life of young people because their first access to the labour market has a significant effect on their economic status and employment career (Korpi et al., 2003). Therefore, the transition from school to work is viewed as a process of labour market integration, determined not only by one's first job but also other social, structural, historic and individual factors (Hillmert, 2002). This study draws on the definition of school to work transition from Schoon and Silbereisen (2009) where the concept is defined as the period between completing formal education and joining the labour market or employment. Thus, transition assesses the period from graduation to employment

and various strategies adopted by graduates in acquiring or creating jobs after graduating from the university. According to the writers, it is an essential period in one's life where important decisions are made. These could range from decisions such as furthering one's education, joining the labour market, the type of employment to engage in, as well as the strategies required to get such jobs. It has been described by Schoon and Silbereisen (2009) as a phase of different routes characterised by either instability for some or smooth sailing for others dependent on particular attributes. Other researchers describe it as a 'yo-yo movement'¹ (Kovacheva & Pohl, 2007; Walther, 2006). Bernardi, Gangl and Van de Werfhorst (2004) describe it as a dynamic process in which people move from the educational system into acquiring or creating a job. It reflects the way young people's entry into the labour market is dependent on individual characteristics and resources. According to Kerckhoff (2000), these individual resources are influenced by institutional arrangements such as the educational system, the employment system and the linkage between them. How best one responds to opportunities and constraints as well as the path taken during this crucial trajectory phase of one's life has consequences on their future career and preceding working life as well as direct linkages with other trajectory phases.

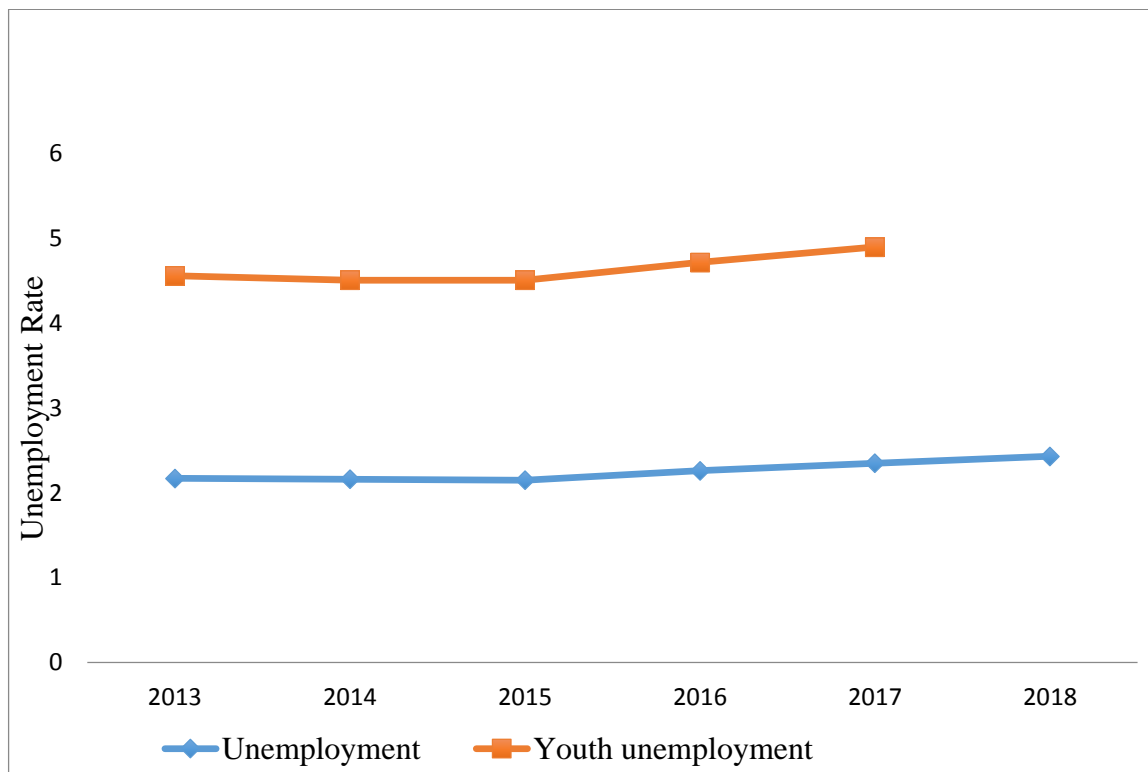
In the context of this study, the period of transition from school into the labour market is mediated by a mandatory one-year service to the nation for all citizens under the age of 40 years. This process prepares graduates for the full labour market transition by giving them the opportunity to experience the labour market. Even with such measures to transition the youth into the labour market, access into the labour market still remains a challenge in Ghana.

¹ Up and down movement

1.2 Research Problem

The economies of many Sub-Saharan African countries are still characterised by fundamental and structural problems resulting in a failure to create jobs and absorb the youth into the labour market (Baah-Boateng, 2015). Ghana has recorded consistent positive growth over the past three decades (Asante, 2011) with average growth rates of over 5 per cent per annum. Since discovery and production of oil in commercial quantities, Ghana's growth peaked at 14% making it one of the fastest growing economies in SSA at the time. However, the Ghanaian economy has still not achieved a major structural transformation to move it into a modern industrialised and developed economy. Economic growth has not translated into job creation and has largely been described as "jobless growth" (Aryeetey & Baah-Boateng, 2016). This is because demand for labour is a derived demand and reflects the activities in the real sector. Unfortunately, Ghana's growth is largely from the financial and extractive sectors, which do not generate enough jobs for the youth. Many young graduates experience challenges in securing employment opportunities or jobs that relate to their area of study (Baah-Boateng, 2015). Even for those who do find work, their earlier career is marked by job instability and multiple transitions between employment and unemployment (Russell & O'Connell, 2001).

Figure 1.4: Youth and General Unemployment Rates from 2013-2018



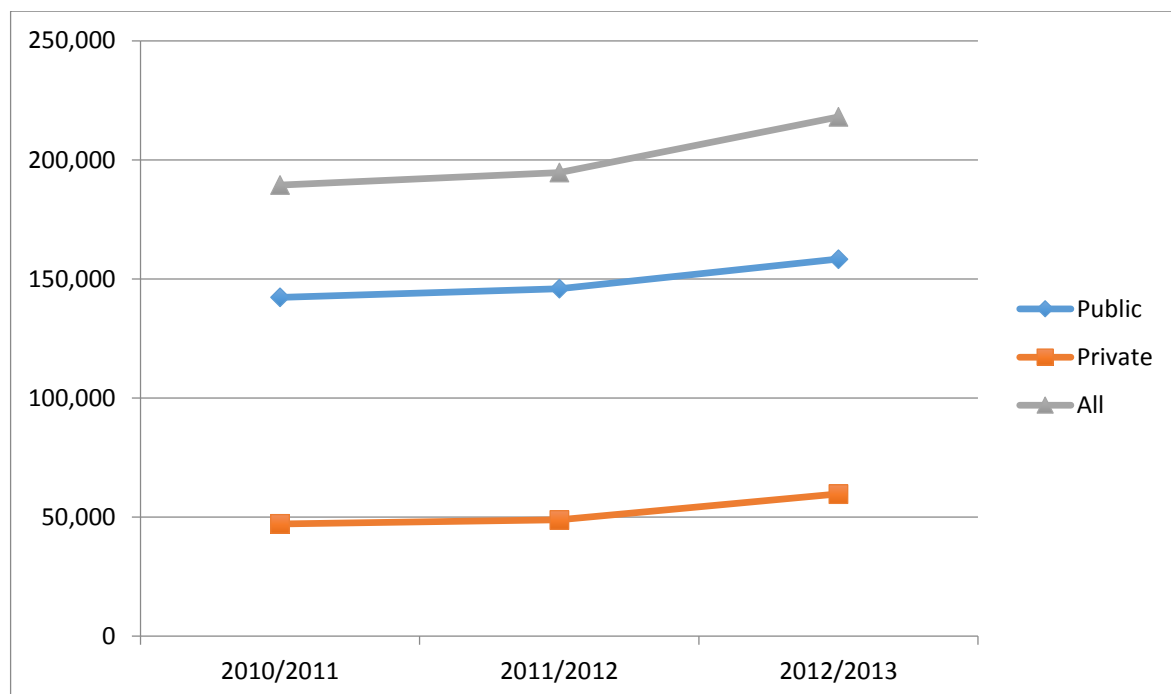
Source: International Labour Organization (2018)

Figure 1.4 shows that over the last few years, youth unemployment has been rising above the general unemployment rate. According to the Ghana Living Survey round six (GLSS6) report, of about 500,000 new entrants into the labour market in 2014, only about 200,000 jobs were created.

Another development that further exacerbates the problem of graduate unemployment is the rapid increase in the number of universities in the past decade. Its aim is to make university education accessible to all by increasing access and coverage, this has resulted in the private sector participation in the provision of education services. There are currently 10 public accredited universities and 81 private accredited Institutions offering degree programmes in

Ghana². This increase in the number of universities has resulted in increased enrolment over the past years. Figure 1.5 shows an overall increasing trend of student enrolment from year to year.

Figure 1.5: Enrolment Trend in Public and Private Tertiary Institutions

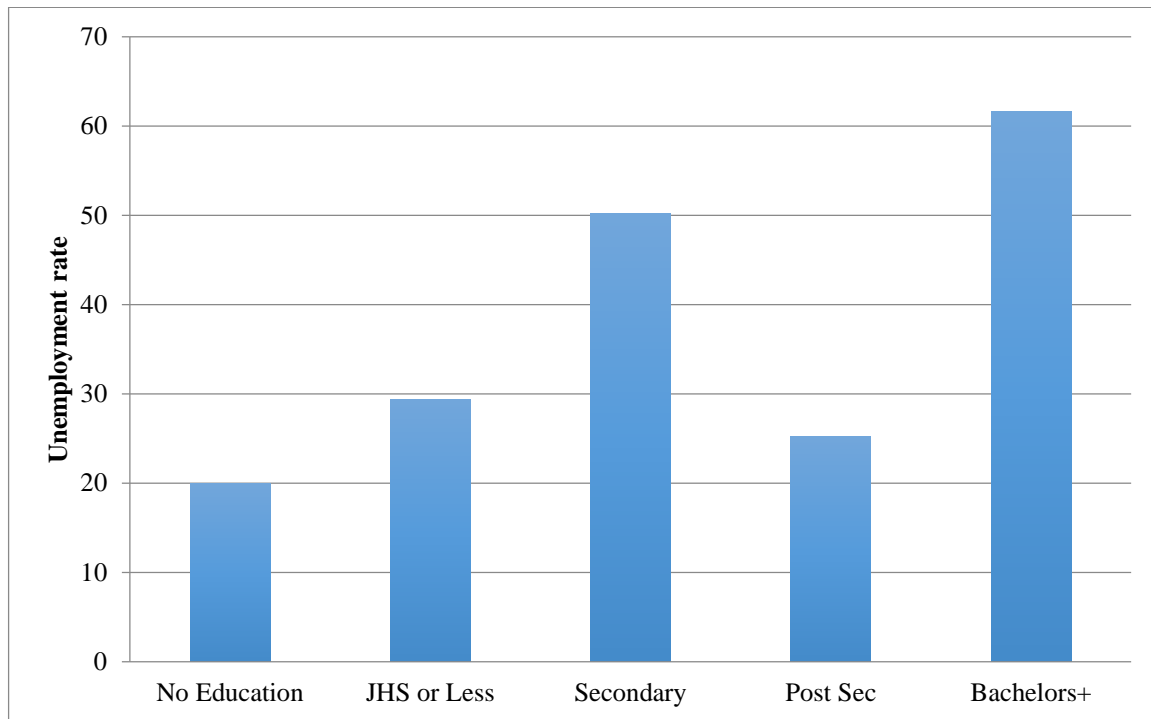


Source: National Accreditation Board (2015)

Yearly, thousands of university graduates join the labour market in search of gainful employment. The challenge is not only tackling the already sizeable unemployed graduates, but also of absorbing the new entrants into the labour market (Owusu-Ansah & Poku, 2012). The 2015 labour force survey shows that unemployment also tends to increase with increase in education as show in figure 1.6.

² National Accreditation website: <http://www.nab.gov.gh> Accessed on 22 May, 2018

Figure 1.6: Unemployment Rate by Education



Source: Computed from 2015 Labour Force Survey

From figure 1.6, as the level of education increase, graduates face higher unemployment. Bachelor degree graduates face higher unemployment rates compared with degrees below it. This survey is collaborated by Aryeetey (2011) as he reports that as many as 50% of graduates who leave Ghanaian universities and polytechnics will not find jobs for two years after their national service, and 20% of them will not find jobs for three years. Also, very little is known about the type of job and which sectors employed find jobs and the implications of long periods of unemployment spells on their life satisfaction. It is therefore important to understand those who are employed, what characteristics makes them more employable and the type of employment they are in and how these affect their subjective wellbeing. Understanding this is crucial for policy making if we really want to solve the unemployment situation particularly among the youth.

The overwhelming growth in tertiary institutions in Ghana and the world at large has generated tremendous research interest. Review of studies on graduate labour market outcome in the developed world show a steady increase in the number of studies focusing on graduate unemployment, youth transition and employment outcomes (Gremm et al., 2018; Assirelli, Barone & Recchi, 2018; Iammarino & Marinelli, 2015; Müller & Gangl, 2003). Interestingly, literature on graduate or youth unemployment in Ghana tends to focus on the demand side of the labour market ignoring the suppliers of labour (Baah-Boateng, 2017; Boateng & Ofori-Sarpong, 2002).

Studies on labour market outcomes generally focus on the effect of education on wage differentials by modelling sectors of employment as a determinant of wages or a framework to correct for random assignment in earnings (Rankin, Sandefur & Teal, 2010; Boudarbat, 2004; Pradhan & van Soest, 1997). Few studies have analysed labour market outcomes using sectoral segregations by examining the different sectors of the economy in which the youth gain employment in, with only a few such studies in Africa (Rankin, Sandefur & Teal, 2010; Mariara, 2003; Andersson, 1993). These studies have, however, ignored an important group of young people, university graduates, whose numbers rise yearly and are pushed into unemployment because of structural issues in the economy such as inadequate employment opportunities. In Ghana, the difficulty in acquiring data on graduate or youth unemployment accounts for the limited number of studies at the micro individual level (TUC, 2005; Baah-Boateng & Turkson, 2005). The lack of reliable data on graduate labour market outcomes, especially data on sectoral choice, the linkages between programme of study, prospects for graduates, duration of unemployment, its effect on their life satisfaction and transitions from university to work creates a huge research gap in the study of labour market outcomes of

graduates in Ghana. The study therefore examines the labour market outcomes in relation to the type, the sectors and the duration of unemployment of university graduates in Ghana and the welfare implications of long periods of unemployment using a measure of subjective wellbeing. The argument is guided by the key question: What are the labour market outcomes and subjective wellbeing of university graduates in Ghana?

Specifically the study answers the questions:

1. What are the factors affecting the likelihood of gaining employment, the type and sectors of employment among university graduates in Ghana?
2. How long does it take university graduates in Ghana to exit unemployment?
3. What are the differences in the subjective wellbeing of employed and unemployed university graduates?

1.3 Research Objectives

The study aims mainly to determine what factors affect labour market outcomes of university graduates in four public universities in Ghana and how these outcomes affect their subjective wellbeing. Specifically, the study seeks:

1. To examine the factors affecting the likelihood of gaining employment, the type of employment and the sector of employment among university graduates in Ghana.
2. To determine the unemployment duration of university graduates in Ghana.
3. To investigate the differences in the subjective wellbeing of employed and unemployed university graduates in Ghana.

1.4 Justification for the Study

The population of Ghana, as for many countries in Africa, is youthful; ³the World Bank estimates that about 57 per cent of Ghana's population is below the age of 35 (World Development Index, 2016). This study is timely; it comes at a time where the growth rate of the economy exceeds the growth rate of youth employment. Again it comes at a time where the informal sector is the fastest growing segment in Africa and is regarded as the sector with the ability to reduce the soaring unemployment challenge (Mashau & Houghton, 2015). Hence, the study will empirically verify which sectors have the potential to reduce unemployment in Ghana and help in policy targeting in order to increase the likelihood of employment. There is a knowledge gap on transition into the labour market and how long it takes graduates from the various universities offering various programmes to gain employment. It is therefore imperative to analyse and highlight the characteristics for selection into the different outcomes; that is, the type and the sectors of employment and the welfare implications of duration of unemployment. This study is important for a number of reasons. First, transition into the labour market is regarded as an entry point into adulthood. According to Leventhal, Graber and Brooks-Gunn (2001), transition from school into the labour market is vital in determining transition into marriage and family life. Similarly, movement from school to work has implications in the lives of young people since how and when this transition takes place can have a deep impact on their sense of identity, importance and their general welfare (Hodkinson, Hodkinson & Sparkes, 2013). Second, a long period of unemployment duration has implications on income, consumption and welfare in general. Darity and Goldsmith (1996) have shown that employment leads to a

³ According to the GSS (2012), the population of Ghana increased by 30.4 per cent over the period 2000 to 2010, with an inter-generational growth rate of 2.5 per cent.

reduction in individual wellbeing. Unemployment imposes an additional burden on the individual, a burden that might be referred to as the non-pecuniary cost of unemployment, which can decrease psychological wellbeing of individuals. These costs arise primarily since employment is not only a source of income but also a provider of social relationships, identity in society and individual self-esteem. Third, the findings from the study will aid in labour market policy by identifying and targeting the vulnerable in terms of employment status using their characteristics. It will furthermore help shape labour market and governmental programmes by providing a better understanding of youth labour market outcomes.

1.5 Thesis Outline

The study is organized into seven chapters. Chapter One provides an introduction to the study consisting of the background, the research problem and objectives of the study. Chapter Two reviews related literature and theoretical underpinnings of the research. In Chapter Three, a discussion on the methodological approaches involving the research design, the data collection and analytical techniques of the thesis is presented. This is followed by Chapter Four, which presents and discusses the empirical findings on the determinants of employment among university graduates.

Chapter Five provides the unemployment duration and the factors accounting for it. In Chapter Six the determinants of subjective wellbeing and the differences in subjective wellbeing among employed and unemployed graduates are discussed. Chapter Seven provides a summary of the main findings and conclusions, and policy recommendations.

CHAPTER TWO

LABOUR MARKET OUTCOME AND SUBJECTIVE WELLBEING: THEORIES AND PERSPECTIVES

2.1 Introduction

This research is built on three interrelated bodies of literature – the human capital literature, especially in relation to the broader labour market outcome framework; the literature on social capital, which constitutes one of the key assets of the employment outcome framework; and finally, the literature on subjective wellbeing. In all these areas, the review is conducted with the objective of identifying the gaps in the literature and how the key research questions contribute to filling these knowledge gaps. In addition, the key theories under investigation and their relationship with the research are discussed. To gain a complete insight of the linkages between education, labour market outcome and general wellbeing requires an in-depth review of the education and labour literature. The aim of this chapter is to discuss both theoretic orientations and empirical literature pertinent to the study and how they relate to the theoretical framework for the analysis. The conceptual framework developed from the review of literature is presented and a summary provided. The following section presents some definition and conceptualization of wellbeing. The theoretical perspectives of labour market outcomes are discussed in section 2.5.

2.2 Conceptualization of Labour Market Outcome

Primary labour market outcomes include employment, joblessness, earnings, duration of unemployment and changes in employment status. Labour market or job market is defined as the demand and supply of labour (Fields, 2007). Whilst education is necessary for

favourable labour market outcomes, other individual and situational factors such as cognition, personality, socio-economic status, family, sex, employment opportunities, network relations etc. work alongside to determine labour market outcomes (de Ferranti et al., 2003). Employment is regarded as an ideal labour market outcome of education. Two sub outcomes that emerge - wage or salaried employment and self-employment can be distinguished. In wage employment, labour is supplied to others for a return called wages or salary, and can be classified as formal employment. Self-employment can however be formal or informal employment, where labour is supplied to one's self. The formality of self-employment is based on registration of the business. The ILO categorises informal employment as remunerative work of both self-employment and wage-employment that does not fall within the legal and regulatory framework as well as non-remunerative work undertaken in an income generating enterprise (ILO, 2002).

Unemployment is an undesirable labour market outcome. It is widely regarded as a key labour market indicator used to evaluate the economic situation of a country. The ILO defines the unemployed as persons within the working age, that is 15 years and older, who are without jobs, are potentially available for and seeking employment within a reference period. Currently, the unemployment rate in Ghana, according to the ILO (2016) is 5.8 per cent: this figure may even be higher considering the fact that this definition does not take into account what has been known in labour literature as discouraged job searchers. Discouraged job seekers are persons who do not find employment after a long-term search and have consequently stopped searching for work. Discouraged employment seekers are excluded from the economically active population and therefore are unaccounted for in the workforce. Hence, the official youth unemployment rate may be an underrepresentation of

reality. In SSA where youth employment has become a challenge even with the high educational attainment of a large population of young people (African Development Bank, 2012; World Bank, 2009), the number of discouraged workers keeps soaring. The World Bank (2016) in its report, "Landscape of Jobs in Ghana" found unemployment among Ghanaian youth to be as high as 48 per cent.

Another dimension of labour market outcome include those who are out of the labour force. These people, although within the working age, are not available for employment. They are either furthering their education or engaged in other activities, which prevents them from taking up employment. The length of time taken to obtain employment is also one aspect of labour outcome. Duration of unemployment measures the length of time an individual remains unemployed. Extended spells of unemployment are related with welfare, social vices, social unrest and psychological issues (O'Higgins, 2002).

The most important and common measure of labour market outcome used by economists is earnings or wages. Earnings are affected by the level and quality of educational outcome. Ideally people with higher education are expected to earn more.

Labour market outcome has also been conceptualised by social science researchers in relation to job satisfaction. Job satisfaction is relevant for economic performance. As asserted by Frey and Stulzer (2002), the wellbeing of employees has a direct relationship with performance. For labour market interventions to be effective, job satisfaction has to be explored as a labour market outcome. All these forms of labour market outcomes highlighted play a significant role in determining and analysing the subjective wellbeing of individuals.

2.3 Concepts and Definitions of Wellbeing

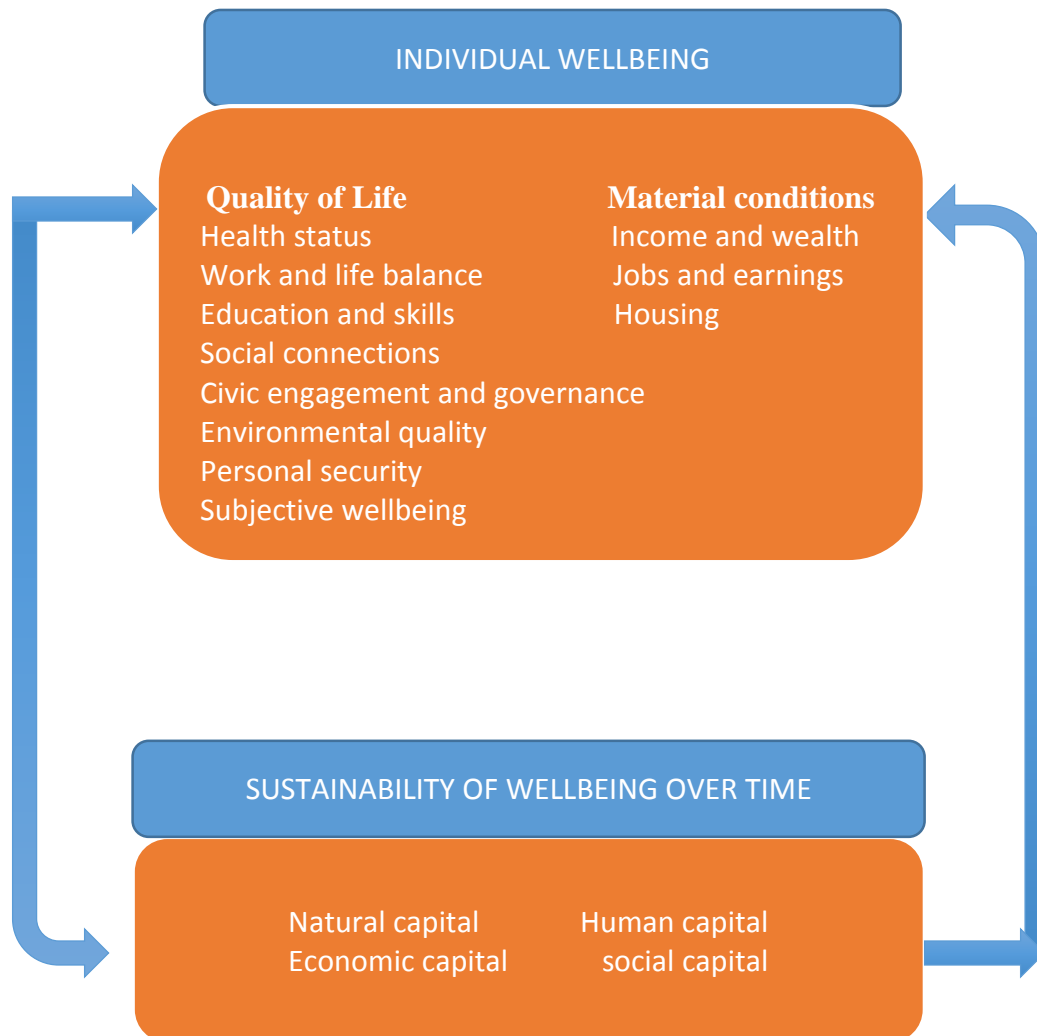
The concept of wellbeing has become vital in the development literature. Earlier researchers have defined wellbeing in objective dimensions using socioeconomic indicators. According to the World Bank (1991), stable macroeconomic policies and economic growth enhance productivity, increase income and purchasing power, thus improving the general wellbeing of a country. Determinants of wellbeing include food, clothing, health and education, among others. Furthermore, wellbeing encompasses freedom of choice and action, which include being able to help each other and the community (Narayan et al., 2000). Sen's (1985) capability approach defines wellbeing as the "ability to function in the society to achieve certain functioning". People's capabilities refer to what people do and can do in their lives that are important to maintain human wellbeing. Subjective wellbeing has received considerable attention from social researchers in economics (Easterlin, 2005), health (Veenhoven, 2008), psychology (Cummins & Nistico, 2002). Initial researchers such as Cummins (1997), Haas (1999) and Noll (2002), supported Diener and Suh (1997) proposal of financial and social indicators as a measure of subjective wellbeing. As economies and social orders built up, researchers proposed that the development of personal satisfaction 'must be entirely subjective' (Campbell & Converse, 1972, p. 442) and this implied surveying economic and target social pointers of wellbeing, as well as people's view of their lives. Hence individuals' self-assessment of life satisfaction and happiness has been used as a proxy to measure subjective wellbeing.

Similarly, the OECD (2011) conceptualises wellbeing to constitute an individual's income, earnings, and general living conditions over a period of time. It encompasses other variables such as educational qualifications, competence, social relations, governance and community

engagements. Wellbeing also examines the sustainability of the various types of capital to an individual. They include natural capital, economic capital, social capital and human capital. Since the OECD's conceptualisation of wellbeing takes into consideration a wide array of variables drawn from various features of individual wellbeing such as the social, economic and psychological wellbeing, reflecting the theories to be examined in subsequent sections, this study adopts the OECD's definition of wellbeing.

The OECD's definition of wellbeing encompasses the quality of life and material conditions of a person. Quality of life includes social connections, health status, environmental quality, education and skills, civic engagement and governance, work and life balance, personal security and subjective wellbeing. Material living conditions include, jobs and earning, income and wealth as well as housing. Another important component of this definition is the sustainability of these individual components of wellbeing. Sustainability of wellbeing requires the perseveration of different types of capital such as human capital social capital, economic and natural capital. Accumulating capital to sustain wellbeing over time also leads to improvement in individual wellbeing through improved material conditions and quality of life as depicted in Figure 2.1. This is therefore a cyclical process. The subjective wellbeing component of the general wellbeing of an individual will be used in our investigation although all the other dimensions of individual wellbeing are essential for an all-inclusive definition.

Figure 2.1: Components of Wellbeing



Source: OECD (2011)

2.4 Subjective Wellbeing

Subjective wellbeing, also a multi-dimensional concept, “includes people’s emotional assessment, domain satisfactions, and global judgments of life satisfaction” (Diener et al.1999). Subjective wellbeing encompasses two main components; they are affective and cognitive domains (Diener et al. 1999, p. 277). Authors of the affective component argue that it encapsulates pleasant and unpleasant dimensions. Emotions and moods like

happiness, joy, affection, etc. are in the pleasant affective domain while sadness, depression, stress, etc. belong in the unpleasant affective domain. The cognitive dimension takes into consideration life satisfaction, which includes satisfaction with past, current, and future life as well as quest to improve one's life (Diener et al. 1999). Helliwell and Putnam (2004) explained that even though "happiness" and "life satisfaction" measures tend to provide consistent results, "happiness" is a short-term measure of moods and emotions, while "life satisfaction" tends to measure long-term self assessments that are relatively more stable.

2.5 Measuring Subjective Wellbeing

Several approaches have been proposed to measure subjective wellbeing as a measure of quality of life, however three main measures have emerged in literature: the Oxford Happiness Inventory Approach; the Depression-Happiness Approach; and the Satisfaction With Life Approach. This study is however interested in the satisfaction with life approach to measuring subjective wellbeing.

Satisfaction with life is the cognitive component of subjective wellbeing measuring past current and future state of life to assess the possibility of any desire to change. Satisfaction With Life Scale (SWLS), developed by Ed Diener and William Pavot in 1985, is one of the best-tested and most reliable multi-item scales of life evaluation. It has a higher reliability and robustness to inter-personal difference in scale interpretation than a single item measure. It means when used under similar conditions, the scale has the possibility of producing similar results. The questions focus on the respondent's judgments on how they evaluate their own lives or how they feel about their life as a whole. These measures can be used in

circumstances where a more in-depth understanding of subjective wellbeing is required or to help understand methodological issues in measuring subjective wellbeing. Hence life satisfaction is defined by Shin and Johnson (1978) as “a global assessment of a person’s quality of life according to his chosen criteria” (p.478). How people feel about their state of being is based on a standard each individual sets for himself. Subjective wellbeing is therefore based on one’s own evaluation or judgment.

2.6 Overview of Labour Market Outcomes in Ghana

The labour market of Ghana has witnessed rapid changes over the past few decades (Aryeetey & Baah-Boateng, 2016). This has been in response to several economic policies and reforms by successive governments in the past. Although reliable labour market data especially on graduate employment is difficult to come by in Ghana, the Ghana Living Standard Survey conducted by the Ghana Statistical Service (GSS) is one of the major data sources used in measuring the labour market outcomes in the country. It is therefore difficult to segregate graduate unemployment data from the general labour market information. This impedes discussions on graduate labour market outcomes and its policy implications. According to Boateng and Ofori-Sarpong (2002), the Ghanaian labour market is characterized by a situation where about 230,000 new job seekers enter the job market annually but only about 2 per cent are able to secure jobs from the formal sector. Employment growth in Ghana has generally been slower than economic growth (Aryeetey & Baah-Boateng, 2016). The nature of employment in Ghana is largely informal with about 80 per cent of the Ghanaian workforce employed in this sector. The sector is characterized by underemployment, bad working conditions, uncertain work relationships and low wages,

with the majority of people living with high income insecurity (Osei-Boateng & Amparatwum, 2011).

According to the Ghana Living Standards Survey VI (GLSS 6) Labour Force Report, the employment to population ratio for Ghana is 75.4 per cent (GSS, 2015). The rate however varies with location being relatively lower for urban areas (69.9%) compared to rural areas (81.6%) implying that a relatively larger population in urban areas are without jobs. The report noted that the majority (68.7%) of the currently employed persons are engaged in vulnerable employment including own account workers and contributing family workers. Furthermore, the employment gap by gender is evident in almost all the occupational groups with higher proportions of males engaged in various employment activities than females (GSS, 2014).

According to the 2015 Labour Force Survey (LFS), about 68% of the labour force are employed representing 71.4% and 64.7% for males and females respectively. 23.3% are not in the labour force because they are either back to school or have given up in their job search (what is regard discouraged workers). Differences exist in the employment status between rural and urban dwellers, 54.3 per cent of urban dweller are employed compared with 66 per cent of people living in the rural areas. In terms of the type of employment, the Ghana Statistical Service (GSS) report that about 20.2 per cent of currently employed persons aged 15 years and older are engaged in wage employment and 33.4 per cent are engaged in self-employment. Further disintegration shows that of those engaged in wage employment, 5.9 per cent are employed in the public sector and 47.6 in the private sector.

Regarding unemployment in Ghana, the rate for persons aged 15 years and older is reported as 5.2 per cent by GSS. Unemployment rate is higher for females than for males recording

5.5 per cent and 4.8 per cent respectively. The rate is also highest among the 15-25 year age group and declines with age for both sexes. The incident of unemployment is higher in urban areas (6.5%) than in the rural areas (3.9%) for all age groups. In the urban areas, Accra (GAMA) has the highest unemployment rate of 7.4 per cent.

2.7 Education and Labour Market Outcomes Nexus

This section examines the key theoretical foundations of the labour market by examining the human capital theory as the main theory used in development studies to explain the link between education and work (Becker, 1964). Other theories that complement human capital in explaining labour market outcomes such as social capital theory and social cognitive career theory will also be discussed.

2.7.1 Human Capital Theory

Human capital refers to “the productive capacities of human beings as income-producing agents in an economy” (Hornbeck & Salamon, 1991, p. 3) or to “the present value of past investments in the skills of people” (Blaug, 1970, p. 19). This means that the skills and knowledge developed by economic productive agents or beings are all encapsulated as human capital. Schultz (1961) simply defines human capital as “direct expenditures on education, health and internal migration in order to take advantage of better job opportunities” (p.1). Investing in one’s self increases the range of choices available and improves welfare in the long run (Muller, 2005). Human capital has become an important determinant of the economic development of many nations (Card, Kluve & Weber, 2010). It has been used as a measure of human resource and productivity of an economy. Improved

human capital through enhanced the human skills and talents have the ability to improve productivity. Similarly, Olaniyan and Okemakinde (2008) refer to human capital as investments made in humans in order to enhance their skills and productivity. The works of Schultz (1971), Sakamoto and Powers (1995) and Psacharopoulos and Woodhall (1997), have led to the theoretical foundation for policies on education and development, which has come to be known as human capital theory based on the assumption that formal education is important in economic development through improved productivity, efficiency and an increased level of human skills and capabilities. Hence, human capitalist theorists posit that an educated population results in a productive nation, which provides a firm basis for investment in human capital. This offers the justification for the huge public expenditure on education in both developed and developing countries, by generating returns both at the macro and micro levels of the economy (Fagerlind & Saha, 1997). The role of human resources in growth can be clearly explained as:

human resources constitute the ultimate basis of wealth of nations. Capital and natural resources are passive factors of production, human beings are the active agencies who accumulate capital, exploit natural resources, build social, economic and political organization and carry forward national development. Clearly, a country which is unable to develop the skills and knowledge of its people and utilize them effectively in the national economy will be unable to develop anything else (Harbison, 1973, p.3).

The argument by Babalola (2003) for investment in human capital is premised on the need for the youth to acquire the knowledge previously amassed by the older generations. Secondly, the youth need to be taught how to use existing knowledge in developing new products and services to enhance their living standard. Investment in human capital is a way

to motivate the development of new products and ideas through creativity that meet the current global needs.

2.7.1.1 Human Capital and Education

Since the early 1960s human capital theory has emphasized education and training as fundamental in the new global economy. This has influenced the government's development framework in many Western countries. Investments in education and training have the potential to enhance people's competencies, capabilities and marketable skills, which eventually generate positive returns by improving their future incomes. Increases in the years of schooling are positively related to higher incomes and, as Ishikawa and Ryan (2002) rightly stipulate, individuals' earnings are mainly determined by the stock of capital they accumulate. Education and skills training are seen as major components of human capital, which act through increased knowledge at the micro-level by improving future rewards and benefits in the form of increased incomes or wages for individuals (Becker et al., 1990). The OECD (2012) and the European Commission (2013) see investment in education as a way to improve social welfare. This positive correlation between education (schooling), skill training and earnings is well established in the empirical works of Tamasauskiene and Poteliene (2013, p. 198), who affirm that “. . . better educated individuals suffer less unemployment, work in more prestigious occupations and have more of other social returns like honour and status than their less well-educated counterparts”.

The discussion on human capital and education has gone beyond the mere access to education or skills training into the quality of education, especially higher education. For some researchers, the quality of education is an element in the construction of human capital

and thus has an important effect on the earnings of graduates (Ehremberg, 2000; Thomas, 2003). Notwithstanding this finding, higher education in the form of tertiary education is not always incorporated into the human capital analysis framework.

2.7.1.2 Labour market outcomes and Wellbeing

In spite of the benefits that accrue to society and the economic development that occurs from putting resources into education, there is a developing and continuous argument over the negative impact of advanced education on satisfaction or satisfaction with life at the individual level (Hartog & Oosterbeek, 1997; Hickson & Dockery, 2008; Stevenson & Wolfers, 2008; Dockery, 2010). Instead of educational attainment placing people on better employment and enhance life outcomes such as health, social status and result in improved life satisfaction than those with lower levels of education, empirical results portray that higher educational attainments are associated with lower life satisfaction. Dockery (2010) attributes this to the fact that higher education raises people's expectations of their returns on their investment in terms of earnings and other favourable labour market outcomes, which is a benchmark they assess their current circumstances. However, from the human capital hypothesis, one can argue that there are both social and individual benefits from training.

2.7.1.3 Education, Labour Market Outcome and Wellbeing

Studies on the labour market have examined the effects of labour market outcomes on wellbeing and the general conclusion is that its effect is ambiguous *a priori*, and it depends largely on individuals' preferences, expectations and opportunities as a whole. The

contribution of human capital development through investment in education and labour outcomes has been emphasized in literature (Krueger & Lindahl, 2000; Hanushek & Woessmann, 2007).

Having highlighted the relationship between human capital and labour market outcomes, the subsequent sections examines other theories the complement the human capital theory in explaining labour market outcomes. Social science research has been geared towards integration of theories in applied studies, termed as pluralism of theories, where theories complement each other in explaining a phenomenon (Waters & Moore 2002). Hence other the social capital theory and the social cognitive career theory complement the human capital theory in explaining labour market outcomes.

2.7.2 Social Capital Theory

Social science researchers have given different definitions to the concept of social capital (Coleman, 1990; Lin, 2001; Putnam, 2000; Adler & Kwon, 2002). Portes and Landolt (2000) defined social capital as the ability to secure resources by virtue of membership in social networks or larger social structures” (p. 532). To Lin (2001, p. 55), “social capital focuses on the resources embedded in one’s social network (or relations) and how access to and use of such resources benefit the individual’s actions”. Putnam (2000) suggested that, social capital refers to features of social structure such as networks, customs, and social conviction that facilitate coordination and cooperation for mutual benefit. These definitions center on resource benefits individuals obtain as a result of membership relationship or just by being part of a social group. These resources can be monetary or non-monetary in nature. Such network relations can facilitate labour market entry and successful outcomes.

Inherently, social capital incorporates three key aspects of social organization - trust, norms and networks or ties (Putman, 2000). Trust generated from social capital among a group of individuals often serves as a bond that holds or binds these individuals together. Aside from trust, networks or ties generated by social capital constitute a useful resource in the form of information, for instance, which provides a link among individuals (Putman, 2000). Ties that result in social capital may either be direct or indirect and the intensity of such ties may vary. Likewise, the outcome of such ties, in terms of either bonding or linking social capital, may depend on the type of network being analysed. In line with the definitions, it can be observed that social capital, unlike other capital forms, is located not in the actors, but in their relationships with other individuals and organizations (Narayan, 1997). Consequently, approaching social capital from a holistic perspective, including both internal and external relationships as well as the sources and effect of these relationships, is particularly important (Westerland & Svahn, 2008).

A major issue with social capital in contemporary era is how social capital is used to mitigate challenges of labour market transition. Although scanty empirical research exists in developing countries regarding the role of social capital in youth transition into the labour market, available literature on advanced countries present divergent views on the subject. A section of the literature theorises a greater role for social capital during periods of unfavourable labour market policies and conditions leading to reduction in employment opportunities (De Herdt & Mariisse, 1997; Derhshem & Gzirishvili, 1998). Others have advanced the discussion a step further by arguing that difficult economic circumstances are indeed a pre-condition for the emergence of social support networks among individuals (Lourenco-Lindell, 2002). The latter argument has thus regenerated the old conception that

“scarcity and not sufficiency makes people generous” (Evans-Pritchard, as quoted in Sahlins, 1984, p. 210). Furthermore, the latter argument takes for granted that social networks are a resource that individuals have and use to their advantage (Lourenco-Lindell, 2002). Contributing to the debate from the Ghanaian perspective, Hanson (2005) argued that, social capital constitutes an important asset that helps reduce socioeconomic vulnerability and increase opportunities among individuals and households. Due to limited employment opportunities, there is a growing pressure on social capital in aiding successful labour market outcomes. In the era of difficult employment situation confronting many young people, there is a growing consensus in Ghana that social support systems, over the years have served as the bedrock for many individuals as they move into different phases in life. Unfortunately however, these claims have not been empirically ascertained in the literature. Little is known about whether young people are receiving adequate support from their network relations as they go into the labour market. It is in the light of the above that this research aims at investigating how social support influences labour market outcomes - gaining employment or creating employment, especially for university graduates.

This study conceptualizes social capital in consonance with Davidson and Honig (2003), where social capital is identified largely in relation to social exchange, that is, the risk and benefits of being in a social relation and how these exchanges affect labour market entry and outcomes and general wellbeing of university graduates.

2.7.2.1 Types of Social Capital

Three types of social capital have been distinguished in social capital literature— bonding, bridging and linking social capital (Granovetter, 1983; Putnam, 2000; Woolcock, 2001). Bonding social capital, which is also referred to as strong ties or thick trust (Granovetter,

1973; Newton, 1997) includes networks or ties built upon relations between like people or homogenous groups such as family, close friends or neighbours, or people within certain business organisations or ethnic enclaves (Woolcock, 2001; Turner, 2007). This type of social capital often tends to be tightly connected and closed to outsiders. According to Putman (2000), bonding social capital helps people to “get by” on a daily basis due to its exclusivity; and Wellman (1992) characterized bonding social capital by the following: “a sense of the relationship being intimate and special, with a voluntary investment in the tie and a desire for companionship with the tie partner; an interest in being together as much as possible through frequent interaction in multiple societal contexts over a long period; and a sense of mutuality in the relationship, with partners’ needs known and supported” (p. 211-212).

Linking social capital, on the other hand, operates at a less personal level and often turns out to be based on indirect secondary social relations. Linking social capital is a product of what Granovetter (1973) characterised as weak ties among members. Linking social capital refers to ties or networks that cut across social and economically different positions. Proponents of linking social capital have argued that it unmasks the vertical dimensions of social capital, which is distinct from the more horizontal relationships of bonding and linking social capital (Woolcock, 2001). Linking social capital can be particularly helpful in acquiring resources or ideas, and information from more formal institutions beyond the immediate reach of individuals and the community (Turner, 2007; Turner & Nguyen, 2005).

2.7.2.2 Effect of Social Capital on Wage and Self-Employment

Social capital and enterprise activities have been theorised to explain why actors have derived benefits from social structures, networks and memberships in which they are particularly connected (Porters, 1998). The network of social relations accorded by belonging to families, organisations and communities is observed to either supplement or, at times, serve as a substitute for the effects of education, experience and financial resources (Coleman, 1990). Consequently, social capital resulting from trust, norms and networks is found to contribute to enhanced economic performance of individuals as well as enabling such individuals to adapt to specific economic environment.

Although entrepreneurship or business start-up intention is high among university graduates in Ghana, actual start-up rates are low (Asamani & Mensah, 2013). The minority of graduates who start their own businesses use social capital in facilitating not only the start up processes but also their business operations. Aside its benefits to the individual, social capital is also found to be very important for enterprise development by serving as a facilitating factor in the formation of start-up businesses and the entire entrepreneurial process (Walker, Kogut & Shan, 1997). Specifically, social capital serves as a means by which entrepreneurs get access to the needed resources for job search and business start-up and skills acquisition (Jenssen & Kristiansen, 2004). These resources often come in the form of information flows and the quality, timeliness of its delivery, as well as a source of targeted market (Adler & Kwon, 2002). Through information flows, job seekers are able to reduce their risks and cut down on transaction costs in job searching and job creation. Such cost range from financial, time and other resources incurred in the process. Furthermore, social capital makes it possible for graduates to get access to business ideas, knowledge

about particular fields of operation, and to facilitate access to capital (Kristiansen, 2004). With all these intermediating roles, social capital is found to influence job search and businesses start-ups (Davison & Honig 2003; Anderson & Miller 2003).

The value of social capital, as a crucial resource base for access to employment, is even more important in many African and other developing country settings where there is informality in the labour market and capital markets are largely rudimentary and contractual obligations and formal market regulating institutions tend to be weak (Lyon, 2000; Fafchamps, 2000). Despite this significance, the literature, which explores the relationship between social capital and employment tends to be largely dominated by studies from the developed world (Davidson & Honig, 2003) and other developing countries in Latin America (Espinoza, 1999) and Asia (Turner, 2007). There are few exceptions focusing specifically on Africa (Kristiansen, 2004; Barr, 1998; Meagher, 2006). In spite of the over concentration in specific regions of the world, the general consensus emerging from the literature indicates that social capital accords individuals access to complementary resources, initiative and basic ideas for start-up, credit access and generally influences the performance of enterprise or livelihood activities. Some of the empirical literature in support of this argument is now presented.

Analysing the performance of nascent entrepreneurs in Sweden, Davison and Honig (2003) observed linking and bonding social capital to be a robust predictor for nascent entrepreneurs and in advancing the start-up process. Their study specifically identified membership of a business network to have a statistically significant positive effect on profitability. Similarly, Anderson and Miller (2003), using theoretical sampling techniques

to study the influence of class in the success of businesses in the city of Aberdeen, found entrepreneurs with linkages to high socio-economic class to have access to highly effective business support, which contributes to greater profitability and the growth potential of their businesses.

In the Caribbean, Honig (1998) identified social capital as an influential factor for profitability of businesses among Jamaican entrepreneurs. Social capital is therefore seen to play a crucial role in the operational success of enterprises. These observations are not different when the focus is turned to businesses in the Asian region. For instance, Turner (2009) studied the importance of social capital types to small-scale enterprises in Eastern Indonesia and identified bonding social capital to be particularly important compared to linking and linking social capital, which were found to be virtually absent. Again, analysing the importance of social capital among young entrepreneurs in Vietnam, Turner and Nguyen (2005) identified bonding social capital to be very important in the establishment and expansion of businesses while linking and linking ties were found not to play influential roles for young entrepreneurs.

Studying the importance of specific forms of social capital to small-scale enterprises in Eastern Indonesia, Turner (2007) identified the heavy reliance among small-scale entrepreneurs on informal networks, linkages and trust for the establishment and successful operation of enterprises. Turner's study specifically identified bonding social capital to be prevalent among small-scale entrepreneurs while linking social capital was observed not to be as prevalent while linking social capital was found to be virtually absent.

In Africa, Fafchamps (1998), in using quantitative techniques, demonstrated the value of

individual networks to entrepreneurs in Kenya and Zimbabwe. The study observed that entrepreneurial networks provide significant resources in terms of preferential access to supplier credits. However, the kind of entrepreneurs that could benefit from this resource tend to be limited mainly to non-indigenous groups such as Europeans and Asians who could easily identify with one another. This group tends to have access to information about the reliability of others in their network, but not those outside the network.

Fafchamps and Minten (2002) analysed returns to social capital among traders in Madagascar and concluded that social capital in the form of networks have a larger effect on firm productivity. Controlling for physical, human inputs and other entrepreneurial characteristics, the study observed traders with better connections to enjoy significantly larger operational scales and value addition compared to those with relatively lesser connections. The dimension of social networks, found to be particularly important by the study, involves relationships with other traders, which the study observed helped entrepreneurs to economise on transaction costs, relationships with potential lenders, and family relations.

In Ghana, Hanson (2005) noted that urban livelihoods are clearly embedded in social relationships. These networks of relations, according to Gyekye (1997), come in different forms and shapes and cut across the household, family, clan, lineage, town and neighbourhood levels. Consequently, individuals may belong to many different social circles of different sizes and at times operating at different levels in terms of space. Such interactions serve as linkage structures that individuals rely on to further their goals and aspirations and can be considered as the backbone of contemporary community life

(Hanson, 2005). Individuals therefore rely on a variety of ties involving friendship, neighbourhood, family relation, and co-worker in an attempt to secure access to vital resources for livelihoods. Social relations have therefore become a very important resource for gaining access to goods and services as well as entry into the right place (Moser, 1996).

Despite the importance of social capital as a vital resource for employment, empirical analysis of the link between social capital and job search or self-employment in Ghana is thin. Notable exceptions, however, include Barr (1998; 2000), Lyon (2000), Hanson (2005), and Lyon and Snoxell (2005) however; their studies were not specific to the youth and particularly to University graduates who form a chunk of unemployed youth. Again these studies employed qualitative methods and have therefore not been able to empirically determine the effect of social capital on the likelihood of employment. Relying mainly on qualitative techniques involving in-depth interviews, Hanson (2005) explored social networking and urban livelihoods in the town of Koforidua, Ghana, using four key interaction lenses: household, kin and neighbourhood ties; alumni ties; occupational ties; and religious associations. The study concluded that “the on going networks, symbolizing different scales of social space are what guide individuals to appropriate forums. They make survival possible” (Hanson, 2005, p. 1291).

Thus, social capital serves as a crucial resource among individuals and their livelihoods or enterprise activities and this helps such individuals to navigate the hardship resulting from socioeconomic change. Evidence from the literature review process indicates that, generally, the literature on the relationship between social capital and entrepreneurship in Africa and Ghana in particular appears thin. Studies that have explored social capital and employment

in Ghana have taken a sub-sectoral approach such as social capital among agricultural traders (Lyon, 2000; Lyon & Snoxell, 2005), and social capital in the performance of manufacturing enterprises (Barr, 1998; 2000). These studies have ignored an important phase of youth transition process, which is the job search period and how social capital facilitates this. It will therefore be interesting to explore the relationship between social capital and employment of graduates in terms of job search and job creation in the Ghanaian context.

As noted earlier, while bonding social capital directs our focus to the significance of family, close friends and members of the same ethnic group, linking social capital gives room for analysing the existence of networks that cut across broader ties, such as acquaintances, distant friends and, to some extent, work colleagues (Turner, 2007). The study utilises two different types of social- bonding and linking social capital to explore how graduates rely on these social relations to obtain access to the labour market.

2.7.3 Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT) by Lent et al. (1994) was formulated from Albert Bandura's general social cognitive theory (Bandura, 1986), which emphasises the relationship between self-referent thinking and social processes in directing human behaviour. The theory has been used in many fields including education, health and career development. It is concerned with cognitive mediators through which learning experiences guide career behaviour using variables such as interest, values, abilities and other interrelated variables. It highlights the process by which individuals undertake their career advancement.

The social cognitive career theory framework is composed of three interlocking models: interest development model, choice model and performance model. According to the interest development model, people's likes and dislikes differ regarding various jobs, occupation and career. These interests are therefore important determinants of job choice. This part of the social cognitive career theory places emphasis on both experiences as well as cognitive factors that result in the development of interests, as well as assisting to motivate choice behaviour and skill attainment. People's interpersonal environment exposes them to a wide range of jobs and careers that has the potential to influence their occupational behaviour or choice. The interest model posits that career interests are also affected by self-efficacy and outcome expectations. Self-efficacy according to Bandura (1997) refers to an individual's assessment or confidence in their ability to perform a task or attain a goal based on their motivation or social environment. Thus, people will form interest in an activity when they see themselves capable at it and anticipate valued outcome from it. By contrast, people fail to develop an interest in a job or career when their self-efficacy is low or they anticipate a undesirable outcome. As people form an attraction for an activity at which they feel capable and anticipate desirable outcomes, they form goals for increasing and maintaining their involvement in that activity. These goals, in turn, increase the likelihood of engaging in the activity. The theory assumes that people come to develop job patterns and later career interests through this life time on going process. Past experiences affect individual's interests by developing self-efficacy beliefs and outcome expectations. In other words, having affirmative experiences in job related activities and the ability to do well in specific jobs makes it more likely that people will develop strong efficacy in terms of expectations and positive outcomes for these career pursuits. In addition, the model implies that people

are unlikely to develop interests in career and academic pursuits for which they are otherwise qualified if they are not exposed to compelling learning opportunities that promote abilities in line with their efficacy beliefs and positive outcome expectations.

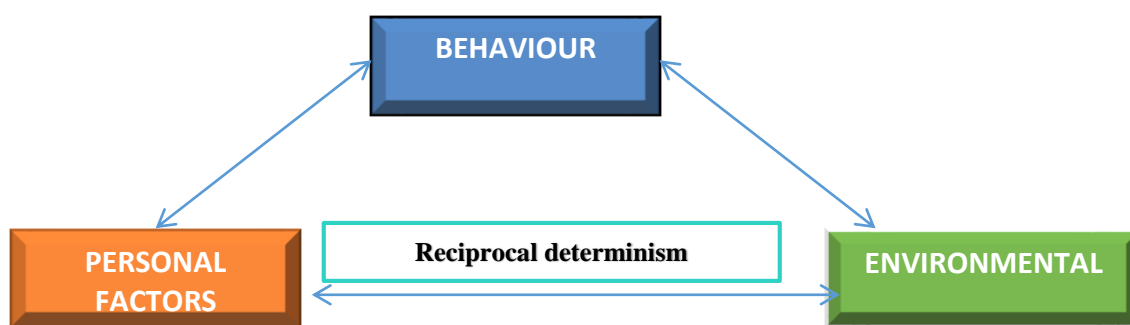
The choice model is another component of the social cognitive career theory. This model holds that interests are typically related to the choices that people make and these further explain the actions they take to implement their choices. In other words, people will choose (develop choice goals for) occupations in which they are interested holding all things constant. The model also states, however, that choices are affected as well by contextual influences and by other person variables. For example, people will be more likely to have to compromise their interests in making career choices if they perceive that their environment is not supportive of their choice or if they perceive significant barriers to entering and prospering in careers that most interest them. When people perceive a need to compromise their interests because of limited opportunities, insurmountable barriers, or a non-supportive environment, their choices will be made primarily on the basis of job availability, self-efficacy beliefs, and outcome expectations. In other words, when people cannot implement their interests, they will choose less interesting occupational paths that are available to them, that provide adequate outcomes, and in which they feel they can perform adequately.

The SCCT model of performance is viewed as being affected in important ways by ability, self-efficacy, outcome expectations, and performance goals. Self-efficacy plays an especially important role in determining how people employ their abilities. Thus, people may be at risk for occupational or academic failure or other difficulties when their abilities fail to correspond with the abilities required in an occupation or course of study or when

their self-efficacy beliefs substantially underestimate or exaggerate their current performance capabilities. The implications for working with persons with sub-standard abilities or inaccurate efficacy beliefs are discussed more fully in a subsequent section of this chapter, as are developmentally oriented strategies for promoting accurate and robust efficacy beliefs.

In summary it can be deduced from the theory that labour market outcomes are partly affected, among many factors, by people's intentions, beliefs and behaviour. It could be a planned behaviour, influenced by reasoned action and rational choice where there are choices available. However, in many cases where the supply for labour outweighs the demand creating situations of unemployment, people do not necessarily have a choice. This study will provide empirical evidence leading to a better understanding of aspects of human capital, social capital and other theories that may be influential during the embryonic, grooming phases of graduates into the labour market.

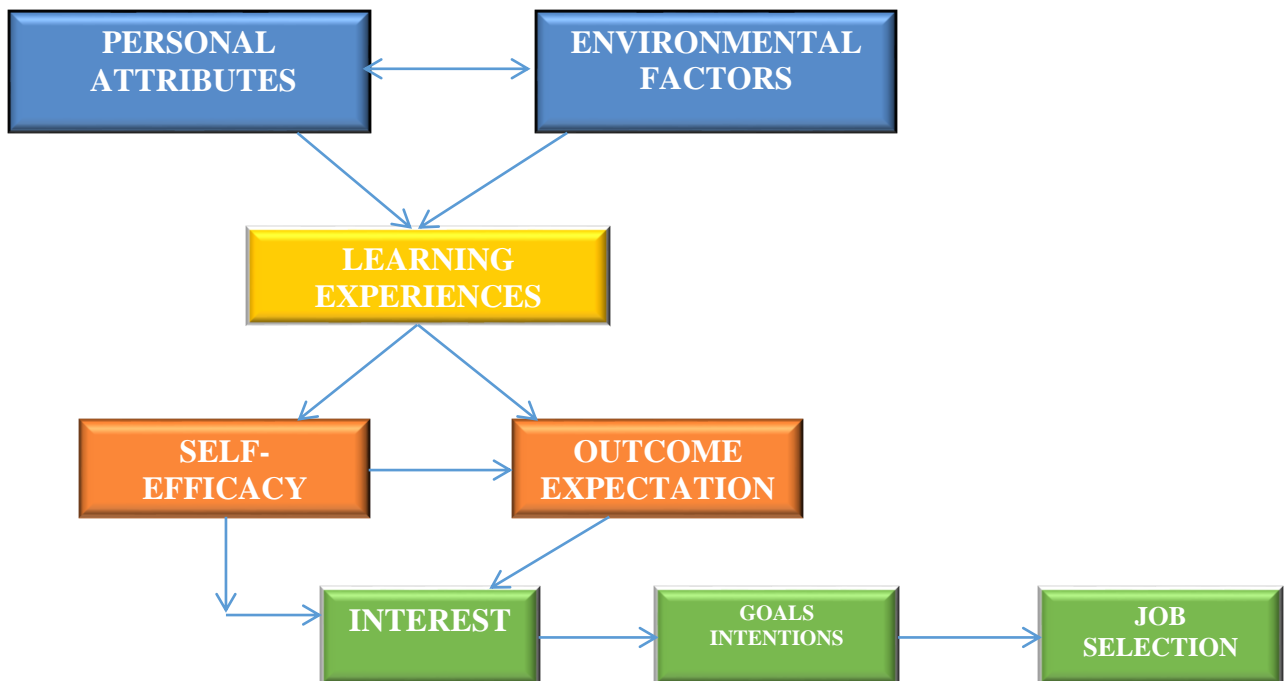
Figure 2.2: The Basic Concept of Social Cognitive Theory



Source: Bandura (1986)

Figure 2.2 above shows the central concept of the SCCT as the dynamic and reciprocal interaction of a set of individual personal learned experiences, the external environment and behaviour in response to stimuli in achieving goals and aspirations.

Figure 2.3: Social Cognitive Career Theory



Source: Lent et al. (1994)

Figure 2.3 shows the relationship between the cognitive factors and job selection. It demonstrates how an individual's cognitive factors such as self-efficacy is affected by their behaviour their environment and their personal attributes which in turn affect the expected outcome. The behavioural, environmental and personal factors affect expected outcomes through self-efficacy both of which affects the individual's interest, goals and intentions which finally affects the job-selection outcome. Behaviour, beliefs, attributes affects their self-efficacy and expected outcome from engaging in an activity. These in turn affect their interest and goals, which further affects their job selection.

2.8 Human Capital, Social Capital, Social Cognitive Career Theory and Labour

Market Outcome: Synthesizing the Theories in Relation to Labour Market Outcomes

Human capital has been theorized as the training and experience one possesses through education or other skills development. The study has theorized social capital as benefits derived from belonging to a network or a social structure (Lin et al., 1981; Porters, 1998). Belonging to networks or social structures acts as an alternative to, or complements education, experience or other resources especially in successful labour market entry (Bourdieu, 1983; Coleman, 1990; Loury, 1987). Social capital is multidimensional, and occurs at both the individual and the organizational levels (Nahapiet & Ghoshal, 1998).

Both human and social capitals have been found to be very critical in determining access into the labour market. They facilitate entry into the labour market, both the formal and informal sectors and serve as a catalyst to breaking many barriers faced by first time entrants. Granovetter (1974) posits that formal channels such as direct application, employment agencies and job advertisement are not the major channels through which employees acquire jobs: most jobs are found through social networks or social contacts. The use of these networks provides information to job seekers allowing them to make informed decisions and take advantage of better jobs. This information about the labour market is best generated through weak ties. Franzen and Hangartner (2006) in their study of social networks and labour market outcomes of graduates within some European countries found that graduates reported they found their first jobs through social network contacts. Searching for jobs using networks saves costs in terms of fewer applications, fewer numbers of interviews and a faster response rate.

In conclusion, human capital and social capital working together with the environment, and other personal factors such as attitude, interest, and behaviour (social cognitive factors) has the possibility of affecting entry into the labour market especially for first time entrants such as the population under study (first degree university graduates).

2.9 Empirical Literature

This section reviews empirical studies on the determinants of satisfaction with life and labour market outcomes in relation to employment outcomes and duration of unemployment.

2.9.1 Determinants of Labour Market outcome

The study conceptualises labour market outcome to mean employment outcome such as employed or unemployed and its duration. It further disaggregates employment into types of employment that is wage or self-employment. Wage employment was further segregated into sectors of employment- private or public sectors. The determinants of labour market outcomes will be discussed in relation to employment outcomes and Unemployment duration.

In an ideal society, research on employment should be investigated using rational choice theory. The basic assumptions of the rational choice theory are that individual decision-makers are rational and utility maximizing agents who make decisions based on information available to them (Ben-Akiva & Lerman 1991). Under such assumptions, economic agents make decisions by considering all relevant information and by calculating the cost and benefits and choose the option that gives the highest expected returns. Hence in the labour

market, individual make rational decisions based on perfect information and opportunities available to them (Ben-Akiva & Lerman 1991). However, actual individual behaviour deviates from these assumptions. Indeed, individuals are limited in their capacity of elaborating information; they can be systematically biased in their behaviour and tend to misrepresent risks and opportunities (Loewenstein, 2000). The implication of this assumption is that university graduates will make labour market decisions based on their socio-economic factors such as age, gender, social network (Khalifa, 2018; Kuada, 2009; Little, 2001) their situational factors such as location, job availability (Donald, Baruch & Ashleigh, 2017; Heintz & Pickbourn, 2012; Wye & Lim, 2009) and their psycho-social factors such as self-efficacy (Lent et al., 1994).

Different theoretical frameworks have been used for labour market analysis. Researchers have used the job search model developed by Mortensen (1970) and Lippman and McCall (1976) in analyzing the determinants of unemployment duration. However, in calculating unemployment duration, survival analyses have been employed. The analysis is guided by the assumption that how long one remains unemployment depends on the probability of acquiring a job offer and exiting the unemployed pool. The probability of exiting unemployment just like the determinants of employment depends on socio-economic factors such as knowledge and skills, social network, including demographic characteristics such as gender, marital status and age. It also depends on situational characteristics such as geographic location, labour market opportunities and psychosocial factors such as self-efficacy, perception of the labour market and risk.

Previous studies have shown that an individual's socio-economic factors such as gender,

age, education, and reservation wage, among others influence their labour market outcomes. Gender was found to be a significant determinant of employment in Ghana and Uganda. Females are more likely than males to undertake employment activities (Newman & Canagarajah, 1999). Contrary to arguments that females' employment activities are influenced by the need to balance family responsibilities and supplement family income, researchers argue that females are likely to be employed relative to their male counterparts although they are likely to be in the informal sector which offers relative work flexibility. The 2015 labour force survey report shows that 50.5 per cent of females are self-employed compared with 39.8 per cent of males. According to GLSSVI report female employment is predominantly in the informal sector where they can balance family responsibility and work. However, other studies argued that there is no clear pattern between the two sexes in relation to the gender dimension of unemployment (Baah-Boateng, 2013; Sumukwo et al., 2012). In relation to unemployment duration, though it is generally believed that males exit unemployment faster than females, Lakuma et al. (2016) assert that, gender effect on unemployment is country and region specific as Verick (2012) find that uneducated black males exited unemployment slower than females in South Africa. Tnasel and Tasci (2004) also find that in Turkey, females have higher unemployment durations than males. This contradicts the findings of Grogan and van den Berg (2001) in Russia.

Education is a significant determinant of people's opportunities in life, and educational effects on life chances are mainly mediated through the labour market in the form of the job rank attained through the different types and levels of education obtained. It is a signal or an indicator of people's ability and skills. Some researchers have found a positive relationship between education and employment (Cairo & Cajner, 2018). However, recent soaring

graduate unemployment rates have revealed that unemployment is very high among the more educated (Qazi et. al., 2017) in Pakistan. This they attribute to the fact more educated individuals are choosy on the types of jobs they want. Others have also attributed this to the rising numbers of graduates churned out yearly as a result of the high numbers of tertiary institutions, which has increased access to education. With regards unemployment duration, literature shows that education has a significant effect in lowering unemployment duration. Bruck-Klingberg et al. (2011) found that highly skilled individuals transitioned from unemployment faster than low-skilled workers in Germany. In addition, people with tertiary training had a 50 per cent chance of exiting unemployment faster than those with basic education in the Czech Republic (Popelka, 2008). In Ethiopia, graduates with a college diploma or a university degree have far shorter unemployment durations compared to secondary school graduates. This shows very high returns to higher education, at least in terms of the probability of getting employment. However, in the context of this study the level of education is the same for all respondents.

Age is another variable reported to influence employment by Sackey and Osei (2006). They argued that there is a positive relationship between age and employment indicating higher youth unemployment rates than adults. Stewart et al. (2014) equate age with experience and found the likelihood of employment to increase with age. In contrast, Hagos et al., (2012) found no relation between employment and age. Assessing the labour market in Ghana, Otoo et al. (2009) found that the economic activity rate varies across age groups with those within 45 to 64 years having the highest economic activity rate of 87.6%. The above statistic lends evidence to the fact that many people in Ghana are unable to secure jobs fully until they are in their 40s. This is because a huge part of their productive years is spent in school

or in training and after that another part of their productive lives is spent being unemployed or underemployed.

In relation to geographical differences, research highlights that disparities in regional labour turnovers are caused by regions with low internal migration and high level of wage rigidity, which tend to have longer unemployment duration (Borsic & Kavkler, 2009). In addition, big cities tend to register low unemployment durations largely because cities participate in international trade and attract foreign direct investment, among other agglomeration factors, as opposed to peripheral towns and rural regions (Ferragina & Pastore, 2008). Many urbanized African countries tend to have relatively lower youth unemployment (Anyanwu, 2014). According to Riphahn (2003), unemployment is high with longer durations in metropolitan areas. This is attributed to the high numbers of migration into these areas with limited employment opportunities. Vipond (1984) asserts that there is a high concentration of job opportunities in capital cities and information network about employment vacancies seem to service these areas better. He finds in Australia, the further away one is from the capital the higher the probability of being unemployed. Bradbury and Chalmers (2004) also find that living in an area with a one-percentage point lower unemployment rate is associated with a 5 per cent increase in the probability of exiting unemployment. Détang-Dessendre, and Gaigné (2009) also find a positive relationship between location and duration of unemployment.

In SSA countries with no unemployment insurance, where the unemployed are given financial support as they search for employment, duration of unemployment may be shortened, as there is no incentive to remain unemployed. Katz and Meyer (1990) find that a

week increase in unemployment benefit in the United States increases unemployment duration from 0.16 to 0.20 weeks. Moreover, in situations where young people depend largely on family support during periods of unemployment, there is risk of exhaustion of household assets, which exposes many households to poverty (Klasen & Woolard, 2008). However, availability of household income and/or entitlement based schemes such as pensions may exacerbate the duration of unemployment. In this regard, declining entitlement and smaller family wealth may incentivize one to search for employment more aggressively (Ham & Rea, 2017).

Economists have argued that social networks are important in the labour market because of market imperfections, such as information asymmetry, difficulty in job matching (Montgomery, 1991). Social network has therefore been identified as a key determinant of employment where it serves as a medium of job information transmission. In the United States labour market, social network play an important role in determining employment as Ioannides and Loury (2004) found, between 30 per cent and 60 per cent of jobs are found through informal social network contacts. Empirical evidence has been provided for network-based job referrals and informational spillovers in the U.S. labour market (Bayer, Ross & Topa, 2008). According to Van Hove et al. (2009) networking might be more effective for job seekers whose social network contains larger network and with stronger ties and higher-status. However, Mowbray et al. (2017) found that social network only increases the number of job interviews but not employment outcomes. In a study of European unemployed youth, Bentolila, Michelacci and Suarez (2010) find that social network helps people to find jobs and reduces unemployment duration by 1 to 3 months. In Ghana, there is

anecdotal evidence on the positive effect of social network and the likelihood of employment. This has not been empirically verified.

Self-efficacy is a psychological factor, which has been reported as an important determinant of employment. Bandura (1997) refers to it as one's confidence in executing a task. It is an important predictor of job search intensity and its affected by one's motivation and interest in an activity. Self-efficacy has been found to have a positive relationship with employment as Saks et al. (2015) revealed that individuals with higher self-efficacy found job faster. However, studies by Liu, Wang, Liao and Shi (2014) discovered a negative relationship between self-efficacy and likelihood of employment. This ambiguity in the relationship can be attributed to the differences in scales used in the measure of self-efficacy as different scales of self-efficacy measures different forms of search intensity.

Although the human capital has been widely recognised and used as an important model to explain labour market outcomes but it has certain weaknesses. For instance it does not take into consideration the socio-psychological as well as situational factors underlying an individual's preferences and demands. These factors actually change the fundamental assumption of the human capital theory that improved skills and knowledge will lead to favourable labour market outcomes. Indeed, situational factors such as the availability of jobs, the location of an individual and social-psychological factors such as the attitude of an individual towards job search can affect his labour market outcome. Accordingly, the theoretical base for this study was reinforced by Bandura's social cognitive career theory (SCCT) and the social capital theory, which takes into account the effect of bonding and linking social capital in gaining access to the labour market. These theories help explain how

social network and attitudinal factors predict entry into the labour market and which type of employment as well as sectors of employment of university graduates. Empirically these variables are rarely used in labour market outcome studies. From the review of literature,

2.9.2 Determinants of Life Satisfaction

Research on life satisfaction began gaining grounds in the field of economics in the 1970s, especially with the work of Easterlin (1974). Previously, the field had been exclusively in the domain of psychology. As Frey and Stutzer (2002) argued, economics should be about individuals' wellbeing and issues of economic growth, unemployment and inflation, and institutional factors such as governance should be aimed at improving their wellbeing. Numerous studies have investigated into the determinants of life satisfaction and general wellbeing.

Diener et al. have found income to have a positive relationship with life satisfaction in the United States. On the contrary, Easterlin (1995) finds that income is not an important determinant of satisfaction. According to the Easterlin paradox the rate of increase in income does not commensurate self-reported life satisfaction. Hence income may increase but life satisfaction may remain stable over time. This he explains by the fact that individuals become inured to changes in income over time. Oswald (2007) shares the same opinion and demonstrates this by using lottery winners in the United States. He finds that lottery winners are never satisfied with their increase in income and wish to gamble further. Income and education have been frequently linked with life satisfaction (George *et al.*, 1985)

Social and demographic factors such as gender, age, marital status and number of children have been found to have uncertain effects on life satisfaction. Wellbeing research shows that gender does not play any significant role. Although Lucas et al (2003) show that being married has significant positive effects on life satisfaction, having children has a contrary effect. With regards to age, there is a curvilinear effect, where the middle age group have the lowest life satisfaction compared to the youngest and oldest groups. According to Blanchflower and Oswald (2007) this is attributed to the fact that the middle-aged group have higher expectations of life compared to the younger and older groups. In terms of marriage Addai et al. (2015) found that in Ghana, marriage has a negative association with life satisfaction.

Winkelmann (2009) asserts social network as an important predictor of wellbeing by reducing the negative effects of unemployment through social support. Social capital in relation to life satisfaction is viewed as a social support system individuals enjoy from belonging to a group. Participation in network relations has been found to have a positive association with life satisfaction (Putman, 2004) either through formal or informal relationships. Sarracino (2013) find that spending time with family and friends has the tendency of increasing life satisfaction. Studies on Ghana revealed that community engagement has a positive correlation with life satisfaction (Addai et al., 2003; Sulemana, 2015). Sulemana (2015) however found that being a member of a religious association leads to lower life satisfaction.

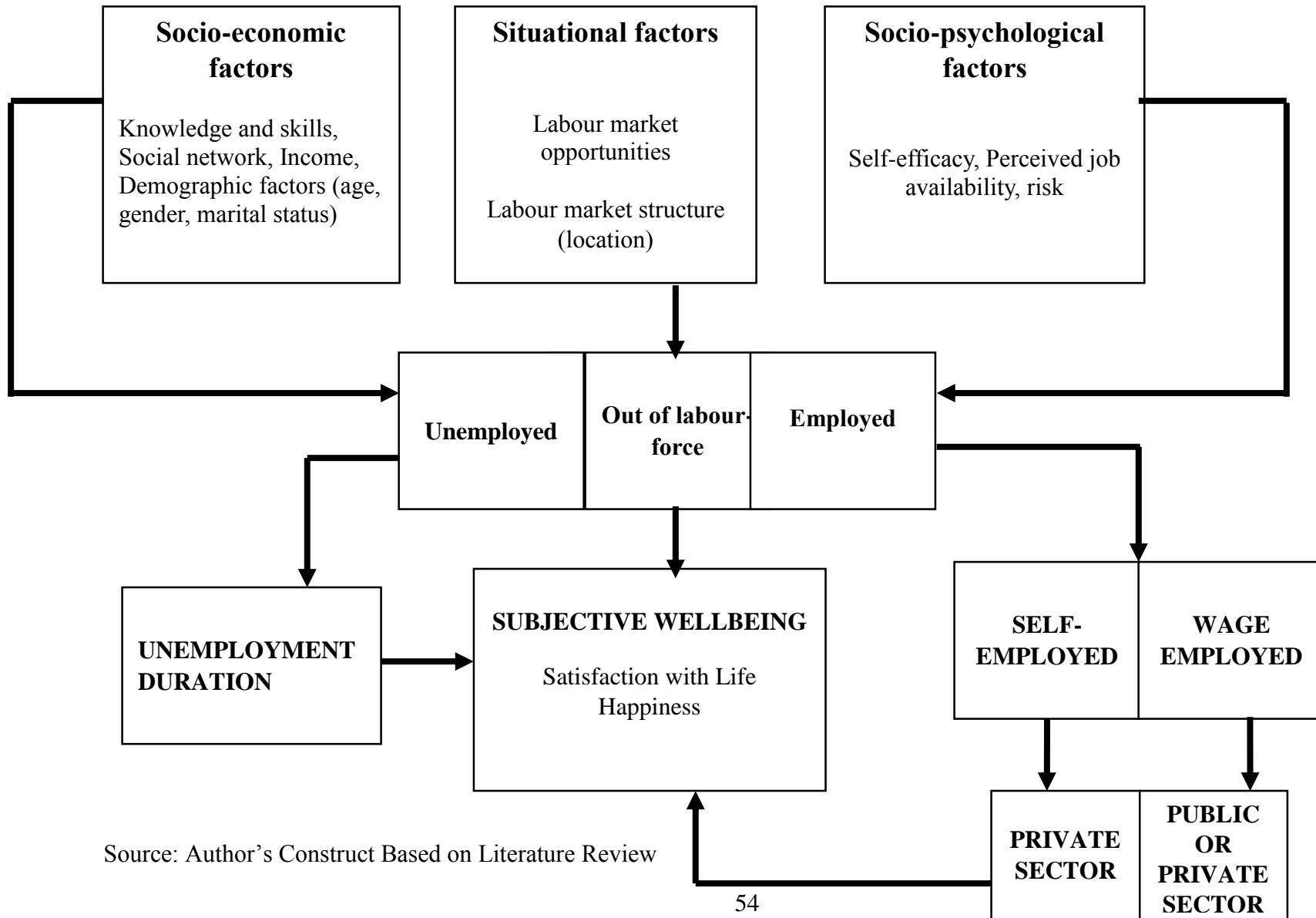
Although there exists plethora of empirical studies on determinant of life satisfaction for developed countries, limited research was found in the context of Africa in which Ghana is

no exception. Recent studies on subjective wellbeing in Ghana have focused on the effect of social capital (see Sulemana, 2015), marriage and subjective wellbeing (see Addai et al., 2015). It can therefore be argued that, though there are a number of studies on subjective wellbeing in Ghana, there is hardly any detailed research on the effect of labour market outcome in relation to employment and unemployment duration on life satisfaction. This study aims to bridge the knowledge gap by combining social capital, cognitive factors and situational factors to predict the likelihood of life satisfaction among employed and unemployed university graduates in Ghana.

2.10 Conceptual Framework

Based on the review of literature, this section employs the various articulated ideas and theories to explain labour market outcomes and the factors that determine these outcomes. Figure 2.4 describes the relationship between human capital, social capital, social cognitive factors and labour market outcomes.

Figure 2.4: Conceptual Framework



Source: Author's Construct Based on Literature Review

The theory of human capital is the main economic theoretical framework guiding this study. It is an extension of Adams Smith's explanation of wage differential. It postulates that knowledge increases an individual's cognitive abilities leading to productivity and efficiency; and individuals with higher human capital will better be placed to perceive and take advantage of opportunities in the labour market leading to better outcomes. Other theories that complement the human capital theory to explain the different outcomes on the labour market are the social capital theory and the social cognitive career theory. Social capital theory refers to social capital as the ability to secure resources by virtue of membership in social network or larger social structures. It is operationalized through the identification of ties or networks, the relationship between these networks, the strength of the networks and the direction of relations within the network (Davidson & Honig, 2003; Turner, 2007). On the basis of the strength of ties existing within a particular network and the direction of relations within the network, the study used two types of social capital - bonding and linking (Putnam, 2000; Turner, 2007). Bonding social capital cuts across networks that are built upon relations within homogeneous groups, such as kin and close relations while linking social capital captures more open, heterogeneous networks that go beyond the insular kin and close friendship ties offered by bonding social capital, to include acquaintances and others within distant positions in the network (Woolcock, 2001; Putnam, 2000; Turner, 2007). In the process, job search or job creation, bonding and linking social capital ties can facilitate the acquisition of resources, ideas and information that can enhance labour market entry (Davidson & Honig, 2003). Social cognitive career theory demonstrates how an individual's cognitive factors such as behaviour, beliefs, environment, and personal attributes affects one's self-efficacy and expected outcome from engaging in an activity: in

this case, labour market. This supportive framework developed from the theories have explained the effect of the theories on employment outcomes, which can be further disaggregated in relation to the type of employment and the sector of employment. These outcomes further have implications of the subjective wellbeing of graduates as indicated in the conceptual framework above.

2.11 Summary and Conclusion

The chapter has examined the existing literature and theoretical perspectives regarding human capital, social capital, social cognitive career theories and labour market outcomes with implications for subjective wellbeing of university graduates. In the review, the chapter identified gaps in the existing literature on labour market transition for graduates in Ghana. Interestingly we find from the review of related literature that labour market outcomes have a positive relationship with subjective wellbeing. There is fast growing literature on the demand side of labour markets yet the reviewed papers have not explored the supply side issues. Again literature appears to be based on assumptions with little empirical evidence available in Africa. This study therefore seeks to empirically explore the types of labour market outcomes of university graduates and investigate the link between labour market outcome and subjective wellbeing of university graduates.

It was also established in literature that employment has positive welfare implications and yet the existing empirical literature, especially in Ghana, is weak. The study fills this gap by integrating these theories and using a probit model to explore the determinants of employment in order to establish relatively stronger econometric evidence that links socioeconomic characteristics to labour market outcome and these outcomes with subjective

wellbeing. In this way policies on labour market and university education will become more focused and effective. The next chapter discusses the method employed in the study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses methods employed to investigate the research questions outlined in the introductory chapter. It begins with a discussion on the research design, data and the methods of data collection employed for the study. A discussion on the quantitative research design is provided as well as the analytical techniques used.

3.2 Research Design

Research design is the overall strategy that is used to integrate the different components of the research in a coherent and logical way to address the research problem (De Vaus, 2001). It enunciates the type of data required, the methods used to collect and analyse the data and how this is going to answer the research questions (Creswell, 2003). The purpose of this study was to explore the determinants of employment of university graduates. The study further determines the unemployment duration as well as the implication of duration on their life satisfaction. The general research design for the study is quantitative research design. The choice of the quantitative approach was informed by the fact that the study seeks to establish relationships and predict outcomes. In line with this methodological approach, research tools associated with a quantitative approach were used to collect and analyse the data.

Due to the lack of reliable and systematic data on employment, research into the labour market has always been fraught with challenges. This difficulty comes about as the definition of what constitutes unemployment, especially in Ghana, has been contested

(Baah-Boateng et al., 2013). Since the study is on labour market outcomes, students who graduated from the university five years before the study were used. A five year period was used because a study by Aryeetey (2011) revealed that as many as 50 per cent of graduates who leave Ghanaian universities and polytechnics will not find jobs for two years after their national service and 20 per cent of them will not find jobs after three years. The study allowed for an additional two years in order to increase the probability of more graduates gaining employment in order to provide a stronger basis for analysis of transitions, and also to factor in a year of national service immediately after they graduate. The study is, in effect, a tracer study of a cohort of university graduates from four traditional public universities in Ghana five years after graduation and four years after national service.

3.3 Sampling Design

The study employed purposive sampling in selecting the universities and a three stage stratified random sampling in sampling the graduates for the study. Ghana has 206 tertiary institutions⁴. Out of these, there are ten (10) public universities and 81 private tertiary institutions offering degree programs. Graduates of four universities were purposively selected for the study: University of Ghana (UG), Kwame Nkrumah University of Science and Technology (KNUST), University of Cape Coast (UCC), and University of Development Studies (UDS). The choice of these four universities is based on the fact that, apart from the University for Development Studies (UDS), the other three universities are the largest (in terms of student numbers) and oldest public universities offering a wide array of courses. University for Development Studies was added because, although relatively new,

⁴ National Board of Accreditation website, <http://www.nab.gov.gh/public-universities-professional-institutions> accessed on July 19, 2018

it offers a wide range of programmes that are development oriented and similar to the other three universities in terms of classification. Furthermore, UDS is the only public university in Northern Ghana.

University of Education was not considered although it is a relatively older university than UDS because it offers specialised programmes with almost guaranteed employment, hence introducing it could have resulted in some biases in the results. Moreover, University of Education was set up to provide higher education to teachers therefore most of the students of this university are already employed prior to their studies. Accordingly, they would not be suitable for the study since it is interested in university graduates who are transiting into the labour market.

Despite a growth in private universities in the last two decades, the ten public universities still have the highest number of students. Although there are more private than public universities in Ghana, in the 2011/2012 academic year, enrolment in public universities accounted for over 60 per cent of all tertiary students⁵. This includes universities and university colleges, quasi-public institutions, tutorial colleges, distance learning institutions, and sub-degree awarding institutions. In terms of programmes, the public universities have a wider range of programmes compared with their private counterparts and these four chosen traditional universities have the largest range. For these reasons, choosing graduates from these four universities is likely to provide harmonization in terms of programmes of study since they offer similar programmes. The subsequent sub-section gives a brief description of the chosen universities.

⁵ Computed from information on the National Board of Accreditation website, <http://www.nab.gov.gh>, accessed on April 10, 2018

3.3.1 University of Ghana

University of Ghana (UG) is the first and largest university in Ghana, founded in 1948 as a university college of the Gold Coast by ordinance with the aim of providing and promoting university education, learning and research. It has a student population of about 37,940 with a 1.4:1 male to female ratio as of the year 2018. It runs post-graduate degrees, bachelor's degree and other sub degrees such as diplomas. It currently has a bachelor's student population of about thirty-two thousand and sixty (36,060)⁶. The number of graduates from University of Ghana registering with the National Service Secretariat (NSS) for the 2012/2013 national service year was four thousand, seven hundred and twenty-three (4,723)⁷.

3.3.2 Kwame Nkrumah University of Science and Technology

University of Science and Technology succeeded the Kumasi College of Technology, which was established by a Government Ordinance on 6th October, 1951. The Kumasi College of Technology was transformed into a full-fledged university and renamed Kwame Nkrumah University of Science and Technology (KNUST) by an Act of Parliament on 22nd August, 1961. The university's name was changed to University of Science and Technology after the Revolution of 24th February, 1966. However, by another act of Parliament, Act 559 of 1998, the university was renamed Kwame Nkrumah University of Science and Technology, Kumasi. KNUST offers programmes such as engineering, planning, pure and applied sciences, social sciences, agriculture among others. It also undertakes graduate degrees in these programmes.

⁶ University of Ghana website, <http://www.ug.edu.gh>. Accessed on October 26, 2017

⁷ National Service Secretariat

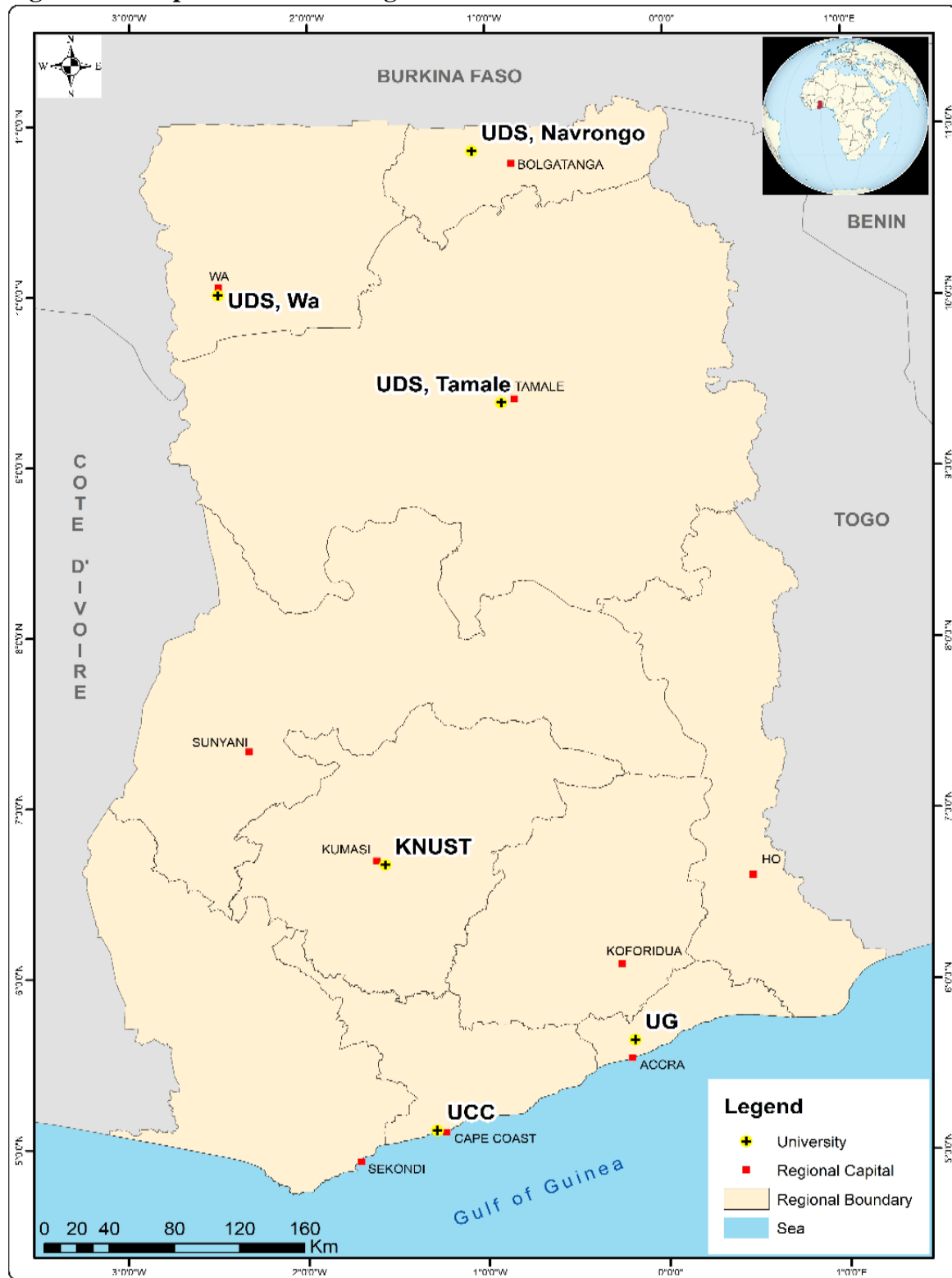
3.3.3 University of Cape Coast

Established in 1962, the University of Cape Coast had the core mandate to train graduate teachers for the second cycle institutions such as training colleges to fill the manpower need for qualified and skilled trained teachers, which the other two public universities (UG and KNUST) were not equipped to undertake at the time. The function of the university has evolved from its core functions to training students in the field of sciences, agriculture and business. It likewise undertakes graduate programmes.

3.3.4 University for Development Studies

The Government used the PNDC Law 270, section 279, in order to enhance the development of the northern sector of Ghana by establishing the University of Development Studies (UDS) in 1992. The university's core focus is on pro-poor issues through its teaching, research and community services. It currently runs undergraduate programmes such as agriculture, integrated studies, planning and land management, business, applied science, and health science and medicine. It also runs graduate programmes in some of these areas.

Figure 3.1: Map of Ghana showing Locations of Universities



Source: Center for Remote Sensing and Geographic Information Services (CERSGIS)

3.4 Study Population

The National Service programme is a compulsory one-year service required of all graduates of Ghana who are 18 years and above, at the time of deployment. The scheme, which started in 1973, now operates under Act 426 (1980) with the aim of deploying freshly graduating youth to priority sectors of the economy to ensure that it does not lack the requisite human resources needed for development. It also provides newly qualified graduates the opportunity to have practical exposure on the job, both in the public and private sectors, as part of their civic responsibility to the state. Graduates are engaged full time in fields such as agriculture, education, health, local government, rural development among others.

Information on graduates from the four public universities who registered with the National Service Secretariat to undertake their service for the 2012/2013 national service years was obtained from the NSS office. This information included names, university attended, programme of study, telephone numbers and, in some cases, email addresses. The NSS deployed over 70,000 tertiary graduates for the 2011/2012 cohort of graduates. The total population for all four institutions was 15,684 of which UG accounted for 4,723; KNUST, 3004; UDS, 4,495; and UCC, 3462. This study was interested in only bachelor degree graduates: non-bachelor degree programmes (masters and diploma) were sorted from the population. This reduced the population to fourteen thousand, two hundred and fifty-two (14, 252). Table 3.1 provides the breakdown of the sample population by university.

Table 3.1: Universities and Graduate Population for 2011/2012 Cohort

University	Number of Graduates	Percentage
UG	4,143	29.07
KNUST	2,881	20.21
UCC	3,462	24.29
UDS	3,766	26.42
Total	14,252	100

Source: National Service Secretariat (2017).

3.5 Sample Size

The first stage of sampling was to apportion weights proportional to the size of the population of each institution. A power test⁸ was conducted to determine the minimum sample size. The minimum sample size generated was 728. Although budgetary allocations posed some constraining effects, the main goal in deciding the sample size for the study was to ensure adequate representation of the different types of programmes offered. In achieving this goal, the researcher decided on a sample size of 2000 because of the possibility of attrition or non-response. Hence, with a sample size of 2000 in mind and the respective weights attributed to the various institutions, proportions were computed for the various institutions. For example, UG had a sample size of 582 (that is 0.2907×2000), Table 3.2 below gives an overview of the first stage of sampling.

⁸ Results of power test presented in appendix 6

Table 3.2: Weights and Sample Size for the Various Universities

Institution	Weight	Sample size
UG	0.2907	582
KNUST	0.2021	404
UCC	0.2429	486
UDS	0.2642	528
Total		2000

Source: Author's own construct.

The second stage of sampling the population for the various institutions was to stratify according to the course of study. The study categorized the programmes into six: Arts and Social Science⁹ (consisting of courses such as Political Science, Economics, Information Studies, Geography etc.); Pure and Applied Science (consisting of pure science such as Chemistry, Biology, and Mathematics; Applied Science such as Home Science, Dietetics, Medical Laboratory etc.); Engineering (Building Technology, Architecture, Chemical Engineering etc.); Agriculture (Agriculture and Agriculture related courses such as Crop and Soil Science, Agricultural Business, Agricultural Economics, Post-harvest Technology etc.); Business; and Fine Arts (such as Dance, Sculpture, etc.). University of Development Studies run four out of the six programmes (they do not offer programmes in Engineering and Fine Arts). The population of the various institutions was divided amongst the six programmes. Again weights were attributed to the various programmes proportional to their sizes within the population in the institution.

⁹Social science does not include Fine Arts

Table 3.3: List of Programmes, Population and Weights for the Various Programmes in the Universities

University	Programme	Population	Weight
UG	Arts and Social Science	3011	0.7268
	Pure and Applied Science	494	0.1192
	Engineering	56	0.0135
	Business	428	0.1033
	Agriculture	90	0.0217
	Fine Arts	64	0.0154
KNUST	Arts and Social Science	996	0.3457
	Pure and Applied Science	550	0.1909
	Engineering	758	0.2631
	Business	163	0.0566
	Agriculture	356	0.1236
	Fine Arts	58	0.0201
UCC	Arts and Social Science	2003	0.5786
	Pure and Applied Science	1001	0.2891
	Engineering	6	0.0017
	Business	243	0.0702
	Agriculture	181	0.0523
	Fine Arts	28	0.0081
UDS	Arts and Social Science	2,614	0.6941
	Pure and Applied Science	481	0.1277
	Business	67	0.0178
	Agriculture	604	0.1604

Source: University Graduates Survey 2017

Having stratified the sample, the study proceeded by using the random number generator in Microsoft Excel to produce a set of randomly selected individuals who have been numbered from 1 through N for each sample, where N represents the total number of individuals of the targeted population. Individuals selected were contacted for interviews. In situations where

interviewers called selected individuals and could not get in touch with them, after three attempts on different occasions, they were replaced with other randomly selected individuals using the excel random number generator. Again on the rare occasion that a selected respondent declined to be interviewed, a replacement was likewise identified through the random number generator in Excel. Table 3.4 below gives a summary of the targeted sample for all the courses for the various universities.

Table 3.4: Summary of Targeted Sample Size for Courses and Universities

	UG	KNUST	UCC	UDS	Total
Social Science	424	140	282	366	1,212
Science	70	78	140	68	356
Engineering	8	106	-	-	114
Business	60	22	34	10	126
Agriculture	12	50	26	84	172
Fine Arts	8	8	4	-	20
Total	582	404	486	528	2,000

Source: Author's own construct.

3.6 Survey Instrument and Data Collection

The survey questionnaire was structured into ten thematic parts reflecting the thematic issues under investigation by the researcher (see Appendix 1). Some of these thematic issues included demographic characteristics, educational background, employment expectations, social networks among others. These sections are relevant when answering the research question as to what factors determine employment among university graduates. Other sections included national service, employment history, current employment activities, if any: questions in these sections were used when calculating how long it takes graduates to gain employment after their national service. The thematic area of satisfaction with life was

used as a proxy to measure and analyse subjective wellbeing of employed and unemployed graduates. Satisfaction With Life Index (SWLI) developed by Diener et al. (1985) was used to construct a life satisfaction score. The index elicited questions on life satisfaction, which were scored on a scale of 1 to 7. A sub-section on life satisfaction was created, which included additional questions pertaining to this area. Although these questions have not been validated they elicited other areas of life satisfaction and subjective wellbeing in general and were used as a check on the SWLI results. Construction of the survey instrument was informed mainly by the objectives of the research, the research question under investigation, and the literature and theoretical orientation of the subject matter.

Under the supervision of the researcher, ten experienced research assistants and a field supervisor were engaged during the fieldwork for the data collection. All the research assistants were at least first-degree holders with extensive field experience, especially in the use of Computer Assisted Personal Interview (CAPI) and telephone interviews. In addition, the researcher trained them on the instrument over a period of three days after which the instrument was pre-tested with some graduates with similar characteristics as the study respondents. Data was collected using Computer Assisted Telephone Interviews (CATI). On average, each respondent spent about forty-five minutes on the telephone with the field researchers. Some interviews were interrupted and continued at times suitable to the respondents. The survey questionnaire was administered over a period of three months from July to September 2017. On a daily basis, the field supervisor received data from research assistants, which he checked for non-responses. Overall 1,503 interviews were obtained but after cleaning the data, 33 incomplete interviews were removed from the sample leaving 1,470 for analysis. All completed questionnaires were then transformed into the STATA

software package for analysis.

3.7 Summary of Respondents

The total number of valid questionnaires used in the study was 1470. Table 3.5 below shows the summary of the number of achieved sample according to universities and programme.

Table 3.5: Summary Respondents

	UG	KNUST	UCC	UDS	Total
Humanities	237	102	216	280	835
Science	99	60	91	51	301
Engineering	6	79	-	-	85
Business	50	18	27	8	103
Agriculture	9	40	20	71	140
Fine Arts	0	3	3	-	6
Total	401	302	357	410	1,470

Source: University Graduates Survey 2017

3.8 Data Analysis

Each of the three objectives of the study was addressed by a particular analytical technique. A combination of the Probit model and Heckman selection model were employed to analyse the determinants of employment, the type of employment, and the sector of employment (objective one). The Cox proportional regression model for survival analysis was employed for determining the unemployment duration of the graduates (objective 2) and the Probit model was used to investigate the effect of employment status or labour market status on the subjective wellbeing of graduates.

The remaining part of this section discusses the conceptualization of the variables employed

in the econometric analysis and literature to support the choice of an analytical approach in addressing a particular objective of the study.

3.8.1 Empirical Model for the Determinants of Employment (Objective One)

Dependent Variable

In order to determine the factors affecting employment among university graduates, the study used employment status as a measure of labour market outcomes. The International Conference of Labour Statisticians (ICLS) of the ILO considers a person of working age (working age in Ghana is 15 years) to be unemployed if, during a specified reference period, that person had been ‘without work’, ‘currently available for work’ (this could be paid employment or self-employment) and ‘seeking work’ by taking active measures in a specified period to search for either paid employment or self-employment. Using the ILO’s definition of unemployment, respondents were asked to indicate whether they want a job, had actively sought for a job in the previous four weeks and were available for work within the next fortnight. A dummy was created for the analysis, measuring ‘1’ if the graduate was employed and ‘0’ if not employed: this included graduates who were out of the labour force (those back to school, those not seeking employment etc.). Hence, the dependent variable is binary. Further analysis of this objective was conducted to determine the type of employment those who were employed were engaged in. Hence, a dummy was created for the type of employment, where ‘1’ measures wage employment and ‘0’ if the graduate is self-employed. Finally, the study further explored the sector of employment of those involved in wage employment by creating a dummy for private and public sector employment, ‘1’ for graduates employed in the private sector and ‘0’ for those employed in

the public sector.

Independent Variables

Control variables: characteristics such as social network, work experience, and programme of study can influence the employment status of graduates. Additional variables such as gender, age, marital status and location were used as control variables.

Model Specification

The main econometric model employed for the study was the Probit regression model. This model is deemed appropriate for the study because the dependent variable is binary; that is, employed or unemployed, self-employed or wage employed, private sector employed or public sector employed. Again it was chosen above other models because the error term is normally distributed making the probit regression a better approach.

The general probit model is stated as:

$$Y_i = f(X_i) \dots \dots \dots (1)$$

Closely following Glick and Sahn (1997), the log-odds were then made to be a linear function of the predictors in a form, $f(k, i)$ to predict the probability that observation i has outcome k , which is generally stated as:

$$Y_i^* = X_i\beta_i + u_i \dots \dots \dots (2)$$

where $Y_i^*=1$ if a graduate is employed and $Y_i^*= 0$ if a graduate is unemployed. X_i is a vector of the explanatory variable.

The equation is further expanded as follows

$$f(k, i) = Y_i = \beta_{0,k} + \beta_{1,k}X_{1,i} + \beta_{2,k}X_{2,i} + \beta_{3,k}X_{3,i} + \dots + \beta_{M,k}X_{M,i} \dots \dots \dots (3)$$

where, $\beta_{M,k}$ is a regression coefficient associated with the M^{th} explanatory variable and the k^{th} outcome. The explanatory variables and coefficients can be grouped into vectors hence the predictor function can be written as:

$$f(k,i) = \beta_k x_i \dots \dots \dots (4)$$

Where, β_k is a set of regression coefficients associated with the outcome k and x_i is the set of explanatory variables associated with observation i .

Equation 3 can be specifically written as:

$$LMO = a + \beta_1 AGE + \beta_2 SEX + \beta_3 MSTATUS + \beta_4 PROG + \beta_5 UNI + \beta_6 LOC + \beta_7 PW + \beta_8 FE + \beta_9 BDSC + \beta_{10} LSC + \beta_{11} JSI + \beta_{12} PJA + \varepsilon \dots \dots \dots (5)$$

where:

LMO=Labour market outcome, measuring the employment status of a graduate [1=employed, 0=not employed (this includes unemployed and graduates who are out of the labour force, either back to school, not looking for a job, etc.)]

AGE=age of graduate in years

SEX=sex (male=1, female=0)

MSTATUS=marital status (married=1, not married =0)

PROG=programme study was captured as Pure and Applied Sciences, Business, Agriculture

and Agriculture related, Engineering and Fine Arts (with Arts and Social Science as the reference category)

UNI= university attended as University of Cape Coast, University for Development Studies, University of Science and Technology (with University of Ghana as the reference category)

LOC= Region where graduate undertook their national service (with Greater Accra as the reference category)

PWE=previous work experience is captured by whether graduate has any form of work experience such as internship (1=Yes, 0=No)

FE=employment status of father (employed=1, unemployed=0)

BDSC= Bonding social network, the number of close relations or friends who could/ have help(ed) a graduate gain or create employment

LSC= Linking social network, the number of politicians or civil servants but not close relations who could/have help(ed) a graduate gain or create employment

JSI=job search intensity, measured by the number of job applications sent out (continuous variable)

PJA= perception of job availability, (1=Yes, 0=No)

The basis for the choice of these explanatory variables is illustrated in Table 3.6 below.

Relative risk ratios (RRR) were then computed for all independent variables for each category of dependent variable except for the base category. RRR is the exponential of the

beta coefficient, which represents the change in the odds of being in the dependent variable category versus the reference category associated with a unit change in the independent variable. The RRR is mathematically represented as follows:

$$\Pr(y_i = j) = \frac{\exp(x_i\beta_j)}{1 + \sum_{j=1}^J \exp(x_i\beta_j)} \dots\dots\dots (6)$$

Where, for the i^{th} individual, y_i is the observed outcome and X_i is a vector of explanatory variables. The RRR is interpreted as: for a unit change in the independent variable, the RRR of the outcome relative to the reference group is expected to change by a factor of the respective parameter estimate, holding all variables in the model constant.

Table 3.6: Conceptualization of Independent Variables

Variables	Supporting literature
Age	Little (2001)
Gender	Brynin (2002) and Khalifa (2018)
Marital status	Schnebelen and Bruhn (2018)
Programme	Mora et al. (2000)
University	Brand and Halaby (2006)
Location	Heintz and Pickbourn (2012) and Rhoda (1980)
Previous work experience	Helyer and Lee (2014)
Job search intensity	Nyarko, Baah-Boateng and Nketiah-Amponsah (2014), Fourgere et al. (2005) and France and Bloemen (2005)
Social network	Granovetter (1974), Lyon (2000) and Kuada (2009)
Father’s employment status	Kolvereid (1996)
Perceived job availability	Donald, Baruch and Ashleigh (2017), Wye and Lim (2009) and Singh and Singh (2008)

Source: Author’s own construct.

From the conceptual framework in Chapter two, three different levels of labour market outcome were identified: employment status (employed or unemployed); type of employment (wage employment or self-employment); and sectoral employment (private sector employment or public sector employment). This objective further explores these levels of labour market outcome. To avoid selection bias in analysing the factors determining selection of employed graduates into wage and self-employment (since the entire sample includes employed and unemployed graduates), the Heckman two-step correction (Heckman et al., 1999) for selection bias was employed. This was because selection into the wage or self-employment groupings was conditioned on the fact that the graduate must be employed. The same was done in estimating the factors determining private and public sector employment for graduates who are wage employed. Selection into these subsets was modelled as dichotomous dependent variables using the Heckman probit model.

3.8.1.1 Empirical Model for the Determinants of Self-Employment

In investigating the probability of a graduate being in self-employment, the Heckman probit model is employed. Two models with two dependent binary response variables are run simultaneously. Generally, probit models can be derived in two ways. One way is to hypothesise an unobserved or latent variable in specifying a non-linear model relating the independent to the dependent variables. In another way, the model can be generated as a random utility or discrete-choice model (Wooldridge, 2009). The study uses the first approach. There are different propensities of being self-employed which are unobserved. The observed measures are being rejected upon employment or not. The dependent variable

is related to the latent or unobserved variable y^* which ranges from $-\infty$ to ∞ by the following structural equation

$$y_i^* = x_i\beta + \varepsilon_i \dots \dots \dots (7)$$

where x denoted the full set of independent variables.

3.8.1.2 Model Specification

For one independent variable x_i , the structural equation can be simplified as follows:

$$y_i^* = \alpha + \beta x_i + \varepsilon_i \dots \dots \dots (8)$$

where y^* is the unobserved or latent variable for observation i , and related to the observed binary variable for self-employment as follows:

$$y_i = \begin{cases} 1 & \text{if } y_i^* > 0 \\ 0 & \text{if } y_i^* \leq 0 \end{cases}$$

For a given value of x

$$\Pr(y = 1|x) = \Pr(\varepsilon > -[\alpha + \beta x]|x) \dots \dots \dots (9)$$

ε is the error term which is independent of x , with an assumed mean of 0 and distributed normally with $\text{Var}(\varepsilon)$. This results in a binary probit model as follows:

$$\Pr(y = 1|x) = \int_{-\infty}^{\alpha+\beta x} \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{t^2}{2}\right) dt \dots \dots \dots (10)$$

The probability of being self-employed is the cumulative density function of ε evaluated at given values of the independent variables.

$$\Pr(y = 1|x) = F(x\beta) \dots \dots \dots (11)$$

where F = normal cumulative density function

$$y_{1i} = 1 \text{ if } y_{1i}^* = \alpha_1 x_{1i} + u_{1i} > 0, \text{ or otherwise}$$

$$y_{2i} = 1 \text{ if } y_{2i}^* = \alpha_2 x_{2i} + u_{2i} > 0, \text{ or otherwise}$$

3.8.2 Model for the Determinants of Unemployment Duration (Objective Two)

Dependent Variable

The dependent variable was waiting time until a graduate gets his/her first job. This is how long it takes a graduate to obtain their first employment after completion of national service, measured in years.

Independent Variables

The independent variables used in this analysis was based on literature reviewed in Chapter two. They are presented in Table 3.7 below.

Table 3.7: Conceptualization of Independent Variables for Duration Analysis

Variables	Supporting literature
Age	Lazaro, Molto and Sanchez (2000)
Age square	Grogan and Berg (2001)
Gender	Kupet (2006), and Dawkin, Shen and Sanchez (2005)
Marital status	Chuang (1999)
Location	Grogan and Berg (2001) and Serneel (2007)
Previous work experience	Tansel and Tanci (2003)
Job search intensity	Kanfer, Wanberg and Kantrowitz (2001) France and Bloemen (2005)
Social network	Putman (2000)
Programme of study	Ciriaci and Muscio (2011)
University	Brand and Halaby (2006)

Source: Author's own construct.

Model specification

The model used to analyse this objective is duration analysis using the survival model. Specifically, the Cox regression model was used.

3.8.2.1 Duration Model

Duration analysis is sometimes called survival analysis or event history analysis. It measures the time it takes for an event to occur; in this case the time it takes for a graduate to get employed or to leave unemployment. The hazard rate or hazard ratio is central to duration analysis and it is the probability of leaving unemployment. The hazard function is the most commonly used model for analysing duration. As discussed in Chapter Two, through economic job search and theories, the duration of unemployment is largely dependent on the reservation wage. How much time people spend in unemployment or the duration of unemployment varies across individuals, and are largely related to the welfare and subjective wellbeing of the unemployed. Duration or survival data are usually characterised by certain incomplete information due to censoring, therefore data on unemployment spells are not normally distributed (Dănăcică & Babucea, 2010). For example, some individuals may not experience the end of their unemployment spell before the study ends, others may also opt out of the study or cannot be found. For these reasons, different analytical methods are employed in survival analysis. Harrell (2015) and Miller (2011) propose the use of non-parametric models for analysing survival data in such cases. This study applied the Cox regression model and the Kaplan-Meier survival function estimator in analysing unemployment duration. These methods allow for analysis of survival from the descriptive

perspective as well as determine the risk factors or covariates associated with the survival probability.

3.8.2.2 Kaplan – Meier Estimator

The study adopts the Kaplan-Meier estimator, which estimates a survival function (Kaplan & Meier, 1958). This approach is commonly used by economists to investigate unemployment (Ham & Rea, 2017; Popelka, 2008; Jenkins, 2005) and has previously been applied in an African context to investigate the duration of youth unemployment (Ismail & Kollamparambil, 2015) in South Africa. According to Dănăcică and Babucea (2007), the Kaplan-Meier method is a non-parametric method used for estimating the survival function $S(t)$, that is, the cumulative probability of not leaving unemployment since time t . This method, also called the Product Limit Estimator (PLE), allows the estimation of the survival function where there is right censoring (Ciuca, 2010). Right censoring occurs when a person drops out before the end of the study or did not experience the event, in this case did not get employed. By this framework, ‘survival’ refers to being unemployed, and ‘failure’ refers to finding a job. The time that a person spends in a given state (unemployment) is referred to as a ‘spell’.

Following Ciuca and Matei (2011), the survival function $S(\cdot)$ gives the probability that a spell will last until a certain time t , written as $S(t)=Pr(T>t)$, where T is a random variable that represents spell duration, while t represents the actual spell duration. Duration of unemployment is stochastic and denoted by T . The cumulative distribution function of T is denoted by:

$$F(t) = \Pr(T \leq t) \dots\dots\dots (12)$$

where t denotes realization of T and the survivor function of T is

$$S(t) = 1 - F(t) \dots\dots\dots (13)$$

The instantaneous probability of becoming unemployed is calculated using the hazard function $h(\cdot)$, written as:

$$h(t) = \frac{p(t)}{s(t)} \dots\dots\dots(14)$$

where, $s(t)$ is the survival function and $p(t)$ is the probability density function of T . The Kaplan-Meier estimator accounts for both spell duration and censoring. A spell is denoted as right censored if the spell is continuous or if the end of the spell is not known; and an uncensored spell denotes a spell that is known to end (Dalgaard, 2008). The Kaplan-Meier survival function for uncensored data is denoted as follows:

$$S(t) = \prod_{t_i < t} \left(1 - \frac{d_i}{n_i}\right) \dots\dots\dots(15)$$

Where t_i represents the survival time, d_i , the number of unemployed persons ending their unemployment spell or getting employment at time t_i and n_i representing the number of persons at risk of leaving unemployment at time t_i . This estimator is also called the product-limit estimator because one way of describing the procedure is that it multiplies together conditional survival curves for intervals in which there are either no censored observations or no failure.

A log rank test is used to compare survival curves from different samples. Here, estimates of hazard functions of two or more groups are compared at each time of failure (person

becoming employed). The log rank test is based on examining the population at each failure time in proportion to the number of individuals at risk in each group. This is then summed over all failure times and compared with the observed number of failures by a procedure similar to the log rank test (Dalgaard, 2008).

The null hypothesis states that there is no difference between survival curves. The test statistic is calculated as:

$$\text{log rank}=\chi^2 = \frac{(O_1-E_1)^2}{E_1} + \frac{(O_2-E_2)^2}{E_2} \dots\dots\dots (16)$$

Where O represents the number of observed failures in the sample and E_i is the total number of expected failures in the sample. The expected number of events for a group is the sum of the expected number of events at the time of each event. The expected number of events at the time of the event can be calculated as the risk for “failure” at that time multiplied by the number of unemployed in that group.

3.8.2.3 Cox Regression Model

The Cox model is a regression model proposed by Cox in 1972 to model the relationship between the hazard rate and the explanatory factors (Nonyana, 2015). Using the Cox regression allows one to identify the individual characteristics that have a significant impact on the hazard function (Kavkler, 2009). Thus, the model examines the effect of the covariates on the hazard function. The hazard function, $h(\square)$, describes the risk of occurrence of an event (leaving unemployment or finding a job) and has the following expression:

$$h(t, X) = h_0(t) * e^{\beta X} \dots\dots\dots (17)$$

Where $h_0(t)$ represents the baseline hazard and βX represents the linear combination of the explanatory variables.

The Cox model assumes the proportional hazards hypothesis; that is, the hazard ratio of two individuals is independent of time, thus the effect of the explanatory variables does not vary over time. The log-hazard is assumed linear and the linear model for the log-hazard function is written as

$$h(t; x) = h_0(t) \exp(\beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k) \dots\dots\dots (18)$$

where $h(t;x)$ is the hazard function at time t for a subject with covariate values X_1, \dots, X_k

$h_0(t)$ is the baseline hazard function, i.e., the hazard function when all covariates equal zero.

\exp is the exponential function $\{\exp(x) = e^x\}$

X_i is the i^{th} covariate in the model and

β_i is the regression coefficient for the i^{th} covariate, X_i .

The Cox model is a proportional hazard model. Following Cox (2002) and avoiding the assumption about the form of the baseline hazard of unemployment, the coefficient β_i is interpreted in terms of relative risk when the covariate x_{ij} is changed by a unit as:

$$\exp(\beta_i) = \frac{a(t)\exp(\beta_1x_{i1} + \beta_2x_{i2} + \dots + \beta_j(x_{ij}+1) + \dots + \beta_kx_{ik})}{a(t)\exp(\beta_1x_{i1} + \beta_2x_{i2} + \dots + \beta_jx_{ij} + \dots + \beta_kx_{ik})} \dots\dots\dots(19)$$

3.8.3 Effect of Employment Status on Subjective Wellbeing of University Graduates

(Objective three)

To examine the differences in subjective wellbeing of employed and unemployed graduates, the satisfaction with life scale was developed as a measure of subjective wellbeing.

Developing Satisfaction with Life Scale

The Satisfaction with Life Scale (SWLS) was developed by generating a pool of 48 items intended to reflect individuals' life satisfaction. From this original pool of items, factor analysis was used to identify 10 items with high loadings (0.60 or above) on a common factor interpreted as global evaluations of a person's life. After the elimination of redundancies, this group of items were further reduced to five items by Diener and Pavot (1985), with minimal effect on the alpha reliability of the scale.

The five items are all keyed in a positive direction, so the five responses can simply be added to arrive at a total score for the scale. A 7-point likert response scale (ranging from 1 meaning strongly disagree to 7 meaning strongly agree) was utilized in order to afford respondents an array of response options. The range of scores is therefore 5 to 35. This study uses Diener and Pavot's five questions to measure SWL. To test the suitability of these questions in the context of this study, a principal component analysis test was conducted. The results of exploratory factor analyses (see appendix) parallels Huebner (1994) and Gilman et al. (2000). Classification of the scores was adopted from Diener et al. (1985). Although Diener et al. (1985) classified their score as a score of 20 representing the

neutral point on the scale, scores between 5 and 9 indicate that the respondent is extremely dissatisfied with life, whereas scores ranging between 31 and 35 indicate that the respondent is extremely satisfied with life. Scores between 21 and 25 represent slightly satisfied, and scores from 15 to 19 are interpreted as falling in the slightly dissatisfied range. For easy comparison, this study classified the scores in two, satisfied and dissatisfied. Scores ranging from 5 to 20 were classified as dissatisfied and scores 21 to 35 represented satisfied.

Dependent variable: A dummy was created for the dependent variable for analysis. The dependent variable is binary; that is, satisfied or not satisfied with life.

Independent variables

Employment status: employment status as a labour market outcome was captured in binary form as either employed or unemployed. Of key interest is the employment status as a determinant of life satisfaction.

Control variables: other variables such as gender, age, and location, were introduced into the equation as control variables. These variables are presented in Table 3.8 below.

Table 3.8: Conceptualization of Independent Variables for the Determinants of Life Satisfaction

Variables	Supporting literature
Age	Ferreri-Carboneel and Gowdy (2007)
Age square	Ferreri-Carboneel and Gowdy (2007)
Gender	Fugl-Meyer, Melin and Fugl-Meyer (2002)
Marital status	Dales (2017) and Schnebelen and Bruhn (2018)
Income	Diener et al. (1999) and Michalos (2017)
Religion	Hadaway (1978) and Lim and Putnam (2010)
Children	Demo and Acock (1996) and Myrskla and Margolis (2012)
Type of employment (wage/self-employment)	Senik (2008), Hershfield et al. (2016), Fallah (2017), and Naseem (2018)
Location	Ewusi (1976)

Source: Author’s own construct

Model Specification

The study uses the maximum likelihood estimation technique, specifically the binary model, with the assumption that the errors are independent of each category (Greene, 2003). The general equation of a binary model, specifically a probit regression model, was used to analyse the determinants of life satisfaction. A probit model was employed in the analysis of this objective given that the dependent variable is binary and the error is normally distributed.

$$Y_i^* = X_i\beta_i + u_i \dots\dots\dots (20)$$

where $Y_i^*=1$ if an i th graduate is satisfied and $Y_i^*= 0$ if the i th graduate is dissatisfied with life. X_i is vector of explanatory variables

Linearizing it, the equation is further expanded as follows:

$$f(k, i) = Y_i = \beta_{0,k} + \beta_{1,k}X_{1,i} + \beta_{2,k}X_{2,i} + \beta_{3,k}X_{3,i} + \dots + \beta_{M,k}X_{M,i} \dots \dots \dots (21)$$

where $\beta_{M,k}$ is a regression coefficient associated with the M^{th} explanatory variable and the k^{th} outcome. The explanatory variables and coefficients can be grouped into vectors hence the predictor function can be written as:

$$f(k,i) = \beta_k x_i \dots \dots \dots (22)$$

Where β_k is a set of regression coefficients associated with the outcome k and x_i is the set of explanatory variables associated with observation i. The explanatory variables considered in this analysis are described in Table 3.8 above.

3.9 Analysis of Open Ended Questions

There were a few open-ended questions in the questionnaire that were used to complement some quantitative questions. These questions are the motivations for employment preference based on the research questions regarding the determinants of type of employment and sector of employment. Following Braun and Clarke (2006), thematic analysis was used to analyse the open-ended questions. This method allows for detailed description of the responses. The recordings were transcribed verbatim and edited for accuracy. Responses were classified into themes and used to further explain and support the relevant segments of the study. Categorisation of the themes was based on responses that implied similar meanings.

CHAPTER FOUR

DETERMINANTS OF GRADUATE EMPLOYMENT IN GHANA

4.1 Introduction

Many emerging economies are faced with the growing challenge of youth unemployment (Pastore, 2018). The high economic growth experienced in Ghana over the last decade has not been accompanied by a proportionate rate of labour absorption into the various sectors. The aim of this chapter is to determine the predictors of employment among university graduates in Ghana. Identifying the correlates of unemployment for policy targeting will help solve the unemployment problem.

First, the chapter explores the labour market expectations of graduates and the factors that determine graduate employment. The Cognitive Career Theory stipulates that perceptions influence a person's motivation in engaging in job search activity that can facilitate employment (Bandura, 1986). A graduate's belief about how much control they have over their employment prospects as well as expectations about the labour market has the tendency to influence job search behaviour, which can invariably affect actual labour market outcomes. Second, the chapter identifies the factors predicting wage employment and self-employment. It further explores factors determining employment into the private and public sectors of the Ghanaian economy.

4.2 Descriptive Statistics

The sample composition of the surveyed graduates is presented in Table 4.1 and Figures 4.1, 4.2, 4.3 and 4.4 below.

Table 4.1: Demographics

Demographics	Frequency (N=1470)	Percentage
Sex		
<i>Male</i>	1,141	77.6
<i>Female</i>	329	22.4
Average Age	30	
Age category		
21-25	10	0.68
26-30	1,032	70.20
31-35	321	21.84
36+	107	7.28.
Ethnicity		
<i>Akan</i>	878	59.7
<i>Ga-Adanbge</i>	69	4.7
<i>Ewe</i>	184	12.5
<i>Mole Dabgani</i>	99	6.7
<i>Others</i>	240	16.3
Marital Status		
<i>Single</i>	1,074	73.1
<i>Married</i>	396	26.9
Children		
<i>No</i>	1,100	74.8
<i>Yes</i>	370	25.2
Religion		
<i>Christianity</i>	893	60.8
<i>Islam</i>	158	10.7
<i>Others</i>	165	11.2
University Attended		
<i>UG</i>	401	27.3
<i>KNUST</i>	302	20.5
<i>UCC</i>	357	24.3
<i>UDS</i>	410	27.9
Programme		
<i>Arts and Social Science</i>	835	56.8
<i>Pure and Applied Science</i>	301	20.5
<i>Business</i>	103	7.0
<i>Engineering</i>	85	5.8
<i>Agriculture</i>	140	9.5
<i>Fine Arts</i>	6	0.4
Class Obtained		
<i>First class</i>	75	5.1
<i>Second class upper</i>	609	41.6
<i>Second class lower</i>	637	43.5
<i>Third class</i>	70	4.8
<i>Pass</i>	73	5.0

Table 4.1: Demographics continue

Location of National Service		
<i>Greater Accra</i>	364	25.1
<i>Ashanti</i>	324	22.4
<i>Brong Ahafo</i>	152	10.5
<i>Western</i>	108	7.5
<i>Eastern</i>	113	7.8
<i>Central</i>	113	7.8
<i>Upper East</i>	49	3.4
<i>Upper West</i>	43	3.0
<i>Northern</i>	115	8.0
<i>Volta</i>	67	4.6
Labour Market Status		
<i>Employed</i>	1022	69.5
<i>Unemployed</i>	389	26.5
<i>Out of the Labour Force</i>	59	4.0
Type of Employment		
<i>Wage employment</i>	918	89.8
<i>Self-employment</i>	104	10.2
Sector of Employment		
Public	341	62.9
Private	577	37.1

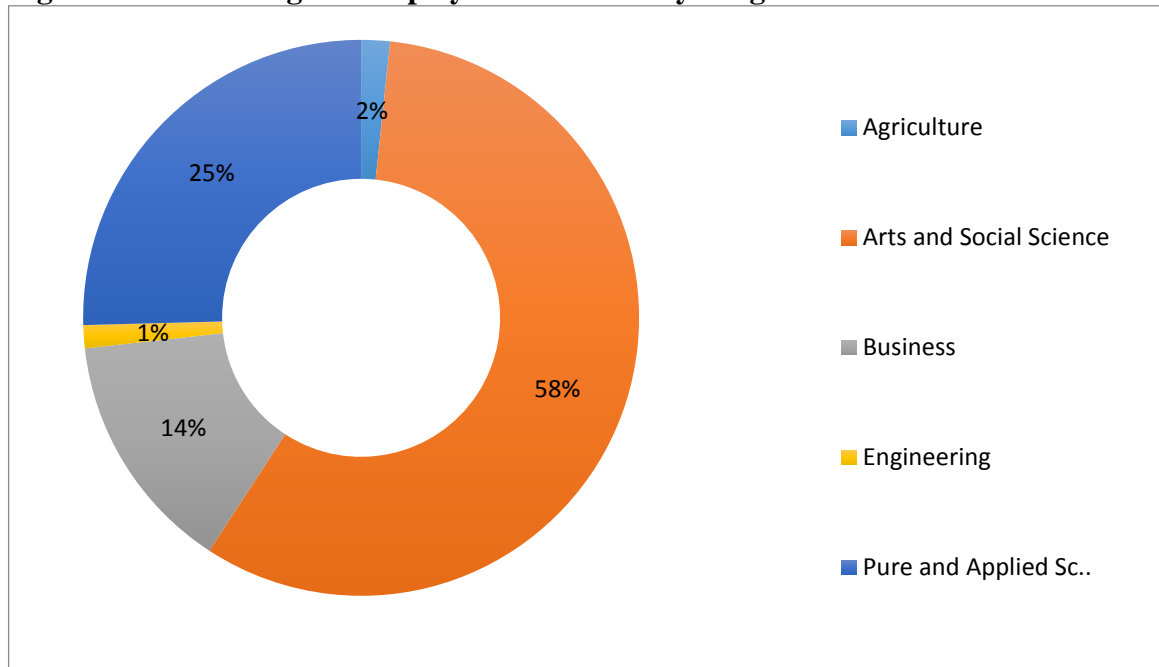
Source: University Graduates Survey 2017

From Table 4.1, the majority of respondents were males (about 78%) with only 22 per cent females. This is reflective of the same frame in the 2012/2013 cohorts of national service personnel; about 71 per cent of the deployed graduates were males with only 29 per cent females. In relation to the programme of study, 57 per cent of the employed graduates studied Arts and Social Science, 21 per cent Pure and Applied Science, 9 per cent Agriculture and only 0.5 per cent Fine Arts. With regards to the university attended, University of Ghana had the highest sampled respondents of 29 per cent of the total and Kwame Nkrumah University of Science and Technology with the least sampled. University of Ghana graduated the highest number of graduates in that year (30%) compared with about 19 per cent from Kwame Nkrumah University of Science and Technology. In terms of age,

the majority of the sampled graduates were between the ages of 21-30 and the average age was 30 years. Since Ghana's last educational reform a decade ago, the average age of completing the University is about 25 years¹⁰. About 73 per cent of graduates were not married: this is indicative of the fact that graduates transition from their youth after completing the university. Although Langevang (2008) observed that the economic circumstances in Ghana make it difficult for many young people to marry and sustain marital relationships, the high proportion of never married graduates in the sample can be attributed to the fact that these graduates are now transiting into adulthood. Akans were the dominant ethnic group in the sample (60%) followed by Ewes (13%) and Ga-Adangbe (7%) with the remaining constituted by ethnic groups mainly of Northern Ghana descent as presented on Table 4.1 above. The Akans generally constitute about 50 per cent of the Ghanaian population. It is worth noting that the Akans are an amalgamation of about twenty smaller ethnic groups with the most popular being the Ashanti who make up about 30 per cent of the Akan population. The majority (25 per cent) of graduates surveyed undertook their national service in the national capital with only 3 per cent in the Upper West Region.

¹⁰ Six years before a child starts class one, six years in primary school, three years in junior high school, three years in senior high school and four years in the university.

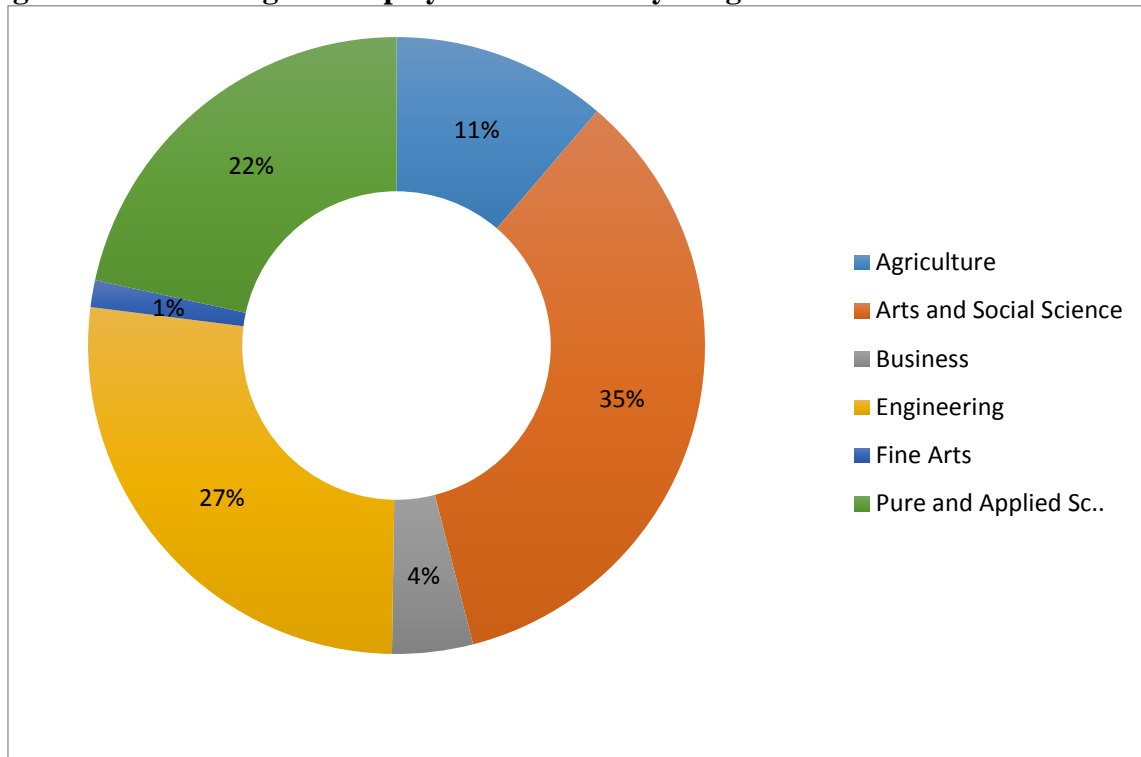
Figure 4.1: Percentage of Employed Graduates by Programme for UG



Source: University Graduates Survey 2017

Figure 4.1 provides the distribution of employed graduates according to programmes for the University of Ghana. The majority (58%) of employed graduates are graduates from the Arts and Social Science programme. This is a representation of the population because of the 4,143 graduates from University of Ghana in the 2011/2012 cohort who registered to undertake their national service, 72.7 per cent were graduates of Arts and Social Science. Only 1 per cent of Engineering graduates from University of Ghana were employed at the time of the survey; and about 25 and 14 per cent for pure and applied sciences and business respectively.

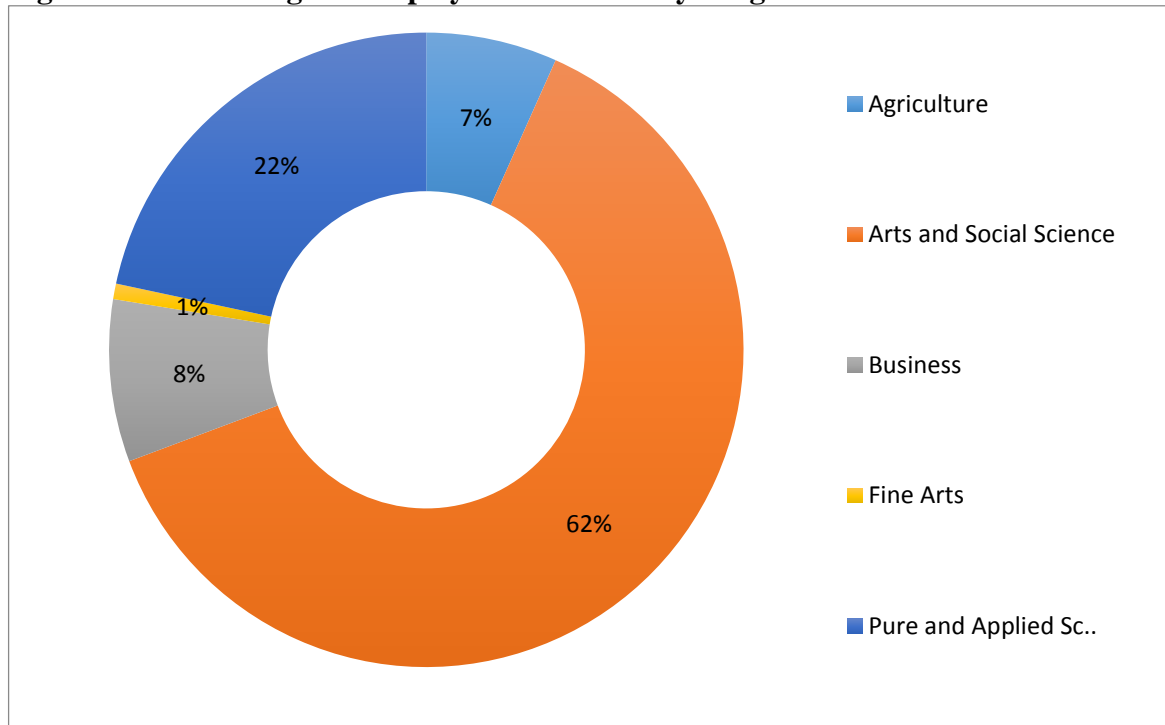
Figure 4.2: Percentage of Employed Graduates by Programme for KNUST



Source: University Graduates Survey 2017

In figure 4.2 above, 35 per cent of Arts and Social Science graduates from KNUST were employed at the time of the survey. The percentage of social science graduates for the 2011/2012 cohorts of national service from KNUST was 34.6 per cent. About 27 and 1 per cent of Engineering and Fine Arts graduates were employed respectively. About 22 per cent and 11 per cent of employed graduates from KNUST are graduates of Pure and Applied Science and Agriculture respectively.

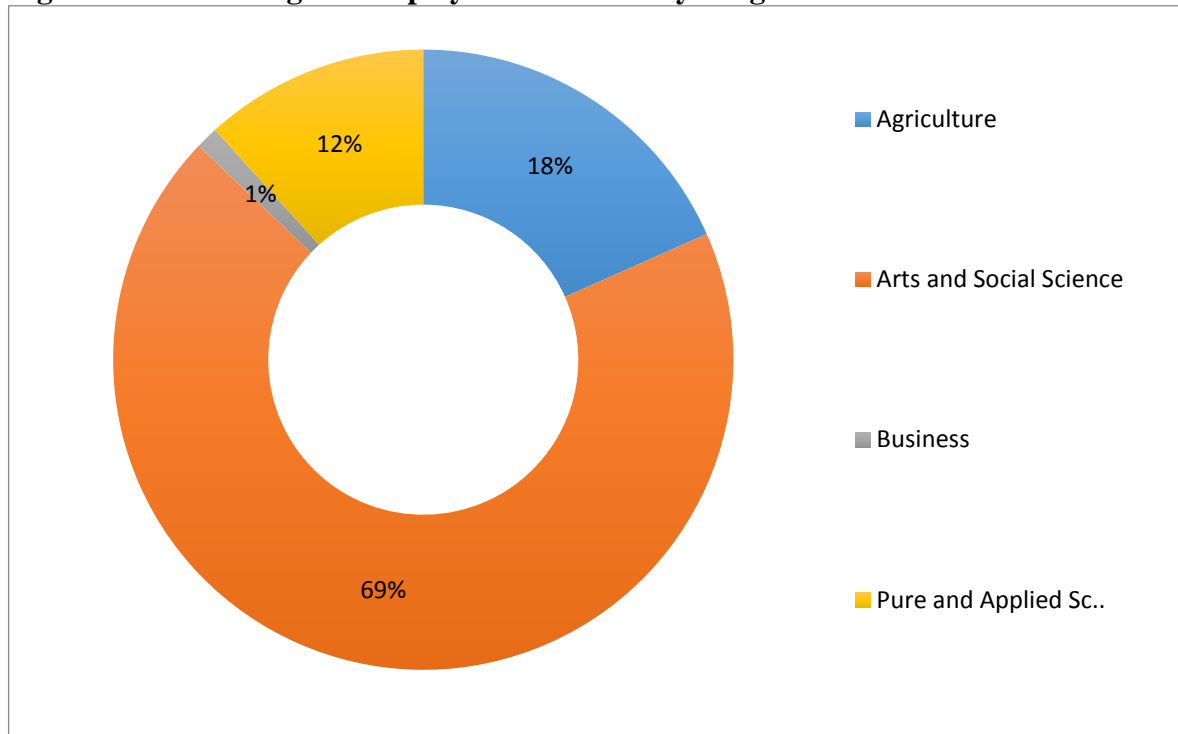
Figure 4.3: Percentage of Employed Graduates by Programme for UCC



Source: University Graduates Survey 2017

From UCC, about 29 per cent of the population was made up of graduates of Arts and Social Science with 0.2 per cent composed of Fine Arts. The highest number of employed graduates at the time of the survey was composed of graduates of Arts and Social Science with only 1 per cent from Fine Arts. This is reflective of the population. Twenty-two per cent for Pure and Applied Sciences, 8 and 7 per cent for Business and Agriculture respectively were employed.

Figure 4.4: Percentage of Employed Graduates by Programme for UDS



Source: University Graduates Survey 2017

In the 2011/2012 cohort of graduates, Arts and Social Science represent 69 per cent of the population and 69 per cent of the employed graduates from UDS are graduates of Arts and Social Science. Only 1 per cent of the employed graduates are from the business programme as shown in Figure 4.4.

Table 4.2: Employment Status by Sex, University Attended and Programme Graduated (in percentages)

Sex/University/ Programme	Employed (N=1022)	Unemployed (N=389)	Out of Labour Force (N=59)	Self-Employed (N=104)	Wage Employed (N=918)	Private (N=577)	Public (N=341)
Male	78	76	56	78	80	77.3	83.6
Female	22	24	44	22	20	22.7	16.4
UG	29	21	32	29	28	30.2	24.9
KNUST	21	19	24	22	21	22.2	18.2
UCC	25	23	24	17	26	26.3	24.6
UDS	25	37	20	22	25	21.3	32.3
Arts and Social Science	56.8	57.3	52.5	76	54.7	52.5	58.4
Pure and Applied Science	20.1	19.8	28.8	12.5	21.1	22.4	19.1
Business	7.3	7.2	0	6.7	7.4	7.9	6.5
Engineering	6.0	4.3	11.9	2.9	6.3	6.9	5.3
Agriculture	9.1	11.1	6.8	1.9	10.2	9.0	10.0
Fine Arts	0.5	0.3	0	0	0.3	1.2	0.9

Source: University Graduates Survey 2017

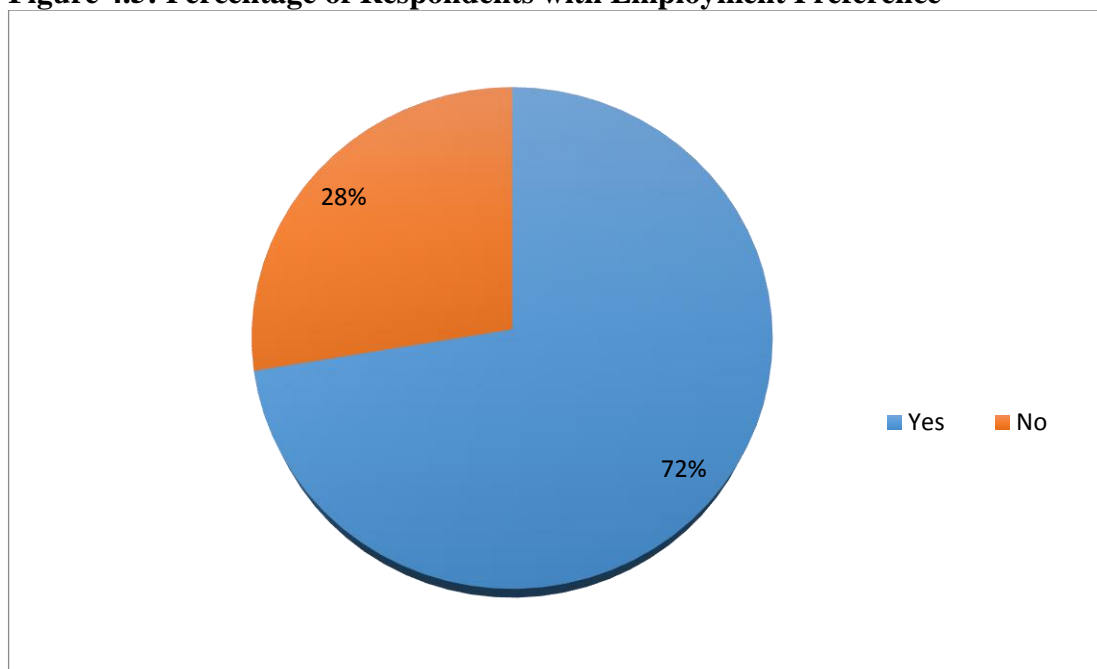
Descriptive statistics reveal that 69.5 per cent of the sampled graduates were employed, 26.5 per cent were unemployed and 4 per cent were out of the labour force. The distribution of employed graduates shows that a higher proportion of males (78%) were employed with only 22 per cent of females. Of the employed graduates, 89.8 per cent were wage employed of which 62.9 per cent were employed in the private sector.

4.3 Employment Preferences of University Graduates

Chapter Two, reviewed the Occupational Choice Models by discussing social cognitive career theory and how this concept has been applied in career choice. This section draws on Social Cognitive Career Theory to examine the types of preferences university graduates form before joining the labour market and further analyses how these preferences influence their actual labour market outcomes. Drawing on the ideas of Bandura (1997) and Vansteenkiste et al. (2005) preferences are the choices that one makes which affects their beliefs that they can successfully achieve a required behaviour to produce a desired outcome. A person's assessment that a given behaviour will produce a certain outcome is referred to as outcome expectations. This, Bandura refers to as self-efficacy (Wood & Wood, 1996; Bandura, 1997). As the world of work is characterised by instability, labour market preferences have the tendency of influencing individual's behaviour that invariably affects his/her job search methods and consequently labour market outcomes. Although job preference do not determine actual labour market outcomes, they have the tendency of influencing these outcomes by triggering cognitive, outcomes such as behaviour, which subsequently affect individual's motivation and commitment in gaining or creating employment (Anderson, Winett & Wojcik, 2007). Employment expectations capture

people's prospects of their ability to acquire new, equal or better employment. With the informality and uncertainty in the labour market, people's perception of their ability to find jobs is important in determining labour market outcomes. Perception of employment or employment expectations can have an effect on actual employment or unemployment (Danh Nguyen, Yoshinari & Shigeji, 2005). It has the tendency to influence job search behaviour, attitude and thoughts, which ultimately influence actual employment (Savolainen, 2018; Vansteenkiste et al., 2005).

Figure 4.5: Percentage of Respondents with Employment Preference



Source: University Graduates Survey 2017

The sampled graduates from the four universities who are currently in the labour market responded to the question on whether or not they had employment preference before joining the labour market. Nearly three fourth or more than two thirds of the sampled graduates (72%), as shown in Figure 4.5, had some form of employment aspirations and preferences before or after

joining the labour force. These preferences ranged from working for themselves, working in the public or private sector to working with charitable organizations as shown in Table 4.3.

Table 4.3: Types of Employment Preference of University Graduates (%)

Employment Preference	Male	Female	All
No Preference	27.43	28.27	27.62
Self-employed	7.71	5.47	7.21
Public Sector (Government)	43.65	40.12	42.86
Private Sector	12.36	13.07	12.52
International/Multinational Company	3.33	5.47	3.81
Non-profit/Charity/NGO	5.52	7.60	5.99
Total	100	100	100

Source: University Graduates Survey 2017 (N=1,064)

The social cognitive theory emphasizes that experiences and the knowledge acquired affect interest, abilities and attitude towards the world of work. When and where these experiences and knowledge are acquired has been identified as key cognitive mediators for employment preferences (Lent et al., 1994). The data shows that most graduates prefer to work in the public sector (42.86%) with a higher proportion of males (43.65%) than females (40.12%) showing this desire. More males (7.71%) than females (5.47%) aspire to be self-employed. However, more females aspire to work in the private sector (13.07%), international/multinational companies (5.47%) and non-profit/charity/NGO (7.60%). The remaining 28 per cent of graduates without employment preferences were willing to take up any job available. These graduates reported from the qualitative data that they believe there is no certainty in the Ghanaian labour market and due to the unavailability of jobs graduates do not necessarily get what they desire. However, there are gender differences in these preferences as shown in Table 4.4 below.

Table 4.4: Gender Differences in Employment Preference

Employment Preference	Male	Female	Difference
Self-employed	0.101	0.135	-0.0034*** (0.017)
Public sector	0.191	0.116	0.075 (0.021)
Private sector	0.324	0.437	-0.113** (0.029)
International/Multinational company	0.262	0.241	0.021 (0.025)
Non-profit/Charity/NGO	0.032	0.015	0.017 (0.003)

Source: University Graduates Survey 2017

An analysis of gender differences in employment expectations revealed significant gender differences in self-employment and private sector employment. No gender differences were reported in employment in the public sector, international organizations and non-profit/Charity/NGO. Table 4.5 gives the results of when these expectations were formed within the education and labour market stages of graduates. From the table, it can be observed that 70 per cent of males and 80 per cent of female graduates form their expectations while at university. This brings to bare the enormous influence of the university system in career formation. Universities must take advantage of this to nurture and guide students' career paths into the labour market through career counselling to help curb the growth unemployment menace among graduates. Interestingly, only 6 per cent formed their expectations during national service while 5 per cent did so after national service.

Table 4.5: When Graduates Form Employment Preferences (%)

When Preferences where formed	Male	Female	All
Before coming to the university	19.08	11.44	17.39
While at university	70.05	80.08	72.27
During National Service	5.92	5.51	5.83
After National Service	4.95	2.97	4.51
Total	100	100	100

Source: University Graduates Survey 2017 (N=1,064)

In terms of factors influencing employment preference formation, graduates chose the single most important factor that influenced their employment preference. From Table 4.6, the programme of study plays a very significant role with about 63 per cent of the graduates identifying their programme of study as the main factor influencing their preference. A tracer study of degree graduates in Asia similarly revealed that a greater percentage of them get their first jobs in fields related to their course of study (Gokuladas, 2010). The effect of family on job preference formation is relatively higher for females than for males with 3 per cent and 7 per cent respectively. Job security has likewise been indicated as an important factor shaping employment preference recording 18.98 per cent. Friends recorded the least with 1.32 per cent.

Table 4.6: Factors Influencing Graduates Employment Preference (%)

Factors	Male	Female	All
My course of study	61.84	64.83	62.5
Family relations	5.43	9.32	6.4
My friends	1.57	0.42	1.32
The prestige	6.88	2.97	6.02
Money	4.35	6.78	4.89
Job security	19.93	15.68	18.98
Total	100	100	100

Source: University Graduates Survey 2017 (N=1,064)

4.4 Factors Determining Graduate Employment

Identifying factors that influence actual labour market status (employed or not employed), has become crucial in understanding youth unemployment challenges and labour market issues. In identifying the determinants of graduate employment, a Probit model was employed in the analysis. Labour market status was measure using a dichotomous dummy variable with the value of 1 for “employed” and 0 for “not employed”. The description of variables and regression results are presented in Table 4.7 and 4.8 respectively.

Table 4.7: Description of Variables

<i>Variable</i>	<i>Description</i>
Sex	Dummy variable: 1= Male 0=Female
Age	Age in years
Age square	Age in years squared
Programme	Arts and Social Science, Pure & Applied Science, Business, Agriculture and Agriculture related, Engineering, and Fine Arts
University	UG, KNUST, UCC and UDS
Class Obtained	Class obtained: First, second upper, second lower, third class, pass
Marital status	Dummy variable: 0=not married 1=married
Location	Regional location of where respondents undertook national service
Ethnicity	Akan, Ga-Adanbge, Ewe, Mole Dagbani and others
Bonding Social network	Number of close family members used to gain employment
Linking social network	Number of politician and civil servants (who are not relations) used to gain employment
National Service Sector	Sector in which graduate undertook national service (1=public 0=private)
Number of job applications	This is a measure of self-efficacy to determine the intensity of job search using the number of job applications sent out.
Job availability	Dummy variable 1=yes 0=no (perception of graduates job availability)
Employment status	Dummy variable: 1=employed 0=unemployed ¹¹

¹¹ Unemployed includes out of the labour force

Table 4.8: Probit Regression Estimates for the Determinants of Employment

Variable	Marginal Effects	Standard Error
Male	-0.1015***	0.0046
Age	-0.0770***	0.0121
Age squared	0.1453**	0.0262
Programme (Art & Social Science as reference)		
Pure & Applied Science	0.2245**	0.0101
Business	-0.0154	0.0194
Engineering	0.5058***	0.0563
Agric and Agric Related	-0.0529	0.2083
Fine Art	-0.0494	0.3025
University (UG as reference)		
KNUST	0.0503**	0.0113
UCC	0.0305	0.0384
UDS	0.0160	0.0943
Class Obtained	0.0531	0.0401
Previous Work Experience	0.1796***	0.0225
Married	0.0826***	0.0285
Father Employed	0.0797**	0.0175
Location (Greater Accra as ref)		
Eastern Region	-0.0588	0.0479
Brong Ahafo Region	-0.0511	0.0440
Northern Region	-0.0670	0.0354
Upper East Region	0.0120	0.0671
Ashanti Region	-0.1190***	0.0364
Western Region	-0.0998**	0.0304
Central Region	-0.0079	0.0478
Upper West Region	-0.1061	0.0780
Volta Region	-0.0265	0.0016
Bonding social capital	0.0281**	0.0041
Linking social capital	0.2755***	0.0273

Table 4.8: Probit Regression Estimates for the Determinants of Employment continue

Number of Job Applications	0.1131**	0.0372
Perception of Job Availability	0.3229	0.9032
Public Sector (National service)	-0.0481**	0.0029
Number of observations	1,470	
LR chi2 (13)	131.16	
Probability >chi-Squared	0.000	
Pseudo R-Squared	0.0737	
Log likelihood	-823.83935	

Sig. * 0.1; **0.05; *** 0.01

Source: Computations based on STATA University Graduates Survey (2017)

4.4.1 Explaining the Determinants of Employment

This section explains the empirical findings of the regression analysis presented in Table 4.8.

4.4.1.1 Gender

From the results presented in Table 4.8 above, gender plays an important role in determining employment among university graduates, as it is statistically significant at 1 per cent. It gives an indication that being male decreases the chances of a University graduate gaining employment by 10.2 percentage points. Although the a priori expectation of the effect of this variable could not be determined because of the varied empirical findings on the effect of gender on employment, this finding does not sync into the human capital theory. Polachek's Gender Segregation Theory (1987), an extension of the Human Capital Theory, states that when females spend more time on domestic responsibilities such as childbearing and house chores (which are usually performed outside the labour market) more than working in the

labour market, their job skills depreciate. Even in the absence of gender discrimination, employers in maximising their utility will sex segregate in favour of males by economically appraising the cost of hiring females who are associated with higher absenteeism, maternity and child rearing responsibilities and on the grounds of stereotyping (Date-Bah, 1986; Glick & Sahn, 1997). In addition to this, empirical literature on gender and employment in Europe provides contrary evidence to this finding. Mooi-Reci and Ganzeboom (2015) found that, in The Netherlands, females are less likely to gain first jobs but, once they had a first job, were more likely to find subsequent jobs. This they attribute to the fact that women are more likely to switch to more motherhood friendly jobs after their first job interruption (Aisenbrey et al., 2009). This finding is also contrary to observations in a section of the literature in Africa, which find that females face entry barriers to the labour market. Particularly in Ghana, it has been found that women are disadvantaged in the labour market (Nyarko, Baah-Boateng & Nketiah-Amponsah, 2014; GSS, 2012). The 2010 Population and Housing Census report finds the share of females in unemployment higher than men by one percentage point. Although these were not university graduates, it gives the national picture of the share of unemployment in relation to gender. However, the finding conforms to other groups of researchers who observed that Ghanaian women are less likely to be unemployed, compared to men (Sackey & Osei, 2005). This can be attributed to the fact that, due to the social difference in gender and the changing gender in terms of responsibilities, females serve as cheap labour in their desperation to support their families and hence are more likely to accept low wage jobs in the third world with the hope of getting a better one rather than sit at home (Brown, 1996; Domfe et al., 2013). Given the imperfections of the labour market, female graduates who are very enthusiastic about finding jobs and have high

employment expectations, are more likely to seek employment using more varied strategies than males, which has the likelihood of increasing their probability of employment. The impetus with which the informal sector grows with predominantly females largely explains why they are likely to be employed. This likewise buttresses Overa's (2007) findings that females are more likely to engage in petty trading and other activities to survive. This begs for further research into details on the kinds of work males and females take up and their motivations for doing so.

4.4.1.2 Age

The signalling theory of human capital identifies age as a potential stigmatizing characteristic. This theory suggests that, due to information asymmetry, employers make hiring decisions based on characteristics such as age and other demographics (Spence, 1973). According to the theory, employers will make rational decision by employing younger and active workers. Empirical literature from Europe shows that older people (usually 50 years and above) are likely to suffer from unemployment compared to their younger counterparts because of the reluctance of employers to hire older workers, especially as first time employment (Evangelist & Chrisman, 2013). This, they attribute to the fact that their period of unemployment is a reflection of their failure and, even when they are hired, they are paid lower wages (Wolber, 2008). Another explanation is that older workers are likely to hold obsolete skills and will require more on the job training than their younger counterparts who are more adaptable to new skills (Kuhn, 2002). In Ghana, Sackey and Osei (2006) argued that there is a positive relationship between age and employment indicating higher youth unemployment rates than adults. The regression results show an

inverted u-shape effect of age on employment. Age squared is statistically significant at 5 per cent. This means that as graduates increase in age, they increase their chances of gaining employment by 15 percentage points till they reach a point where their chances begin to decline. This is an indication that although age is associated with experience (Stewart et al. 2014), at a point employers are less willing to employ older graduates since old age is also associated with early retirement.

4.4.1.3 Programme of Study

In the era of expanding higher education, the field of study has become a crucial determinant of labour market success of university graduates. The programme or course a graduate graduated with is statistically significant at 5 per cent. Graduates who offered Pure and Applied Sciences relative to Arts and Social Science increase their chances of becoming employed by 22 percentage points. Moreover, Engineering was observed to be statistically significant at 1 per cent meaning that, relative to Arts and Social Science, graduating from a programme in Engineering increases the chance of a graduate being employed by 51 percentage points. According to the human capital theory, the value of human capital is directly related to the amount of investment in one's self (Psacharopoulos & Patrinos, 2004). Investing more resources in training and development of human capital makes them more marketable in the labour market. Relating to the theory, graduates of Pure and Applied Sciences and Engineering relative to Arts and Social Science invest more resources¹² in their education and therefore increase their value in the labour market, which is likely to result in positive outcomes. In a related study in the United States, Maurer, Howe and Lee (1992)

¹² The school fees for Science and Engineering are higher as compared to Arts and Social Science.

found that engineering students get over 50 per cent of jobs although they only constitute 10 per cent of college graduates. This, they attribute to the high value society places on these graduates in the labour market. Again graduates from these programmes are trained in specific areas and are equipped with specific skills relative to Arts and Social Science. Ballarino and Bratti (2009) in their study, although not conducted in Ghana, found graduates in social science to be less interested in pecuniary aspects of a job and thus have a low reservation wage compared to Engineering and Science graduates and are therefore more likely to be employed. This does not necessarily apply to our findings. The empirical results can partly be explained by the rapid expansion of the construction and other technical sub-sectors of the economy although the researcher admits that there are many different specialisations in engineering, not all of which is related to construction. Field and Ofori (1988) stated that the expansion of the construction and information technology industry in Ghana as a major part of the private sector has contributed significantly to Ghana's economic growth and has led to a high demand for engineers and an increased employment of young graduates in the field subsequently leading to improvements in their incomes and welfare. This evident contribution to the economic output of a country affects virtually all aspects of life (Ramachandra & Rameezdeen, 2006). The construction sector remains one of the key sectors in the economy in terms of its share of GDP (i.e., 9.1% for 1993- 2011 period) and the overall industrial output (i.e., 35.9% for 1993-2011 period). The construction sector plays a leading role in the improvement of socio-economic conditions and the built environment in Ghana. Osei (2013) confirmed the evidence that the construction sector activity promoted economic growth in Ghana and the relationship remains positive.

The human capital theory explains that the high cost of training in relation to resources such as time and money increases the value of human capital. Compared to the general course of study, engineering students have a higher cost of training. In addition, the theory of demand and supply stipulates that, when demand exceeds supply, price is likely to go up, all things being equal. With very few universities in Ghana offering engineering programmes and the stringent requirements for entry, the demand for engineering graduates exceeds the supply in the labour market making it relatively easier to obtain jobs (Boateng & Ofori-Sarpong, 2002; Edward & Sanders, 1998). The relatively smaller number of graduates with qualification in Science and Engineering reduces the extent of competition in the labour market and increases the chances of employment. Al-Kafri (2011) opposes specialization and posits that specialising in a field of education lowers employment chances by reducing the range of employment opportunities. However, studies in other European context indicate that, in general, graduates in the sciences are more likely to find and maintain employment than those in Arts, Social Sciences and Law (Mora et al., 2000; Ciriaci & Muscio, 2011), which is in consonance with these findings.

4.4.1.4 University Attended

Linked to the programme of study is the university attended: graduates of Kwame Nkrumah University of Science and Technology have a relatively higher chance of getting employment relative to graduates of University of Ghana. Graduating from KNUST relative to UG, increased employment chances by 5 percentage points: this is statistically significant at 5 per cent. Generally empirical literature on the role of the university in labour market outcome tends to concentrate on the reputation of the university using the university's

ranking. Brand and Halaby (2006) found a positive relationship between the ranking of universities in the US and a graduate's labour market outcome. However, in McGuinness' (2003) study of graduates from UK universities, it was revealed that the quality of the student (measured using teaching quality assurance guidelines) rather than the quality of the university attended is more important in the labour market. Hence, graduates' labour market outcomes depend more on the subjects studied than the university attended.

Although there is limited empirical literature to support the choice of university and labour market outcome in Ghana, the possible explanation for this finding is that the core mandate of a university can affect the kind of programmes they run and the graduates churned out. For example, KNUST, formally called Kumasi College of Technology was founded to train technicians and fill the skills needs of the economy who are in relatively low supply; hence, KNUST is noted for producing Engineering graduates. This core mandate explains why this university trains more professionals such as civil engineers, quantity surveyors, planners and many others. This finding corroborates the finding in relation to the programme of study.

4.4.1.5 Social Network

Social network as a form of social capital plays a critical role not only in social or private life, but also in the labour market. Literature on social contacts gained prominence in labour market research after Granovetter's (1974) article on getting a job and how individuals find jobs revealed strategies used by individuals in acquiring employment. Social capital is a vital tool used to avoid or overcome bureaucratic procedures and red tape in the presence of labour market imperfections, and government and market failures in many developing countries. The use of a social network gives job seekers informational advantage by

allowing them to gather better information about job availability. A social network, as an effective tool for job creation, facilitates the spread of information and resources in the network (Zimmer, 1986; Jann, 2003). Network members likewise serve as a source of potential clients or customers (Wegener 1991; Coverdill, 1994). Linking social networks, following the work of Ackah, Aryeetey and Clottey (2011), was measured using the number of government, civil servants and politicians who are not close relations that graduates have used to acquire or create a job. The number of friends, family and close relations who facilitated job acquisition or creation measured the bonding social network. This information was used to test whether the chances of employment are higher for those who are socially connected and have friends and relations in government¹³ and other areas. Social capital determines employment as bonding social capital was identified to be significant at 5 per cent while linking social capital was observed to be significant at 1 per cent. This implies that an additional increase in bonding social capital improves the chances of a graduate gaining employment by 2.8 percentage points while an increase in linking social capital improves the chances a graduate has of being employed by 27.6 percentage points. In total, graduates who are ‘well connected’¹⁴ are able to over-come labour market failures in order to secure or create jobs.

Social capital theory highlights the ability to extract benefits from social structures, networks and memberships (Portes, 1998). These benefits, according to the theory, supplement education and other individual attributes in labour market entry (Coleman,

¹³ In the mist of weak, poorly developed and enforced institutions in countries such as Ghana and many developing countries, having social connections or a network within government or the civil service may result in nepotism, bribery and other unprofessional behavior.

¹⁴ With higher numbers of contacts within government, the civil service and other areas

1990). Social networks can be provided by extended family, community-based, or organizational relationships. According to the theory, having strong network relations has a positive relationship with labour market success through the provision of social exchanges, which can take the form of provision of financial support or facilitating employment creation either in wage employment or self-employment. Contemporary research that explores the linkage between social capital and young people's transitions has recognized that young people are not only beneficiaries of capital from their close network of relations or bonding social capital ties, but also creators of capital through their own peer groups or linking social capital ties (Putnam, 2000; Helver & Bynner, 2007; Worth, 2009). Simply put, social capital enables young people to make a successful transition into the labour market.

Empirically, social networks have worked in all spheres of life. Social networks have been used as a source of financial and emotional support in labour market entry, which increases their chances of gaining employment or creating employment (Alder & Kwon, 2000; Burt, 2000). Literature on social networks and entrepreneurship is widespread and shows that social capital serves as a facilitating factor in the formation of start-up businesses and the entire entrepreneurial process (Chong & Gibbons, 1997; Walker, Kogut & Shan, 1997). Specifically, social capital serves as a means by which entrepreneurs get access to the needed resources for business start-up, growth of businesses and skills acquisition (Kristiansen, 2004). In Ghana, Kuada (2009) highlights the need for financial and emotional support in job creation and social capital helps to fill the gap. Yeboah (2017), in his study of Ghanaian youth, found that social networks are used by the youth to over-come hardship through the provision of financial and emotional resources. The results can therefore be explained by the fact that institutions in Ghana are poorly developed and are characterised

by weak enforcement, which paves the way for bribery, nepotism and unprofessional behaviour (Ackah, Aryeetey & Clottey, 2011). The existence of such institutional failures can result in the use of social networks to gain access to the labour market by using friends, relatives and other networks as useful sources of information and assistance in gaining employment. These results are generally consistent with the findings of Bentolila, Michelacci and Suarez (2010) who identified a positive relationship between social contacts and finding a job among graduates in US and Europe.

4.4.1.6 Self-Efficacy

Self-efficacy in employment is concerned with one's confidence in gaining employment. It is measured by the intensity of job search. The intensity of the job search was measured using the number of job applications sent out. From the results, it is observed to be statistically significant at 5 per cent and this implies that graduates with higher job search intensity increase their chances of getting employment by 61.3 percentage points. Job search involves money, time and dedication. It is therefore graduates who are determined to get employed who will increase their job search with the hope that they will land one. Hence the higher the number of job applications sent out, the more likely they are to gain employment. This fits into the social cognitive career theory of Bandura (1986) where a person's belief in his ability to undertake a task will intensify his efforts in accomplishing it. This, therefore, provides empirical evidence for efforts, intensity and successful labour market outcomes. Individuals who engaged in higher levels of job search were more likely to obtain employment than persons with lower levels of job search behaviour (Kanfer, Wanberg & Kantrowitz, 2001). Further literature on job search suggest that intensive job search

decreases the risk of unemployment (Nyarko, Baah-Boateng & Nketiah-Amponsah, 2014; Fourgere et al., 2005; France & Bloemen, 2005).

4.4.1.7 National Service

Location is very crucial in determining employment in Ghana. Regional studies show that capital cities are usually the most developed relative to other towns with respect to employment opportunities, and this attracts the youth. Theoretical and empirical evidence from Glaeser and Resseger (2010) show that human capital accumulation is faster in bigger metropolitan areas: Sub-Saharan Africa is no exception. Accra is generally perceived as a hub of employment opportunities by the youth. Anecdotal evidence shows that jobs are highly centralised and available jobs are centred in the capital cities. Again the national capital is more developed in terms of infrastructure, which draws investment leading to job creation and hence employment. Young people therefore believe that relocating to the capital city increases their chances of job offers. Relative to Greater Accra, graduates who undertook their one-year mandatory national service in Ashanti and Western Regions have a decreased chance of employment by 11.9 and 10 percentage points and is significant at 1 per cent and 5 per cent respectively. Closely associated with national service is the sector in which graduates undertake their national service. The results show that those who undertook their national service in the public sector have a 5 percentage points lower chance of gaining employment. This finding is not surprising considering the fact that recruitment procedure into the public sector is complicated and bureaucratic compared with the private sector.

4.4.1.8 Experience

Internships are part of measures designed to integrate formal education and work through experiential learning. With the rise in graduate unemployment rates, many institutions are increasingly concerned with the graduate labour market entry by using internships to facilitate their transition from school to work (Chen, 2011). The dummy for previous work experience is found to be positive and highly significant (1 per cent). Graduates with work experience in the form of internship, holiday jobs or previous employment experience raise their probability of employment by 8 percentage points. The theory of human capital places emphasis on investment in human capital. Investment in human capital can take varied forms such as investment in education, investment in training or investment in health. According to the theory, investment in human capital has a positive effect on employment and employment outcomes (Becker, 1962). Again flowing from the social cognitive career theory, Bandura (1997) suggests that people develop self-efficacy based on their past experiences. The social capital theory also asserts that people build network relations in the environment they find themselves, therefore graduates can build their social network at places of internships, which can facilitate future employment. Hence, it is expected that graduates who have some previous experience in the labour market will have better qualifications, experience and higher self-efficacy to undertake job search resulting in a successful labour market outcome. This finding is a reflection of the theory and meets a priori expectation of a positive relationship between experience and employment. Although researchers have argued that the effect of work experience on employability cannot be disaggregated from other factors, the empirical evidence generally supports the findings.

Although empirical literature on Ghana is scant, in America, empirical literature on internships among American college students show that internships increase interview rate and employment prospects by 14 per cent (Nunley, Pugh, Romero & Seals, 2016; Callanan & Benzing, 2004). A perception survey of university graduates in Australia revealed that internships have been useful in obtaining employment (Price & Grant-Smith, 2016). According to High (2014) and Helyer and Lee (2014), more than half of top graduate recruiters cited work experience in terms of internship as prioritised skill sets in graduate selection into employment. Silvia et al. (2018), in their recent assessment of the how internships affect employability of new university graduates, found that internships have helped boost the employment chances of Portuguese university graduates.

In Ghana, Esia-Donkoh et al. (2015) found that internships for teacher trainees have helped them in securing employment. The finding is explained by the argument that graduates with prior experience in the labour market tend to have strong attachments with the labour market, develop better career preparation, and have stronger job networks and curriculum vitae (Weible, 2009). They are more effective in searching, hence increasing their likelihood of employment (Jensen & Westergard-Nielsen, 1987).

4.4.1.9 Marital Status

Finally, marriage influences the chances of university graduates being employed as being married was found to be statistically significant at 1 per cent. This implies that being married increases the chances of a university graduate becoming employed by 8.3 percentage points. From the social capital theory, marriage is a source of bonding capital. Also, marriage can help widen the network base of graduates since a spouse's source of

social network can be extended to the partner (Putman, 2000). Married people arguably have more financial responsibilities and obligations relative to unmarried people, all things being equal. Hence married graduates are likely to embark on job search and use all available means to acquire, or create jobs in order to obtain financial stability.

4.5 Determinants of Self-Employment among University Graduates

Annually, over 230,000 new job seekers join the labour market in Ghana from universities and other tertiary institutions (Boateng & Ofori-Sarpong, 2002). Only about 2 per cent of this pool are employed in the formal sector (Boateng & Ofori-Sarpong, 2002). The advent of increased numbers of graduates moving into Europe and other countries to further their education has reduced the large numbers of unemployed (Boateng & Ofori-Sarpong, 2002). Shrinking and limited opportunities for gaining formal wage employment has resulted in entrepreneurship or self-employment being promoted as a panacea to generating youth employment to curb the soaring unemployment experienced in many countries (Alba-Ramirez, 1994). Policy makers in Sub-Saharan Africa are faced with a difficult challenge of how to create employment, which has promoted a research widely in Sub-Saharan Africa (Langevang & Gough, 2012). Okoye (2017) and Adeniyi (2015) found that encouraging job creation through entrepreneurship education can reduce the thousands of graduates churned out yearly looking for unavailable white-collar jobs. This study further examined, for those employed, the factors determining the kind of employment they are engaged in, that is, wage employment or self-employment. Table 4.9 shows the estimates for the determinants of wage employment and self-employment among university graduates.

Table 4.9: Heckman Probit Regression Estimates for the Determinants of Self-Employment

Variable	Self-employment	Employment
	(ME)	(Coefficient)
Female	0.0297*** (0.0067)	0.9884* (0.3473)
Age	0.0177*** (0.0035)	0.1031*** (0.0166)
Age squared	0.1742** (0.0282)	-0.0398* (0.0056)
<i>Programme (Humanities)</i>		
Science	0.4194 (0.0872)	0.3054 (0.4186)
Business	0.8603 (0.4763)	-0.3485 (0.1476)
Engineering	0.0539 (0.0128)	-0.0742 (0.0657)
Agriculture	0.3128 (0.2035)	0.5835 (0.4256)
Fine Arts	0.0494 (0.0175)	0.0824 (0.2981)
<i>University (UG)</i>		
KNUST	-0.0417** (0.0051)	-0.2109 (0.4791)
UCC	0.3621* (0.0868)	0.1933 (0.3944)
UDS	0.1083 (0.1079)	-0.6275 (0.1479)
Previous work experience	0.5796 (0.0909)	0.0299 (0.0160)
Risk (Averse)	1.0748 (0.1097)	0.0205 (0.0498)
Marital Status (Married)	0.1293 (0.1699)	0.0555 (0.0039)
<i>Father (Self-Employed)</i>		
Wage employed	0.0375 (0.0011)	0.0162 (0.0251)
<i>Location (Greater Accra)</i>		
Eastern Region	0.0086 (0.0139)	-0.4755 (0.6101)

Table 4.9: Heckman Probit Regression Estimates for the Determinants of Self-Employment continue

Brong Ahafo Region	0.0083 (0.0049)	-0.3363 (0.5704)
Northern Region	-0.1054 (0.0679)	0.1606 (0.6570)
Upper East Region	-0.0037 (0.0089)	-0.5632 (0.3199)
Ashanti Region	-0.0577 (0.0398)	-0.1907 (0.3974)
Western Region	0.0127 (0.0536)	-0.5621 (0.6855)
Central Region	-0.0229 (0.0496)	-0.1677 (0.7982)
Upper West Region	-0.1187 (0.0508)	-0.5560** (0.1749)
Volta Region	-0.0539 (0.1481)	0.3760 (0.6390)
<i>Ethnicity (others)</i>		
Ga- Adanbge	0.0839 (0.1626)	-0.2543 (0.1401)
Ewe	0.0758 (0.1929)	0.1133 (0.3121)
Mole Dabgani	0.0045 (0.0657)	0.1026 (0.2034)
Akan	0.2836** (0.0147)	0.0242*** (0.0035)
Bonding social network	0.0187*** (0.0024)	0.1089*** (0.0043)
Linking social network	0.1740 (0.015)	0.8491** (0.1033)
Intensity of job search	-0.3584*** (0.0269)	0.2351 (0.707)
Perceived job availability	-0.1554* (0.0624)	0.0273 (0.102)
National Service in Public Sector	0.366 (0.103)	-0.0171 (0.0219)
Number of observations		1,022
Test: Independence of equations		
Wald test $p = 0$		
P-value 0.00005		
Log likelihood		-162.08999

Standard Errors in parenthesis; Sig. * 0.1; **0.05; *** 0.01

Source: Computations based on STATA University Graduates Survey (2017)

4.5.1 Explaining Self-Employment among University Graduates

The empirical results on the determinants of self-employment among university graduates are presented in this sub-section. The regression coefficients presented in Table 4.9 are of little relevance in the probit analysis, as they do not provide insight to the degree and strength of the independent variables (Greene, 2003). The marginal effects of the independent variables at their respective means provide this information as they measure small changes in the independent variable on self-employment. In the case where the independent variable is dummy, the marginal effect represents a change from zero (0) to one (1) on self-employment.

4.5.1.1 Gender

The results from Table 4.9 show that gender differences account for the level of self-employment among university graduates. Being female increases the probability of being self-employed by 0.30 and it is statistically significant at 1 per cent. Although Asamani and Mensah (2013) found no statistically significant effect of gender on entrepreneurial intentions among university graduates in Ghana, gender affects actual entrepreneurship. Females have always used self-employment as a means to exit poverty (Williams, 2004). The general literature on gender and entrepreneurship usually portrays men as risk lovers who are more willing to venture into entrepreneurial activities (Sapienza, Zingales & Maestripieri 2009; Cramer, Hartog, Jonker, & Van Praag, 2002; Wang & Wong, 2004); and the Global Entrepreneurship Monitor (GEM)¹⁵ report (2017), similarly confirm that men are 50 per cent more likely than women to start a new business. Again, women have been found

¹⁵ The GEM is an annual survey of entrepreneurship in over 60 countries across the world.

to have a lower probability of entering into self-employment than do men (Blanchflower, 2000; Leoni & Falk, 2010; Verheul et al., 2012; Koellinger et al., 2013). At the quantitative level, the differences in the probability of transition to self-employment are considerable for men according to the 2016 GEM report. Although these studies are not specifically on university graduates, it gives an indication of the general findings on females' risk adversity and self-employment tendencies. This study, however, finds otherwise: it is an indication that risk aversion is not necessarily a reason for venturing into self-employment especially for female graduates. Literature on youth entrepreneurship has found that female youth have greater entrepreneurial tendencies relative to their male counterparts (Langevang & Gough, 2012). While there is a rising number of women-owned businesses, liberal feminist theory still portray women as disadvantaged due to overt discrimination coupled with systematic factors, which deprive them of vital business resources such as training, experience, and access to finance.

In addition to demand side factors that reduce women's access to wage employment, cultural attitudes that affect the supply side undoubtedly influence women's participation in self-employment. Although there is a rise in female participation in formal employment, domestic responsibilities and traditional attitudes about females and formal employment lower their career aspirations. Self-employment gives women the chance to balance family and work responsibilities (Butter & Moore, 1997; Marlow, 1997; Walker & Webster, 2007). These factors tend to reduce female participation in the labour market and encourage entry into less formal self-employment where there is flexibility (Glick & Sahn, 1997). Men and women are faced with childcare decisions and strategies such as self-employment for

women can be used to reduce the cost of childcare (Bianchi, 2000). These factors are constraints faced by females, which males usually do not face. A number of empirical studies have found gender differences in self-employment in OECD countries (Blanchflower & Meyer, 1994; Blanchflower, 2000). Clain (2000), for instance, found evidence to suggest that women place more value on non-wage aspects of self-employment than men do.

4.5.1.2 Age

Age is has a positive relationship with self-employment and it is significant at 1 per cent with marginal effect of 0.018. This means that an additional increase in age increases the chances of graduates being self-employed. The variable age squared shows that there is a quadratic relationship between age and self-employment. This relationship is an inverted U-shape meaning; there exist a threshold above which the relationship is reversed (Levesque & Minniti, 2006). Younger graduates are 17 per cent more likely to be self-employed to a point and subsequently the relationship becomes inverse and this is statistically significant at 5 per cent. From the human capital theory, age has a positive correlation with experience and human capital accumulation. The social capital theory posits that, as people increase in age, their network base is likely to increase. There is, therefore, a positive relationship between age and human and social capital. Contrary empirical evidence however exists on the relationship between age and entrepreneurship. Asamani and Mensah (2013) examined the level of entrepreneurial inclination among Ghanaian university students and found that age has no significant effect on their entrepreneurial inclination. Similarly, Chenube et al. (2011), in assessing entrepreneurial inclination among university student in Delta State

Nigeria, which has similar social-economic conditions as Ghana, observed that age did not affect self-employment.

In spite of the contrary evidence, Reynolds (2017) has indicated that the age group 30-40 years has the highest rate of business founders. Based on human and social capital theories, older graduates are more likely to be self-employed because they have, on average, a larger amount of resources such as human capital, financial capital and social capital that can facilitate their entry into self-employment (Cahill et al., 2013). Empirical research that tests the non-linear impact of age has confirmed this relationship and found that self-employment usually peaks between the ages of 35 and 44 years (Georgellis et al., 2005a; Caliendo et al., 2014).

4.5.1.3 University Attended

Although the programme of study was not significant in the results, graduates of KNUST were found to have 4 per lower chance of being self-employed compared with graduates from University of Ghana. However graduates of UCC have a 36 per cent higher probability of being self-employed compared to graduates of University of Ghana. Entrepreneurial education can promote self-employment. Dyer (1994) has suggested that by undertaking entrepreneurship courses, or training, graduates are instilled with confidence and courage to start up their own businesses. Krueger and Brazeal (1994) recommended that education in entrepreneurship can improve the perceived feasibility for entrepreneurial business through an increased knowledge base of students, confidence building and promoting self-efficacy. Entrepreneurial education programmes are a source of entrepreneurial attitude and overall intentions to become future entrepreneur (Souitaris, Zerbinati & Al-Laham, 2007).

Entrepreneurial education is generally embedded in business related courses and most of the business related programmes are undertaken in University of Ghana relative to the other universities. Based on the arguments above, it can be said that, since graduates of KNUST and UCC are less likely to obtain entrepreneurial education compared with UG, they will be less likely to become self-employed.

4.5.1.4 Job Search

Job search is a purposeful action with efforts exerted towards finding a job (Schwab et al., 1987). Job search intensity is found to be vital in determining whether a graduate becomes self-employed or wage employed. An additional application sent decreases the probability of being self-employed by 36 per cent (marginal effect of 0.3584). Associated with job search is the perception of job availability: if graduates perceive that there are employment opportunities in the economy, they are less likely to be self-employed by a probability of 16 per cent this is statistically significant at 10 per cent.

These findings are consistent with prior expectations in the social cognitive career theory. Social cognitive career theory places emphasis on the relationship between self-referent thoughts and social processes in directing behaviour. Self-efficacy refers to individuals' judgments of their abilities to organize and execute an action required to attain desired performance (Bandura, 1986; 1997). Individuals with a great sense of self-efficacy in a particular situation will invest their resources in obtaining the desired outcome. Job search self-efficacy refers specifically to an individual's belief that he or she is capable of gaining or creating the desired employment outcome (Kanfer & Hulin, 1985; Nesdale & Pinter, 2000). Theoretically, Moynihan et al. (2003), Rauch and Frese (2007) and Van

Solinge (2014) established a positive relationship between job search efficacy and employment outcome. This relationship is mediated by search behaviour such as the number of applications sent out and the number of interviews attended. Empirical studies have found a positive relationship between search efficacy and employment (Sak & Ashforth, 2000; Monyihan et al., 2003).

It can be argued that graduates who want to be self-employed will spend less time searching for employment. Firstly, when graduates perceive that they are employable and employment opportunities are available, they will intensify their job search. In their meta-analytic review of job search and employment Kanfer, Wanberg and Kantrowitz (2001) found job search intensity to be a predictor of wage employment. Secondly, graduates can be driven into self-employment. Literature on necessity and opportunity driven entrepreneurship show that the youth can venture into entrepreneurship because they have been unsuccessful in finding jobs and these are regarded as necessity or survivalist entrepreneurs (Langevang & Gough, 2013). Ghana has been experiencing a phenomenon of ‘jobless growth’ since the 1990s (Anyidoho, 2013, p. 11; Aryeetey & Baah-Boateng, 2013), where many young people now find it difficult to secure employment in the wage sector, with the majority resorting to self-employment. For many of the young people, establishing businesses has become the main source of gaining a livelihood and developing a career path.

4.5.1.5 Ethnicity

The results on ethnicity show that Akans, relative to the other ethnic group, are more likely to be self-employed by 28 per cent. This result is supportive of the argument in literature about the fact that the Ashanti and Kwahu sub-groups of the Akan population in Ghana are

particularly noted for their active engagement in business and their entrepreneurial spirit. The Akans generally constitute about 50 per cent of the Ghanaian population. It is worth noting that the Akans are an amalgamation of about twenty smaller ethnic groups with the most popular being the Ashanti who make up for about 30 per cent of the Akan population of Ghana followed by the Fantis who constitute about 20 per cent. Therefore, graduates who are of Akan ethnic group are likely to have their relatives in self-employment. Having a relative in self-employment is a predictor of the decision to follow their career path (Taylor, 2001; Andersson & Hammarstedt, 2011). This impact of relatives can be through the transfer of human capital such as experience, managerial skills, and knowledge (Barnir & Mclaughlin, 2011); social capital such as business contacts (White et al., 2007); or financial capital such as inheritance and role modelling (Bandura, 1986), which are all needed for self-employment. Chlosta et al. (2010) sums up this argument in the statement: “growing up in an entrepreneurial family offers the opportunity to learn from the self-employed parent ... getting a realistic job preview of self-employment” (p.121).

4.5.1.6 Bonding Social Capital

The findings reveal the effect of family and close relations in the likelihood of self-employment. Bonding social capital was found to be significant at 1 per cent with the probability of 2 per cent. This means that knowing an additional family and close relation who is influential in helping a graduate gain employment increase their probability of being self-employed by 2 per cent. Literature has highlighted the effect of family and friends in business creation where they serve as a source of capital or market base for their produce.

4.6 Determinants of Public Sector Wage Employment

Many developing countries, particularly in Africa, have experienced a significant rise in unemployment among educated workers, principally among holders of university degrees (Bashir, Ahmad & Hidayat, 2015). Due to the global economic crisis experienced in recent years, many countries have been faced with the task of making their public sector productive by implementing employment policy reforms (Bezes, 2018; Kahancová & Martišková, 2016). This worsening unemployment problem appears to be linked to the slowdown of recruitment in the public sector, the principal employer for educated workers in developing countries (Boudarbat, 2004). The neo-liberal policy reforms since the 1980s and the recent directives from IMF have resulted in significant cuts in public sector employment with a shift in emphasis towards the private sector as the engine of growth for the Ghanaian economy (Mensah, Fobih & Adom, 2017). The study is interested in what determines the likelihood of employment in the private or public sectors for those who are wage employed.

Table 4.10: Heckman Probit Regression Estimates for the Determinants of Public Sector Wage Employment

Variable	Public Sector (ME)	Wage Employment (Coeff)
<i>Male</i>	0.1889*** (0.0480)	0.2297*** (0.0567)
Age	0.7178 (0.3987)	0.1742* (0.0282)
Age Squared	2.1031 (1.7341)	-0.1031 (0.0266)
<i>Programme (Arts and Social Science)</i>		
Science	0.6831** (0.0296)	-0.4194 (0.1872)
Business	-0.4586* (0.1553)	0.8603 (0.2763)
Engineering	0.1417 (0.1069)	-0.5386*** (0.1805)
Agriculture	0.0586 (0.1553)	0.3128 (0.1335)
Fine Arts	0.0974 (0.0002)	-0.0911 (0.0512)
<i>University (UG)</i>		
KNUST	0.1401 (0.0462)	0.4174** (0.0351)
UCC	0.3915 (0.6050)	0.3621* (0.1868)
UDS	0.0974 (0.0563)	0.1083 (0.0079)
Previous work experience	0.1827 (0.0435)	0.5796 (0.0996)
Risk Averse	0.1438** (0.0044)	0.0748*** (0.007)
Married	0.0652 (0.1380)	-0.4293 (0.2699)
Father Employed in Public sector	0.0787** (0.0006)	0.0375 (0.0071)
<i>National Service Location (Greater Accra)</i>		
Eastern Region	0.7531 (0.2815)	-0.5368 (0.1951)
Brong Ahafo Region	0.9421*** (0.0291)	0.1433 (0.1148)
Northern Region	0.8867 (0.5834)	0.1522** (0.0451)

Table 4.10: Heckman Probit Regression Estimates for the Determinants of Public Sector Wage Employment continue

Upper East Region	0.7569 (0.0214)	-0.6930* (0.1355)
Ashanti Region	0.9853** (0.0362)	0.4427 (0.3599)
Western Region	0.7352 (0.0431)	0.1332 (0.1869)
Central Region	0.9320*** (0.0304)	0.6696 (0.5278)
Upper West Region	0.7815 (0.0066)	-0.2907*** (0.0002)
Volta Region	0.1431 (0.0293)	1.6393 (0.6596)
Ethnicity (<i>Akan</i>)		
Ga- Adanbge	0.9884 (0.3741)	0.8806 (0.2063)
Ewe	0.7914 (0.0527)	-0.8507*** (0.3604)
Mole Dabgani	0.6489** (0.0135)	0.1657 (0.0726)
Others	0.3372 (0.1394)	-0.5836** (0.1147)
Bonding Social Network	0.0525 (0.0015)	0.0104 (0.0034)
Linking Social Network	0.0665*** (0.0257)	0.8987** (0.2024)
Intensity of Job Search	0.1809** (0.0028)	0.3584*** (0.0269)
Perceived Job Availability	0.1422 (0.0025)	-0.1554 (0.0124)
National Service in Private Sector	0.6826 (0.1002)	0.0772 (0.0054)

Number of observations 918

Test: Independence of equations

Wald test $p = 0$

P-value 0.00005

Log likelihood -171.15745

Standard Errors in parenthesis; Sig. * 0.1; **0.05; *** 0.01

Source: Computations based on STATA University Graduates Survey (2017)

4.6.1 Explaining Employment in the Public Sector

Employment in the public sector is generally desired for its stability, which attracts risk-averse workers (Bellante & Link, 1981). Thus, even when the public sector pays the same as the private sector, some workers may still prefer public sector jobs. In developing countries, these jobs are also associated with high social status. Orivel (1995) finds extreme preference for employment in the public sector in African countries: the public sector, he explains is noted for job stability and generally offers higher wages. In Ghana, with the introduction of the single spine pay policy, public sector employment salaries are relatively at par with the private sector although some sections of the private sector still pay more. There is also some level of prestige associated with working in the private sector (Orivel, 1995). The regression results on determinants of public sector employment are presented in Table 4.10. The following sub-sections discuss the significant variables.

4.6.1.1 Gender

From the results, gender is significant in determining whether a wage-employed graduate gets employed in the public sector. Being males increase the probability of gaining employment in the public sector by 19 per cent. This is statistically significant at 1 per cent. Literature associates public sector employment relative with job security.

4.6.1.2 Programme of Study

The programme of study plays a role in determining the kind of employment a graduate engages in as science and business are observed to be statistically significant at 5 per cent and 10 per cent respectively. Graduating in a business programme has a negative effect on

the likelihood of being employed in the public sector. Graduates who have a certificate in Pure, Applied Science and science related courses have 68 per cent chance of gaining employment in the public sector compared with graduates of Arts and Social Science. This finding is not surprising since such students are trained with a specific or specialized skill set compared to graduates of Arts and Social Science programmes. These are specialized programmes whose graduates are usually absorbed into key areas of the public or government sector where there is a high demand (Boateng & Ofori-Sarpong, 2002). However, graduates with a certificate in business or a business related programme reduces the chances of being employed in the public sector by 46 per cent probability. Those who do not get employment in the public sector then seek other alternatives.

4.6.1.3 Risk Aversion

University graduates who are risk averse are 14 per cent more likely to find employment in the public sector. Available evidence suggests that the stability of employment is greater in the public sector than in the private sector (Farell & Smith, 1979). The value that individuals place on this stability depends on the individual's assessment of risk aversion. Economic theory suggests that individuals with a high degree of risk aversion will be more likely than others to seek employment in the public sector, all things equal. Di Mauro and Musumeci (2011) found that risk aversion differed between variable income and fix wage earners with fixed wage earners being more risk averse than variable income earners. The public sector is regarded as a fixed wage sector and private sector employment is generally on a contract basis, which is related to risk (Bellante & Link, 1981). Graduates who are risk averse will generally prefer employment in the public sector.

4.6.1.4 Location

The region graduates undertook their national service has been found to be important in determining whether a university graduate gains employment in the public sector. The location variables indicate Brong Ahafo Region to be significant at 1 per cent. Central Region is also significant at 1 per cent with marginal effect of 0.9320. This implies that graduates who undertook their national service in the Brong Ahafo and Central Regions relative to Greater Accra have 94 and 93 per cent respectively higher chances of being employed in the public sector. This requires further studies to qualitatively explore why graduates who undertook their national service in Brong Ahafo Region and at Cape Coast have a better chance of gaining employment in the public sector.

4.6.1.5 Social Network

A unit increase in an effective social network, measured by the number of politicians, civil servants among others who are known to the graduates and can or have helped them gain employment raises the chances of gaining employment into the public sector by 7 per cent. This is highly significant (1 per cent level of significance). The effect of social networks is greater for the public sector employment compared with self-employment. These findings parallel the findings of Gee, Jones and Burke (2017), which show a strong relationship between social networks and job search using friends on Facebook. Mowbray, Hall, Raeside and Robertson (2017), in their meta-analysis of social networks, emphasise the role it plays as an informal informational tool facilitating job search. Again Yeboah (2017), studying migrants in Ghana, reveal social networks as a tie that strengthens young migrants' agency by providing financial resources that allows them to circumvent the labour market

imperfections. However, this finding contradicts Mouw (2003) who concludes that contacts have no causal effect on labour market outcomes.

The sectors in which parents are employed plays a significant role in determining graduates' sector of employment. Graduates whose fathers are employed in the public sector have an 8 per cent chance of similarly gaining employment in the public sector. This is significant at 5 per cent level of significance. This highlights the effects of parental influence on employment. Research has examined the effects of paternal involvement in career development and found that children are likely to see fathers as role models and follow their career path (Lamb, 2004). This explains why the sector of a father's employment is statistically significant. Secondly, parents can serve as a source of social capital. Parents' social network can sometimes automatically become networks for their wards.

4.6.1.6 Self Efficacy

Finally, the findings reveal that an additional application sent out (measure of self-efficacy and a reflection of job search intensity) by a graduate can increase his chances of being employed in the public sector by 18 per cent. The extent to which individuals engage in a self-directed job search is influenced by their motives for obtaining employment in such areas (Leana & Feldman, 1999). Graduates with a strong motive for obtaining employment in the public sector will intensify their search in that direction.

4.7 Gender Differences in Sectoral Employment

This sub-section looks at gender differences in relation to sectoral employment.

Table 4.11: Gender Differences in Sectoral Employment

Sector	Male	Female	Difference
Education	1.5517	0.0844	0.7074 (0.1193)***
Legal	0.9156	0.1557	-0.0641 (0.0118)***
Health	0.5172	0.7709	-0.0254 [0.0089]***
Finance and Insurance	0.2170	0.2658	-0.0488 (0.1552)***
Manufacturing	0.0696	0.0389	0.0365 (0.0084)
Tourism and hospitality	0.0238	0.0587	-0.0350 (0.0071)***
Sales and marketing	0.0500	0.0492	0.0007 (0.0079)
Oil industry	0.0838	0.0918	-0.0079 (0.0103)
Development work	0.1124	0.0903	0.0221 (0.1105)**
Agriculture and agriculture related	0.0077	0.0007	0.0070 (0.0025)***
Others	0.1373	0.0874	0.0500 (0.1160)

Note: Standard Errors in parenthesis; Sig. * 0.1; **0.05; *** 0.01

Source: Computations based on STATA University Graduates Survey (2017)

The study further explores gender differences in sectoral employment. The results in Table 4.11 show that males are more likely to be employed in the educational sector than females. Only 15 per cent of females are employed in the legal sector compared with cent of males. Females are more likely to be in the health and finance sector with over 77% and 27% compared with 52% and 22% of males in the health and finance insurance sectors respectively. These differences are all significant. Gender differences are similarly reported in the tourism and hospitality sector, development work, and the agriculture and agricultural related sector. There is however no gender differences recorded in the manufacturing, sales and marketing and oil industry.

4.8 Motivations for Choice of Sector of Employment

An analysis of the survey conducted with respect to motivations for the choice of employment into the sectors of the economy revealed a multiplicity of motivations that serve as incentives for graduates in their choice of sectoral employment and self-employment.

4.8.1 Motivations for Taking up Employment in the Public Sector

Key among the multiplicity of motivations for taking up employment in the public include job security and stability, career interest, opportunity for further training and professional development, and job availability (see Table 4.12). Job security and stability was most frequently mentioned as the primary motivation with females recording a higher proportion of 45.4 per cent compared to males' proportion of 38.8 per cent. It should be noted that no female mentioned money, flexibility and nice working environment as their primary motivation factor and no male mentioned job status and prestige as their primary motivation factor. In a highly competitive labour market, the decision to take up employment in the public and private sector or be self-employed depends largely on conditions in the labour market such as job availability rather than individual preferences.

Table 4.12: Motivations for Taking up Employment in the Public Sector (in percentages, N=918)

Motivation Factors	Male	Female	All
Job security or stability	38.77	45.45	39.88
Career interest	26.81	25.46	26.89
Opportunity for further training and development	10.51	18.18	11.78
Availability	12.32	7.27	11.48
The money	5.80	0.00	4.83
Flexibility	4.71	0.00	3.93
The opportunity to meet influential people	0.36	1.82	0.60
Nice office/work environment	0.72	0.00	0.60
The status or prestige of the job	0.00	1.82	0.30
Total	100	100	100

Source: University Graduates Survey (2017)

Among the factors, job security is regarded as the most influential factor because the public sector is generally considered a relatively secure sector for employment. The unemployment rate in Ghana has been on the ascendency over the years from 5.1 per cent in 2014, 5.5 per cent in 2015 to 5.8 per cent in 2016 (ILO, 2016); because of the major challenges the economy faces, the number of job positions has declined. Private sector retrenchment increased as a result of the economic downturn Ghana experienced due to the recent energy crisis (Doe & Emmanuel, 2014). As a result, preference for public sector jobs has increased considerably because they are regarded as relatively more stable and secured (see Lee and Choi, 2016 for similar finding in the Korean context). The main motivation for being in the public sector was exemplified in the narrative of a 28-year-old graduate of Arts and Social Science from the University of Ghana:

Working in the government sector even though the pay is not as good as the private sector like the banks, the only good thing is that you are assured of your job. They cannot easily sack you. For me it is better to have job where you are sure of your monthly salary. As for Government work at the end of the month they will pay no matter what, you will get your salary. (A 28-year-old graduate of University of Ghana).

This statement highlights the premium graduates place on job security in deciding which sector to seek employment in. Employees in the private sector have a 50% higher chance of losing their jobs than the government employees (“Career choice”, n.d). Although the majority of workers are in the informal sector, with fewer job openings in the government sector, the government jobs are conventionally considered a safe career option with more job security in part because labour unions in the public sector are stronger than the private sector and for political reasons government usually succumbs to demands of labour unions. Again since most of the government departments are non-profit orientated, there are lower chances for employees being retrenched or dismissed due to restructuring or downsizing. It should however be noted that, during long slumps or economic depressions, this sector is usually the hardest hit through large-scale retrenchment such as the structural adjustment period. In the private sector, however, job security is based more on performance.

Other factors that were highlighted include career interest, opportunity for further training and professional development, availability of money, flexibility and opportunity to meet influential people. Limited employment opportunities coupled with labour market imperfection can compel graduates to take up any available employment in any of the sectors. Graduates do not necessarily have the capacity to self-select into these sectors as highlighted in the interview with John, a graduate from University of Ghana who noted that,

“I did not have an option, this is the job I got, I just had to take it like that or else I will sit at home”. This narration by John highlights the fact that with limited job opportunities, some graduates do not have a choice as to which sector they take up employment.

4.8.2 Motivations for Taking up Employment in the Private Sector

Factors motivating university graduates into the private sector include financial, environmental and psychological. Table 4.13 gives a summary of motivational factors. In the private sector, money or salary was the main motivation with about 60 per cent for both male and female graduates reporting this. Time commitment in the private sector was the least highlighted motivational factors (0.17%). Females did not report any positive impact on society, job security or stability, opportunity to meet influential people and time commitment on the job as a motivational factor in taking up employment in the private sector.

Table 4.13: Motivations for Taking up Employment in the Private Sector (in percentages, N=341)

Motivation Factors	Male	Female	All
Money/Salary	60.43	60.60	60.48
The status or prestige of the job	13.41	13.64	13.46
Nice office/work environment	10.99	14.39	11.75
Opportunity to travel	7.91	9.09	8.18
Availability	2.64	1.52	2.39
Positive impact on society	2.20	0.00	1.7
Opportunity for further training and development	0.88	0.76	0.85
Job security or stability	0.66	0.00	0.51
Opportunity to meet influential people	0.66	0.00	0.51
Time commitment of the job	0.22	0.00	0.17
Total	100	100	100

Source: University Graduates Survey (2017)

Literature on wage differentials between the private and public sectors dates back to the works of Smith (1976a; 1976b; 1977). Smith’s findings portray sectoral wage differentials across states in the United States and in many countries. The situation was captured in the narrative by Ama, a 25-year-old UDS graduate as follows:

I think the private sector pay more than the public sector. My friends in the bank and other private companies are the ones driving the beautiful cars and wearing the nice coats. People even respect you more when you work in such companies. You can get to enjoy all the nice things at work, like the car loan, which are interest free and other benefits. Some of my friends in the government offices don’t even have offices to sit in. (Ama, 25 year-old graduate of UDS).

It must be noted that there are some jobs in the private sector that pay less than the public sector, especially with the introduction of the single spine pay policy by government. This policy has made the sector much more attractive.

Table 4.14 gives a breakdown in terms of the sub-sectors of employment. The private sector employs more graduates in the financial, banking and insurance sub-sector, employing 29.3 per cent of graduates employed in the private sector, comprising of 34.1 per cent of females and 27.9 per cent of males. The legal sub-sector employed the least numbers in the private sector, recording 0.2 of all graduates employed in the private sector. In the public sector, the education sub-sector employs the highest percentage of graduates in the sector with 54.1 per cent; 59.1 for males and 29.1 for females.

Table 4.14: Sub-Sectors of Employment in Percentages

Field	Private sector			Public sector		
	Male	Female	All	Male	Female	All
Education	19.78	15.15	18.74	59.06	29.09	54.08
Legal (Law)	0.00	0.76	0.17	0.72	3.64	1.21
Health	5.49	1.52	4.60	9.42	16.36	10.57
Financial, banking, insurance	27.91	34.09	29.30	4.35	12.73	5.74
Manufacturing	4.84	5.30	4.94	1.09	00.00	0.91
Tourism and hospitality	1.54	0.76	1.36	0.00	0.00	0.00
Sales/marketing	4.40	5.30	4.60	1.09	3.64	5
Oil industry	2.86	3.03	2.90	0.36	3.64	0.91
Development work	5.93	3.03	5.28	6.16	5.45	6.04
Agricultural related	7.47	4.55	6.81	5.07	1.82	4.53
Military/Armed forces	0.44	0.00	0.34	1.45	1.82	1.51
Other	19.34	26.52	20.95	11.23	21.82	12.99
Total	100	100	100	100	100	100

Source: University Graduates Survey (2017)

4.8.3 Motivations for being Self-Employed

This section provides results on the reasons given by university graduates for going into self-employment. In Table 4.15, 37.5 per cent of graduates who are self-employed attributed this to the unavailability of jobs in the country. From the open-ended questionnaire, a 27-year-old photographer and a graduate of UCC mentions that, “I searched for a job for a very long time, you just have to start your own, there are no jobs in the system”.

About 34 per cent of graduates were motivated by a passion to undertake self-employment: 16 per cent attributed it to the difficulty in finding jobs, 11 per cent of graduates are self-employed because they wanted to have time to themselves and family and only 2 per cent mentioned they could not work for anyone.

Table 4.15: Motivations for Self-Employment (in percentages, N=104)

Motivational Factors	Percentage of Respondents
There are no jobs available	37.5
I have the passion in this business	33.7
It is difficult to find a job	16.3
I want to have time for myself and family	10.6
I cannot work for anyone	1.9

Source: University Graduates Survey (2017)

Table 4.16: Fields of Self-Employment (in percentages, N=104)

Field	Self-Employment		
	Male	Female	All
Fashion	15	78.7	44.2
Photography	3.5	0	1.9
Catering, Hospitality	1.8	10.6	5.8
Art and Entertainment	7.4	2.1	4.8
Construction	8.8	4.2	6.7
Farming	28.1	2.1	16.3
IT, Advertisement, Printing	16.7	0	8.7
Transport	3.5	0	1.9
Financial	3.5	2.1	2.9
Facilities Management	2.5	0	1.9
Educational	8.8	0	4.8
Total	54.8	45.2	100

Source: University Graduates Survey (2017)

Of the graduates who are self-employed, 44.2 per cent of them are employed in the field of fashion. In terms of gender distribution, 79 per cent of females are in the field of fashion with 28 per cent of males in farming and 17 per cent in IT, advertisement and printing.

4.9 Summary

This chapter examined determinants of employment as well as determinants of self-employment and employment into the public sector. Despite the contrary view in literature that females are marginalised in the labour market, the chapter has demonstrated that female university graduates are more likely to gain employment after their national service than their male counterparts. Other factors such as social capital, programme of study, and previous work experience all influenced the likelihood of employment of university graduates. Surprisingly, the class obtained does not correlate with employment. In relation to self-employment, the chapter showed that risk aversion, which has been widely researched as a strong determinant of self-employment, was not statistically significant in determining self-employment among university graduates. However other factors such as age, job search intensity and ethnicity were statistically significant determinants of graduate self-employment. Finally, the chapter found social networks, programme of study and location as determinants of public sector employment. The chapter also explored motivations for the choice of employment and qualitatively revealed that the motivation for taking up employment in the public sector is largely due to job stability.

CHAPTER FIVE

UNEMPLOYMENT DURATION OF UNIVERSITY GRADUATES IN GHANA

5.1 Introduction

Duration of unemployment has gained series of scientific investigations. It has been the center of most discussions on unemployment. This is because the length of time people stay unemployed has implications on their wellbeing. This Chapter is interested in determining how long it takes university graduates to gain employment by investigating their likelihood of exiting unemployment. The chapter starts by examining graduates' perception of the labour market, the job search strategies of graduates, its relationship with job offers and the gender differences in job search methods among graduates. The chapter finally calculates the unemployment duration of university graduates in Ghana.

5.2 Graduates Employability Perception

Perceptions are very crucial in determining reality. Literature on psychology demonstrates a strong relationship between perceptions and reality through action (Franz, Gegenfurtner, Bülthoff & Fahle, 2000). It has the tendency of affecting outcomes by influencing the cognitive behaviour of individuals, which subsequently affect their belief and ability to execute a task. Embodied in the social cognitive career theory framework discussed in Chapter Two is the interest model. Individuals' interests are affected by their self-efficacy and expected outcome (Bandura, 1986), therefore graduates will develop a strong efficacy and expectations in areas in which they perceive they have the capacity to gain employment. In the same vain, literature on employability finds self-efficacy as an important predictor of employment (Dacre & Qualter, 2013)

Table 5.1: Graduates Perception of Employability (in percentages)

Statement	Agree	Not sure	Disagree
It is difficult for university graduates to find work	84.35	7.55	8.09
The majority of unemployed graduates are too choosy – they would rather sit at home other than do certain kinds of jobs.	51.14	17.80	31.06
The majority of university graduates will find work within three months after national service.	5.18	5.61	89.21
The majority of university graduates will find work within one year after national service.	26.97	20.60	52.42
I am confident that I can get exactly the kind of job I want, when I am ready.	39.81	18.45	41.74
I can get a job, even if it is not my preferred job.	65.37	14.46	20.17
I feel the university has prepared me well for work.	63.11	17.91	18.99

Source: University Graduates Survey (2017)

The overwhelming negative perception of employability of graduates can be explained by the fact that it has become very difficult for young people to gain access to formal employment, especially over the past few decades (Langevang & Gough, 2010; ISSER, 2010). This is due to the implementation of neo-liberal policy reforms since the 1980s, which has brought about significant cuts in public sector employment. The situation is further compounded by the recent shift in emphasis towards the private sector as the engine of growth for the Ghanaian economy, which has not resulted in significant gains in employment for the youth in the private formal sector (ISSER, 2004; Langevang, 2008). What is being experienced is the phenomenon of ‘jobless growth’ that has been happening since the 1990s (Anyidoho, 2013 p. 11; Aryeetey & Baah-Boateng, 2013), where many

young people find it difficult to secure employment in the private and the public sector with some resorting to the informal sector as a means of gaining employment.

Over 80 per cent of graduates agree to the statement that it is difficult for university graduates to find work. This assertion is further collaborated by 89.2 per cent and 52.4 per cent of graduates disagreeing to the statements that the majority of university graduates will find work within three months and one year respectively. Interestingly, 63.1 per cent of university graduates disagree that the university has prepared them well for the field of work. Only 19 per cent agree to this statement. Graduates do not feel confident about getting their preferred job, as 41.7 per cent disagree to the assertion that “I am confident that I can get exactly the kind of job I want, when I am ready”. However about 65 per cent agree they can get a job even if it is not their preferred job.

While it is difficult to conclude at this stage of the analysis using the negative individual self-assessment of job availability and their employability, there is generally a mixed perception of employment. In the following sections, I explore the job search methods used by graduates in acquiring or gaining employment and the gender differences that may exist.

5.3 Gender Differences in Job Search Methods

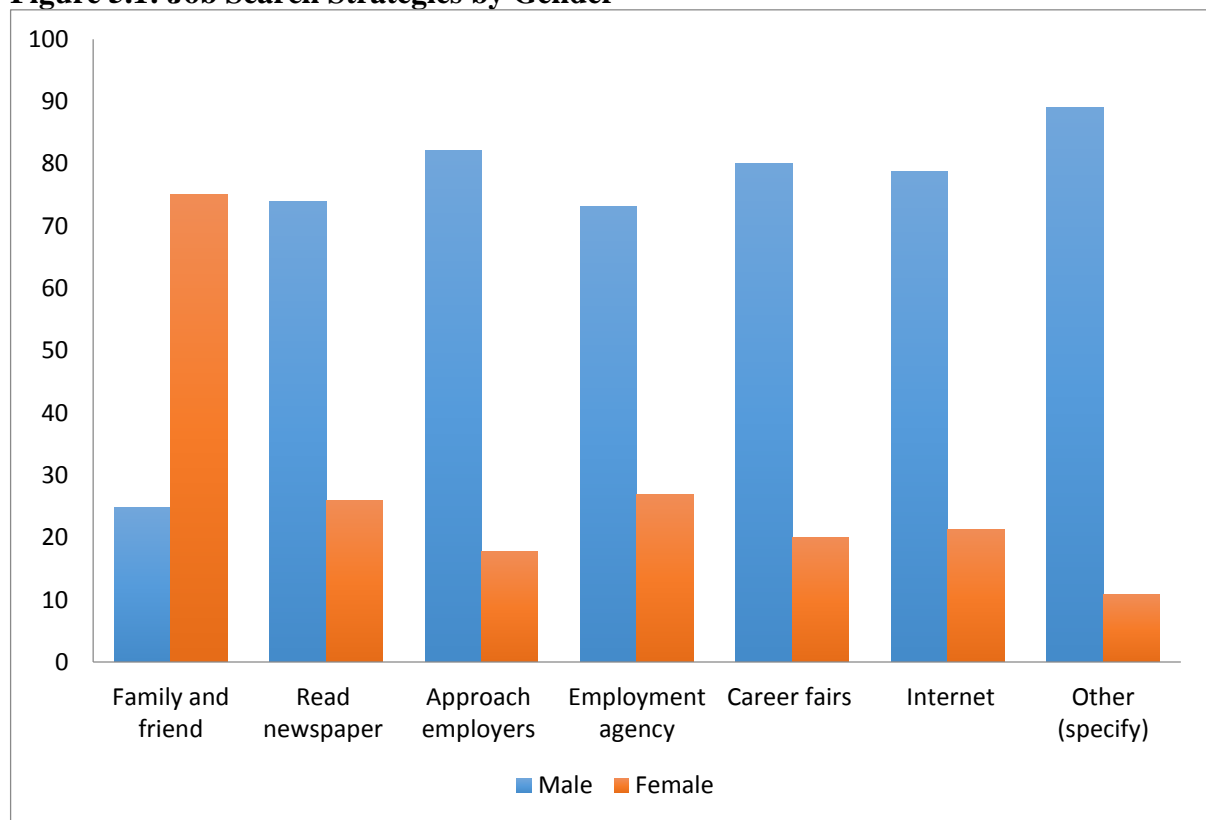
Job search methods are the strategies and techniques employed by graduates in looking for a paid job. Research indicates that job search methods and behaviour is related to the number of job offers (Carlsson, Eriksson & Rooth, 2018; Saks & Ashforth, 2000). Job search has been considered as an integral part of labour market outcomes and has received considerable attention in literature in the past decade (Huffman & Torres, 2001). Understanding job

search methods and processes can help in understanding unemployment durations in general and particularly for university graduates. Bandura's self-efficacy theory discussed in Chapter Two describes individuals' judgments of their capabilities to organize and accomplish courses of action required to achieve an objective (Bandura, 1997). Again, how well an individual can undertake a task within a social context is regarded as self-efficacy (Stajkovic & Luthans, 1998). Those who have a strong sense of self-efficacy in a particular situation will devote their attention and effort to the demands of the situation, demonstrate greater confidence, and when faced with obstacles and difficult situations, will try harder and persist longer. Specifically, job-search self-efficacy refer to the belief that an individual is capable of performing the behaviours requisite for obtaining a desired employment outcome (Nesdale & Pinter, 2000). Graduates are more likely to spend more time on the methods that are more likely to lead them to a job.

Both male and female graduates engage in substantial job search upon graduating. Empirical evidence indicates that men spend more hours searching for employment than females (Faberman, Mueller, Sahin & Topa, 2017; Caliendo, Cobb-Clark & Uhlendorff, 2015). Male and females differ in their search techniques. There is the need to investigate the individual difference in job search strategies and job outcome. Since the latter part of the 1990s, when research on sex differences in job search strategies and the relationship between job search methods and job outcomes received considerable attention, a pattern has emerged (Straits, 1998; Drentea, 1998; Huffman & Torres, 2001). Males spend more time searching for jobs by applying directly to firms and contacting family and friends. This is further collaborated by Straits (1998) who found men to more likely to obtain their recent jobs through personal contacts. Similarly, Huffman and Torres (2001) found that men are

more likely than women to use informal contacts. However, females have been found to spend more time looking for employment opportunities through electronic media (Blau, 1992). Whereas considerable progress has been made in examining sex differences in job search strategies in developed countries, the same progress cannot be said about many developing countries. This section explores which sexes are likely to use which search methods and why.

Figure 5.1: Job Search Strategies by Gender



Source: University Graduates Survey, 2017

The use of family and friends network strategy is utilised more by females (75%) than males (25%). The rest of the strategies are utilised more by males than females. Seventy –four per cent of males and 26% of females utilize newspaper adverts as a source of job search

avenues. More males (84%) than females (16%) will approach employers directly in search for employment.

Table 5.2: Gender Differences in Job Search Methods

Job Search Method	Males	Females	Difference
Family and friends	0.1060	0.1215	-0.1553** (0.0202)
Newspapers	0.0324	0.0395	-0.0071 (0.0120)
Contact employers directly	0.1420	0.1064	0.3560** (0.0199)
Employment agencies	0.0167	0.0213	-0.0046 (0.0088)
Career fair	0.0070	0.0061	0.0009 (0.0049)
Internet	0.2699	0.2523	0.0177*** (0.0273)
Others	0.0719	0.0304	0.0415 (0.0122)
All	4.5951	4.2353	0.3598 (0.1985)

Significance: *** 0.001, ** 0.05 and *0.10; standard errors in brackets

Source: University Graduates Survey (2017)

Table 5.3 below shows a considerable statistically significant gender difference in the use of family and friends in gaining employment. Females are more likely to use their social network (family and friends network) in obtaining employment. However, males are more likely to use the internet and contact employers directly in searching for employment. No significant gender differences were recorded in the use of newspapers, employment agencies and career fairs in searching for jobs.

5.4 Gender Differences in Number of Job Offers

Closely linked to the search methods is the number of employment offers received. In this section, the study is interested in knowing if there are any significant gender difference in the number of job offers graduates obtained.

Table 5.3: Gender Differences in Number of Job offers

Number of job offers	Male	Female	Difference
One	0.071	0.128	-0.057*** (0.018)
Two	0.011	0.012	-0.010 (0.008)
Three	0.457	0.372	0.085* (0.029)
Four	0.006	0.003	0.003 (0.004)
Five	0.008	0.000	0.008 (0.004)
Above five	0.179	0.177	0.002 (0.023)

Source: University Graduates Survey (2017)

Exploring gender differences in the number of job offers graduates received, there is a statistically significant gender difference in receiving one job offer: females are more likely to get one job offer. However, males are more likely to obtain three job offers compared with females. There are no gender differences recorded for the other number of job offers - two, four, five and above five.

5.5 Job Search Strategies, Intensity and Employment Outcomes

This section further explores the relationship between job search method and the number of offers. Self-efficacy has been conceptualised to capture job search strategy and job search

intensity (measured by the number of job applications sent out). Research on job search methods and behaviour find that self-efficacy has a positive effect on job search methods and behaviour, and that search methods, in turn, have a positive effect on employment outcomes (Saks & Ashforth, 2000). Hence, the job search strategy employed has implications on the outcome. Saks and Ashforth (2000) conceptualize employment outcomes as the number of offers received by job seekers. The table below shows the job-search strategy and the number of job offers graduates received in percentages.

Table 5.4: Job Search Strategies and Employment Outcome

Strategies	One	Two	Three	Four	Five	Above five
Ask family and friend	29.41	52.94	8.82	5.88	0	2.94
Read newspaper advert	28.57	42.86	28.57	0	0	
Approach employers directly	41.86	46.51	11.63	0	0	0
Use employment agency	60	40	0	0	0	0
Go to career fairs	25	75	0	0	0	0
Search on the internet	50	33.64	10	2.73	0.91	2.73
Other (specify)	45.83	41.67	4.17	4.17	0	4.17
Total	43.59	41.03	10.26	2.56	0.43	2.14

Source: University Graduates Survey (2017)

Literature highlights the role of social networks in obtaining employment. About 53 per cent of graduates who used the network of friends and family in searching for employment have received two job offers. The use of newspaper advert has generated one job offer for 29 per cent of graduates who use this method and two offers for 43 per cent of graduates.

Intensity of job search, measured by the number of job applications sent out has been found to have a positive relationship with employment outcomes (number of job offers). The results in Table 5.5 below, however, do not show a clear relationship between the number of applications and number of job offers.

Table 5.5: Number of Job Applications and Job Offers

Number of Applications	Number of Job Offers					
	One	Two	Three	Four	Five	Above five
1-5	63.27	34.69	2.04	0.00	0.00	0.00
6-10	51.16	32.56	6.98	4.65	0.00	4.56
11-15	33.33	46.67	13.33	6.67	0.00	0.00
16-20	25.00	50.00	25.00	0.00	0.00	0.00
Above 20	37.88	40.91	13.64	1.52	1.52	4.55
Total	45.1	39.22	10.29	2.45	0.49	2.45

Source: University Graduates Survey (2017)

Generally, most graduates received a job offer (a percentage of 45.1) with the least number of job offers being five (0.49%). A clear relationship cannot be established between job search intensity and number of job offers. Job search behaviour described above and conceptualized in Chapter Two results in the determination of unemployment duration. Having discussed the relationships between these behaviours and employment outcomes, the subsequent sections estimates unemployment duration for graduates subject to some explanatory variables.

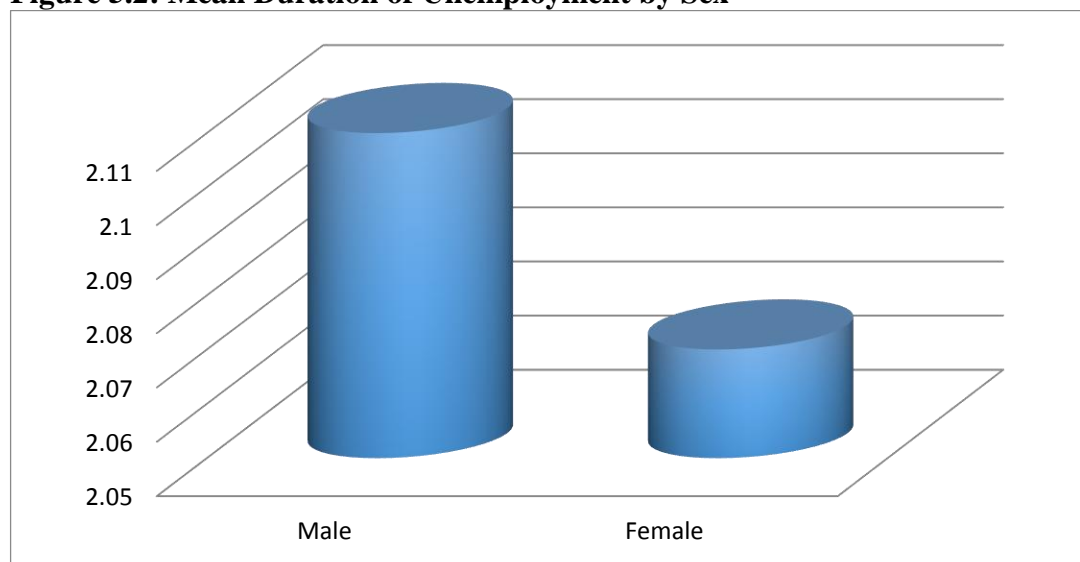
5.6 Duration of Unemployment

The length of unemployment, all things being equal, depends on the wage rate that an individual places on the value his services can command in the labour market and on the opportunity cost of the searching activity (citation). A key source of economic risk is the spell of unemployment. The length of time one remains unemployed has implications on income, consumption, investment and general wellbeing (Dendir, 2006). Again, increasing lengths of the unemployment spell tend to decrease job search activities (McGee, 2015) and can also reduce individuals' self-esteem (Van der Meer, Wielers & Rozenstraat, 2015; OECD, 2014)

5.6.1 Characteristics of Respondents and Unemployment Duration

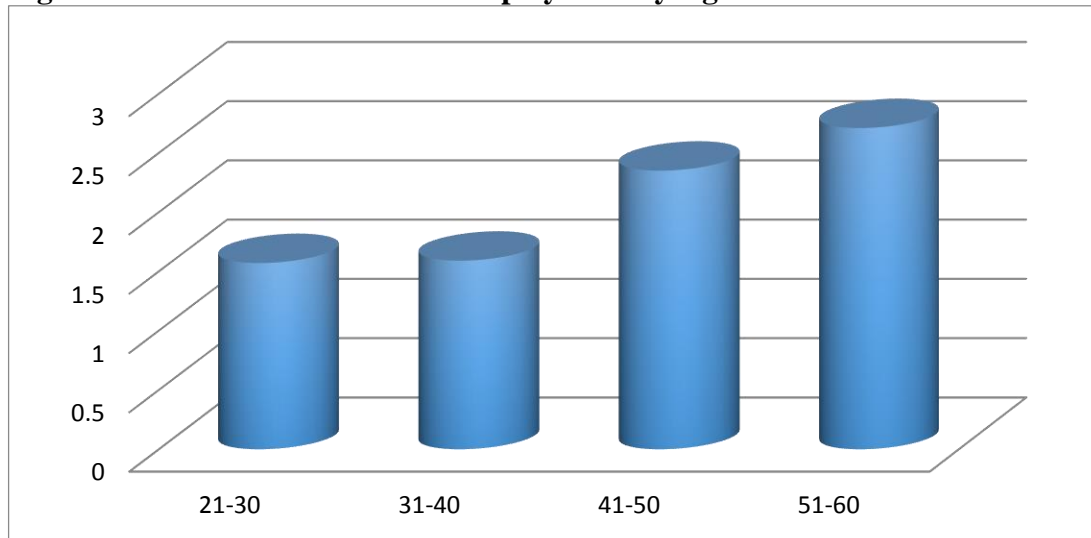
Presented below are the mean unemployment durations by observable characteristics. Males recorded slightly higher mean unemployment duration than females (2.1 years).

Figure 5.2: Mean Duration of Unemployment by Sex



Source: University Graduates Survey 2017

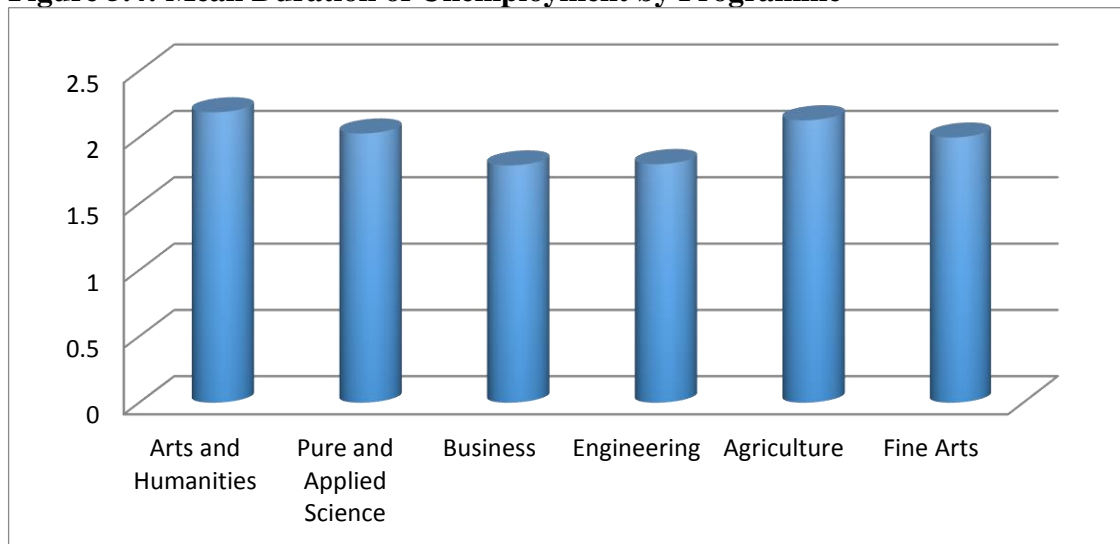
Figure 5.3: Mean Duration of Unemployment by Age



Source: University Graduates Survey 2017

The majority of the sampled graduates are within the age category of 31-40 years and their mean unemployment duration is 1.59 years. The highest duration was recorded for graduates within the age category of 51-60 (2.71).

Figure 5.4: Mean Duration of Unemployment by Programme



Source: University Graduates Survey 2017

Among the different programmes, there are noticeable mean differences. The highest mean unemployment duration was recorded from graduates of Arts and Social Science with a mean of 2.2 years. Graduates of Pure and Applied Sciences recorded a mean of 2.03 years, and Fine Arts, 2 years. The lowest mean was recorded from graduates of business programmes (1.8 years).

Table 5.6: Respondents Characteristics and Unemployment Duration

Variable	Sample percentage	Mean unemployment duration (years)
Single	73.06	2.18
Married	26.94	1.88
UG	27.28	2.04
KNUST	20.54	1.76
UCC	24.29	2.10
UDS	27.89	2.46
Bonding social capital		2.56
Linking social capital		1.13
Job search intensity		1.63

Source: University Graduates Survey (2017)

Married graduates recorded a lower mean duration of 1.9 years compared to unmarried graduates of 2.2 years. By university, University for Development Studies recorded the highest mean duration of 2.5 years while University of Science and Technology recorded the lowest mean duration of 1.8 years. In terms of location, the highest mean duration was recorded in Brong Ahafo Region with mean of 2.5 years and the lowest in Greater Accra Region (1.8 years). Although in Chapter 4 graduates who undertook their national service in Brong Ahafo region have 94 per cent probability of gaining employment in the public

sector, this high probability of employment could not impact their duration of unemployment.

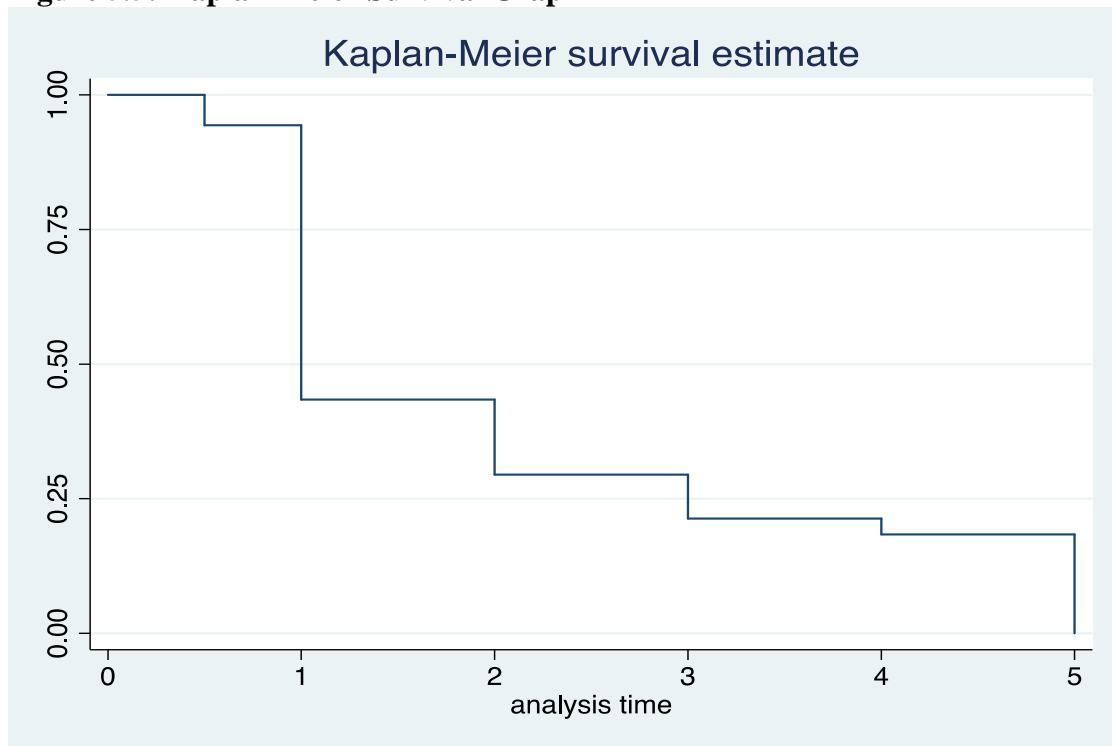
5.6.2 Analysis and Results of Kaplan-Meier Survival Function and Cox Proportional Model

In analysing unemployment duration among university graduates the study used, the Kaplan-Meier and Cox proportional models are used. The Kaplan-Meier estimation method provides analysis of survival from the descriptive perspective and bivariate comparisons using the log-rank statistic. The Cox proportional model provides the risk factors or covariates associated with the survival probability.

5.6.2.1 Results of Kaplan-Meier Survival Function

This section presents estimates of survival functions, which report the probability of remaining unemployed after a given duration. The results of the Kaplan-Meier Survival duration are presented below.

Figure 5.5: Kaplan-Meier Survival Graph



Source: Computations based on STATA, University Graduates Survey (2017)

The Kaplan-Meier survival graph in Figure 5.5 above and survival function on Table 5.9 below show the percentage of graduates who will remain unemployed after the time period.

Table 5.7: Kaplan-Meier Survival Function

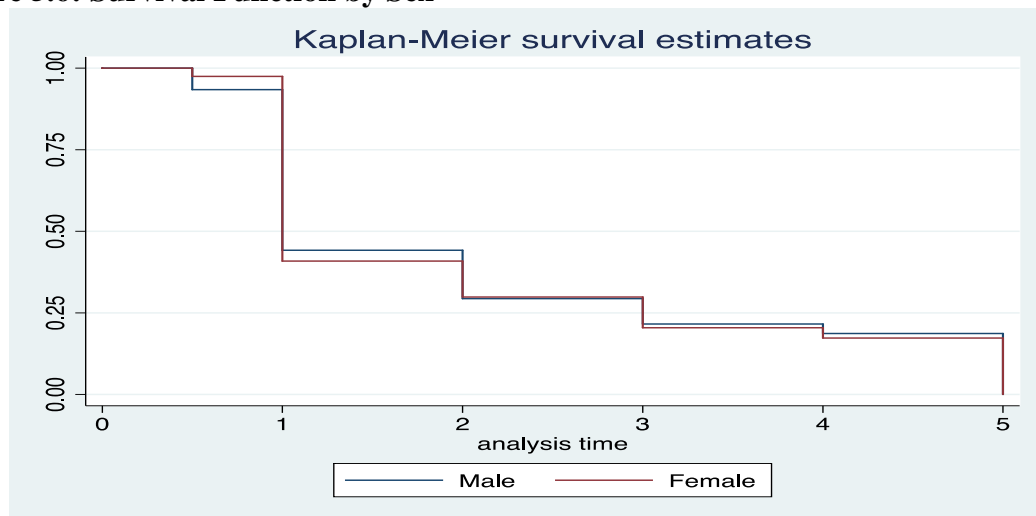
Time	Survival Function
<1	0.9436
1	0.4342
2	0.2948
3	0.2132
4	0.1835

Source: Computations based on STATA, University Graduates Survey (2017)

In less than a year after national service, the probability of a graduate being unemployed is 0.94 or 94 per cent. However, a year after national service, the probability reduces to 43 per

cent as shown in Figure 5.6 and Table 5.9. By the fourth year of being in the labour market, the probability of being employed is 0.82. The results mean that 94 per cent of graduates will remain unemployed for less than a year after their national service irrespective of their programme of study and other characteristics. About 43 per cent, 29 per cent, 21 per cent and 18 per cent will remain unemployed one, two, three and four years respectively after national service. The survival function shows a decreasing trend in the probability of being unemployed. Experience in the labour market can be attributed to the length of time one stays unemployed (Sage, 2017). Graduates who spend longer time searching for jobs will be more experienced in application processes and discover job search strategies that work better. Contrary to this argument, some researchers attribute long unemployment spells with frustration and depression, which can further lead to longer spells of unemployment (Biney, Addo & Abu, 2015).

Figure 5.6: Survival Function by Sex



Source: Computations based on STATA, University Graduates Survey (2017)

The Kaplan- Meier survival graph in Figure 5.6 above and the survival function in Table 5.10 below show the percentage of graduates who will remain unemployed after the time period according to sex.

Table 5.8: Kaplan-Meier Survival Function by Sex

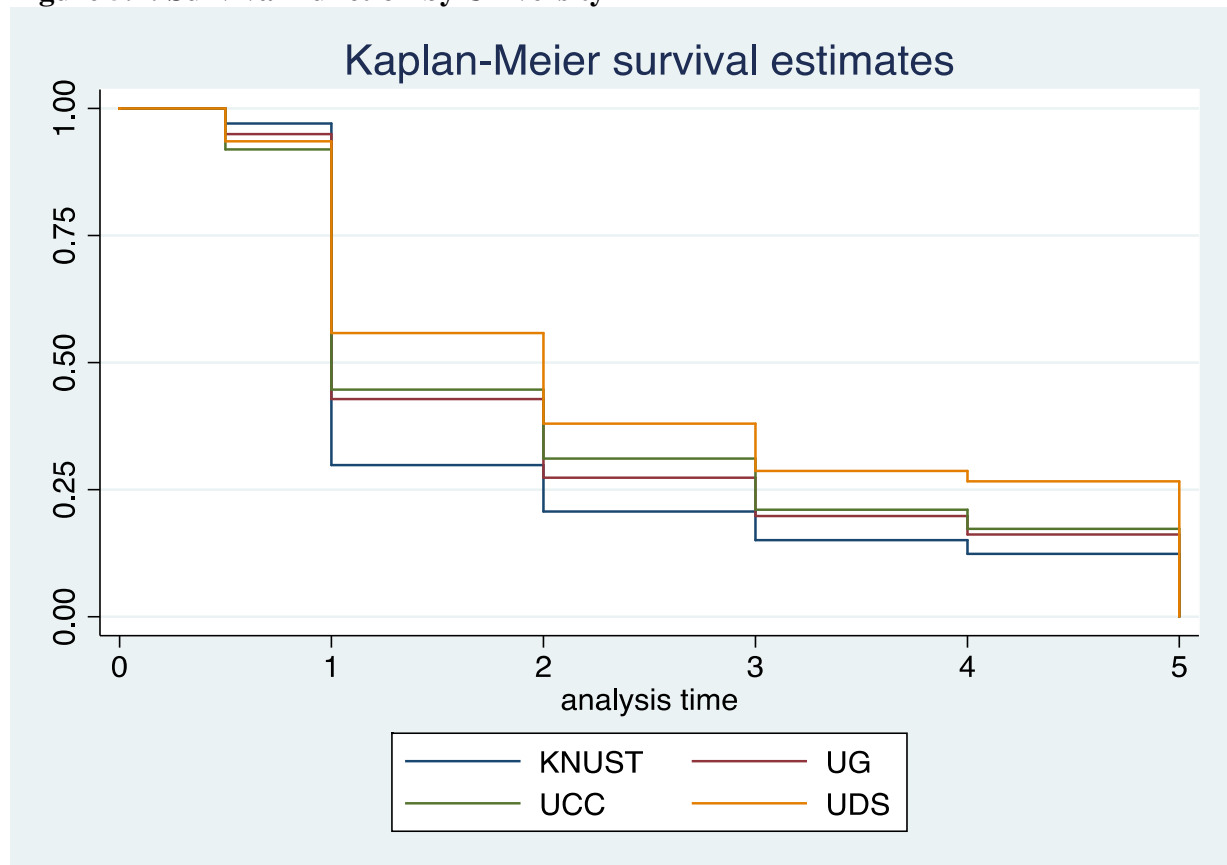
Time	Survival Function
Male	
<1	0.9343
1	0.4418
2	0.2936
3	0.2158
4	0.1867
Female	
<1	0.9748
1	0.4088
2	0.2987
3	0.2044
4	0.1730

Source: Computations based on STATA, University Graduates Survey (2017)

The results of the Kaplan-Meier survival function for sex show no gender differences in unemployment spells by sex. This is confirmed by the log-rank test in appendix 3a with the p-value not statistically significant (0.952), as the P-value is greater than 0.10. Hence, gender is not a determinant of the probability of unemployment duration among university graduates. In less than a year after national service, 93 per cent of male graduates will be unemployed and 97 of female graduates will be unemployed. However, as the years go by, employment improves for female graduates. Although the difference between the probability of employment between males and females is minimal, within a year after national service,

44 per cent and 41 per cent of males and females will remain unemployed. By the fourth year after national service, 19 per cent and 17 per cent of males and females respectively will remain unemployed.

Figure 5.7: Survival Function by University



Source: Computations based on STATA, University Graduates Survey (2017)

The Kaplan- Meier survival graph in figure 5.7 above and the survival function on Table 5.11 below show the percentage of graduates who will remain unemployed after the time period according to the university attended.

Table 5.9: Kaplan-Meier Survival Function by University

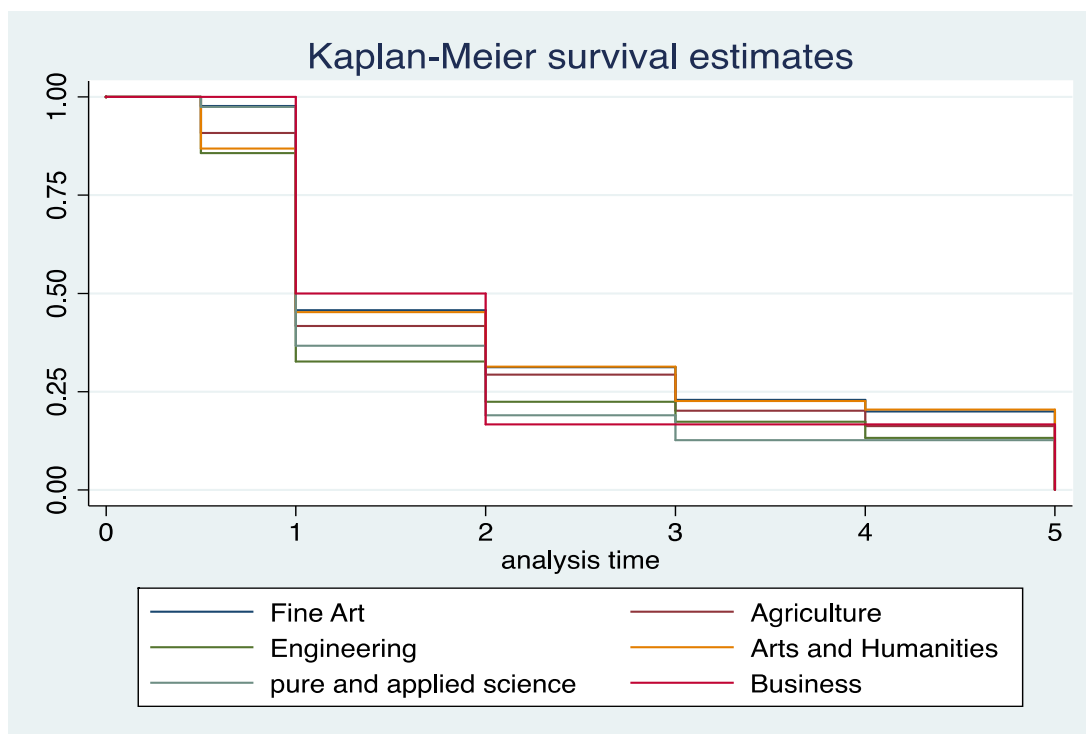
Time	Survival Function
<i>KNUST</i>	
<1	0.9704
1	0.2984
2	0.2070
3	0.1505
4	0.1237
<i>UG</i>	
<1	0.9496
1	0.4281
2	0.2734
3	0.1978
4	0.1619
<i>UCC</i>	
<1	0.9193
1	0.4467
2	0.3112
3	0.2104
4	0.1729
<i>UDS</i>	
<1	0.9354
1	0.5581
2	0.3798
3	0.2868
4	0.2661

Source: Computations based on STATA, University Graduates Survey (2017)

The results showed that there are differences in duration of employment in relation to the university attended, as the log rank test for university attended is highly significant at 1 per

cent ($Pr > \chi^2 = 0.0000$) as shown in appendix 3b. In less than a year after national service, the probability of survival or getting employed are 3 per cent, 5 per cent, 8 per cent and 6 per cent for KNUST, UG, UCC and UDS graduates respectively. This means that 97 per cent of KNUST, 95 per cent of 92 per cent of UCC graduates and 94 per cent of UDS graduates will remain unemployed. In less than a year of national service, the probability of employment favours graduates of UCC. However, in a year, the survival probability reduces drastically in favour of KNUST graduates, with 70 per cent for KNUST, 57 per cent for UG, 55 per cent for UCC and 44 per cent for UDS graduates (survival functions of 30, 41, 45 and 55 per cent for KNUST, UG, UCC and UDS respectively remaining unemployed). By the fourth year after national service, 12 per cent, 16 per cent, 17 per cent and 27 per cent of KNUST, UG, UCC and UDS graduates will remain unemployed.

Figure 5.8: Survival Function by Programme



Source: Computations based on STATA, University Graduates Survey (2017)

The Kaplan-Meier survival graph in Figure 5.8 above and the survival function on Table 5.12 below show the percentage of graduates who will remain unemployed after the time period according to the programme of study.

Table 5.10: Kaplan-Meier Survival Function by Programme

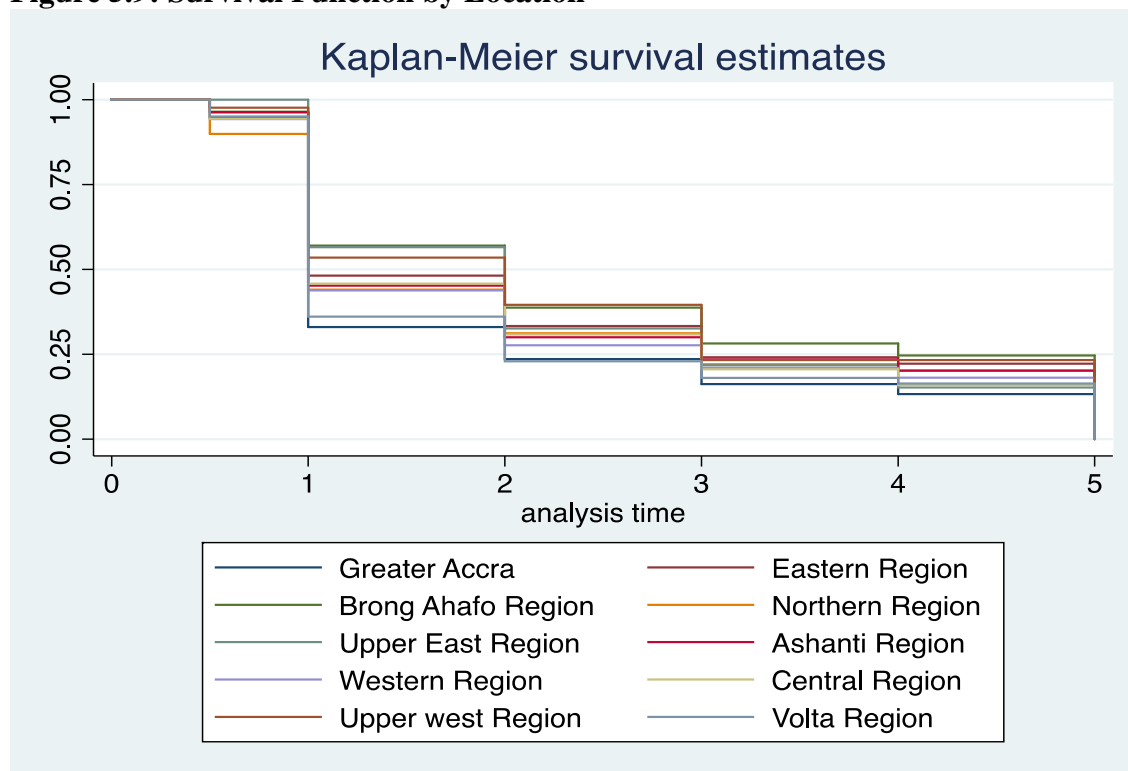
Time	Arts and Social					
	Fine Art	Agric	Engineering	Science	Science	Business
<1	0.98	0.91	0.86	0.87	0.97	0.70
1	0.46	0.42	0.33	0.45	0.37	0.67
2	0.31	0.29	0.22	0.31	0.19	0.43
3	0.23	0.20	0.17	0.23	0.13	0.4
4	0.20	0.16	0.13	0.20	0	0.25

Source: Computations based on STATA, University Graduates Survey (2017)

The log rank test for programme of study is statistically significant at 5 per cent ($Pr > \chi^2 = 0.0216$) as shown in Appendix 3c. The unemployment duration in relation to programme of study shows that, in less than a year after national service, employment favours graduates of business related programmes with only 70 per cent who remain unemployed. Within the same period, 98 per cent of Fine Arts graduates will remain unemployed. However, in the year after national service, unemployment duration favours graduates of Engineering with only 33 per cent unemployed. Of great interest is that the findings show that, even four years after national service, a quarter (25%) of business graduates will remain unemployed. This finding has policy implications considering the influx of business related universities in the market and the wide range of business related programmes within the universities. This study has revealed that business graduates have a

higher employability in less than a year after national service but as the years go by, the employability reduces. Engineering graduates have a higher employability rate within the period except for the first period. Also worth noting is that all graduates of Pure and Applied Science programme get employed in the fourth year.

Figure 5.9: Survival Function by Location



Source: Computations based on STATA, University Graduates Survey (2017)

Table 5.11: Kaplan-Meier Survival Function by Region

Time	GA	ER	BA	NR	UER	AR	WR	CR	UWR	VR
<1	0.95	0.96	0.96	0.90	100	0.96	0.94	0.94	0.98	0.95
1	0.33	0.48	0.57	0.44	0.57	0.45	0.44	0.46	0.53	0.36
2	0.24	0.33	0.39	0.31	0.33	0.30	0.28	0.31	0.40	0.23
3	0.16	0.24	0.28	0.22	0.22	0.23	0.21	0.21	0.23	0.18
4	0.13	0.22	0.25	0.20	0.15	0.20	0.18	0.16		0.16

Source: Computations based on STATA, University Graduates Survey (2017)

The log rank test shows a statistical significance at 1 per cent ($Pr > \chi^2 = 0.0159$) as shown in Appendix 3d. The p-value of the location log rank test is significant at 5 per cent ($p = 0.0159$) indicating that regional differences is a determinant of the probability of being unemployed. In less than a year, the probability of unemployment is almost the same across regions as seen in figure 5.9. Graduates of Northern Region are likely to gain employment faster in that period with the probability of remaining unemployed being the lowest at 0.9. However, from then till the second year into the labour market, graduates in Greater Accra and Volta Regions have lower unemployment probabilities of 33 and 36 per cent in the first year, 24 and 23 per cent in the second year respectively. The results suggest that graduates located in Greater Accra tend to register lower unemployment duration. Although Ghana practises the decentralized system of governance, Accra as the national capital tends to have better infrastructure that facilitates private sector investment and hence there are more employment opportunities. This, no doubt, comes with its own challenges as it draws graduates from the other regions into the national capital, creating problems of migration (Langevang & Gough, 2009).

5.6.2.2 Results of Cox Regression Estimates

The Cox regression estimation technique provides the hazard rate showing the probability that the individual will be employed, per time unit, given that the/she has survived up to the specified time. Before analysing the Cox proportional model a test of goodness of fit of the model was undertaken. Table 5.12 shows the result of the test of goodness of fit.

Table 5.12: Test of Goodness of Fit of Model

	p-value
1. Likelihood Ratio test on joint significance	0.000
2. Restriction test on all significant variables	0.3024
3. Schoenfeld residual test (prop hazard assumption)	0.6997
4. Link test (model significance test)	0.4320
5. Shared frailty test (unobserved heterogeneity $-\theta$)	0.5690
	Plot indicate
6. Cumm baseline hazard plot (unobserved heterogeneity)	No evidence of unobserved heterogeneity
7. Martingal residual plots (functional form test)	No evidence of inappropriate functional form

Testing the overall goodness-of-fit, the likelihood ratio (LR) test is found to be statistically significant, with p-value of almost zero. Thus, the estimated model fits well statistically. The other tests results (restriction test on all insignificant variables; Schoenfeld residual test on proportional hazard assumption; link test on model specification; shared frailty test and duration of dependency on unobserved heterogeneity; and Martingale's residual plot to test on functional form) also suggest that statistically, the estimated Cox Proportional Hazard model has high goodness of fit.

Table 5.13: Description of Variables for Unemployment Duration

Variable	Description
	<i>Dependent variable</i>
Duration of unemployment	Length of unemployment spell
	<i>Independent variables</i>
Age	Age in years
Gender	Male (0) female (1)
Marital Status	Single (0) Married (1)
Social network	Individuals answered yes or no to knowing someone who can/has helped them gain employment. Yes (1) No (0)
Previous work experience	Whether individuals have ever had any experience in the labour market, such as internship, holiday job, etc.
The number of job applications sent out	Job search intensity
Location	Regional location of where respondents undertook national service
Programme	Programme of study
University attended	University attended: UG (1), KNUST (2), UCC (3) UDS (4)

Table 5.14: Cox Regression Estimates for Unemployment Duration

Variable	Hazard Ratio	Standard Error
Age	1.028***	0.011
Sex (<i>ref: Male</i>)	1.392***	0.090
Marital Status (<i>ref: single</i>)	0.985	0.044
Previous work Experience	0.988	0.077
Bonding Social Capital	1.278**	0.080
Linking Social Capital	1.519***	0.149
Job Search Intensity	0.885	0.073
Programme (<i>ref: Art and Social Science</i>)		
Science	1.013	0.092
Business	1.148	0.154
Agriculture	1.124	0.136
Engineering	1.532***	0.230
Fine Arts	1.385	0.709
University (<i>ref: UG</i>)		
KNUST	0.906	0.108
UCC	0.990	0.104
UDS	0.957	0.111
Private sector	1.364***	0.129
Public sector	0.557	0.362
Location (<i>ref: Greater Accra</i>)		
Eastern Region	0.933	0.131
Brong Ahafo Region	0.874	0.117
Northern Region	1.000	0.148
Upper East Region	0.762	0.149
Ashanti Region	0.925	0.099
Western Region	0.951	0.133
Central Region	0.872	0.120
Upper West Region	0.898*	0.202

Table 5.14: Cox Regression Estimates for Unemployment Duration continue

Volta Region	1.043	0.179
Number of subjects		1,113
Number of observations		1,113
Number of failures		1,113
Time at risk		1621.5
LR chi2 (22)		16.66
Probability > chi Squared		0.6129
Log likelihood		-7173.7377

Sig. *0.1; **0.05; ***0.01

Source: Computations based on STATA, University Graduates Survey (2017)

5.6.3 Explaining Unemployment Duration of University Graduates

The results presented in Table 5.14 above show that the age variable is statistically significant at 1 per cent level and the estimates hazard ratio is 2.8. This implies that, for each one-year increase in age, graduates have a 3 per cent higher chance of exiting unemployment, all things being equal. In the human capital theory, age is viewed as a proxy for experience (Cowling & Taylor, 2001). It can be interpreted that older graduates have more experience in the labour market and can therefore take advantage of employment opportunities, which is likely to shorten their unemployment duration. This finding is consistent with those of Lakuma, Marty and Kuteesa (2016) where they found that, in Uganda, the probability of exit from unemployment increases with age. However, contrary evidence exists on the relationship between age and unemployment duration, with unemployment duration tripling for individuals over 55 years in the US as a result of the financial recession (Wanberg, Kanfer, Hamann & Zhang, 2016). In Ghana, Baah-Boateng (2015) and Sackey and Osei (2006) observed that unemployment decreases with age. The African Development Bank in 2012 reported higher adult unemployment rates of about three

times higher. Youth in Ghana face labour market challenges such as lack or limited work experience, and lower labour market skills compared to the older generations (Sackey & Osei, 2006), which pose as barriers to labour market entry after graduation.

The results also show that the hazard rate of leaving unemployment is 39 per cent higher for females than for males. This difference is statistically significant at 1%. The sex of a graduate is an important determinant of unemployment duration in Ghana.

Marital status of graduates was not a statistically significant determinant of unemployment duration among university graduates in Ghana. This result is rather surprising given that marriage is regarded as a source of social network that has the potential of increasing job search methods and strategy. Again, married people are likely to have more responsibilities and dependants that can increase their intensity of job search. Again Addison and Portugal (2014) found that, in developing countries like Ghana, married people are less likely to decline job offers.

As expected, the results show that the two types of social capital, - bonding and Linking- are both statistically significant determinants of unemployment duration. The hazard rate of bonding capital is with a hazard rate of 28 per cent and the hazard rate of Linking capital is 52 per cent. This means that having close friends and relations who facilitate employment will increase the chance of a graduate exiting unemployment after school by 28 per cent. Graduates who use politicians and other civil servants who are not close relations increase their chances of exiting unemployment by 52 per cent. The importance of social network cannot be underestimated in the labour market. Since Oslon's (1965) seminal work, economic reasoning has increasingly inculcated social interaction and literature on social

networks has rapidly gained grounds (Chauvin, Porto & Mulangu, 2017; Mulangu, 2014; Brock & Durlauf, 2001; Manski, 2000). According to the social capital theory, network relationships can facilitate labour market entry by acting as a resource, which is used for information acquisition or informally negotiating labour market rigidities. In terms of job creation, bonding and linking social capital can serve as a source of start-up capital or can be helpful in acquiring other resources and ideas that are beyond the immediate reach of the individual (Turner, 2007). There is, therefore, a positive relationship between access to social capital and the probability of exiting unemployment. By attending the university, graduates are likely to increase their network base through alumni ties and other relations. Empirically, studies in Europe have found a social network as a facilitating tool in reducing duration of unemployment and also results in increases in the number of job offer of university graduates (Piróg, 2016; Baay, Van Aken, De Ridder & Van der Lippe, 2014; Macmillan, Tyler & Vignoles, 2015). In Asia, Chen (2017) found that the social network increases employability and improves the chances of exiting unemployment of fresh university graduates in the Zhejiang Province of China. Although the study was not conducted in Ghana, the results showed that social ties are a common job search strategy in reducing unemployment duration. In African research on social network and employment have concentrated on social network and entrepreneurship (George et al., 2016; Khayesi, George & Antonakis, 2014). Hanson (2005), exploring network relations in Ghana using alumni ties, finds that young people navigate socioeconomic hardship using social relations as a resource. From the results linking social capital has a higher hazard rate compared with bonding social capital. This highlights the strong effect of other social relations other than close relations in the successful transition into the labour market by reducing unemployment

duration. Due to information asymmetry as a result of labour market imperfections in developing countries, and Ghana in particular, Ackah, Aryeetey and Clottey (2011) found that there is the need for an invisible hand in facilitating access to employment.

According to the job mismatch theory, skills mismatch (reflected by the programme graduated) between labour supply and labour demand causes unemployment in the labour market. The quality of human capital invested is also likely to have a significant influence on a graduate's unemployment duration. Huge investments in human capital are expected to produce positive outcome; in this case, positive labour market outcome. A successful labour market entry is also measured by the length of time it takes to gain or create employment. The programme of study is one measure of investment into human capital. Therefore, the programme graduated with is expected to have a statistical influence as a determinant of graduate unemployment duration, but the direction of influence cannot be determined a priority. The findings show that the hazard rate for a graduate with a degree in engineering is 53 per cent higher compared with the base category of Arts and Social Science. In the analytical study of the labour market of tertiary graduates in Ghana by Boateng and Ofori-Sarpong (2002) graduates of science related and engineering programmes have a higher probability of gaining employment. Their study revealed that there is a problem of supply-demand gaps in graduate output. This over-supply of graduate labour is prominent in courses that are easily accessible, such as Arts and Social Science, and an under-supply in critical areas like engineering and the sciences. This basic economic theory results in higher prices for graduates of engineering resulting in higher employment chances and exit rates. Franzen and Hangartner (2006) also found that graduates who obtained jobs through social contacts usually find jobs that are related to their educational degree.

The hazard rate of leaving unemployment for graduates located in Upper West Region is lower by 10.2 per cent than for those located in the capital, Greater Accra. The Ghana statistical service report on job creation revealed that Upper West recorded the least number of jobs created by both formal and informal establishments (GSS, Job creation report, 2014). The job creation report is an indicator of job opportunities in the various regions in Ghana. Upper West is one of the poorest regions in Ghana and hence lacks employment opportunities. The place of residence has been generally found in literature to have a significant effect on unemployment durations (Arulampalam & Stewart, 1995; Grogan & Berg, 2001; Tansel & Tasci, 2003; Kupets, 2006; Serneels, 2007). In Russia, Grogan and Berg (2001) observed that those living in Moscow or St Petersburg have higher exit rates than those living in other regions. Moscow and St Petersburg are capital cities and have more infrastructure and investment opportunities attracting investors and subsequently resulting in higher employment opportunities.

Equally important is the sector in which a graduate undertook national service. Graduates who undertook their national service in the private sector have a hazard rate of 1.364 meaning they have 36 per cent more chances of exiting unemployment compared with those who undertook their service within the public sector. This can be attributed to the recent ban on public sector employment, which restricted access to employment with the sector.

5.7 Summary

This chapter examined the unemployment duration of university graduates in Ghana. The chapter started with an examination of graduates' perception of their employability and access to employment. An overwhelming negative perception of employability and access to

employment was found. The study revealed that demographic characteristics such as gender and age are important determinants of the probability of exiting unemployment for graduates. Similarly, location, social network (bonding and linking social capital) and the programme of study tend to have statistically significant effects on the duration of unemployment.

The study used two methods of duration analysis in calculating unemployment duration. Using the Kaplan-Meier survival function, there was a decreasing trend in the probability of being unemployed with time. In terms of gender, no statistically significant differences were recorded in terms of probabilities of employment implying that gender was not a determinant of unemployment duration. The Kaplan-Meier likewise found regional differences in the survival rate of unemployment, implying that the region in which a graduate undertakes national service has an effect on their probability of exiting unemployment. The Cox proportional regression analysis revealed similar results as the Kaplan-Meier except that, with the Cox proportion analysis, gender is a statistically significant variable in determining the hazard rate of being employed.

CHAPTER SIX

SUBJECTIVE WELLBEING OF EMPLOYED AND UNEMPLOYED UNIVERSITY GRADUATES

6.1 Introduction

This chapter addresses the third objective of the study - to investigate the effect of employment status on the subjective wellbeing of university graduates. The aim is to investigate whether unemployment reduces a graduate's subjective wellbeing. As noted in Chapter Three, literature on the measures of subjective wellbeing includes positive affect (happiness), negative affect (depression) and satisfaction with life. This study borrows from the work of Diener (1984) by using satisfaction with life as a measure of subjective wellbeing. Key among the questions addressed in this chapter includes: What factors account for the subjective wellbeing of university graduates in Ghana? What is the difference between the life satisfaction of employed and unemployed graduates? The chapter is structured under three main sections. Section 6.1 gives descriptive statistics of satisfaction with life of university graduates, while section 6.2 investigates the differences in the subjective wellbeing of university graduates and 6.3 concludes the section.

6.2 Concept of Satisfaction with Life

In Chapter Three, a closer look was paid to the concept of subjective wellbeing by discussing the three commonly used operationalization of the construct. There are three main measures of subjective wellbeing: the Oxford Happiness Inventory; the Depression-Happiness Scale; and the Satisfaction with Life Scale. This study follows the OECD guidelines in measuring subjective wellbeing by adopting the satisfaction with life scale as a

measure of subjective wellbeing. Diener (1984) conceptualizes the satisfaction with life component as “...cognitive evaluation of one’s life” (p.550). Similarly, life satisfaction has been defined as a “global evaluation by the person of his or her life” (Pavot, Diener, Colvin, & Sandvik, 1991, p. 150). It can therefore be explained as a self-assessment of one’s life (Diener, 1994; Diener et al., 2017; Diener & Lucas, 1999; Sheldon, 2013). According to Veenhoven (1994), happiness and life satisfaction are indistinguishable. The satisfaction with life scale is used to measure an individual’s view of their self-esteem, wellbeing and general happiness with life. This scale has been widely used by the New Economics Foundation, the World Health Organization (WHO), the Afrobarometer and United Nations Human Development Report (UNHDR) in measuring overall happiness. The satisfaction with life scale, as a component of subjective wellbeing, was developed by Diener, Emmons, Larsen and Griffin in 1985 to measure a subjective quality of life satisfaction as a proxy of happiness.

6.3 Descriptive Statistics of Life Satisfaction

This section takes a cursory look at the data and how it generally relates to life satisfaction.

Table 6.1: Descriptive Statistics of Satisfaction with Life

Variable	Not satisfied	Satisfied
Sex		
<i>Male</i>	69.41	30.59
<i>Female</i>	67.17	32.83
<i>All</i>	68.91	31.09
Age		
<i>21-30</i>	65.55	34.45
<i>31-40</i>	76.5	23.5
<i>41-50</i>	88	12
<i>51-60</i>	66.67	33.33

Source: University graduates survey, 2017 (N=1470)

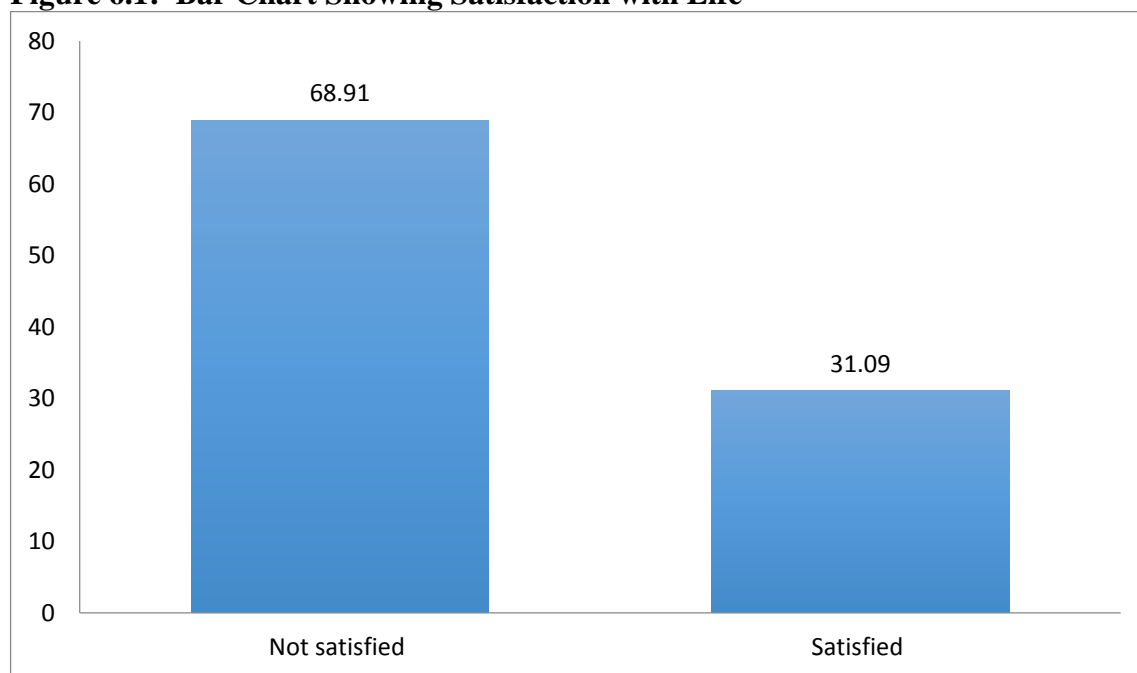
Table 6.1: Descriptive Statistics of Satisfaction with Life, continue

Variable	Not satisfied	Satisfied
Labour market outcome		
<i>Employed</i>	64.68	35.32
<i>Unemployed</i>	78.57	21.43
Type of employment		
<i>Private sector</i>	80.17	19.83
<i>Public sector</i>	51.94	48.06
<i>Self-employed</i>	72.11	27.88
Marital status		
<i>Single</i>	68.34	70.45
<i>Married</i>	31.66	29.55
Number of children		
<i>No child</i>	81.27	18.73
<i>One</i>	83.57	16.43
<i>Two</i>	83.33	16.67
<i>Three and Above</i>	90.7	9.3
University attended		
<i>UG</i>	59.6	40.4
<i>KNUST</i>	59.27	40.73
<i>UCC</i>	80.67	19.33
<i>UDS</i>	74.88	25.12
Programme		
<i>Arts and Social Science</i>	69.82	30.18
<i>Pure and Applied Science</i>	63.46	36.54
<i>Business</i>	73.79	26.21
<i>Engineering</i>	72.14	27.86
<i>Agriculture</i>	69.41	30.59
<i>Fine Arts</i>	50	50
Location		
<i>Greater Accra</i>	65.38	34.62
<i>Ashanti</i>	57.46	34.26
<i>Brong Ahafo</i>	72.37	27.63
<i>Western</i>	68.52	31.48
<i>Eastern</i>	67.26	32.74
<i>Central</i>	72.57	27.43
<i>Upper East</i>	77.55	22.45
<i>Upper West</i>	67.44	32.56
<i>Northern</i>	75.65	24.35
<i>Volta</i>	76.12	23.88

Source: University graduates survey, 2017 (N=1470)

Generally, it can be reported that university graduates are not satisfied with life. About 69 per cent of respondents reported not being satisfied, with only 31 per cent reporting being satisfied at the time of the survey.

Figure 6.1: Bar Chart Showing Satisfaction with Life



Source: University graduates survey, 2017 (N=1470)

Table 6.1 gives descriptive statistics of the percentage of graduates who are satisfied or not satisfied with life according to age, gender, marital status, religion, number of dependents, number of children, university, programme, class and location. In terms of gender, 31 per cent of males and 32 per cent of females are satisfied with life compared with 69 per cent of males and 67 per cent of females who reported not being satisfied respectively. In terms of age, a greater percentage of graduates (66%, 88% and 67%) within the age groups 21-30, 31-40, 41-50 respectively reported not being satisfied with life. With regards to labour market outcome, 35 per cent of employed graduates are satisfied with life, with 65 per cent not satisfied. However, 21 per cent of unemployed graduates are satisfied with 78 per cent

not being satisfied. Of those who are employed, comparing public and private sector employed graduates, a greater percentage (48.06%) of graduates in the public sector reported satisfaction with life compared with those employed in the private sector (19.83 per cent), and 72.11 per cent of self-employed graduates are not satisfied. Both single and married graduates reported being unsatisfied with 68 per cent and 31 per cent respectively. Generally, the results show that a high percentage of graduates are not satisfied with life; only graduates in the public sector recorded satisfaction.

Table 6.2: Life Satisfaction of University Graduates (%)

Response	Male	Female	All
In most ways my life is close to my ideal			
Agree	51.18	51.98	51.36
Disagree	48.82	48.02	48.64
Note: Chi-square = 0.0642; degree of freedom =1; Pr(0.0800)			
The conditions of my life are excellent			
Agree	36.81	33.13	35.99
Disagree	63.19	66.87	64.01
Note: Chi-square =1.5005; degree of freedom=1; Pr(0.0221)			
I am satisfied with my life			
Agree	41.28	44.38	41.97
Disagree	58.72	55.62	58.03
Note: Chi-square = 1.0059; degree of freedom=1; Pr (0.0316)			
So far I have gotten the important things I want in life			
Agree	13.23	16.11	13.88
Disagree	86.77	83.89	86.12
Note: Chi-square =1.7666; degree of freedom=1; Pr(0.000)			
If I could live my life over, I would change almost nothing			
Agree	11.83	15.81	12.72
Disagree	88.17	84.19	87.28
Note: Chi-square = 3.6319; degree of freedom=1; Pr(0.000)			

Source: University Graduate Survey (2017)

Generally there is no difference between the life satisfaction of males and females. Almost an equal percentage of males and females agree that in most ways their lives are close to

ideal (51% of males and 52% of females). In response to the conditions of their lives, 63 per cent of males, 67 per cent of females and 64 per cent of all graduates disagree the conditions of their lives are close to ideal. A higher percentage of females were more satisfied with their lives than males agreeing 44% and 41% respectively. More females than males agreed that so far they have gotten the important things they want in life (13% males and 16% females). Over all, 87 per cent of graduates disagree that if they could live their lives over, they would change almost nothing.

6.4 Other Measures of Life Satisfaction

Other measures of life satisfaction used by the study (although not validated) are presented in this section.

Table 6.3: Graduates' Evaluation of Life Satisfaction (in percentages)

Statement	YES		Total
	Male	Female	
Have you recently been able to concentrate on whatever you are doing?	84.4	87.84	85.17
Have you recently lost much sleep over worry?	30.59	26.44	29.66
Have you felt that you are playing a useful part in things?	84.57	89.97	85.78
Have you recently felt capable of making decisions about things?	91.15	92.10	91.36
Have you recently felt constantly under strain?	37.95	28.88	35.92
Have you recently felt you couldn't overcome your difficulties?	28.22	25.84	27.69
Have you been able to enjoy your normal day-to-day activities?	74.41	81.16	75.92
Have you been able to face up to your problems?	69.50	66.57	68.84
Have you recently been feeling unhappy and depressed?	29.01	21.88	27.41
Have you recently been losing confidence in yourself?	16.30	10.94	15.10
Have you recently been thinking of yourself as a worthless person?	21.65	6.99	18.37
Have you recently been feeling reasonably happy all things considered	78.62	82.98	79.59

Source: University graduates Survey, 2017

The general responses from the table above show that females are generally happier with their lives compared to males. From the table, 84 per cent of males and 88 per cent of females have recently been able to concentrate on whatever you are doing. More males (31%) than females (26%) have recently lost much sleep over worry. A higher percentage of males (28%) than females (26%) have recently felt they couldn't overcome their difficulties. More males (38%) than females (29%) have recently felt constantly under strain. However, more females (81%) than males (74%) have been able to enjoy their normal day-to-day

activities. More males (29%) than females (22%) have recently been feeling unhappy and depressed and 22 per cent of males have recently been thinking of themselves as worthless compared with only 7 per cent of females.

Table 6.4: Life Satisfaction According to Employment Status

Statement	Unemployed		Employed	
	Yes	No	Yes	No
Have you recently been able to concentrate on whatever you are doing?	69.87	30.13	91.88	8.12
Have you recently lost much sleep over worry?	43.75	56.25	23.48	76.52
Have you felt that you are playing a useful part in things?	66.29	33.71	94.32	5.68
Have you recently felt capable of making decisions about things?	83.48	16.52	94.81	5.19
Have you recently felt constantly under strain?	64.51	35.49	36.11	63.89
Have you recently felt you couldn't overcome your difficulties?	40.18	59.82	22.21	77.79
Have you been able to enjoy your normal day-to-day activities?	58.04	41.96	83.76	16.24
Have you been able to face up to your problems?	59.38	40.62	72.99	27.01
Have you recently been feeling unhappy and depressed?	43.30	56.70	20.45	79.55
Have you recently been losing confidence in yourself?	24.55	75.45	10.96	89.04
Have you recently been thinking of yourself as a worthless person?	21.88	78.12	16.83	83.17
Have you recently been feeling reasonably happy all things considered?	35.04	64.96	86.01	13.99

Source: University Graduates Survey, 2017

Generally, from the responses as shown in Table 6.4 above, employed graduates are relatively satisfied with life. From the table, about 92 per cent of employed graduates compared with about 70 per cent of unemployed graduates have recently been able to

concentrate on whatever they do. About 44 per cent of unemployed graduates compared with 23 per cent of employed graduates have lost much sleep over worry. For the question of whether they have recently felt constantly under strain, 36 per cent and 65 per cent of employed and unemployed graduates respectively answered affirmatively. About 43 per cent of unemployed graduates and 20 per cent of employed graduates have been feeling unhappy and depressed. The general trend shows a higher percentage of employed graduates are more satisfied with life than unemployed graduates. Although these questions on life satisfaction have not been validated, the findings support the validated subsequent results below.

6.5 Test of Association

To test whether the independent variables are significantly associated with life satisfaction, a Chi square test was conducted. The results of the chi-square are presented in Table 6.5 below.

Table 6.5: Summary Statistics of Control Variables by Satisfaction with Life

Control variables	Percentage	χ^2 (df)	N
<i>Gender</i>		0.5979**(1)	1470
Male	78.18		
Female	21.82		
<i>Marital status</i>		0.6023***(1)	1470
Not married	73.1		
Married	26.9		
<i>Children</i>		0.285***(1)	1470
Yes	25.2		
No	74.8		
<i>Religion</i>		1.1035(2)	1,470
Christianity	88.5		
Islam	10.3		
Others	1.2		
<i>Employment Type</i>			1,022
Wage employment	89.82		
Self-employment	10.18		
<i>Sector of Employment</i>			918
Private	62.85		
Public	37.15		
<i>Location of Graduate</i>		11.155(9)	1,470
Greater Accra	23.85		
Eastern Region	7.62		
Brong Ahafo Region	11.02		
Northern Region	8.72		
Upper East Region	3.81		
Ashanti Region	21.34		
Western Region	7.41		
Central Region	8.22		
Upper West Region	2.91		
Volta Region	5.11		

Source: University Graduate Survey

From Table 6.5, gender is found to be significantly associated with life satisfaction (chi-square of 0.5979 and $p < 0.005$). Marital status and having children are likewise statistically significant with life satisfaction and are likely predictors of graduate life satisfaction.

6.6 Exploring Predictors of Satisfaction with Life of Employed and Unemployed

University Graduates

To determine the differences in how employed and unemployed graduates assess their satisfaction with life, a probit regression was employed with binary dependent variables as satisfied and not satisfied. The results are presented in Table 6.6 below.

Table 6.6: Description of Variables

<i>Variable</i>	<i>Description</i>
<i>Dependent variable</i> (life satisfaction)	1=satisfied, 0=not satisfied
<i>Independent Variables</i>	
Employed	0 = unemployed university graduates 1=employed graduates
Age square	Square of Age
Sex	Dummy variable: 0= Male 1=Female
Religion	Dummy: 1=Christian, 0 otherwise
Employment type	0= self-employment 1=wage employment
Sector of employment	0= public sector 1= private sector
Marital status	0=not married 1=married
Income	Earnings of employed graduates
Location	Regional location of graduates
Employed females	0= unemployed female graduate 1=employed female graduates
Children	Graduates with one or more children
Married with Children	0=graduates who are married without children 1=married with children

Table 6.7: Probit Estimates for Determinants of Satisfaction with Life

Variables	Model 1 (ME)	Model 2 (ME)	Model 3 (ME)
Age	0.1823***	0.1200*	-0.0028**
Age Squared	0.1006***	0.0125**	0.007**
Sex	0.3823	0.0030	0.1403
Married	0.8448***	0.9571**	0.5035**
Religion	0.3149	0.2630	0.0430
Income	-0.3721**	0.1783	0.0155
Children	0.8773	0.5540	0.0199
Employed	0.3014**	-	-
Wage Employed	-	0.2798	-
Private Sector	-	-	-0.4735***
Location (Ref: Greater Accra)			
Eastern Region	-0.8309	-0.8685	0.7012
Brong Ahafo Region	-0.6317	-0.7577	-0.0395
Northern Region	0.6952	-0.0396	-0.0614
Upper East Region	-0.6229	0.3242	0.0742
Ashanti Region	0.1125*	-0.1877	0.3052
Western Region	-0.9451	0.1401	-0.5341
Central Region	-0.6200	0.1005	-0.3342
Upper West Region	0.7968	0.7012	0.5399
Volta Region	-0.5194	-0.7330	-0.9299
Bonding Social Capital	0.4307***	0.1950***	0.2740
Employed Females	0.1016**	0.1340*	0.3471
Married Females	0.3378***	0.1201*	0.2151
Married with Children	0.0385**	0.0675***	0.1731***
Number of observations		1,448	
LR chi2 (23)		68.89	
Probability >chi-squared		0.0000	
Pseudo R-Squared		0.0826	
Log likelihood		-1169.0361	

Standard Errors in parenthesis; Sig. * 0.1; **0.05; *** 0.01

Source: Computations based on STATA University Graduates Survey (2017)

6.7 Determinants of Subjective Wellbeing of University Graduates

The study admits that there is a possibility that life satisfaction can influence graduates' employment status, which poses an endogeneity problem but because instruments are extremely difficult to come by, the study was not able to address it. Ideally, an instrument

for employment status, which does not correlate with life satisfaction should be identified and used in an instrumental variable two stage least square estimation procedure to address the endogeneity problem. Considering the fact that the data does not provide this instrument, the problem could not be addressed. According to Chang and Yen (2011), only few studies have addressed the possible endogeneity between employment and life satisfaction. The results therefore do not imply causality and should be interpreted as correlates. The results are provided in Table 6.7. Model one determines the relationship between life satisfaction and employment. Model two determines the relationship between wage employment and life satisfaction and model three examines the relationship between public sector employment and life satisfaction.

6.7.1 Age

In model one and two, the study finds a negative relationship between age and life satisfaction but a positive relationship between age squared and life satisfaction. In line with Howley (2017), there is a U shaped relationship where younger people and older people report higher life satisfaction and the lowest reported by the middle aged. This is attributed to the fact that younger people do not have much to worry about in life but as they get to middle age, the stress of life reduces their life satisfaction and when they finally get into old age they would have acquired all they want and therefore are likely to be satisfied with life. Others have found an inverted U shaped relationship between age and life satisfaction. The reason attributed to this finding is that as younger people are striving hard to make a living in life and this reducing their life satisfaction. When they get older, their health begins to fail them reducing their life satisfaction. The findings are inconsistent with Ferreri-Carbonell

and Gowdy (2007) who found that, as people age, they are more likely to be satisfied with life.

6.7.2 Marital Status

The association of marriage and subjective wellbeing has been explained by Reis and Gable (2003) in the context of social capital and support theory. According to the ‘protection’ hypothesis of marriage, marriage bestows companionship, emotional support and financial stability among others. These, in the long run, promote wellbeing (Stutzer & Frey, 2006). Social support is a key determinant of happiness (Schnebelen & Bruhn, 2018) and marriage can serve as a source of social support and a catalyst in increasing life satisfaction. In almost every society, adults are expected to marry in whatever form. According to Becker (1985), there are gains from marriage through increased earnings, and marriage is viewed as a rational choice for which the benefits outweigh the cost. In Ghana, like many African societies, marriage is the foundation of social organization and the relationship between marriage and life satisfaction is very profound (Assimeng, 2007). Marriage has therefore been held in high esteem with great importance placed upon it (Addai et al., 2015; Lloyd & Mensch, 2006). Marriage is thus expected to have a positive effect on life satisfaction. The results in all these models are positive and significant for the marriage variable. This means that married graduates have a 84 per cent, 96 per cent and 50 per cent probability of being satisfied with life. This finding is in line with a priori expectations considering the fact that Aroian, Uddin and Blbas (2017) portray marriage as a source of social support, which has the likelihood of reducing stress and subsequently increasing happiness. Similarly, Dales (2017) and Paik (2016) find friendship and marriage to have a positive relationship with

happiness. There is ample evidence that married graduates are more satisfied with their lives than single graduates (Myrskylä & Margolis, 2012). Although these studies were not conducted in Ghana, the results show that lower psychological wellbeing among unmarried graduates can be attributed to the high levels of distress, lower financial support and societal pressure especially for females to get married (Gornick, 2004; Evenson & Simon, 2005; Goldstein & Kenney, 2001). In Ghana, Addai et al. (2013) found that, contrary to the generally held view that marriage is associated with high wellbeing, marriage actually reduces life satisfaction. This, they attribute to the economic strain married people, especially males, endure in providing for their family needs.

The gender effect of marriage on satisfaction has been reported in studies such as Lee et al. (1991), Waite (1995) and Addai et al. (2015) where married males reported higher life satisfaction than unmarried males. Females have been suggested to exhibit a relatively higher reliance on marriage for self-gratification. This is because social stigma hypothesis places more approval on marital status and stronger disapproval on unmarried status, which generates positive life satisfaction (Diener et al., 2000). In terms of gender differences in marriage and satisfaction, an interaction of the two variables revealed that married female graduates are less likely to be satisfied with life. Married female graduates have a 33 per cent probability of being satisfied with life in model one and 12 per cent probability of life satisfaction in model two. Although married graduates are likely to have more emotional and other responsibilities than unmarried graduates, the value placed on marriage in the Ghanaian context prejudices against females, with unmarried females usually regarded as non-conformists to the status quo (Pokimica et al., 2012). The high social, cultural and economic value placed on marriages in Ghana can explain why married females are more

likely to report higher life satisfaction. However for married males, the effect is negative by about 26 per cent. This can be explained by the fact that marriage places financial burden on males who have to make a living not only for themselves but for their partner and the larger family.

6.7.3 Income

The “Easterlin Paradox” makes us understand that income and happiness are positively associated only for a particular period of time, since the relationship does not hold over time: Easterlin regards this as a paradox (Easterlin et al., 2010). According to him, happiness varies directly with income, but over time, happiness does not increase with further increases in income. This time series period of income and happiness is usually over 10 years. The bivariate analysis found income to be a predictor of life satisfaction among graduates; however, income has a negative relationship with life satisfaction. With a unit increase in income, graduates are 0.37 times less likely to report being satisfied. This highlights the fact that money is not necessarily a determinant of graduate life satisfaction contrary to Michalos (2017) who revealed that raising people’s income could raise happiness. This confirms the “Easterlin Paradox” to an extent where income at a point is not a predictor of life satisfaction. It can be argued that the Easterlin’s paradox was a macro analysis of economic advancement and satisfaction of nations. At the individual level, Diener et al. (1999) found higher wages increase satisfaction, but only to a specific degree. It can therefore be concluded that income is a necessary, but not a sufficient, predictor of life satisfaction among university graduates in Ghana.

6.7.4 Employment

The results explain the differences in subjective wellbeing of employed graduates compared with unemployed graduates. Employment has been found to have a positive relationship with life satisfaction, statistically significant at 1 per cent. Employed graduates have a 30 per cent probability of being satisfied with life compared with their unemployed counterparts. The results must however be interpreted with caution as life satisfaction itself can influence employment. It is possible that graduates who are more satisfied with their lives are the ones who will seek employment. Hence the possibility of a bidirectional relationship. Employment is regarded as a form of financial asset. Senik (2008) found that accumulation of financial assets through income generation has a great positive effect on wellbeing. Access to income can correspondingly lead to accumulation of other forms of assets such as physical assets through savings (Ellis & Freeman, 2004). Such assets can play a crucial role in smoothing incomes in times of income fluctuations. Employment, as an income-generating venture, can therefore help in the accumulation of various forms of assets and help in enhancing wellbeing and, subsequently, satisfaction with life. Although some studies show a negative relationship between employment and general satisfaction with life by arguing that employment increases stress and competes with an individual's leisure (Naseem, 2018), others have consistently shown that there is a positive relationship between employment, life satisfaction and general subjective wellbeing by decreasing anxiety and depression (Griep et al., 2016). Lelkes (2006) found that unemployment reduces the probability of life satisfaction by 19% using European data. Other studies (Frey & Stutzer, 2002) suggest an even higher reduction.

6.7.5 Sector of Employment

The type of employment has no statistical significance with life satisfaction. In terms of sectoral employment, graduates employed in the private sector compared to those in the public sector are less likely to be satisfied with life. This can be related to the work demands of the private sector. Contrary to studies that suggest a positive relationship between life satisfaction and number of hours worked (Luechinger, Meier & Stutzer, 2006, Hansson & Salmela, 2005), this study finds from model three that, graduates employed in the private sector have 47 per cent lower probability of being satisfied with life. The private sector in Ghana is associated with higher monitoring and supervision and longer working hours although the formal private sector pays relatively higher wages than the public sector (Fallah, 2017; Akarçay Gürbüz & Polat, 2016). The public sector however is associated with stronger dismissal protection and lower risk of bankruptcy (Luechinger, Meier & Stutzer, 2006). Time and money have been considered to be vital resources in the determinant of happiness. Kasser and Seldom (2009) have found that having more time to one's self is related to happiness and life satisfaction. With the trade-off between time and money, focusing on time gives one enough opportunity to engage in happiness-triggering behaviours such as socialization and less work, hence feeling happier and more satisfied with life (Hershfield et al., 2016; Whillans et al., 2016). This result is not surprising as graduates who work in the private sector are more likely to have 'time famine' as described by Perlow (1999) and hence will be more likely to exhibit behaviours that undermine subjective wellbeing such as stress and physical health.

6.7.6 Location

In terms of location, the bivariate analysis in model one indicates that graduates located in Ashanti Region relative to Greater Accra have 11 per cent higher probability satisfied with life. Aside Ashanti Region, graduates resident in all other regions relative to Greater Accra reported lower life satisfaction, although not statistically significant in model one. No statistical significance was reported for location in model two and three. This finding is not surprising considering that Ewusi (1976) found regions outside the national capital relatively lack socioeconomic facilities and social amenities that propel satisfaction. So what is different about Ashanti Region, which makes its graduate residents report higher levels of life satisfaction? This finding is consistent with the finding of Addai (2014) where they attribute the results to what is known in measurement literature as “reporting heterogeneity”, where the perception of people’s wellbeing vary even under the same conditions.

6.7.7 Married with Children

Graduates who are married with children are more likely to be satisfied with life and less likely not to be satisfied compare with married graduates without children. This was significant for all three models recording probabilities of 4 per cent, 7 per cent and 17 per cent. The effects of marriage on psychological wellbeing strongly depend on parenthood status. There is ample evidence that parents are more satisfied with their lives than childless couples (Demo & Acock, 1996; Myrskla & Margolis, 2012). Although parents face higher levels of time pressure (Gerson & Jacobs, 2004) as well as lower financial wellbeing (Gornick, 2004), especially for parents with young children, this lower psychological wellbeing can be attributed to the fact that non-parents face higher levels of psychological

distress from society (Evenson & Simon, 2005; Nomaguchi & Milkie, 2003). The results show that married graduates with children are more likely to be satisfied with life compared to those without children by 4 per cent. This highlights the importance of children in improving life satisfaction. The value of children theory argues that the emotional benefit of parents does not depend on the number of children one has. According to the theory, marginal utility derived from having one more child decreases (Nauck, 2007). This study simply finds that just having a child has a 4 per cent probability of increasing life satisfaction.

6.7.8 Social Capital

Research on social capital and life satisfaction has gained ground not only in literature on social space but also in economics. The importance of social capital in determining happiness has been highlighted by Helliwell (2006), Portela et al. (2013), and Sulemana (2015) where they found that people who frequently contacted family and friends are much happier than those with no such contacts. Bonding social capital, which measures ties with close family relations and friends has been found by Helliwell and Putman (2004) to have reduced the negative domain of the affective component of social capital, which includes loneliness, stress, depression, etc. This means that bonding social capital has a positive effect on life satisfaction. The results from the survey show that a unit increase in bonding social capital increases the probability of being satisfied with life by 43 per cent in model one and 20 per cent in model two. Similar findings were reported from the study of Sulemana (2015).

6.7.9 Religion

What is surprising from the findings is the effect of religion on life satisfaction. In Ghana, with a lack or limited social welfare programmes, religious participation has become a source of social support for many, especially in times of difficulties (Pokimica et al., 2012). However, this study finds no statistically significant relationship between religion and life satisfaction among university graduates although the relationship is positive for non-Christian graduates compared with Christians. This result is surprising since Ghana is regarded as a religious country and predominantly Christian (GSS, 2012) and religion is deemed to be an important social mediator in all aspects of life. This study is, however, consistent with Addai (2013a) who obtained an insignificant effect of religious affiliation and life satisfaction.

6.8 Summary

This chapter examined the difference in life satisfaction with employed and unemployed graduates. The results revealed that, generally, graduates are not satisfied with life with about 69 per cent of them reporting this. A higher proportion of unemployed graduates reported not being satisfied. Within the employed graduates, the results further showed that those employed in wage employment compared to self-employed are more likely not to be satisfied with life. A further disaggregation shows that, within wage-employed graduates, a higher proportion of graduates employed in the private sector are more likely not to be satisfied with life. The probit estimates reveal that married graduates are more likely to be satisfied with life compared with graduates who are not married. Interestingly, income has a negative relationship with life satisfaction contrary to literature but partially confirming

Easterlin's paradox of income and life satisfaction. Employment was found to be a correlate of life satisfaction with employed graduates having a 30 per cent higher chance of reporting being satisfied with life. Other measures of life satisfaction, although not validated, corroborates the results.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND POLICY RECOMMENDATIONS

7.1 Introduction

This chapter summarizes the major findings discussed in the last three analytical chapters. Based on the findings, conclusions and recommendations are made in an attempt to inform policy issues towards better graduates' labour market outcomes and improvement in life satisfaction. The chapter then concludes with suggestions for further research.

7.2 Summary

The main objective of the study was to explore the labour market outcomes of university graduates in Ghana and their subjective wellbeing. In order to achieve this, the study considered the following objectives:

- To analyse the determinants of employment among university graduates;
- To determine the unemployment duration of university graduates in Ghana; and
- To examine the subjective wellbeing of university graduates.

The study is grounded on three theories - the theory of human capital, social capital theory and the social cognitive career theory. These theories seek to explain how university graduates in Ghana transit into the labour market and the various outcomes that emerge. The theories are further used to examine what determines the differences in subjective wellbeing of graduates based on their different labour market outcomes.

7.2.1 Determinants of Graduate Employment

The probit analysis carried out in Chapter Four identified some determinants of graduate employment as statistically significant. Despite the view in employment literature that females are disadvantaged in the labour market (Nyarko, Baah-Boateng & Nketiah-Amponsah, 2014; GSS, 2012), this research shows that female university graduates are more likely to be employed compared to their male counterparts. Although this type of employment is not necessarily formal employment, females are more willing to take up any job with the hope of getting a better one. This explains the dominance of females in the labour market, especially for the informal sector.

Another interesting finding that has not previously been explored in the Ghanaian labour market is the relationship between programme of study of graduates and their employment outcome. Graduates of Engineering and Science were observed to be statistically significant with a positive relationship with employment compared with graduates of Arts and Social Science. This makes the chances of employment for graduates of Engineering and Science higher than that of Arts and Social Science. Although there are few studies in the area of programme of study and employment outcomes, this study attributes these findings to the value placed on these graduates based on the economic theory of supply and demand. With few universities specialized in the training of graduates in these fields of study, coupled with the expanding technological sub-sector, the supply of these graduates falls short of the demand and this ultimately increases their price in relation to their market value.

Another key finding relates to social network and employment outcomes. The social capital theory seeks to explain how network relations can affect labour market outcome. Social

capital theory classifies social capital as bonding social capital, linking social capital and linking social capital (Putnam, 2002; Woolcock, 2001). Bonding social capital is the network of close associates and family relations like parents, siblings, close friends and other close relations. Linking social capital refers to ties or networks that cut across social and economically different positions. Linking social capital emanates from institutions that are particularly helpful in acquiring resources or ideas, and information from more formal institutions beyond the immediate reach of individuals and the community. Linking social capital, on the other hand, operates at a less personal level and often turns out to be based on indirect secondary social relations. Linking social capital is a product of weak ties among members. It involves support from individuals who are distant within the network of relations of the youth. Such connections involve connections with acquaintances and distant relations. Examples of linking social capital include political networks, which are not close relations, religious ties, alumni ties and many others. The study used bonding and linking social capital as measures of a social network.

From all the analysis, in seeking employment, graduates tend to relay their resources, which includes their social capital. Bonding and linking social capital ties played a significant role in obtaining employment for graduates. With the imperfections that characterize African markets (including Ghana), graduates use all resources available to them in order to gain access to the labour market. The effect of bonding capital was stronger than linking capital, implying that kinship and close relations are more influential in the transition process into the labour market.

Previous work experience has been emphasized as a critical component of human capital

theory. This study found a statistically significant and positive relationship between having some previous work experience and having a positive employment outcome. Graduates with some form of work experience, either in the form of holiday jobs, internship, attachment and many others tend to have a strong connection with the labour market. They furthermore build their network base through such engagements. These facilitate job search and consequently lead to successful labour market transition. Work experience has likewise been found to promote higher confidence levels, which are necessary for labour market entry.

The study further explored the type of employment for those who are employed (wage or self-employment) and the determinants of graduates being self-employed. With the rising unemployment rates, self-employment has been touted as a panacea to the soaring graduate unemployment problem. The analysis showed that gender, age and ethnicity all account for self-employment among university graduates. Contrary to literature, which portray females as being risk averse, female university graduates are more likely to be self-employed compared to males. This could possibly be because of the flexibility in self-employment, especially for married females who have to balance family and work. Again, due to the unavailability of wage employment, self-employment has been used as an alternative to gaining a livelihood and developing a career path for females. Additionally, the study found the number of applications sent out to be a measure of self-efficacy. The majority of graduates (38%) attributed the unavailability of jobs in the wage sector as the main motivation for venturing into self-employment.

Finally, the study explored the determinants of the sector of employment for those engaged in wage employment. Among the statistically significant variables that determine public

sector employment are gender, programme of study, location, risk aversion, social network and number of job applications. Job security or stability was highly attributed to being the motivation for taking up employment in the public sector. The analysis also revealed gender differences in sub-sectors of employment. More males than females were likely to be employed in the education and legal sub-sectors. However, there are more females than males in the health, tourism and hospitality sub-sectors. This finding is not surprising, particularly for the tourism and hospitality sub-sector, since it is a female biased sector. No statistically significant gender differences were reported in the manufacturing, sales and marketing and oil industry.

7.2.2 Unemployment Duration of University Graduates

This section of the study summarises the major findings that emerged from the duration of unemployment analysis. Two methods of analysis were used to determine unemployment duration - the Kaplan Meier and the Cox regression model. The Cox regression model provided results on the determinants of the exit rate of unemployment and the Kaplan Meier provided unemployment duration for the main variables of interest. The Kaplan-Meier survival function indicated a decreasing trend in the probability of being unemployed with time. In terms of gender, no statistically significant differences were recorded in the probabilities of employment implying that gender was not a determinant of unemployment duration. The Kaplan-Meier also found regional differences in the survival rate of unemployment, showing that the region in which a graduate undertakes national service affects their probability of exiting unemployment. The Cox proportional regression analysis revealed similar results to the Kaplan-Meier except that, with the Cox proportion analysis,

gender is a statistically significant variable in determining the hazard rate of being employed.

7.2.3 Satisfaction with Life of University Graduates

According to Frey and Stutzer (2002), policy makers should be gearing towards policy that aims to improve life satisfaction for as many people as possible since, in the long run, almost everyone aims to be happy. The results showed that graduates were generally not satisfied with life. The probit results revealed marriage, employment status and sector of employment as correlates of life satisfaction. Other interaction variables, which also correlate with life satisfaction, include employed females and married males who both have a negative relationship with life satisfaction. Married females and married graduates with children portrayed a positive relationship with life satisfaction.

7.3 Policy Recommendations

Policy recommendations are targeted at the actors involved.

7.3.1 Government

Job creation programmes in Ghana have mostly been generic. While this approach seems to target all graduates, the findings of this study reveal that engineering and pure and applied science graduates have lower unemployment duration and are more likely to find jobs within a year after graduation. The study therefore recommends that job creation strategies should give attention to graduates of Arts and Social Science who constitute a higher proportion of graduates from all universities and yet are less likely to find employment.

Living in some region other than Greater Accra (such as Upper West Region) tends to reduce the probability of graduates gaining employment and increases their unemployment duration. While programmes such as the Savannah Accelerated Development Authority (SADA) offer support from government and other development partners to achieve its core mandate of bridging the gap between the northern and southern parts of the country, there is the need for more to be done. Government is therefore advised to deepen the agenda for northern development in order to provide employment opportunities for the youth.

The study furthermore found that male graduates are less likely to find employment. It therefore recommends that government should implement gender targeting job creation policies aimed at improving job opportunities for male graduates.

7.3.2 University Authorities

The influx of non-professional degree programmes such as the Arts and Social Science in the universities has resulted in universities churning out high numbers of graduates with such certificates resulting in an influx of these graduates onto the labour market. Given the high number of job seekers with such certificates, coupled with dwindling job opportunities, their employment chances are reduced increasing their unemployment duration. University authorities should therefore run degree programmes in areas where there is a high demand for a particular skill set to enable an easier transition into employment: this situation was highlighted in the study, which showed that graduates of sciences and engineering are more likely to find jobs because of the labour market demand for such personnel.

University authorities should intensify and promote career guidance and counselling since the study finds that 70 per cent of males and 80% of female graduates form their employment expectations while at the university.

7.3.3 Graduates

University graduates should be encouraged to obtain work experience especially during vacations in the form of internships to facilitate their future labour market entry as the study shows that graduates with some form of work experience have a higher probability of employment. Graduate should also strengthen and increase their social capital, especially linking capital, as it was found to facilitate employment.

It is recommended for graduates to intensify their job searching behaviours by churning out more applications since it is evident from the findings of the study that an additional application increases the probability of gaining employment by 11 per cent.

7.4 Conclusions

Conclusions of the study are based on both the empirical findings and literature. Graduate labour market outcomes have attracted increasing debate and discussion in recent times. Rather unfortunately, discourse involving policy makers and employers on graduate employment and employability is conducted without a detailed understanding of the grounded realities of the situation of the youth. Using graduates of four main public universities in Ghana, the study has found their labour market outcomes and what accounts for the outcomes observed. It has also determined duration of unemployment and the differences in life satisfaction of graduates in Ghana.

7.5 Contribution to Knowledge

The study has contributed to graduate unemployment literature in several ways. First, most claims about graduate attributes are anecdotal and on a macro perspective. Hence beyond completion of degree courses, there is a severe lack of information pertaining to the transition of graduates and where they end up in the labour market. This study has revealed the different types of labour market outcomes of university graduates in Ghana and, more importantly, what determines these outcomes. It has also bridged the macro and micro level of labour market analysis in Ghana. Second, the study explores another perspective of labour market studies through the use of different types of human capital (different programmes of study) and the effect of social networks using two distinctive types of social capital - bonding and linking social capital ties. These have been incorporated into the broader framework to support how graduates find jobs in the mist of labour market informality and have contributed to unemployment and social capital literature. Third, the study has revealed the supply side of labour market dynamics, which has gained little attention in unemployment literature. The study has also developed a framework for labour market outcomes and SWL in Ghana using socio-psychological, socio-economic and situational factors.

7.6 Areas for Further Research

The study would have desired to examine the labour market outcomes of graduates of private universities in Ghana; however, resource availability and a limited time frame rendered this impossible. It is therefore recommended that another study extend the investigations on labour market outcomes and subjective wellbeing to graduates of private

universities in order to examine the differences and fully inform policy on graduate employment outcomes. Again, including more universities will provide a better ground for generalization of the implications of these outcomes on university graduates in Ghana. Finally, this research calls for a longitudinal study using qualitative methods such as life trajectory approaches to monitor and track these outcomes and their implications for life satisfaction over time.

The study did not explicitly include formal and informal employment although issues of formal and informal employment has important considerations in development discourse giving the importance of the informal economy in developing countries. This could be an area for further exploration in future studies. Further studies could also examine the quality of employment of graduates.

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APPENDICES

Appendix 1: Survey Questionnaire

**INSTITUTE OF STATISTICAL, SOCIAL AND ECONOMIC
RESEARCH (ISSER)**

UNIVERSITY OF GHANA, P.O.BOX LG74

LEGON-ACCRA

**TOPIC: GRADUATE EMPLOYABILITY AND LABOUR MARKET
EXPERIENCES IN GHANA**

Dear University alumnus,

Good morning/afternoon, my name is Andaratu A. Achuliwor, a PhD student at ISSER University of Ghana. I am conducting a study on Labour Market Outcomes of University Graduates as a requirement for the award of a doctorate degree in Development Studies. Graduate unemployment has become a big issue in recent years and I am conducting this study on the employability of graduates and the challenges they go through in acquiring or creating a job. The main aim of this survey is to find out your labour market outcomes, specifically what you have been engaged in after graduating from the University. All the information you give will be treated confidentially, and used only for this research. If you have any questions or want more information about the study, you may contact me at naachuliwor@yahoo.co.uk. The interview is estimated to last a minimum of one hour. I would like to seek your permission to take part in the study. Feel free to stop the interview at

any time when you do not wish to you continue and if you do not wish to respond to some questions you are free to do so.

Do you agree to take part in the interview	Yes		No	
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Instructions:

- Fill out the questionnaire honestly.
- If you don't understand any question, please ask for clarification.
- Write clearly.

Thank you for your time

SECTION A: BACKGROUND INFORMATION

A1. Age	
A2. Sex	1. Male [] 2. Female []
A3. Ethnicity	1. Akan [] 2. Ga-Adangbe [] 3. Ewe [] 4. Guan [] 5. Gurma [] 6. Mole-Dabgani [] 7. Grusi [] 8. Mande [] 9. others(specify).....
A4. Religion	1. No religion 2. Christian 3. Muslim

	<p>4. Traditionalist</p> <p>5. Others (specify)</p>
A5. Marital status	<p>1. Single []</p> <p>2. Married []</p> <p>3. Co-habiting []</p> <p>4. Divorced []</p> <p>5. Widowed []</p> <p>6. Other (specify).....</p>
A6. Do you have a child/children? If No, skip to A8	<p>1. Yes</p> <p>2. No</p>
A7. Number of children	<p>1. One []</p> <p>2. Two []</p> <p>3. Three and above []</p>
A8. Do you have any other dependants?	<p>1. Yes</p> <p>2. No</p>
A9. Number of dependents (excluding children)	<p>1. One []</p> <p>2. Two []</p> <p>3. Three []</p> <p>4. Four []</p> <p>5. Five and above []</p>
Ext. Which JSS/JHS did you attend?	<p>1. Public</p> <p>2. Private</p>
Ext. Which SSS/SHS did you attend?	<p>1. Public</p> <p>2. Private</p>
A10. Who do you live with?	<p>3. Both parents []</p> <p>4. Father only []</p> <p>5. Mother only []</p> <p>6. Relative/Guardian []</p> <p>7. I live by myself/I have my own family []</p>

A11. What type of employer is father, mother and guardian (if applicable) do/did they work for?

Employer	a. Father	b. Mother	c. Guardian (if applicable)
Self employed			
Government sector			
Small private company			
Large private Ghanaian company			
International company			
NGO			
Other (specify)			

A12. What is the highest level of education completed by your mother, father and guardian?

	a. Mother	b. Father	c. Guardian (if applicable)
None			
Primary school			
JHS/Middle school			
Vocational/commercial/technical/ professional?			
Senior Secondary			
Nursing/teacher training			
Technical/professional			
Tertiary (University, etc)			
Don't know			

SECTION B: EDUCATIONAL BACKGROUND

B1. Which University did you attend?	<ol style="list-style-type: none"> 1. University of Ghana 2. University of Science and Technology 3. University of Cape Coast 4. University of Development Studies
B2. Have you graduated? If no skip to section C	<ol style="list-style-type: none"> 1. Yes [] 2. No []
B3. Which year did you graduate?	
B4. What programme did you graduate with? (or intend to graduate with if respondent has not graduated)	<ol style="list-style-type: none"> 1. Humanities/social science 2. Science 3. Business 4. Art 5. Others
B5. What class did you graduate with?	<ol style="list-style-type: none"> 1. First class [] 2. Second class upper [] 3. Second class lower [] 4. Third class [] 5. Pass [] 6. Others(specify).....
B6. What was your final cumulative grade point average?	<ol style="list-style-type: none"> 1. 99. Refused to answer

SECTION C: EMPLOYMENT PREFERENCES

<p>C1. Did you have any job preferences before joining the labour market? (If no, skip to section D C1i. If No why?</p>	<p>1. Yes [] 2. No []</p>
<p>C2. What kind of employment preferences did you have? (what type of job did you want or wish to have?)</p>	<p>1. To work for myself 2. To work in my family business 3. To work for the public sector (Government) 4. To work for the private sector 5. Work with an International/Multinational company 6. Work with a Non-profit/Charity/NGO</p>
<p>C3. When did you decide you wanted this kind of job?</p>	<p>1. Before coming to the university [] 2. While in school [] 3. During my National service [] 4. After my national service []</p>
<p>C4. Which of these influenced your preferences most</p>	<p>1. My course of study [] 2. My parents [] 3. My friends [] 4. The prestige [] 5. Money [] 6. Passion [] 7. Other (specify).....</p>
<p>C5. How did you plan on getting this job (pick at most two)</p>	<p>1. Through my parents/ guardian [] 2. Through friends [] 3. Pay my way through [] 4. Used school placement center 5. Used employment agency 6. Responded to a media advertisement 7. Searched on the internet for job vacancies</p>

	8. Attended career fair or information session 9. Approached employer directly 10. Approached by an employer 11. National service posting 12. Other (specify).....
C6. How will you describe yourself in relation to risk and employment	1. Loves to take risk(risk lover) 2. Moderate risk taker (risk neutral) 3. Avoids risk (risk averse)

SECTION D: NATIONAL SERVICE

D1. Have you undertaken your national service? IF NO, SKIP TO SECTION E	1. Yes [] 2. No []
D2. Which year did you start?	
D3. Which year did you finish (if you have not completed your service, when do you intend to finish)	
D4. Which kind of institution did you do your service with?	1. Education [] 2. Legal (Law) [] 3. Health [] 4. Financial, Banking, Insurance [] 5. Manufacturing [] 6. Tourism and hospitality [] 7. Sales/marketing [] 8. Oil industry [] 9. Development work [] 10. Agricultural related [] 11. Military/Armed forces [] 12. Other(specify).....

<p>D5. In which region did you do your service?</p>	<ol style="list-style-type: none"> 1. Greater Accra [] 2. Ashanti Region [] 3. Eastern Region [] 4. Western Region [] 5. Brong Ahafo Region [] 6. Central Region [] 7. Northern Region [] 8. Upper west Region [] 9. Upper East Region [] 10. Volta Region []
<p>D6. What type of institution was it?</p>	<ol style="list-style-type: none"> 1. Government sector/institution [] 2. Small private Ghanaian company(<10 permanent workers) [] 3. Large private Ghanaian company(>10 permanent workers) [] 4. International company [] 5. NGO [] 6. Others (specify).....
<p>D7. Were you retained in this institution after you service?</p>	<ol style="list-style-type: none"> 1. Yes [] 2. No []
<p>D8. If yes, what influenced your retention?</p>	<ol style="list-style-type: none"> 1. My performance [] 2. I knew someone in the company who helped me [] 3. My parents/guardian know someone who helped me [] 4. I paid someone to help me []

	<p>5. I just got lucky []</p> <p>6. I don't know []</p> <p>7. Other (specify).....</p>
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SECTION E: JOB MARKET-PREVIOUS EMPLOYMENT

<p>E1. Have you ever been employed by a company/institution/someone? If no, skip</p> <p>E1i. Have you ever undertaken any holiday job, internship, attachment?</p>	<p>1. Yes</p> <p>2. No</p>
<p>E2. In which year did you get your first employment</p> <p>E2i. What kind of employment was it</p> <p>E2ii. When did you earn your first salary?</p> <p>E2iii. How much were you paid?</p>	<p>1. Permanent</p> <p>2. Contract</p> <p>3. Others (specify).....</p>
<p>E3. In which type of institution?</p>	<p>1. Government sector []</p> <p>2. Small private Ghanaian company []</p> <p>3. Large private Ghanaian company []</p> <p>4. International company []</p> <p>5. NGO []</p> <p>6. Others (specify).....</p>
<p>E4. Is this institution the same as the one you undertook your national service?</p>	<p>1. Yes []</p> <p>2. No []</p>
<p>E5. Are you still working for this institution?</p>	<p>1. Yes []</p> <p>2. No []</p>

SECTION F: CURRENT EMPLOYMENT

<p>F1. Are you currently employed? IF NO SKIP TO SECTION H</p>	<p>1. Yes [] 2. No []</p>
<p>F2. Which of these sectors are you employed in F2i. what motivated you to take up employment in this sector</p>	<p>1. Public sector 2. Private sector 3. Self-employed</p>
<p>F3. How soon after completing national service did you get a job? F3i. Did you know/do you know someone who can or has helped you get employment? F3ii. IF YES, How many close relatives did you use when searching for a job F3iii. How many politicians, friend, alumni etc (who are not your close relations) did you use when searching for employment</p>	<p>1. Less than one month [] 2. 1 to less than 3 months [] 3. 3 to less than 6 months [] 4. 6 to less than 12 months [] 5. 1 to less than 2 years [] 6. 2 years or more []</p>
<p>F4. What type of employer are you working for? IF SELF-EMPLOYED, SKIP TO SECTION G</p>	<p>1. I am self-employed 2. Family business 3. Government (MDA) 4. Government school (Basic School/JSS/SHS/Tertiary) 5. Private school (Basic</p>

	<p>School/JSS/SHS/Tertiary)</p> <p>6. Small private Ghanaian company (<10 permanent workers)</p> <p>7. Large private Ghanaian company (>10 permanent workers)</p> <p>8. International/Multinational company</p> <p>9. Non-profit/Charity/NGO</p> <p>10. Others (specify).....</p>
F5. What field/sector are you working in?	<p>1. Education []</p> <p>2. Legal (Law) []</p> <p>3. Health []</p> <p>4. Financial, Banking, Insurance []</p> <p>5. Manufacturing []</p> <p>6. Tourism and hospitality []</p> <p>7. Sales/marketing []</p> <p>8. Oil industry []</p> <p>9. Development work []</p> <p>10. Agricultural related []</p> <p>11. Military/Armed forces []</p> <p>12. Other(specify).....</p>
F6. Roughly How much are you currently earning? Net or take home pay, after tax?	
F7. Did you send out any applications since you completed?	<p>1. Yes []</p> <p>2. No []</p>
F8. How many job applications have you sent out since you completed	<p>1. 1-5 []</p> <p>2. 6-10 []</p>

school?	<p>3. 11-15 []</p> <p>4. 16-20 []</p> <p>5. 21 and above []</p>
F9. Did you get any job offers before settling on this one?	<p>1. Yes []</p> <p>2. No []</p>
F10. How many job offers did you get before settling on this?	<p>1. One []</p> <p>2. Two []</p> <p>3. Three []</p> <p>4. Four []</p> <p>5. Five []</p> <p>6. Above five []</p>
F11. What kind of job were you applying/seeking for?	<p>1. Any job, as long as it gets me out of the house []</p> <p>2. A job in my field of study []</p> <p>3. A job that pays well []</p> <p>4. A job that will give me work experience and training []</p> <p>5. Other (specify).....</p>
F12. Do you think you got the kind of job you were looking for?	<p>1. Yes []</p> <p>2. No []</p>
F13. What do you think are the most important factors that helped you get a job? (CHOOSE ONE)	<p>1. Grades/Class obtained []</p> <p>2. Course/programme offered at the university []</p> <p>3. Contacts (who-you-know) []</p> <p>4. Added value (additional certificates or training) []</p> <p>5. Practical skills (not theory or book</p>

	<p>learning) []</p> <p>6. Previous work experience []</p> <p>7. Personality (eloquence, social skills, confidence, initiative, etc) []</p> <p>8. Luck []</p> <p>9. Gender []</p> <p>10. Other (specify).....</p>
<p>F14. What influenced your decision to take up this job? (CHOOSE ONE)</p>	<p>1. My interest []</p> <p>2. Opportunity to travel []</p> <p>3. Opportunity for further training and professional development []</p> <p>4. The money []</p> <p>5. Job security or stability []</p> <p>6. The status or prestige of the job []</p> <p>7. The time commitment of the job []</p> <p>8. Positive impact on society []</p> <p>9. The work environment (a nice office, air condition etc) []</p> <p>10. The opportunity to meet influential people []</p> <p>11. I had no option []</p> <p>12. Other (specify).....</p>
<p>F15. Which of these was your best strategy used in finding a job? (CHOOSE ONE)</p>	<p>1. Ask family and friends []</p> <p>2. Read newspaper advertisement []</p> <p>3. Approach employers directly []</p> <p>4. Use employment agency []</p> <p>5. Go to career fairs or information sessions []</p>

	<p>6. Search on the internet for job vacancies []</p> <p>7. Other (specify).....</p>
<p>F16. In your opinion what are the two important things employers are looking for?</p>	<p>1. Grades/Class obtained []</p> <p>2. course/programme offered at the university []</p> <p>3. Added value (additional certificates or training) []</p> <p>4. Practical skills (not theory or book learning) []</p> <p>5. Previous work experience []</p> <p>6. Personality (eloquene, social skills, confidence, initiative, etc) []</p> <p>7. Gender []</p> <p>8. other (specify).....</p> <p>.....</p>
<p>F17. What do you think the university authorities should do to help prepare you for the labour market? (CHOOSE TWO)</p>	<p>1. Offer career counselling []</p> <p>2. Organise career fairs []</p> <p>3. Provide information about jobs []</p> <p>4. Teach practical skills []</p> <p>5. Change the curriculum []</p> <p>6. Help place students in attachment and internships []</p> <p>7. Other (specify).....</p>
<p>F18. Are you happy with your current job?</p>	<p>1. Yes []</p> <p>2. No []</p>
<p>F19. If given the opportunity will you</p>	<p>1. Yes []</p>

opt for another job?	2. No []
F20. If yes what kind of job?	
F21. Why?	
F22. 10-15 years from now, what is the most important thing you hope to have achieved in your work	1. Promotion to a high level [] 2. Experience and skill [] 3. A lot of money [] 4. Happiness and fulfilment [] 5. Other (specify).....

F23. Indicate whether you agree or disagree with the following statements (tick)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
a. It is difficult for university graduates to find work.					
b. The majority of unemployed graduates are too choosy – they would rather sit at home other than do certain kinds of jobs.					
c. The majority of university graduates will find work within THREE MONTHS after national service.					
d. The majority of university graduates will find work within ONE YEAR after national service.					
e. I am confident that I can get exactly the kind of job I want, when I am ready.					

f. I can get a job, even if it is not my preferred job.					
g. I feel the university has prepared me well for work.					

SECTION G: SELF –EMPLOYED

G1. Why did you decide to become self employed	<ol style="list-style-type: none"> 1. I have the interest in creating my own job [] 2. It is difficult to find a job [] 3. There are no jobs [] 4. I can not work for anyone [] 5. I want to have time for myself and family [] 6. Other (specify).....
G2. When did you decide you wanted to be self-employed	<ol style="list-style-type: none"> 1. During my time at the University [] 2. Immediately after school (before national service) [] 3. During my national service period [] <ol style="list-style-type: none"> 1. After my national service [] 2. Others (specify).....
G3. What kind of business are you into?	<ol style="list-style-type: none"> 1. Fashion [] 2. Photography [] 3. Catering [] 4. Buying and selling [] 5. Entertainment [] 6. Construction [] 7. Farming [] 8. Others (specify).....

G4. Which year did you start?.....	
G5. How did you raise your start up capital?	1. Personal savings [] 2. Provided my parents [] 3. Provided by friends [] 4. Provided my relative/guardian [] 5. Loan from the bank/other financial institutions [] 6. Other (specify).....

G6. Indicate whether you agree or disagree with the following statements (tick)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
a. It is difficult for university graduates to find work.					
b. The majority of unemployed graduates are too choosy – they would rather sit at home other than do certain kinds of jobs.					
c. The majority of university graduates will find work within THREE MONTHS after national service.					
d. The majority of university graduates will find work within ONE YEAR after national service.					

e. I am confident that I can get exactly the kind of job I want, when I am ready.					
f. I can get a job, even if it is not my preferred job.					
g. I feel the university has prepare me well for work.					

SECTION H: UNEMPLOYED AND OUT OF THE LABOUR FORCE

H1. Are you looking for a job?(if No, skip to H7)	1. Yes [] 2. No []
H2. How long have you been searching for a job?	
H3. What type of job have you been searching for?	
H4. Have you sent out any applications?	1. Yes [] 2. No []
H5. How many job applications have you sent out so far?	1. 1-5 [] 2. 6-10 [] 3. 11-15 [] 4. 16-20 [] 5. 21 and above []
H6. Why do you think you are not getting a job?	1. I do not have the requisite skills for the job [] 2. I do not have the social networks to get me a job [] 3. I do not have the required experience for the job [] 4. There are no jobs available []

<p>H7. If No, why are you not looking for a job?</p>	<ol style="list-style-type: none"> 1. I want to further my education [] 2. I am furthering my education [] 3. I am tired of looking for a job [] 4. I am not interested in working [] 5. I want to travel out of the country to work [] 6. Other (specify).....
<p>H8. 10-15 years from now, what is the most important thing you hope to have achieved in your work</p>	<ol style="list-style-type: none"> 1. Promotion to a high level [] 2. Experience and skill [] 3. A lot of money [] 4. Happiness and fulfilment [] 5. Other (specify).....

SECTION I: SATISFACTION WITH LIFE SCALE

Please indicate the extent to which you agree or disagree with the following statements

Statement	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Agree	Slightly Agree	Strongly Agree
I1. In most ways my life is close to my ideal							
I2. The conditions of my life are excellent							
I3. I am satisfied with my life							
I4. So far I have gotten the important things I want in life							
I5. If I could live my life over, I would change almost nothing							

PLEASE ANSWER YES OR NO TO THE FOLLOWING QUESTIONS

	YES	NO
I7. Have you recently been able to concentrate on whatever you are doing?		
I8. Have you recently Lost much sleep over worry?		
I9. Have you recently Felt that you are playing a useful part in things?		
I10. Have you recently Lost much sleep over worry?		
I11. Have you recently Felt that you are playing a useful part in things?		
I12. Have you recently Felt capable of making decisions about things?		
I13. Have you recently Felt constantly under strain?		
I14. Have you recently Felt you couldn't overcome your difficulties?		

I15. Have you recently Been able to enjoy your normal day-to-day activities?		
I16. Have you recently Been able to face up to your problems?		
I17. Have you recently Been feeling unhappy and depressed?		
I18. Have you recently Been losing confidence in yourself?		
I19. Have you recently Been thinking of yourself as a worthless person?		
I20. Have you recently Been feeling reasonably happy all things considered		

SECTION J: TRANSITION

Please indicate which activity you were engaged in during the various years (multiple responses apply)

YEAR/ACTIVITY	National Service	Searching for a job	Got employed	Started a business	Still Working/employed	Changed job	Back to school
2010							
2011							
2012							
2013							
2014							
2015							
2016							
2017							

THANK YOU FOR YOUR TIME!!!!!!!!!!!!!!

Appendix 2: Chi 2 test of satisfaction with Life and labour market outcome

SWL	Unemployed	Employed	Total
Dissatisfied	352	661	1,013
Neutral	43	150	193
Satisfied	53	211	264
Total	448	1,022	1,470

Pearson chi2 (2) = 28.3226 Pr=0.000

The chi test between SWL and labour market outcome (employed and unemployed) is highly significant at 1 per cent.

Appendix 3a: log-Rank Test for Equality of Survival Function (sex)

Sex	Events observed	Events expected
Male	1066	1066.64
Female	318	317.36
Total	1384	1384

Chi2 (1)=0.00 Pr>Chi2=0.952

Appendix 3b: Log-Rank Test for Equality of Survival Function (University)

University	Events observed	Events expected
UG	372	326.59
KNUST	278	270.09
UCC	347	341.59
UDS	387	445.73
Total	1384	1384

Chi2 (3)=31.48 Pr>Chi2=0.0000

Appendix 3c: Log-Rank Test for Equality of Survival Function

Programme	Events observed	Events expected
Arts and Humanities	781	819
Science	283	269.49
Business	98	82.6
Agriculture	137	136.09
Engineering	79	70.88
Fine Arts	6	5.96
Total	1384	1384

Chi2 (5)=13.20 Pr>Chi2=0.0216

Appendix 3d: Log-Rank Test for Equality of Survival Function (Location)

Location	Events observed	Events expected
Greater Accra	339	300.98
Eastern Region	108	115.88
Brong Ahafo Region	142	162.98
Northern Region	109	108.55
Upper East Region	46	48.05
Ashanti Region	303	312.96
Western Region	105	103.58
Central Region	107	104.84
Upper west Region	43	48.34
Volta Region	61	56.83
Total	1363	1363

Chi2 (9)=20.35 Pr>Chi2=0.0159

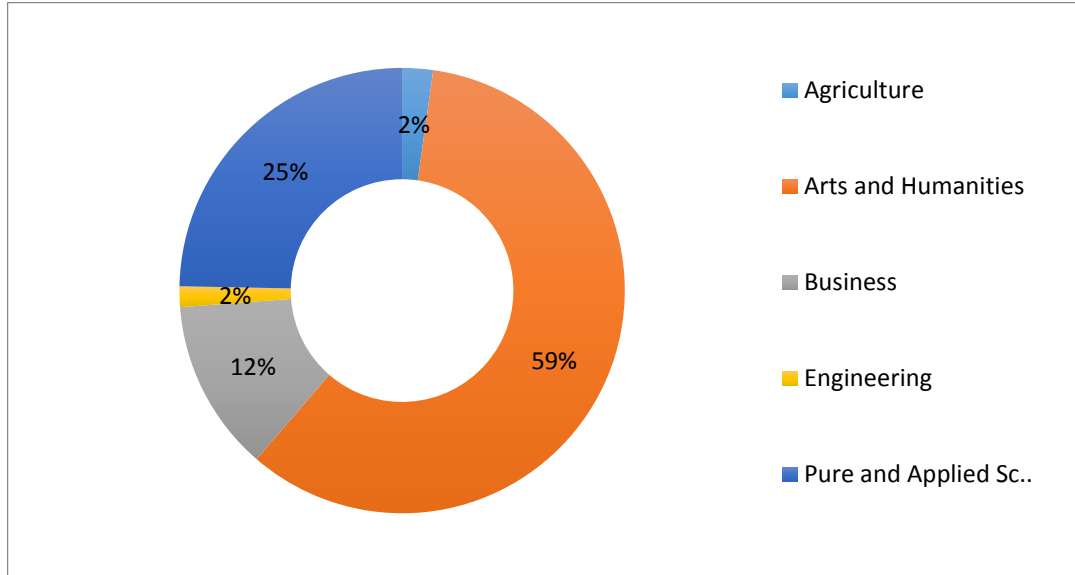
Appendix 4: Results of principal component analysis (eigenvectors)

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Unexplained
Q1	0.7795	-0.7075	0.7537	-0.9196	0.8381	0
Q2	0.5337	-0.8482	0.8027	-0.8135	-0.8401	0
Q3	0.4826	0.5889	-0.5827	-0.5961	0.5236	0
Q4	0.6858	-0.6853	-0.7289	0.3574	0.7296	0
Q5	0.5281	0.9715	0.8076	0.6762	0.4314	0

The factor loadings in the Principal component analysis above reflect that all five questions

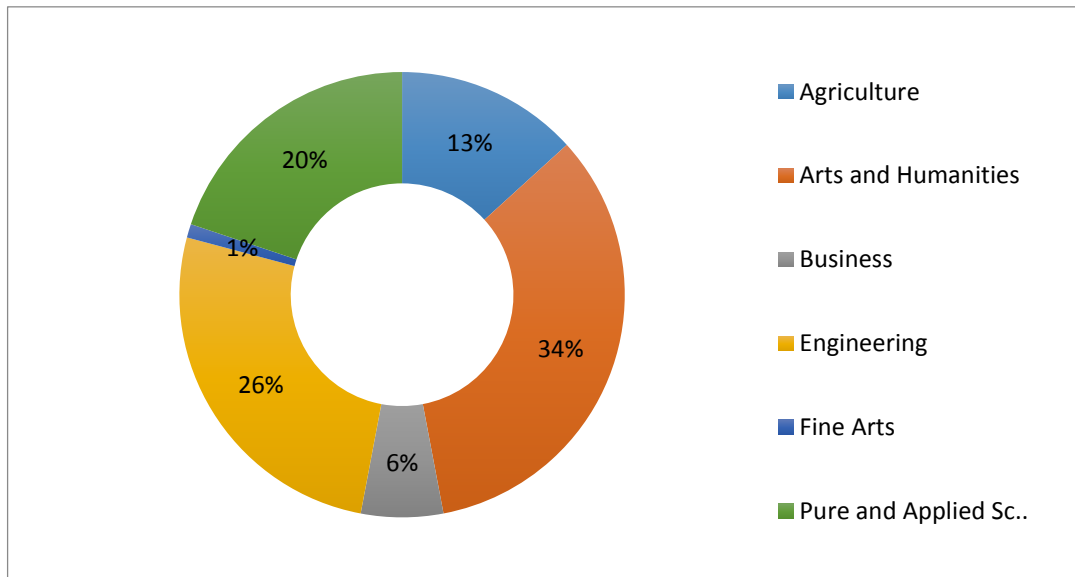
(Q1- Q5) measure satisfaction with life and are suitable in the context of this study.

Appendix 5a: Percentage Distribution of Surveyed Graduates by programmes for UG



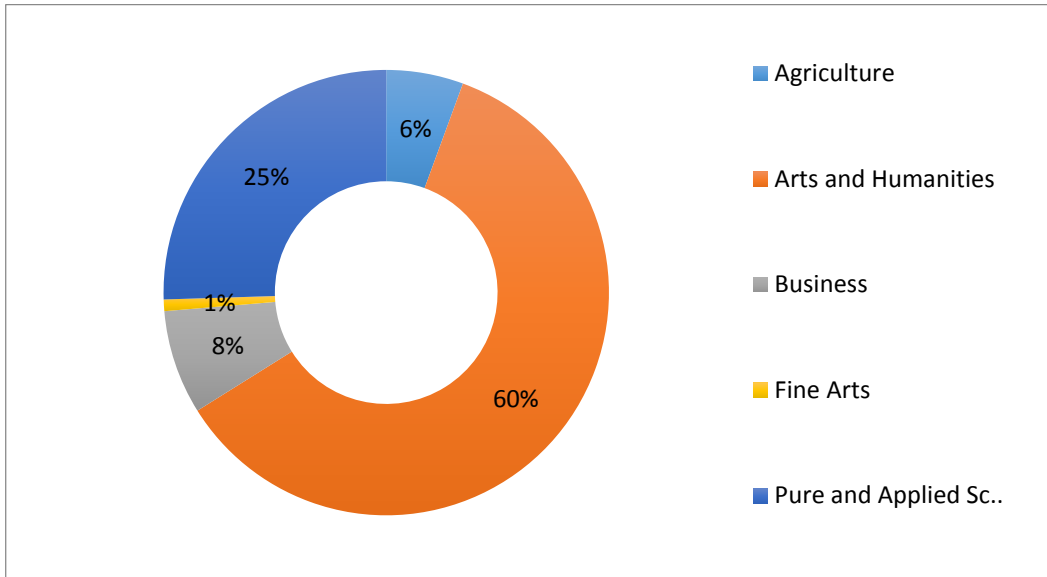
Source: University Graduates Survey 2017

Appendix 5b: Percentage Distribution of Surveyed Graduates by programmes for KNUST



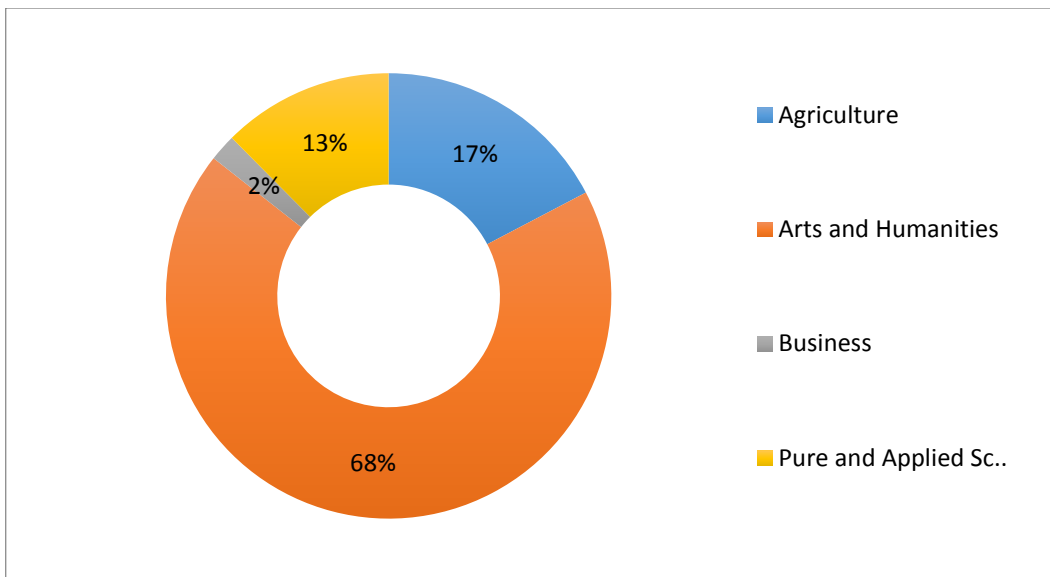
Source: University Graduates Survey 2017

Appendix 5c: Percentage Distribution of Surveyed Graduates by programmes for UCC



Source: University Graduates Survey 2017

Appendix 5d: Percentage Distribution of Surveyed Graduates by programmes for UDS



Source: University Graduates Survey 2017