LABOUR MARKET DETERMINANTS OF PRIVATE DEMAND FOR POSTGRADUATE STUDIES IN SELECTED UNIVERSITIES IN KENYA

BY

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A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY (EDUCATIONAL PLANNING AND ECONOMICS OF EDUCATION) IN THE SCHOOL OF EDUCATION AND LIFELONG LEARNING OF KENYATTA UNIVERSITY

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DECLARATION

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DEDICATION

To God Almighty; His hand has brought me this far. Glory and honour to Him. To my loving husband; Gabriel Macharia Kariuki. To my wonderful children; Eric and Purity, Nelius and Gideon, and Joy. To my mother and my late dad; Bernadette and John Peter. Their prayers, encouragement and immense support strengthened me throughout my study.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

CUE	Commission for University Education
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organization
KNBS	Kenya Bureau of Statistics
NACOSTI	National Council for Science and Technology Innovation
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
PSO	Public Sector Organization
SAGAs	Semi-Autonomous Government Agencies
SDHER	State Department for Higher Education and Research
SPSS	Statistical Package for Social Sciences
TVET	Technical and vocational education and training
U.S	United States
UK	United Kingdom

ABSTRACT

Postgraduate training and research is crucial in driving Kenya into a middle income economy. However, while the private demand for postgraduate studies in universities in Kenya has been on an upward trend, it has started going down. This may hamper realization of both the university objectives and Kenya vision 2030. Reviewed literature shows that among other determinants, factors related to the labour market affect an individuals' choice to undertake postgraduate studies. Against this context the study set out to establish the degree to which perceived returns, skills requirements for a knowledge economy, labour force status and shifting workforce demographics affect private demand for postgraduate studies in selected universities in Kenya. The human capital theory which espouses that investments in education and training enhance productivity and economic success, guided the study. In line with the Follow-Up variant of the Explanatory Sequential Mixed Methods design, the study was conducted in two phases namely, the quantitative and qualitative phases. Specific quantitative findings that necessitated further explanation were identified by focusing on extreme or outlier cases, as well as unexpected outcomes This enabled the collecting of qualitative data from participants, in the second phase, who could best help explain the quantitative findings. The target population for this study comprised all the 60,101 students pursuing Master's and PhD (Doctor of Philosophy) degrees in both public and private chartered universities in Kenya during the study period. Using snowball, systematic and proportionate sampling, 396 Master's and PhD students were selected from 4 public chartered universities and 3 private chartered universities, which were purposively selected. The study used primary data obtained through questionnaires and interviews. A panel of experts helped establish questionnaire validity while validity of the interview guide was determined through respondent validation. The internal consistency of the questionnaires was assessed using Cronbach's alpha statistic which gave a value of $\alpha = 0.7$. A pilot study was conducted using one public and one private university so as to determine the reliability as well as the validity of the research instruments. The quantitative data were computed using descriptive and inferential statistics, while the qualitative data were computed through thematic and content analysis methods. The findings were presented in the form of charts, graphs and tables. Perceived returns ($B = .57$ and $p = .004 < .05$) and labour force status [Unemployment ($B = .019$ and $p = .004 < .05$), Employment ($B = .015$ and $p = .002 < .05$)] were found to be significant predictors of private demand for postgraduate studies. Self-employment ($B = -.007$ and $p = .244 > .05$) as a labour force status, was however found not to be statistically significant to private demand for postgraduate studies. Though skills requirements for a knowledge economy ($B = .447$ and $p = .099 > .05$) and shifting workforce demographics ($B = .034$ and $p = .237 > .05$) were found to be statistically significant to private demand for postgraduate studies, they were found to be non-significant predictors of private demand for postgraduate studies. The research suggests that while pursuing postgraduate studies enhances an individual's competitiveness in an organization, it falls short in providing essential skills for the job market, and this could explain why the demand for postgraduate studies is on a downward trend. To increase postgraduate participation rates, the study recommends the integration of innovative studies in Kenyan universities to address advanced skills requirements. The study also recommends fostering university-employer partnerships to provide accurate information, relevant training, and employment prospects for postgraduate students.

CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This chapter provides an introduction to the research conducted on labour market determinants of private demand for postgraduate studies in selected universities in Kenya. The chapter provides an overview of the study, including the background information, problem statement, research objectives and questions, the study's significance, limitations and delimitations of the study. Additionally, it presents the study's assumptions, theoretical and conceptual frameworks, and operational definitions of key terms and concepts used throughout the research.

1.2 Background to the Study

The relevance of postgraduate degrees is increasing in the dynamic international higher education landscape, catering not just to individuals seeking advanced qualifications but also to countries aiming to expand their highly skilled workforce (British Council, 2014). This observation is underpinned by Human Capital Theory which postulates that future productivity is increased by investments in education (Psacharopoulos & Patrinos, 2018). The assumption is that education and training contribute to enhanced productivity, leading to economic benefits such as higher wages and increased gross domestic product (Tan, 2014; Netcoh, 2016).

It is therefore expected that pursuing higher education will enable individuals to enhance their skills and meet the requirements of a dynamic and sustainable knowledge-driven economy. Mulinge and Arasa (2017) assert that this will contribute to the modelling of a society that is not only democratic and civilized, but also inclusive. Increasing the numbers of students pursuing postgraduate degrees and finding a top position at the international

university rankings has therefore been employed as a strategy to achieve national economic development (Benson, 2015). According to Garba (2010), it is only in nations with strong postgraduate education with up-to-date state of the art research institutes where educational, scientific and technological development will be experienced. As such, many countries across the world have recorded a persistent rise in the demand for postgraduate studies over the years (Sojkin et al., 2011; Altbach et al., 2019).

Apart from the governments providing postgraduate education for purposes of deriving social benefits, individuals too privately demand postgraduate studies for various purposes. Schuller et al. (2004) assert that other than helping the economy to grow, postgraduate education is also perceived as an instrument aimed at making life more comfortable for those who acquire it. They are likely to be happier and healthier. They are also likely to get well-paid jobs, secure positions of greater influence, wealth and power, and also gain control of factors of production (Baum et al., 2013; Psacharopoulos & Patrinos, 2018).

There are many determinants of private demand for postgraduate studies. Smyth and Banks (2012) assert that students' decisions to enrol for postgraduate studies revolve around economic, rational and socio-cultural factors. Aslan (2014) categorized the determinants of private demand for education as follows: personal factors (like age, cognitive skills, biological features, interests and expectations for the future), economic and labour market determinants (like cost of education, level of income, expected income, choice of vocation and expectancy about the labour market), socio-cultural factors (like origin of family and gender segmentation), and institutional factors (which include education system and other institutions).

Various studies conducted across the world reveal numerous determinants of private demand for postgraduate studies. Aslan (2014) shows that in Turkey, academic/individual, socio-cultural/familial, and economical/professional factors contribute significantly to the rise of private demand for postgraduate education. In the UK, the enhancement of career opportunities and the motivation to acquire or update skills for increased employability, one's own personal satisfaction, the reputation of the university and its location when choosing a university to study in are prime motivators for pursuing a postgraduate degree (Donaldson & McNicholas, 2004).

Oni (2013) noted that in Nigeria, parental income, graduate unemployment, and cost of postgraduate studies significantly influenced the demand for postgraduate studies in University of Ibadan. The study argued that if jobs are available for the graduates, most of them will not be forced to demand postgraduate studies. Instead, they will be engaged in work which will make them contribute positively to the productivity level of the Nigerian economy. Fumilayo (2014) too found out that in Nigeria, factors such as funding, the expansion of education at the elementary and secondary levels to address human resource requirements, high unemployment rates, and population growth contributed to shifts in enrolment patterns.

Mbwilo et al. (2019) note that in Tanzania, identification of skill gaps and the consequent provision by the government of opportunities to establish postgraduate programmes to address the gaps have significantly contributed to the private demand for postgraduate studies.

Case studies assert that in Kenya, enrolment decisions for Master's degrees are influenced by various factors, including financial considerations, individual factors, institutional

factors, reference groups, and the desire to acquire additional knowledge and skills (Evans, 2013; Muthui, 2013).

Taking into account that most individuals will actively seek education so as to enable them enter the workforce, and the existence of signals within the labour market that elicit responses from people (Bonoli & Leichti, 2014), the focus of this study was on the labour market determinants of postgraduate studies that affect private demand for postgraduate studies. According to Bonoli and Leichti (2014) and Kreisman et al. (2023), labour market determinants are job market related signals that trigger peoples' actions and responses in relation to the labour market. These signals can influence students' choices regarding enrolment in postgraduate programs (Yu, 2021). Thus, perceived returns, skills requirements for a knowledge economy, labour force status and shifting workforce demographics as labour market determinants of postgraduate studies are likely to affect demand for postgraduate studies.

According to the human capital model, education is viewed as an investment in which the costs associated with pursuing education are compared to the anticipated future returns, chiefly in the form of higher wages that are discounted over time (Becker 1962, 1964). This often involves assessing the viability of investing in studies (Evans, 2013). According to Hossler et al. (1999), students will seek to maximize the total value derived from a utility, often using cost-benefit analysis. In the choice process, it is assumed that students consider the advantages and disadvantages of each alternative choice and make logical assumptions about the possible results of one decision over another (Hossler et al., 1999). This leads to enrolment decision of an individual student as his priority choice among the available tuition and job alternatives (Psacharopoulos, 2014).

Conversely, though a lot of literature has estimated the returns to schooling using earnings data (Altonji et al., 2016; Lindley & Machin, 2016; Altonji & Zhong, 2020), Jensen (2010) highlights that the actual enrolment decisions of students and/or their parents are influenced by the perceived returns associated with pursuing education. This perspective is reinforced by Boneva et al. (2019) who provide evidence that individuals' perceptions of both immediate and long-term benefits of postgraduate education play a significant role in determining their enrolment in postgraduate programs. The perceived benefits encompassing a range of benefits in both the immediate and distant future, greatly shape the decision-making process when it comes to pursuing postgraduate studies. Thus as Wanja (2014) puts it, individual students tend to weigh choices based on the extent to which investing in education will yield personal (private) benefits, and enrolment decision happens only when the expected benefits exceed expected costs (Vatta et al., 2016). This is often manifested in the likelihood of realizing higher earnings, increasing chances of employment, and following a desired occupation path. It therefore follows that when the perceived returns of investing in postgraduate studies seem attractive, an individual will find justification in engaging in them and hence the private demand for postgraduate studies.

As has been observed by Đonlagić and Kurtić (2016), the labour market demands are being transformed due to the rapid pace of technological advancements and the emergence and growth of the knowledge-based economy in numerous global economies. This is likely to bring about new and future skills demand in the labour market to cope with this new development. Additionally, Acemoglu and Restrepo (2016) find that automation, fueled by better artificial intelligence has a major impact on jobs in the sense that it reduces

employment and the labour share and may even reduce wages. It therefore emerges that as states aim to foster high-skilled and high-value economies, the perception has shifted away from the notion that traditional factors of production are the only ones that contribute to economic growth and development. Furthermore, several studies, including those by Rich (2010), Beaudry et al. (2013) and Weaver and Osterman (2013), have highlighted the challenges faced by employers in finding adequately skilled workers among college graduates. This reflects potential skills shortages in certain areas and is likely to lead to an increased demand for postgraduate studies to fulfil the demands for more skilled labour (Othman et al., 2012).

Labour force status categorizes people in terms of inclusion or exclusion from the labour force. Based on resolutions arrived at during the 19th edition of the International Conference of Labour Statisticians (ICLS) held in 2013, individuals within the working age population of a country can be categorized into three distinct groups based on their labour force status: those who are employed, those who are unemployed, and those who are not part of the labour force (Lincaru & Atanasiu, 2016). According to the International Labour Organization, the labour force comprises the employed and the unemployed (ILO, 2017). The Organization for Economic Co-operation and Development defines the employed individuals as those who work for pay or profit for at least one hour per week, including those temporarily out of work due to reasons such as leave, sickness or industrial action (OECD, 2019). On the other hand, the unemployed are individuals who are without work, actively seeking employment, and available for work, as per the definition provided by OECD (2019).

With the marketing world becoming more advanced and diverse, there has been an observation that employers are increasingly seeking after research skills and this in turn has seen more graduates as well as business professionals improving their qualifications and career prospects with postgraduate study (University of Otago, 2017). Hence, those already employed may seek to enhance their qualifications through postgraduate studies.

Youth and graduate unemployment has become a challenge in many countries in the world, with youth unemployment rate estimated at approximately two to four times that of the older people (Sayın, 2012; Marelli & Vakulenko, 2014). In Britain for instance, it is reported that between 2001 and 2013, unemployment and underemployment among graduates shot up from 37 per cent to 47 per cent (Oppong & Sachs, 2015). In Africa, Balogun (2016) found out that nearly half of the 10 million students, that graduate yearly from the over 668 universities in Africa miss jobs. In Kenya, Munga and Onsomu (2014) report that 67% of the total unemployment rates belong to the youth. It is also reported that in every 10 young people with the necessary qualifications, about 4 are without work (Farah & Ali, 2018). While previous forecasts have suggested that rising rates of graduate and youth unemployment lead to an increased demand for education in Europe (Barakat et al., 2010), this study set out to establish the extent to which unemployment in Kenya affects the demand for postgraduate studies.

Research has indicated that companies led by highly educated and self-employed individuals tend to experience faster growth, irrespective of market conditions (Kangasharju & Pekkala, 2002). Furthermore, there is an increasing demand for individuals holding Master's and Doctoral degrees across various employment sectors (Ortlieb, 2015). It has also been observed that individuals with advanced educational qualifications are

more likely to work in large corporations, become self-employed or pursue freelance opportunities (Ortlieb, 2015). Consequently, the pursuit of postgraduate studies may be driven by the desire to engage in self-employment and take advantage of emerging opportunities.

As noted by DiPrete and Buchmann (2013), shifting workforce demographics, demonstrated by trends like aging, emerging gender gaps, and declining birth rates, have drastically reduced the labour force in much of the world. According to Maestas et al. (2016), a two thirds decline in labour productivity growth in the USA is attributed to population aging, whereas one-third is associated with the slowdown in labour growth. According to Lisenkova et al. (2010), this age shift in the workforce mainly results from two processes namely population ageing and potential population decline. This will have an effect on the labour market in the sense that an aging population means an aging labour force, eventually translating to rising numbers of older workers and falling numbers of younger workers (Lisenkova et al., 2010). The implication is that as the more experienced and highly workforce shrinks, aspiring workers will tend to develop themselves through engaging in postgraduate studies so as to gain the relevant skills (Khattab, 2015).

However, other than these labour market determinants of private demand for postgraduate studies, there are other determinants that can cause the graduates to return to the university to pursue postgraduate studies. One such determinant is the imperfections in the labour market where lack of strong collaboration between higher education institutions and employers hampers the employability prospects of graduates (Bell & Blanchflower, 2011; Watson & Buchanan, 2020). Mroz and Savage (2006) note that graduates rely on family, friends, their professors, private employment agencies, public employment service, and

higher education institution career guidance centres to secure a job, and if one fails to have a reliable person to link them to the world of work, they remain unemployed for long and the alternative is to pursue higher education.

1.2.1 Postgraduate Studies in Universities in Kenya

Information obtained from Commission for University Education's (CUE) website reveals that from the single Royal Technical College in 1956 (now university of Nairobi) with only a population of 215 students, Kenya as at the year 2019, had a total of 74 universities. The total student population in these universities stood at 536,296 in the 2017/18 academic year (CUE, 2019). This indicates a high demand for university education in Kenya.

In addition to its role in overseeing, coordinating, and ensuring the quality of university education, the Commission for University Education in Kenya also works towards advancing the goals of university education and formulating policies related to admission criteria and requirements (Republic of Kenya, 2013). The objectives of university education are drawn from the national goals of education, specifically, the second goal which aims at promoting the developmental progress of the nation, encompassing its societal, economic, technological, and industrial demands (Mwaka et al., 2013). Of the ten objectives of university education as spelt out by the Universities Act No. 42 of 2012, objectives 1, 4 and 6 have direct relevance to postgraduate studies as they aim at advancement of knowledge through research and scientific inquiry, fostering excellence and quality in teaching and research, and disseminating research outcomes to the wider public (Republic of Kenya, 2012).

In relation to Republic of Kenya (2012) and Chege (2015), the main goal of university education in Kenya is to produce graduates that have been equipped with skills that

empower them to make sense of and use information. They should possess the ability to address both personal and societal challenges effectively through the application of clear, creative, independent and critical thinking. Such graduates should demonstrate intellectual values that typify integrity and reliable citizenship. They should embrace lifelong learning, thus making them innovative and enterprising (Republic of Kenya, 2012).

The Postgraduate Research and Training National Policy in Kenya, implemented by the Commission for University Education, plays a vital role in influencing and guiding the development of postgraduate education. This policy, as highlighted by Mukhwana et al. (2016), aims to establish standards not only for quality training and postgraduate students' supervision, but also in research across all universities in the country. By developing and implementing this policy, the CUE seeks the enhancement of the overall quality as well as the effectiveness of postgraduate education in Kenya. The policy, as spelt out by Mukhwana et al. (2016), encompasses five main areas of focus: policies and regulations of institutions, the process of admitting students, the learning environment, funding and support systems provided by the institutions.

The government of Kenya has consistently emphasized the significance of research, recognizing it as a means to generate wealth and promote human development (Mukhwana et al., 2016). Research is therefore an essential element of postgraduate education and training, with the expectation that it will play a significant role in the transformation of the industrial sector and the enhancement of economic growth in addition to poverty reduction (Mukhwana et al., 2016). To achieve the goals of postgraduate training and national development goals in general, the government has developed a number of development

plans and strategy papers including prominent ones such as Kenya Vision 2030, the Second Medium Term Plan of Vision 2030, and several Sessional Papers.

Education and training, under the Social Pillar in Kenya Vision 2030, is anticipated to be the key channel through which the national development goals will be realized (Republic of Kenya, 2013). Specifically, postgraduate training and research is expected to play a crucial role in facilitating the country's transition from a low-income status towards attaining a middle-income economy status (Republic of Kenya, 2013). The Second Medium Term Plan for Education and Training was developed to aid the actualization of the social transformation attached to Kenya Vision 2030, as captured in the social pillar (CUE, 2017). The Plan centers on the notion that creating a sustainable pool of highly trained workforce that is crucial in achieving the nation's goals of transforming into a knowledge-driven economy, will rely heavily on the university system, especially at the postgraduate level (Republic of Kenya, 2013; CUE, 2017). The Education, Training, and Research Sessional Paper No. 1 of 2005 sought to address various areas related to education, training and research in Kenya (Republic of Kenya, 2005). It sought to achieve several objectives, including addressing the challenges of research policies that lacked harmonization, inadequate research funding, insufficient mechanisms and procedures for disseminating and utilizing research findings, and lack of contemporary research bank of records and reference books of what has been carried out or is being done. Among other recommendations, the paper outlined the importance of the government increasing investment in research and development.

Another strategic paper aiming to achieve the goals of postgraduate training and national development goals is Sessional Paper No. 1 of 2019 (Republic of Kenya, 2019), which

emphasizes the importance of establishing a skilled workforce and promoting research and development to foster national development. Aligned with the objectives of Kenya Vision 2030, the paper advocates for university education and training that is responsive to market demands, ensuring high quality, research-driven, gender-sensitive, technologically advanced, inclusive and globally marketable (Republic of Kenya, 2019).

Hence as Kimathi and Henry (2014) assert, convictions and anticipations on university studies have driven the government to labour to increase not only the access and relevance of university education in Kenya, but also its quality. Along with this, the introduction of appropriate and innovative programs that meet individual students' needs (Muchemwa, 2016), has provided an opportunity for individuals to pursue postgraduate studies and hence the private demand for postgraduate studies.

According to Kenya National Bureau of Statistics, there was a total number of 6,789 Master's and PhD students enrolled in Kenyan universities in year the 2007. The numbers shot to 24,417 in 2013 (KNBS, 2013). CUE (2018) records that in the 2015/16 academic year, the Master's students were 55,461 while the PhD students were 7,146. This postgraduate enrolment according to CUE (2018) accounted for about 11.9% of the overall university students' population in the country, and a 1.9 percent rise from the 10 percent enrolment in 2014. CUE (2019) records that across the different levels of university education between 2015 and 2017, the rise in enrolment was recorded at the postgraduate degree levels, with a total number of 2,048 postgraduate programmes in the 2016/17 academic year. The number of Master's and PhD students enrolled in Kenya's public and private universities between 2015 and 2019 is shown in Table 1.1.

Table 1.1

Master's and PhD Enrolment in Kenya's Public and Private Universities: 2015-2019

Level	Public Universities				Private Universities				Total			
	2015/ 2016	**2016/ 2017**	**2017/ 2018**	**2018/ 2019**	**2015/ 2016**	**2016/ 2017**	**2017/ 2018**	**2018/ 2019**	**2015/ 2016**	**2016/ 2017**	**2017/ 2018**	**2018/ 2019**
Master's	45,571	48,767	40,840	43,100	9,890	9,454	10,705	8,299	55,461	58,221	51,545	51,399
PhD	6,059	8,372	11,868	9,292	1,087	1,205	2,790	1,017	7,146	9,577	14,658	10,309
Total	**51,360**	**57,139**	**52,708**	**52,392**	**10,977**	**10,6 59**	**13,495**	**9,316**	**62,607**	**67,798**	**66,203**	**61,708**

Source: CUE, 2015-2019 Universities Statistics Data, Kenya

As indicated in Table 1.1, during the 2015/16 and 2016/17 academic years, enrolment at the Master's level went up, signifying a growing demand for postgraduate studies. However, in the 2017/2018 and 2018/2019 academic years, enrolment at this level went down by 11.5 % and 0.3 %. Similarly, there was an increase in PhD enrolment from 2015 to 2018; however, during the academic year 2018/2019, there was a notable decrease of 29.7% at this level. The total drop in postgraduate enrolment in the 2018/2019 academic year was 6.8%. This signifies fluctuating demand for postgraduate studies.

The downward trend in postgraduate enrolment may hinder the realization of Kenya becoming a middle-income economy come 2030. Mukhwana et al. (2016) record that in 2015, despite an increase in postgraduate enrolment from 10% in 2014 to approximately 11.9% of the student population, this proportion falls short in fulfilling the present and future requirements of the country.

They also observe that both the number of postgraduates being produced and the rate of postgraduate production are inadequate to satisfy the nation's needs which include the requirement for staffing, the replacement of an aging faculty, and the necessity for professional teams in both the government and private sectors.

CUE (2018) acknowledges that the expansion of PhD programs does not align with the growth of higher education institutions. According to the data presented in Table 1.1, there were 7,146 doctoral students studying in Kenyan universities during the academic year 2015/16. This represented a 1.3 per cent of the total university student population (CUE, 2018). Additionally, CUE records that the 9,577 PhD enrolment in the 2016/2017 academic year represented 1.7% of the total student population in universities in Kenya (CUE, 2018). Apart from leading to a shortage of staff with doctoral credentials in Kenyan universities, it has also been articulated that the slow rate of building the PhD capacity in the country will be a hindrance in meeting the national research agenda (Mukhwana et al., 2016; Barasa and Omulando, 2018).

Lack of enough Master's students could translate to even fewer students enrolling for PhD studies, leading to shortage of lecturers. This would exacerbate the already dire situation where the Commission for University Education in Kenya shows that the number of professors working in public universities rose by only 11% in the period between year 2010 and 2013 (CUE, 2015). Between 2015 and 2016, the number of professors working in the public universities rose by only 9% (CUE, 2018). With a significant increase in university student enrolment, this emphasizes the difficulty the country faces in achieving the desired student-to-staff ratios in its universities (CUE, 2015).

As per the 2018 Commission for University Education report, the proportion of academic staff to the number of programs and student enrolment in the academic year 2016/2017 indicates that more programmes were being mounted and more students were being enrolled in universities without a corresponding increase in staffing (CUE, 2018). As spelt out in the report, this has resulted to increased workload for staff and over reliance on part

time staff for teaching. Another observation pointed out by the report is biasedness towards research where academic staff prioritize teaching at the expense of research. Accordingly this may compromise the quality of university education, yet the quality of knowledge that students get at the universities in addition to its accessibility is critical to the country's competitiveness.

According to Sessional paper No. 14 of 2012, in order to attain the desired student-staff ratio of 1:40, an average of 2400 PhDs needed to be graduated annually from across all the universities in Kenya by the year 2022. However, as Mukhwana (2017) postulates, the rate at which students graduate does not align with the high rate of enrolment as students in many universities drop out due to financial, economic and social challenges. Also, according to CUE (2018), less than 400 PhD students graduate yearly while Master's graduates, who are potential PhDs holders, continue to register a downwards trend.

Thus, it is evident that while there has been growing demand for postgraduate studies in Kenya over the years, the demand has taken a fluctuating trend. As postgraduate training and research is essential in driving the country into a middle income economy (Republic of Kenya, 2013), it is important that more students enrol for postgraduate studies. If the downward trend in demand for postgraduate studies continues, the country will lack enough highly trained manpower to run the economy. This will hamper the realization of the country's national aspirations of being a knowledge-based economy as formulated in Kenya Vision 2030 (Republic of Kenya (2007). It will also impede the attainment of university education objectives.

Studies done in Kenya to establish factors contributing to private demand for postgraduate studies are mainly case studies and generally focus on general factors. A study by Muthui

(2013) on factors influencing the demand for higher learning opportunities by primary school teachers was carried out in Matinyani district, Kitui County. It emerged that financial considerations, individual factors, institutional factors, and reference groups influenced the demand for higher studies. The study looked at general factors and the population of study was derived from only one county. This study's objectives was to establish the effect labour market determinants of postgraduate studies have on private demand for postgraduate studies in universities in Kenya.

Evans (2013), in a descriptive case study on the factors that influence the demand for Master's degree in education in the University of Nairobi in Kenya, revealed that people enrol for a Master's degree so that they can later proceed to pursue Doctorate degrees and eventually become lecturers at the universities. Other factors identified were: the need to acquire more knowledge and skills, get a better pay, compete with a spouse, make use of extra money, and avoid frustration at the workplace. The current study specifically focused on the labour market determinants of postgraduate studies affecting private demand for postgraduate studies and was conducted in various universities in Kenya.

Other studies by Wambugu et al. (2009), Muthee (2010) and Omolo (2010) looked at the state of unemployment in Kenya and the causes. The study by Muthee (2010) did not address how labour force status affects private demand for postgraduate studies. While the studies conducted a situational analysis of unemployment in Kenya, they did not show how unemployment impacts on schooling decisions by postgraduate students.

Kirui (2016) shows that education contributes significantly in determining whether one engages in self-employment or wage employment. It emerges that there is a likelihood that people with higher education levels may choose to be self-employed while also working

for large corporations simultaneously. The study also notes that advanced degree programmes are likely to increase the profitability of a firm. However, the study does not seek to establish whether the desire to be self-employed drives individuals to seek postgraduate studies.

Sifuna (2006) observes that the general trend of female labour market participation rates increases with the level of education although not very strongly. The study however leaves room to determine whether the shifting workforce demographics could be affecting the private demand for postgraduate studies in Kenya.

In their study, Madichie and Nyakang'o (2016) investigate the necessity of implementing a strategic workforce plan within a public sector organization to address the challenges posed by an aging labour force. Findings reveal a number of challenges attributed to an ageing labour force at the PSO. The study's recommendation emphasized the importance of re-evaluating current practices regarding hiring, retention, strategies of succession, and approaches to manage talent within the organization. However, the study did not examine the potential connection between an aging labour force situation in the labour market and the private demand for postgraduate studies.

The above mentioned studies dwell on general factors and most are case studies. The current study specifically looks at the labour market determinants of postgraduate studies and how they affect private demand for postgraduate studies in Kenya. Consequently, the study set out to establish how labour market determinants of postgraduate studies affect private demand for postgraduate studies in the universities that were selected for the study.

1.3 Statement of the Problem

As articulated in Kenya's development plans, which include Kenya Vision 2030 and several Sessional Papers, postgraduate training and research enhances industrial transformation, economic growth, and poverty reduction through skills development. The perceived benefits of postgraduate studies and the government's initiatives to enhance university access have led to a growing private demand for postgraduate studies. However, while private demand for postgraduate studies in Kenya over the years has been rising, it has started declining, and this poses a risk of a shortage of highly trained and skilled professionals in the country. Scholars and the human capital theory postulate that among other factors, labour market determinants of private demand for postgraduate studies could be major contributors towards fluctuating trends in private demand for postgraduate studies. Thus perceived returns, skills requirements for a knowledge economy, labour force status, and shifting workforce demographics are determinants in the labour market that may affect private demand for postgraduate studies in Kenya. The underlying question that this study sought to address was this: do labour market determinants of private demand for postgraduate studies, affect private demand for postgraduate studies in universities in Kenya, and if so to what extent?

Studies conducted in Kenya on demand for university education are either case studies or the focus is on general factors. Apparently, there is a scarcity of research on labour market determinants of private demand for postgraduate studies in Kenya. This study, with a view to inform policy aimed at increasing participation rates at the postgraduate studies level, sought to fill the gap by establishing the extent to which labour market determinants of private demand for postgraduate studies affect private demand for postgraduate studies in selected universities in Kenya.

1.4 Purpose of the Study

The study aimed at establishing how labour market determinants of private demand for postgraduate studies affect private demand for postgraduate studies in selected universities in Kenya. Specifically, the study sought to establish how perceived returns, skills requirements for a knowledge economy, labour force status and shifting workforce demographics affect private demand for postgraduate studies.

1.5 Objectives of the Study

The following objectives guided the study.

i. To establish the extent to which perceived returns, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in selected universities in Kenya.

ii. To establish how skills requirements for a knowledge economy, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in selected universities in Kenya.

iii. To determine the effects of labour force status, as a determinant of private demand for postgraduate studies, on private demand for postgraduate studies in selected universities in Kenya.

iv. To determine how shifting workforce demographics, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in selected universities in Kenya.

1.6 Research Questions

The following research questions guided the study.

i. To what extent does perceived returns, as a determinant of private demand for postgraduate studies, affect private demand for postgraduate studies in selected universities in Kenya?

ii. How does skills requirements for a knowledge economy, as a determinant of private demand for postgraduate studies, affect private demand for postgraduate studies in selected universities in Kenya?

iii. What are the effects of labour force status, as a determinant of private demand for postgraduate studies, on private demand for postgraduate studies in selected universities in Kenya?

iv. How does shifting workforce demographics, as a determinant of private demand for postgraduate studies, affect private demand for postgraduate studies in selected universities in Kenya?

1.7 Significance of the Study

Despite the study being carried out in selected universities within Kenya, it employed probabilistic methods where all postgraduate students in the selected universities were given equal opportunity for participation. This approach enhances the study's broader applicability and relevance to various stakeholders. Hence, this study may be of significance to policymakers, universities in Kenya, academicians, employers, researchers and postgraduate students for better planning of postgraduate education as well as in the making of informed choices on postgraduate education.

1. **Policy Makers in Postgraduate Education**

1.1 The Commission for University Education (CUE)

This is one of the Semi-Autonomous Government Agencies (SAGAs) in the State Department for Higher Education and Research (SDHER), within Kenya's Ministry of Education. It is the regulatory body for university education in Kenya and is responsible for ensuring quality and standards in university education, including the approval and accreditation of programmes offered by universities. One of CUE's responsibilities includes formulating the policy for admission criteria and requirements, among other mandates.

The research findings of this study will assist CUE, as a policy making body in university education, better understand the role of labour market determinants of postgraduate studies on private demand for postgraduate studies in universities in Kenya. Findings linking labour market determinants of postgraduate studies to private demand for postgraduate studies will justify the implementation of policies aimed at increasing participation rates. This will assist them in formulating, executing and adjusting educational policy for postgraduate studies in Kenya. Hence, the necessary adjustments to meet prevailing and future labour market needs of the country will be made.

2. **Universities in Kenya**

Universities need to comprehend the dynamics that have come with the fluctuating postgraduate studies demand. Therefore, this study results will be valuable for strategic planning by the universities to respond to challenges that come with the fluctuating demand for postgraduate studies**.**

3. Students seeking to pursue Postgraduate Studies

Students aspiring to enrol for postgraduate studies need to comprehend the labour market determinants of private demand for postgraduate studies. This study's findings will help students make informed choices as they seek to enrol for postgraduate studies.

4. Employers

In the employment industry, it is essential that there is an adequate potential workforce to fill the available work places. It is also important that the workers who are hired possess the specific expertise and competencies required to achieve optimal levels of productivity.

The research findings of this study will therefore help sensitize employers, in general, on the need to collaborate with universities offering postgraduate studies for the enhancement of accurate information, training and employment opportunities for postgraduate students, thus addressing the challenge of skills gaps in the labour market.

5. Academicians and Researchers

Additionally, findings from this study may serve as a valuable resource for academics as a point of reference. The study has potential significance to theory in that it can supplement the existing research findings on determinants of private demand for postgraduate studies.

1.8 Limitation and Delimitation of the Study

1.8.1 Limitations of the Study

In carrying out this research, the researcher encountered several limitations which she could not control. These included:

i) The study had some limitations in relation to external validity as the research findings were based on the particular duration that the researcher was conducting

the study. The research findings were therefore dependent on factors occurring during that time. It can, therefore, not be said with certainty that the results can be generalized for all times.

ii) One way of assessing private demand for postgraduate studies is looking at the enrolment (Conlon et al., 2017). A study of private demand for postgraduate studies based on information on enrolled students, leaving out all those who desired to enrol, is likely to be incomplete and may fail to identify some significant determinants.

1.8.2 Delimitations of the Study

The study's scope was limited by the following characteristics that defined its boundaries.

i) The study focused exclusively on universities classified as public chartered and private chartered. The constituent colleges and institutions with provisional accreditation status were left out. This was because according to statistics obtained from Commission for University Education for the 2017/18 academic year, the combined percentage of these colleges and institutions constituted a minimal fraction of total universities in Kenya at 34%, and with a percentage enrolment of only 2% and 1.4% of the total population of Master's and PhD students respectively (CUE, 2019).

ii) While the inclusion of all determinants of postgraduate studies that affect private demand for postgraduate studies would be very comprehensive, this study narrowed down to some of the labour market determinants of postgraduate studies namely: perceived returns, skills requirements for a knowledge economy, labour force status and shifting workforce demographics. The study's objectives and

research questions were based on these determinants, which were also used to form the independent variables of the study.

iii) Though postgraduate diploma in education (PGDE) qualifies for postgraduate education, students enrolled for this programme were left out in the study because the programme does not entail research. The postdoctoral students were also excluded from the study so as to enable the study focus specifically on Master's and PhD students. This helped in maintaining a more targeted and manageable scope.

1.9 Assumptions of the Study

Several assumptions were made in carrying out the study which include the following:

i. That all universities in Kenya offer postgraduate programmes.
ii. That postgraduate student enrolment at Kenyan universities is a measure of the private demand for postgraduate studies in Kenya.
iii. That the respondents had knowledge on labour market determinants of private demand for postgraduate studies in universities in Kenya and therefore they would give reliable responses.
iv. That the study findings from the selected postgraduate students category as well as the universities for this study would be a reflection of what could be obtained if a census of all the students as well as universities in Kenya were to be conducted.

1.10 Theoretical and Conceptual Framework

1.10.1 Theoretical Framework

The human capital theory, proposed by Schultz (1961) and developed by (Becker 1962, 1964) guided this study. The theory postulates that education or training offers useful

knowledge and skills to the work force, hence raising their productivity and returns (Becker, 1964).

The theory suggests that investments are made in human capital so as to improve workforce productivity and consequently their earnings. These investments, according to Patrinos (2019), are costly and involve direct costs like tuition fees, and indirect costs like foregone earnings. Schultz (1961) and Becker (1964) emphasized that education as an investment should yield greater returns for individuals in the form of higher salaries, for companies through enhanced productivity, and for society in terms of technological advancement.

Subsequently, Becker (1964) distinguishes between two forms of human capital namely; personal human capital, which operates at the individual level, and social human capital, which operates at the broader societal level. This study's focus is on the micro level as it looks at how perceived returns could affect an individual's decision to pursue postgraduate studies.

At the micro (individual) level, the theory suggests that an individual bears the direct and indirect expenses (costs) of education in expectation that this investment will generate a future stream of benefits. According to this theory, the demand for education hinges on the individual's employment and income expectations. It attaches importance to the fact that varying levels of education, training, and experience result in different costs and earnings within diverse labour markets. Consequently, an individual will seek education to the extent that it enhances lifetime earnings through increased productivity, as posited by Becker (1964) and Mincer (1974). Therefore individuals will choose voluntarily the level of educational achievement that corresponds to their natural abilities and also their discount

rate. The discount rate reveals the extent to which one is ready to trade-off future returns against today's returns.

This fact is emphasized by a significant body of literature and research. For instance, Psacharopoulos and Patrinos (2004) posit that educational quality as measured by cognitive skills, impacts strongly on individual earnings. It has also been found that compared to the other levels of education, the returns to higher education are the highest (Montenegro & Patrinos, 2014; Psacharopoulos & Patrinos, 2018).

Human capital theory asserts that skills acquired through education and experience in an individual's lifetime is what creates an intuition for successful business performance emanating from a broad set of skills that are transmissible between vocations (Brixy & Hessels, 2010). Also, Pompei and Selezneva (2017) postulate that spending more years in education decreases the likelihood of experiencing unemployment and slightly increases the likelihood of pursuing self-employment. Therefore, improving access to university degrees and more so postgraduate degrees is likely to tackle unemployment and encourage self-employment.

Within the framework of developing human capital, human capital theory highlights the importance of education and training (Becker, 1964). This view is supported by Farid et al. (2012) who assert that education, experience and health are the core human capital variables which directly influence the labour force participation and play an important role in employment, with higher education playing the most crucial role in raising labour force participation. However, it has been observed that the process of human capital formation is affected by shifting workforce demographics and that aging opens up new human capital development opportunities. Čiutienė and Railaitė (2015) posit that the changing societal

values have not only made the young people to focus more on education but they have also made them more interested in rapidly developing new technologies. It thus follows that older less educated workers will be replaced by the younger, more educated and more technological compliant people. So in the context of population ageing, there is a reduction of the active labour force which increases investment in human capital importance. The young people will thus see opportunities in the labour market and this will inspire them to pursue postgraduate studies.

The human capital theory has however been criticized because of its assumption that education increases workplace productivity, leading to pay increase for the employees. The theory offers little insight in terms of what processes translate education and training into higher earnings (Netcoh, 2016). The theory also assumes that attainment and quality of higher education levels results in greater work productivity and wages. This assumption does not take cognizant of the fact that human capital formation, as a process, differs from one individual to another and from one group to another. Persons learn differently and likewise, the quality of training that may be considered effective in one setting may be rendered ineffective in another (Eide & Showalter, 2010). Also the investments needed to achieve a desired result in one context may be different for another.

However, since the focus of this study is on labour market determinants of private demand for postgraduate studies, the human capital theory fits in this study because it focuses on education and training as a medium for investing in human productive capacity. Education and training impart knowledge and skills which can be productively employed on the labour market in future. One way through which educational attainment contributes to the decision of whether or not to supply labour is its influence on the wage that the labour

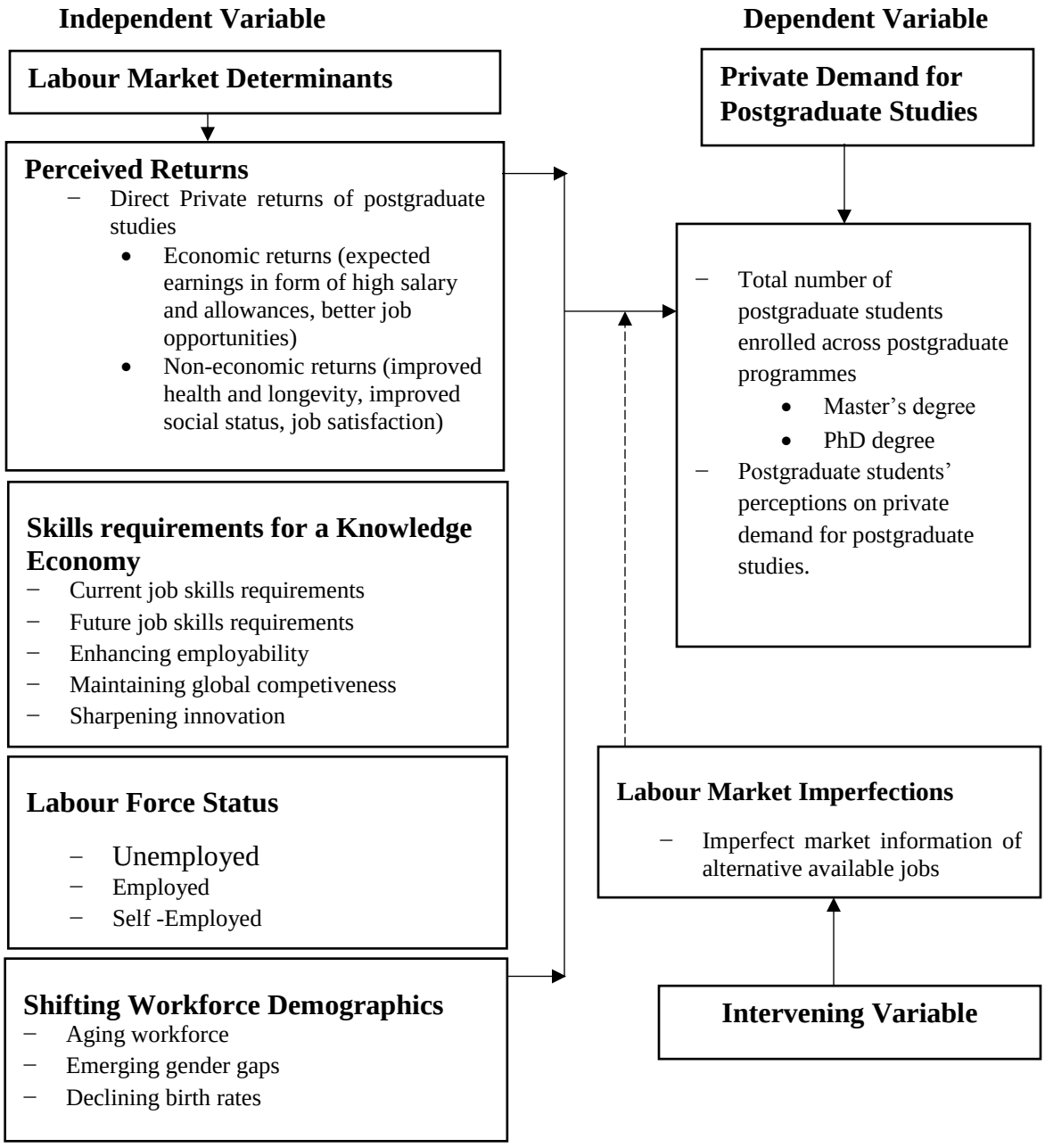
market offers. If postgraduate education is associated with higher productivity, then individuals in possession of postgraduate education should be offered higher wage in the labour market. Assurance of employment after engaging in an educational investment is also likely to attract demand for postgraduate studies. Thus, individuals will weigh the costs and benefits of an educational investment and decide whether to engage in it or not. Hence, this theory was relevant to the study.

1.10.2 Conceptual Framework

The study objectives were conceptualized within the following framework.

Figure 1.1

Conceptual Framework on Labour Market Determinants of Postgraduate Studies and Private Demand for Postgraduate Studies



The relationship between the independent variables (perceived returns, skills requirements for a knowledge economy, labour force status, and shifting workforce demographics) and the dependent variable (private demand for postgraduate studies) is conceptualized in Figure 1.1.

Acquisition of postgraduate studies has both cost implications and expected benefits. If benefits outweigh the costs, this can justify investing in the development of human capital. It is expected that one has to keep on upgrading their skills so as to remain relevant in the knowledge economy. First degree holders often go back for a second and higher degree for an upgrade of skills and hence the private demand for postgraduate studies.

Labour force status, for instance, employment, unemployment and self-employment may be an incentive to seek postgraduate studies. Nowadays many individuals are looking into the future and perceiving a strong likelihood of self-employment. They are interested in running their own businesses and to be their own bosses. It is anticipated that education levels, significantly impact on the profitability of the business (Chiliya & Roberts, 2012) and hence the private demand for postgraduate studies. The contemporary workforce is also characterised by many aging workers due to the declining birth rates. As a result, older people especially in the developing countries will increasingly become an important part of the decreasing workforce (OECD, 2006). The fact that this development emphasizes the necessity to retrain and retain older labour force notwithstanding, employers are only hiring older workers as a final option (Billett et al., 2011). This is likely to motivate young people to upskill themselves through engaging in postgraduate studies. In this way, they qualify themselves as suitable replacements for the aging workforce. Additionally, the workforce is characterised by an emerging gender gap where women have been encouraged to pursue

more education. The increasing educational attainment by women is, among other things, motivated by the opportunities to work that are made available in a more modern economy (Verick, 2014). Thus, it is expected that with the confidence that a person of any gender can occupy any employment position, private demand for postgraduate studies will increase.

The indicators for the dependent variable which is private demand for postgraduate studies were the number of postgraduate students across the Master's and PhD programmes and also postgraduate student's perceptions on private demand for postgraduate studies.

Labour market imperfections characterized by lack of perfect market information of alternative available jobs and labour immobility was the intervening variable. Due to the fact that in reality, markets are not perfect, the forces of demand and supply are not the sole determinants of wage rates (Watson & Buchanan, 2020). Workers and firms may be disadvantaged by poor information where for example, workers may be uninformed of better paid jobs elsewhere, and employers too may not be in a position to gauge the skills that their prospective employees possess. Workers therefore have imperfect information of alternative available jobs (Graham & Anwar, 2019). Graduates fail to acquire employment because friends and family do not or are unable to connect them to the world of work. According to Tulibaleka et.al (2021), the upshots of not getting family support family include not only long durations of unemployment but also involving in risky and informal engagements as they wait for formal employment that will match the attained educational qualifications. Anastasiu et al (2017) assert that unemployment of graduates is contributed by the lack of cooperation between universities and the hiring firms. Labour immobility arises when labour does not relocate to where it is greatly demanded (Economics

Online, 2020). This can be as a result of a change in industrial structure that leaves some people unable to respond by switching job, industry, or location. This eventually renders them temporarily or permanently unemployed.

1.11 Operational Definition of Terms

The terms below have been operationalized in this study to assume the corresponding meaning.

Direct Private Returns of Postgraduate Studies: These are the profits that go to an individual as a result of acquiring postgraduate studies.

Employment: The state of having paid work for at least one hour a week, including those temporarily out of work.

Expected Earnings: This is the anticipated earnings by an individual pursuing a course of action engineered by the desire to improve his chances of employability.

Gender Gaps: Systematic differential outcomes achieved by women and men in the labour market.

Graduate Unemployment: State where graduates from universities are actively looking for jobs but are unable to secure them.

Imperfect Market Information: Refers to where workers are unaware of better paid jobs or the employers are not able to gauge the skills that their prospective employees possess.

Knowledge Economy: An economy that utilizes ideas and application of technology rather than physical abilities, exploitation of cheap labour or conversion of raw materials.

Labour Force Status: Refers to whether one is in employment, unemployment or outside the labour force.

Labour Immobility: Means that labour does not transfer to where it is greatly demanded.

Labour Market: Refers to the mechanism that enables the buying and selling of human labour as a commodity and the means by which labour demand is matched with labour supply.

Labour Market Determinants: Signals in the labour market, like price of labour, skills required, employment, unemployment and workforce demographics that affect how people react towards the labour market.

Labour Market Imperfections: When factors other than the forces of demand and supply determine the wage rate, thus rendering the labour market uncompetitive.

Perceived Returns: The comparison of the cost of pursuing postgraduate studies with the expected benefits after completion of the programme.

Postgraduate Studies: Studies leading to acquisition of a Master's or Doctorate degree.

Private Demand for Postgraduate Studies: Refers to the number of persons enrolled for postgraduate studies.

Self-employed: Are individuals in business on their own account, whether running their personal limited company as a sole trader or through a partnership and may or may not have workers.

Shifting Workforce Demographics: A scenario where more workers are approaching retirement than are entering the workforce. Also considers the number of young and old employees, as well as the number of men and women in the workforce.

Skills: Knowledge, attitudes as well as technical capabilities that an individual acquires or exhibits.

Skills Requirements: The sum of basic and new skills needed to survive in modern-day knowledge society.

Unemployment: Refers to a condition where people of working age are without work, but are available for and are seeking work.

Youth Unemployment: Unemployment of young people, of between 14 and 28 years as defined by the United Nations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2. 1 Introduction

A comprehensive review of previous studies that are relevant to the current study is provided in this chapter. The study focused on labour market determinants of private demand for postgraduate studies. A thematic literature review was employed to focus on the key concepts and outcomes rather than delving into specific aspects of the studies under review as recommended by Creswell (2012). By identifying the gaps in the reviewed literature, the study was able to generate new knowledge. The chapter gives an overview of the study's dependent variable, private demand for postgraduate studies in universities in Kenya. The independent variable of the study, labour market determinants of private demand for postgraduate studies, was discussed under the following indicators: perceived returns, skills requirements for a knowledge economy, labour force status, and shifting workforce demographics. These were discussed in relation to their effect on private demand for postgraduate studies.

2.2 Private Demand for Postgraduate Studies in Universities in Kenya

Psacharopoulos (2014) suggests that the total enrolment of students in an educational system is determined by a sequence of private investment decisions. It is the combination of these private decisions that form social demand (Mueller & Rockerbie, 2005). This means that social demand for education is the product of independent individual choices made at individual households but later merge at the education market to constitute social demand for education. One way of measuring private demand is by counting the number of applications (Psacharopoulos, 2014). Another way of measuring private demand for education is enrolment (Conlon et al., 2017).

Private demand for postgraduate studies in Kenya is shown to have been rising over the years. From an enrolment of 6,789 Master's and PhD students in year 2007, through 24,417 in 2013 (KNBS, 2013), to 67,798 in the 2016/ 2017 academic year (CUE, 2018), it definitely has been a steady rise in private demand for postgraduate studies. However as postgraduate enrolment statistics reveal, total postgraduate enrolment in universities in Kenya declined from 67,798 in the 2016/2017 academic year to 66,203 in the 2017/2018 academic year. In the 2018/2019 academic year, postgraduate enrolment dropped further to 61,708 (CUE, 2017, 2018, 2019). This shows fluctuating demand for postgraduate studies, a trend that may lead to the country lacking enough highly trained manpower to run the economy.

As posited by Mukhwana et al. (2016), the number of postgraduates in the country are way far below the present and future demands of the nation. Among the challenges the country is likely to encounter include staffing and replacement of an ageing faculty at the higher institutions of learning, as well as placing and replacing professional teams required in both government and the private sector (Mukhwana et al., 2016). The fluctuating trend in postgraduate enrolment is also likely to hinder the national research agenda (Mukhwana et al., 2016; Barasa & Omulando, 2018). Thus, the downward trend in postgraduate enrolment may hinder the realization of Kenya becoming a middle-income economy come 2030.

2.3 Perceived Returns and Private Demand for Postgraduate Studies

In many countries and especially the developed ones, postgraduate degree holders continue to form a significant share of the workers (Boneva et al., 2019). This highlights the importance of postgraduate degree holders in the workforce. It has also been posited that the benefits of pursuing higher education beyond the undergraduate level are significant

and progressively increasing (Burgess, 2016). According to statistical data from 2018, approximately 15 percent of workers in the United States and 14 percent in the United Kingdom held postgraduate degrees, and had notably higher earnings compared to employees with only an undergraduate degree (Lindley & Machin, 2016; Boneva et al., 2019). In Japan, findings show that workers with a postgraduate degree earn approximately between 15 and 30 percent more than those with only an undergraduate degree, and that the rate at which an investment in obtaining a Master's degree yields returns degree is between 11 and 12 percent (Kakizawa et al., 2014; Morikawa, 2015). This empirical evidence points to the tangible economic benefits associated with pursuing postgraduate education. The substantial income differentials and favorable return on investment, ranging between 15-30 percent and 11-12 percent respectively, suggest a compelling case for the value-added by advanced degrees in the Japanese workforce. This data not only draws attention to the financial incentives for individuals but also contributes valuable insights for policymakers and educators in understanding the broader socioeconomic impact of higher education.

In South Africa, Nikolov et al. (2020) found that each extra year of education is associated with a rise in earnings of approximately 18 to 20 percent. This underscores the role of education as a platform for accessing higher-paying employment and securing advancement within the workforce. Additionally, the returns to higher education in this country have been found to be increasing as education enables students to access better paying jobs as well as better opportunities for promotion in the workplace (Salisbury, 2016; Horn, 2018). This points out to not only individual or private financial benefits but also

emphasizes the importance of education as a key driver of economic and professional growth in the South African context.

In Kenya, Rugar et al. (2010) found that investing in more university studies produced a 47.8% rate of return, affirming the economic benefits of pursuing advanced university studies. Notably, their findings indicate that, despite Master's degrees offering faster payback, obtaining a Doctorate degree emerges as the most lucrative level of education within the university setting. This is an indication of the relationship between educational investments and their potential for substantial returns, thus shedding light on the benefits of pursuing advanced degrees in the Kenya.

Examining returns to education has traditionally relied on earnings data, as demonstrated by Altonji et al. (2016), Lindley and Machin (2016), and Altonji and Zhong (2020). However, from research conducted both in developed and developing countries' settings, it emerges that people tend to be misinformed about the returns to schooling as highlighted by Jensen (2010) and Wiswall and Zafar (2015). This knowledge gap has prompted a shift towards investigating educational choice using expectations data about future earnings (Giustinelli, 2010; Zafar, 2011). In these studies, it has been shown that like actual outcomes, expectations vary with observable characteristics (Delavande, 2014). It has also been shown that at the individual-level, there is a strong association between expected outcomes and future outcomes (Delavande & Rohwedder, 2011). Such data have aided in making inferences about decision-making in various fields (Zafar, 2013; Stinebrickner & Stinebrickner, 2014). Hence, since individuals tend to be misinformed about actual returns to schooling (Jensen, 2010; Wiswall & Zafar, 2015) it is the perceived returns by students and their parents that affect actual enrolment decisions. The perceived returns or expected

benefits in postgraduate education investment are both economic and non-economic (Machin & McNally, 2007; Schendel & Oketch, 2014). The economic returns include high salary and allowances and better job opportunities while non-economic returns include improved health and longevity, improved social status and job satisfaction (Machin & McNally, 2007; Schendel & Oketch, 2014). Therefore as Gölpek (2012) asserts, higher expected returns lead to a greater desire for people to choose to invest in educational opportunities. According to Machin and McNally (2007), individuals with higher tertiary education enjoy higher wage premiums.Thus, the choice for investment in postgraduate studies depends on the potential future returns.

Perceived returns to education have been illustrated as important predictors for schooling choices, way above other standard schooling factors (Jacob & Wilder, 2011; Beaman et al., 2012). Also, Boneva et al. (2019) support this view by documenting that the decision to enrol in postgraduate studies is heavily influenced by perceptions regarding various instant and long-term benefits associated with advanced education. Thus, the decision-making process regarding the amount of education a prospective student should pursue is primarily shaped by their perceived benefits of education.

However, while future returns matter, Delavande and Zafar (2014) assert that, at least in the Pakistan context, they only play a marginal role in determining university choice as compared to factors like financial constraints and non- economic outcomes enjoyed at the university.

Kwakwa et al. (2012), using the Akuapem Campus of the Presbyterian University College in Ghana, found that students' choice to enrol for higher education is influenced by factors like the possibility of higher earnings, employment, getting promoted and raising social

status. The study concluded that individuals' expected returns influences their enrolment to higher education.

In Kenya Moraa (2014) finds that at 40%, attaining a university-level education offers the most substantial individual benefits in terms of returns on investment in schooling. Moraa (2014) concludes that progressing to university education is highly advantageous as it generates greater returns in comparison to lower levels of education. The study however does not establish whether anticipation for higher returns is a motivator for private demand for postgraduate studies in Kenya, hence this study.

From the above literature, findings yield varying results. Some studies only point out at the fact that returns to postgraduate studies are high compared to other levels. However, they do not investigate whether perceived returns of a postgraduate degree motivate students to enrol for postgraduate studies. Secondly, depending on the country of the study, perceived earnings have or have no effect on postgraduate studies choice. One of the objectives of this study was to fill this research gap by establishing how perceived returns affect the decisions by students to enrol for postgraduate studies in Kenya.

2.4 Skills Requirements for a Knowledge Economy and Private Demand for Postgraduate Studies

In a knowledge-driven economy, as postulated by Okebukola (2019), the creation, diffusion, as well as information and knowledge utilization is valued as the most important factor of production. This is as opposed to the traditional economy where the argument is that it is only in financial or physical terms that capital can be explained (Hadad, 2017)). Likewise, facilitated by better artificial intelligence, automation is predicted to have a major effect on jobs in the sense that it reduces employment (Đonlagić & Kurtić 2016; Acemoglu & Restrepo 2016). A report by the Manpower Group (2016) asserts that up to

47 percent of U.S. jobs in 2010 were rated as very likely to turn out to be computerized by 2030. Carnevale et al. (2010) predict that the new businesses and opportunities created should eventually surpass those that vanish and that technology is enabling the emergence of new work models that may assist in solving some of the current labour market issues.

Thus as noted by Wang (2012), globalization, new technologies as well as the revolution of information has had a profound impact on the global economy in form of shortened production cycles and greater productivity. These changes and transformations may therefore have great implications for the roles and types of jobs that education should prepare people for. According to OECD (2017), high level education is in a favorable position to supply the demand for advanced skills in an economy. The report also notes that routine manual jobs and cognitive tasks are being eliminated by technological progresses, by way of creating new jobs that demand digital skills. Arntz et al. (2016) also note that 9% of jobs face the risk of complete automation due to these advancements while approximately 30 to 35% of jobs could potentially undergo notable transformations in the execution of tasks. This underscores the evolving landscape of employment shaped by technology.

Wang (2012) advocates that in order to maximize on human resources, there is need to develop and update needed skills that will ensure active participation in the economy, enhance employability through relating education to the labour market and build a flexible education system that not only caters for school-age students but also covers adults who are in need of updating their skills and knowledge. Postgraduate programmes are examples of such openings where adults may go back to school to update their skills. This is likely to increase the demand for postgraduate studies.

Skills and education have been shown to promote productivity growth. Holland et al. (2013) show that a 1% increase in the share of the labour force with university degrees increases productivity level by between 0.2 and 0.5% in the long-run. Another observation is that with the widespread of information and communication technologies, vocational skills will be required for these technologies to be utilized effectively (Mason et al., 2014). This may compel individuals to seek postgraduate studies so as to upskill themselves.

Walker (2012) conducted a study in Cambodia whose focus was on the emerging patterns and trends among postgraduate students. The research utilized an online survey and targeted Master's students at a government university in Cambodia. The results indicated that a considerable proportion of postgraduate students allocated a substantial portion of their annual earnings towards their studies and associated costs. It was also found that many students believed that obtaining a postgraduate degree would have tangible benefits for their career prospects. Additionally, respondents expressed the opinion that universities should establish stronger connections between their offered study programs and the future skilled labour requirements of the country. These insights draw attention to the financial commitment and perceived career advantages associated with postgraduate education, as well as the call for closer alignment between academic offerings and national labour requirements.

In investigating changes in the need for advanced educational opportunities after globalization in Malaysia, Othman et al. (2012) conducted a study where they compared the trend in demand for education before and after globalization. They concluded that globalization has impacted most on the demand for private higher education institutions as well as technical and vocational education to fulfil the demands for more skilled labour.

Amimo (2012), in a study in Kenya, points out the necessity to gain knowledge about the changing requirements for present day workforce so that educators can ensure a curriculum that will prepare students for the world of work. Riechi (2008) too sought to assess Kenya's public universities capacity to cope with demand for their academic programmes and the pertinence of these programmes to labour market needs and Kenya's development goals. It emerged that courses offering skills that were in high demand in the labour market attracted excess demand, signifying that these universities were responding to labour market signals. The study also found that in some universities, there was excess capacity to offer some academic programmes that were in less demand in the labour market even though they were deemed relevant to Kenya's social and economic challenges like crime, starvation and inadequate infrastructure. In addition to putting in place effective mechanisms to ensure continuous monitoring of the labour market signals and also establish the appropriate value weightings on academic programmes needed to address shortages in the labour market, (Riechi, 2008) recommends continuous assessments by stakeholders aimed at informing and guiding the students on career choices so as to enhance student placement. The study also recommended undertaking of regular surveys to capture university students' perceptions on various jobs and industry.

Judging by the above studies, the imperative to meet the increasing need for skilled labour is evident. However, the studies address the issue of job-skill mismatch but they do not address how skills requirements for a knowledge economy affects an individual's choice to seek postgraduate studies. The current study aimed at establishing, through students' perceptions, the effect skills requirements for a knowledge economy has on private demand for postgraduate studies in universities in Kenya.

2.5 Labour Force Status and Private Demand for Postgraduate Studies

Labour force status classifies people in the following categories: individuals who are in employment, individuals who are unemployed, and individuals who are not part of the labour force ((ICLS, 2013). The unemployed are described as persons without work but actively looking for employment and are currently ready to commence employment (OECD, 2019).

According to the World Employment Social Outlook (ILO, 2016), the global unemployment figure reached 197.1 million in 2015, exceeding the previous year by 1 million and surpassing pre-crisis levels by more than 27 million (ILO, 2016). In line with these findings, Oppong and Sachs (2015) highlight a rise in graduate unemployment in the contemporary global landscape that poses a significant challenge to economies worldwide. This emphasizes the critical need for comprehensive strategies to address the issue of increasing unemployment, particularly among graduates, and highlights the necessity for effective policy measures and educational initiatives to bridge the gap between skills and employment opportunities.

Observations in Europe, as noted by Barakat et al. (2010), indicate that a surge in youth unemployment corresponds with an increased demand for postgraduate studies. In America, Barr and Turner (2013) highlight the impact of weak labour markets during the Great Recession, which heightened youth unemployment and spurred enrolment for further studies. Additionally, Hillman and Orians (2013) discovered that a 1% point increase in unemployment correlates with a demand rise of 1.1–3.3% for postgraduate enrolment. These findings underscore the interconnectedness between economic factors, unemployment, and the pursuit of postgraduate education as individuals seek to enhance their skills during challenging labour market conditions.

In Nigeria, the phenomenon of graduate unemployment stands out as a primary driver of the increasing demand for postgraduate studies, as observed by Oni (2013) and Fumilayo (2014). This finding highlights a relationship between challenges in the job market and the pursuit of higher education, as individuals aim to improve their employment prospects.

In Kenya, Omolo (2010) points out that since the year 2000, salaried workers proportion in the country was low, decreasing and accounted for less than one quarter of the total employments in the country. Uddin and Uddin (2013) too observe that the number of salaried employees reduced from 28.49% in year 2000 to 19.54% in 2008 as the proportion of the unemployed graduates experienced a sustained upward trend. This points out to the glaring problem of graduate unemployment that the country is facing.

In Kenya, the high unemployment rates are associated with the economy's slow growth, limited labour absorptive capacity, a mismatch between job skills and market demands, and deficiencies in labour market information, as highlighted by Omolo (2010) and Uddin & Uddin (2013). This emphasizes the complex nature of the unemployment challenge, which calls for comprehensive strategies that address skills development and accurate labour market information to address the unemployment issue. While these studies shed light on the causes of Kenya's unemployment, a gap remains in understanding how unemployment affects the private demand for postgraduate studies. Hence further research is necessary to determine how unemployment affects the private demand for postgraduate studies in the Kenyan context.

A study by Wambugu et al. (2009) provided an overview of Kenya's unemployment situation. The study’s interest was in taking stock of the existing information on the country’s types and causes of unemployment and documenting the array of stakeholders,

policies and initiatives that have been put in place to manage the problem. While the study conducted a situational analysis of unemployment in Kenya, it did not show how unemployment impacts on schooling decisions by university students. Similarly Muthee's findings (2010) put youth unemployment rate in Kenya at 65%. The study reported that lack of the competencies required to gain an upper hand in some job markets hindered newly graduated persons from finding jobs. Despite these insights, the report did not show how unemployment affects the private demand for postgraduate studies in Kenya. Therefore, as has also been put by Nesoba (2010) and Mwirigi (2011), unemployment does not only result from jobs shortage but also from an inadequate educational infrastructure. These findings create room for a study on how unemployment affects schooling decisions of postgraduate students in Kenya.

However, it is not always that unemployment becomes an incentive for postgraduate studies demand. Rivers (2010) concluded that in America, unemployment rates did not significantly affect enrolment. Likewise, Tumino and Taylor (2015) posit that in the assumption that adult unemployment rate influences young people's long term employment expectations, two scenarios are possible. On one hand, higher levels of adult unemployment can promote schooling if in a high unemployment context, education is seen to significantly improve opportunities for employment. On the other hand, increases in adult unemployment can discourage students to pursue higher education, as they fear suffering the same fate. The study concludes that educational enrolment of youth from economically disadvantaged backgrounds increases during periods of high youth unemployment while high levels of adult unemployment discourage school enrolment. Similarly, Jelili (2010) asserts that holding wages constant, higher unemployment in the

present only makes schooling more attractive. This is because chances that a wage is lost are less, as the opportunity cost of education reduces with higher unemployment. Likewise, the study observes, the benefits of education reduce with higher future unemployment, therefore discouraging enrolment.

These studies yield varying results for while some find a positive relationship between unemployment and postgraduate studies demand, others find a negative relationship. This study endeavours to determine the real situation in Kenya through establishing how unemployment affects private demand for postgraduate studies in Kenya.

A report by University of Otago (2017) asserted that the employed, in order to remain relevant and gain promotion in their work places, may seek postgraduate studies that would equip them with valuable skills which include research and other critical skills. This reflects the evolving nature of contemporary workplaces where individuals are in pursuit of advanced education as a strategy to equip themselves with a stock of skills, including the fundamental ability to conduct research and other critical skills, and thus remain relevant in their work places. In Kenya, standardized guidelines for academic staff promotion were implemented in 2014 by the Commission for University Education. These guidelines specified that individuals must hold a doctoral degree (PhD) in order to be eligible for teaching positions at universities (CUE, 2014). Though the rule was later nullified by the court (Star Today newspaper dated, December 11th, 2019), this development could increase the number of individuals seeking doctorate degrees. Hence the business of engaging in higher studies and developing one's skills is not only encouraged but it is practically linked to career advancement and maintaining relevance in the work place.

As noted by Van and Jansen (2006), individuals who achieve higher levels of education and are driven by non-monetary benefits such as greater autonomy or self- satisfaction count themselves well skilled to start their own firms. ComRes (2017) too notes that self-employment has grown tremendously especially in the 2000s as a large number of people are choosing self-employment than ever before because of the freedom and flexibility associated with it. Other than the desire for freedom and flexibility found in self-employment, Clark (2011) postulates that individuals opt for self-employment because after graduation they cannot find a job. Ortlieb (2015) too observes that with more than 66% of university graduates lacking jobs, graduates are looking for other income generating opportunities such as starting self-owned businesses and pursuing postgraduate education to better the success of their business. This, as also observed by Holtz-Eakin, et al. (2000), means that self-employed individuals may require postgraduate education to enhance the depth of knowledge and an individual's ability to apply skills in new and creative ways that are not always achievable through an undergraduate degree alone.

Self-employment encompasses various models that offer individuals alternative paths to pursue entrepreneurship. As articulated by Muffels (2013) and Boeri et al. (2020) some examples of self-employment include solo self-employed individuals, freelancers and partnerships. This reflects the flexibility and autonomy that characterize entrepreneurial endeavours. According to the Organization for Economic Co-operation and Development (OECD, 2015), solo self-employment is the simplest way for a person to start a business. This form of self-employment is characterized by individuals operating independently, without the involvement of partners or employees. Boeri (2020) sheds light on the changing dynamics within self-employment, noting an increasing trend in solo self-employment

relative to self-employment with dependent employees. This shift could lead to the growth of gig economy work and alternative work arrangements where the labour market is characterized by the prevalence of short-term, flexible jobs and freelance or independent work, as opposed to traditional full-time employment.

Block and Thurik (2013) find a strong correlation between education level and the likelihood of self-employment. Consequently, businesses managed by individuals with advanced degrees tend to have higher potential for growth compared to those operated by individuals with lower levels of education. Kangasharju and Pekkala (2002) also observe that in Finland, firms led by the highly educated and self-employed people have greater chances of growth irrespective of market conditions. This suggests that, despite the challenges associated with managing small businesses, the entrepreneurial ventures led by highly educated individuals exhibit resilience and a capacity for sustained growth. Hence, this could lead individuals to seek advanced education.

In West Africa, an investigation carried out in urban informal sector firms in Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal and Togo, established that among other things, people with high level of education tend to be successful entrepreneurs (Grimm et al., 2012). This associates higher levels of education with an enhanced ability to manage businesses.

In Kenya, Uddin and Uddin (2013) note that the number of the self-employed people has continued to rise. They report that the proportion of persons in self-employment rose from 70.42 percent in 2000 to 79.78 percent in 2008, representing a 9.36 percentage increase over that period. This upward trend suggests that the number of individuals opting for entrepreneurship is growing. An observation by ILO (2009) too indicated that wage and

salaried employees were relocating to the self-employment sector because of the worsening welfare of the workers in the unregulated sector due to the low economic developments. This indicates a shift toward self-employment as a potentially more viable and flexible alternative that is driven by the challenges encountered in traditional employment settings. Kirui (2016) too, in looking at the determinants of youth self-employment in Kenya, points out that there is a significant relationship between education and the decision as to whether one will participate in either self-employment or wage employment. This suggests that educational backgrounds play a pivotal role in shaping the preferences of the youth, steering them toward either entrepreneurial endeavours or traditional employment.

The literature on self-employment reveals that there is a likelihood that people who are highly educated will be self-employed and may at the same time go to work in large corporations. It also emerges from the literature that advanced degree programmes are likely to increase the profitability of a firm. Hence, this can be an incentive for postgraduate studies enrolment. However, the reviewed studies do not seek to find out whether the desire to be self-employed drives individuals to seek postgraduate studies. The present study aims to address this research gap by establishing how self-employment, as a labour force component, contributes to private demand for postgraduate studies in universities in Kenya.

2.6 Shifting Workforce Demographics and Private Demand for Postgraduate Studies

The global workforce is undergoing significant demographic shifts, characterized by an increasing percentage of older individuals in the industrialized workforce. As highlighted by Yaldiz et al. (2017), this phenomenon can be attributed to various interrelated and interconnected factors which include the aging of the baby-boom generation, evolving retirement laws, improved health conditions allowing for extended work life, the financial

necessity for additional revenue among older workers, and a declining influx of younger individuals into the workforce.

Findings from the 2016 report by the Manpower Group indicate that such workforce demographics trends imply shortages in labour supply as nearly sixty percent of individuals today live in nations with shrinking or rather stagnant work forces. China, for instance, is grappling with a demographic shift where the working-age population peaked in 2010, and projections indicate that by 2050, more than a quarter of the country's population will be over 65 years old, a significant increase from the current eight percent. The same report also indicates that the labour force of Germany is likely to go down by six million workers by 2030 and this explains why the country is more open to migrants.

As highlighted by Jaimovich and Siu (2009), future shortfalls in the supply of the labour force means that economies will increasingly be required to diversify their sources of personnel to maintain economic growth. The imminent retirement of a significant and experienced cohort of older workers poses a critical challenge for firms. Hence planning for the seamless replacement of these retiring employees becomes vital. Thus, as Ackerman and Kanfer (2020) assert, the big challenge that companies face is ensuring that the valuable knowledge that these older workers possess is transferred before they exit employment.

Diprete and Buchmann (2006) posit that there are emerging gender gaps in the workforce which significantly impact on education attainment. It is also noted that although a significant minority of men carry on to reach the highest echelons of education achievement and labour markets, it is also clear that the median man is moving towards the opposite direction (DiPrete & Buchmann, 2013). This is also echoed by David and

Melanie (2013) who observe that since the 1980's, the U.S male labour market has taken a downward trend along the dimensions of employment rates, occupational status, real wage levels and skills acquisition. This trend of diminishing male presence in the labour market is also pointed out by Ratcliffe (2013), who notes that, since the 1980s, male students have been outnumbered by their female counterparts in most UK universities. This shift in educational demographics is bound to have profound implications, eventually translating into significant gender gaps within the workforce.

In Africa, Nabalamba and Chikoko (2011) point out some factors that pass for urgent and pressing demographic challenges. These include fast population growth, a growing urban population and high child and maternal mortality rates. These may have implications in the labour market like increased numbers of young people as well as high youth unemployment.

According to Bhorat et al. (2015) in South Africa, although there was a matching increase in employment and the working age population, there was a lack of alignment between employment growth and the growth of the labour force. This resulted to a rapid rise in the level of unemployment in total terms and as a ratio of the labour force. The authors posit that this disconnect points to the importance of understanding the longer-term challenges and opportunities related to demographic change. Such an opportunity, as reported by World Bank (2015) is exploring how the projected working-age population growth could be achieved through the creation of a virtuous circle of job intensive growth, enhanced productivity, greater savings and better schooling attainment, particularly for the youth who would expand the working age population in the future. The report argues that if education improved it would ensure that new entrants to the workforce are better equipped

for the modern workplace, accelerate real GDP growth and virtually eliminate extreme poverty by 2030. These studies present the interaction of demographic changes, employment dynamics, and educational opportunities in South Africa. However as the labour market undergoes transformations influenced by changing demographics, understanding the evolving needs and aspirations of individuals seeking advanced education is crucial.

In Kenya, Sifuna (2006) observes that the general trend of female labour market participation rates is increasing with education level although not very strongly. Madichie and Nyakang'o (2016) find a number of challenges attributed to an ageing labour force at the Public Service Organization in an ageing labour force situation. The study recommended the need to revise the status quo on the hiring, talent management approaches as well as retention and succession strategies in the organization. However, what these studies fail to address is how an aging workforce situation affects the private demand for postgraduate studies in Kenya. This is important for developing informed policies and strategies aimed at addressing the dynamic needs of the Kenyan labour market. Hence, this study aims to fill this gap by establishing the relationship between an aging workforce in the labour market and the demand for postgraduate studies in selected universities in Kenya.

2.7 Summary and Gaps identified in the Literature Review

The literature review reveals that private demand for postgraduate education is growing across many developed and developing countries. It also reveals that among other factors, determinants associated with the labour market play a role in private demand for

postgraduate studies. The literature, encompassing both global and local past studies was reviewed into a critique and the following gaps were identified.

While expected returns have been shown to predict schooling choices (Jacob & Wilder, 2011; Beaman et al., 2012; Kwakwa et al., 2012), Delavande and Zafar (2014) posit that the choice to enrol in university studies is primarily influenced by the perceived value of consumption rather than the investment value associated with pursuing higher education.These varying results on the relationship between higher education demand and perceived returns necessitated the carrying out of this study in Kenya. Secondly, though the study by Moraa (2014) found that university level of education in Kenya yields higher returns as compared to the lower levels of education, it did not address how perceived returns affect schooling decisions by postgraduate students in universities in Kenya, hence this study.

While Riechi (2008) recommends the need for the government to create a model for manpower planning focusing on offering of strategic programmes by institutions aligned to the country's developmental needs, Amimo (2012) questions the logic behind training graduates whose employment is not guaranteed. The literature provides a contrast between skills offered at some universities and the actual industrial skill needs. These studies however do not address how skills requirements for a knowledge economy affects individuals' decisions to seek postgraduate studies. This study aims to bridge this research gap by establishing how skills requirements for a knowledge economy affects individuals' decisions to seek postgraduate studies.

Literature reviewed on labour force status effect on private demand for postgraduate studies shows varying results. While Jelili (2010) and Fumilayo (2014) assert that

unemployed individuals may choose to pursue postgraduate studies to make them better placed for employment, Rivers (2010) concluded that unemployment rates did not significantly affect enrolment. Tumino and Taylor (2015) posit that educational enrolment of youth from economically disadvantaged backgrounds increases during periods of high youth unemployment while high levels of adult unemployment discourage school enrolment.

Wambugu et al. (2009) explored the unemployment situation in Kenya. While the study conducted a situational analysis of unemployment in Kenya, it did not show how unemployment impacts on schooling decisions by postgraduate students, hence this study. Fumilayo (2014), linked unemployment to university education demand in Nigeria. This study aimed to determine how labour force status affects private demand for postgraduate studies in Kenya.

Kangasharju and Pekkala (2002) conducted a study in Finland on education's role in self–employment success while Klaesson and Larsson (2014) conducted a study on education and self-employment propensity in Sweden. In Kenya, Kirui (2016) shows that in the choice as to whether to participate in either self-employment or wage employment, education plays a crucial role. From the literature it emerges that people with advanced education tend to participate in self-employment and could also simultaneously go to work in large corporations. It is also revealed that advanced degree programmes are likely to increase the profitability of a firm. However, none of these studies sought to establish the effect self-employment has on private demand for postgraduate studies. This study aimed to determine how self-employment affects private demand for postgraduate studies in the Kenyan context.

Literature on shifting workforce demographics as reviewed in this study reveals that the emerging gender gap in the workforce significantly impacts on education attainment (Diprete & Buchmann, 2006; David & Melanie, 2013; Ratcliffe, 2013). Diprete and Buchmann (2006), and David and Melanie (2013) studies were conducted in the U.S while that of Ratcliff (2013) was done in the UK. This study intended to determine how shifting workforce demographics affect private demand for postgraduate studies in Kenya.

While Bhorat et al. (2015) and World Bank (2015) lay facts and implications of changing demographics in the workforce in South Africa, they do not link this with private demand for schooling and hence this study.

In Kenya, the study by Sifuna (2006) notes that the general trend of female labour market participation rates is increasing with education level. Madichie and Nyakang'o (2016) find a number of challenges attributed to an ageing labour force at the Public Service Organization in an ageing labour force situation. These studies do not seek to establish how an aging workforce situation in the labour market affects private demand for postgraduate studies in Kenya and hence this study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter provides a comprehensive overview of the methodology utilized in this study. It covers: the research design employed, the study location, the target population, the sampling design, the research instruments used, the assessment of instrument validity and reliability, piloting of the study, data collection procedures and data analysis techniques, as well as logistical and ethical considerations. Each of these aspects is examined in detail to offer a thorough comprehension of how the study obtained relevant data regarding the labour market determinants of private demand for postgraduate studies in the universities that were selected for the study.

3.2 Research Design

In this study, a Mixed Methods research approach was utilized, which involves gathering, analysing, and integrating both quantitative and qualitative data within a single research study (Creswell & Plano Clark, 2011; Creswell, 2014). The purpose of employing this approach was to gain a more comprehensive understanding of the research problem (Creswell, 2014). While the quantitative method provided deductive and generalizable measures of representativeness, the qualitative method offered an inductive and contextual exploration of the complexity of the phenomenon (Onwuegbuzie & Johnson, 2019). By using the Mixed Methods approach, the researcher was able to tap the strengths and minimize the limitations of both quantitative and qualitative approaches, thus enhancing the overall validity and breadth of the study.

This study employed Explanatory Sequential Mixed Methods design consisting of two distinct phases namely the quantitative phase and the qualitative phase (Creswell, 2014).

Specifically, the follow-up explanations model (Creswell and Plano Clark, 2011), was used where a secondary qualitative phase was used to explain the quantitative results (which were given primacy in the study). In the initial phase, survey (quantitative) data were collected and results were analyzed. The results were used to plan the second (qualitative) phase (Creswell, 2014). The particular quantitative findings that required further explanations like individuals scoring at extreme levels or unexpected results were identified. Through purposeful sampling, qualitative data were obtained from the participants who could best help explain the findings (Creswell & Plano Clark, 2011; Creswell & Creswell, 2017). Since the design aims at following up the quantitative findings and exploring the results in more depth, the qualitative sample was drawn from the initial quantitative sample (Creswell, 2014).

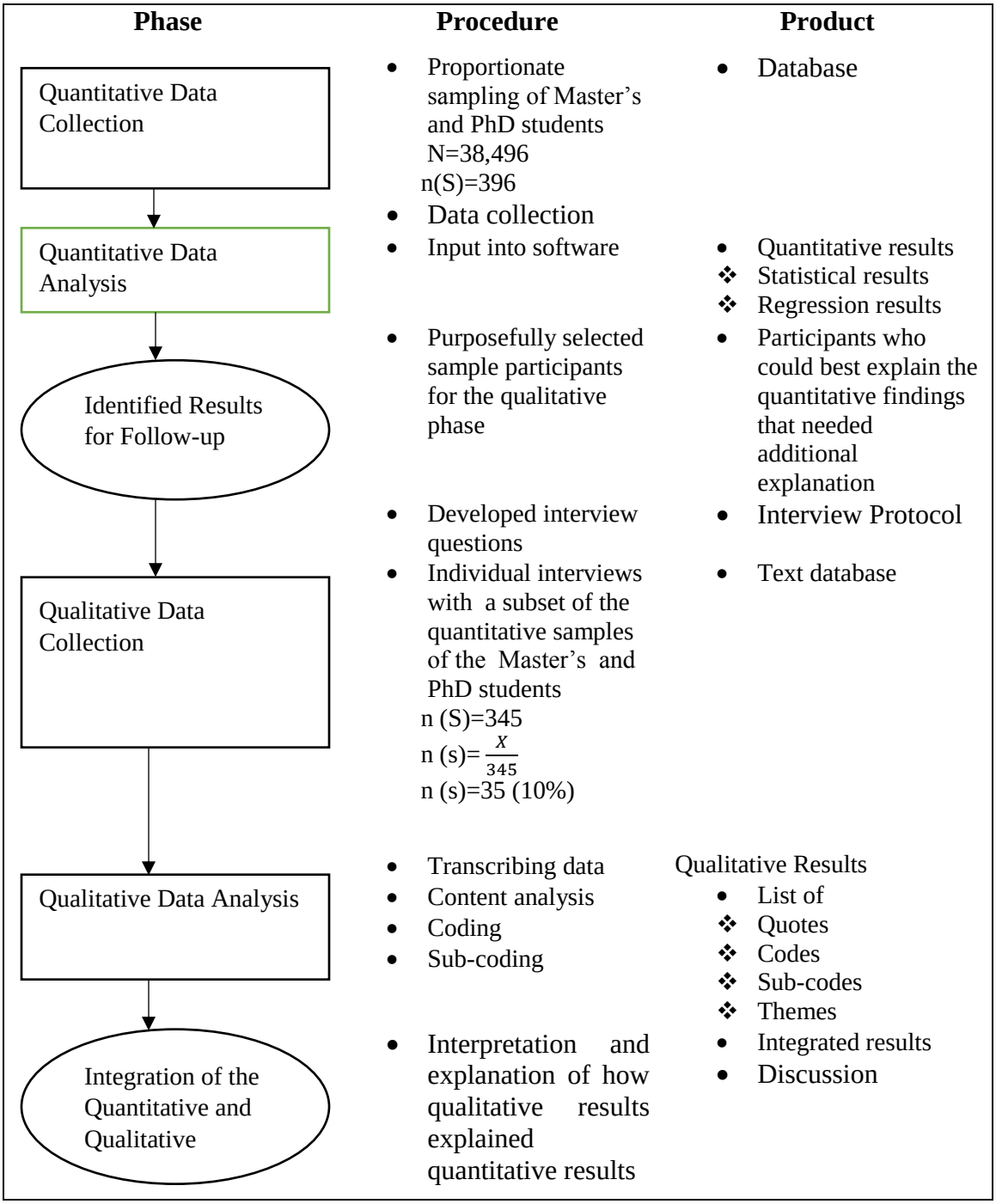
The justification for this approach in the study was that since the quantitative data and results presented a general picture of the effect that labour market determinants of private demand for postgraduate studies have on private demand for postgraduate studies, further analysis, through qualitative data collection was needed to explain the general picture of the effects of labour market determinants of private demand for postgraduate studies on private demand for postgraduate studies in the universities that were selected for the study (Creswell, 2014).

Labour market determinants of private demand for postgraduate studies was the independent variable in this study and was unpacked as follows: perceived returns, skills requirements for a knowledge economy, labour force status, and shifting work force demographics. The dependent variable was private demand for postgraduate studies while the intervening variable was labour market imperfections.

The way the study utilized the Explanatory Sequential Mixed Methods design is as presented in Figure 3.1.

Figure 3.1

How the Explanatory Sequential Mixed Methods design was utilized in the study



As shown in Figure 3.1, the initial phase of the explanatory sequential study design consisted of gathering quantitative data using questionnaires. The collected data were subsequently analyzed to provide insights and guide the subsequent qualitative phase. In the qualitative phase, a subset of participants was purposefully selected from the quantitative phase and interviewed for a deeper understanding of the quantitative results obtained. This sequential approach allowed for a comprehensive examination of the research topic, combining the quantitative data and qualitative data in order to gain a deeper understanding of labour market determinants of private demand for postgraduate studies.

3.3 Location of the Study

The study was conducted in different counties in the Republic of Kenya. In Kenya, counties are geographical entities visualized by the country's 2010 constitution as the units of devolved government (The Constitution of Kenya, 2010). Kenyatta University, United States International University Africa, and the University of Nairobi are situated within Nairobi County. Mount Kenya University and Jomo Kenyatta University of Agriculture & Technology are located in Kiambu County. Egerton University is situated in Nakuru County, while Daystar University is located in Machakos County.

3.4 Target Population

3.4.1 Universities

The study targeted all the public chartered and private chartered universities in Kenya. CUE (2019) records that in Kenya, there are 31 and 18 public chartered and private chartered universities respectively. This gives a total of 49 universities. An overview of the study's target population is as indicated in Table 3.1.

Table 3.1

Summary of the target Population-Public and Private Chartered Universities

University Type	***N***	***%***
Public Chartered Universities	31	63.3
Private Chartered Universities	18	36.7
Total	**49**	**100**

3.4.2 Respondents

The target population of this study comprised all the Master's and PhD students enrolled in both public chartered and private chartered universities across Kenya at the time of this study. According to CUE (2020), the Master's degree and PhD students enrolled in these universities in Kenya during the 2018/2019 academic year stood at 50,033 and 10,068 students respectively, bringing a total enrolment of 60,101 postgraduate students. This was the target population for the study. The enrolment of Master's and PhD students in the public and private chartered universities in Kenya during the 2018/19 academic year was as shown in Table 3.2.

Table 3.2

Master's and PhD Enrolment in Public and Private Chartered Universities in Kenya in the 2018/19 Academic Year

University Type	**Enrolment**					
	Master's ***N***	**%**	**PhD** ***N***	**%**	**Total**	**%**
Public Chartered Universities	42,626	85.2	9,169	91.1	51,795	86.2
Private Chartered Universities	7,407	14.8	899	8.9	8,306	13.8
Total	**50,033**	**100**	**10,068**	**100**	**60,101**	**100**

3.5 Sampling Design

Sampling of the universities was done through purposive sampling and proportionate sampling. As the research was conducted during COVID-19 period, it was extremely

difficult to locate the respondents in their respective institutions. This necessitated the use of snowball sampling. Hence, a combination of snowball sampling, systematic sampling, and proportionate sampling was utilized to sample the Maters and PhD students and to ensure representativeness.

3.5.1 Sampling of Universities

Kumar (2019) suggests that a sample of between 10% and 20% is appropriate sample for a descriptive study. Following this recommendation, a sample size of 7 (15%) out of the 49 public chartered and private chartered universities listed in Table 3.1 was selected for this study.

To maintain proportionality between the sample and the total number of public and private chartered universities in Kenya, the study utilized the proportional allocation formula recommended by Kothari (2004). This approach ensured that the number of universities selected from each stratum in the sample accurately reflected the distribution of universities in the population. The following formula was used: $n_i = n \times p_i$

Where;

n_i = the sample size for each stratum,

n= the required sample size (7),

$$p_i = \frac{Total\ population\ in\ the\ stratum}{Total\ target\ population}$$

This gave the researcher 4 (63.3%) public chartered universities, and 3 (36.7%) private chartered universities. The actual sample size for each category of the universities is as indicated in Table 3.3.

Table 3.3

Sample Size for the Universities

University Type	***N***	***n***	***%***
Public Chartered Universities	31	4	63.3
Private Chartered Universities	18	3	36.7
Total	**49**	**7**	**100**

So as to capture the diversity of the universities in terms of programme offering at the postgraduate studies level, purposive sampling was used. Purposive sampling was preferred because in this type of sampling not every item in the population is included in the study but rather those that meet the defined criteria (Alvi, 2016). The following 4 public chartered universities were selected for the study: University of Nairobi, Kenyatta University, Jomo Kenyatta University of Agriculture & Technology and Egerton University. The 3 private chartered universities selected for the study were: Daystar University, Mount Kenya University and United States International University Africa. The universities were chosen on the following grounds.

University of Nairobi stands out as the oldest university in Kenya and has diversified academic programmes. It is a research intensive university and specializes in technology, humanities, applied sciences, basic sciences, social sciences as well as the arts (World Bank, 2019; UON, 2020).

Kenyatta University was established so as to meet the demand for secondary school teachers (Katitia, 2015). In the 2018/2019 academic year, 40% of the University's student registered population was enrolled in various education programmes (Kisilu, 2019, CUE, 2020).

Jomo Kenyatta University of Agriculture and Technology is renowned for its strong research interest in biotechnology and engineering areas (Olayo, 2005; JKUAT, 2020).

Egerton University is a premier Agricultural University in Kenya. It offers courses in agriculture, law, education, commerce, medicine, engineering, social sciences, and arts among others (Egerton University-our Profile, 2016).

Daystar University has an inclination towards communication related programmes (Kuria & Marwa, 2017), while United States International University Africa is inclined towards international relations programmes as well as commerce and information (USIU Africa, 2020). Mount Kenya University has the highest number of programmes offered at the postgraduate level in the private universities category. In the 2017/18 academic year, the university had a total of 6 and 27 programme offers at the Doctoral and Master's level respectively (CUE, 2019).

3.5.2 Sampling of the Master's and PhD Degree Students

For the purposes of the first, quantitative phase of the study, a combination of snowball sampling, systematic sampling, and proportionate sampling was used to obtain a sample from the study population of Master's and PhD degree students in the selected 7 universities.

The sampling process began with snowball sampling. As described by Creswell (2012), snowball sampling, is a purposive sampling method where the researcher requests participants to suggest additional individuals who could be included in the sample, leading to a chain or "snowball" effect of participant referrals. Hence, the researcher contacted some postgraduate students from the selected universities. These initial participants were asked to refer other Master's and PhD students in their universities who could provide insights into the private demand for postgraduate studies.

The snowball sampling method resulted in a surplus of referrals beyond the required sample size. To manage the excess referrals obtained through snowball sampling, systematic sampling was employed to randomly select participants from the pool of the Master's and PhD students. This sampling method ensured that the population was evenly represented, with sample elements spaced at equal intervals within the population as advocated by Castillo (2009). A pre-determined sampling interval was used to systematically sample individuals from the list of referrals until the desired sample size for each academic level was achieved.

Following the systematic sampling process, participants were stratified into two groups based on their academic level: Master's and PhD students. Proportionate sampling was then employed to allocate participants to each stratum in proportion to their representation within the population of postgraduate students. Based on the statistics provided by CUE (2020), postgraduate student enrolment in the 7 universities in the 2018/19 academic year was as shown in Table 3.4

Table 3.4

Master's and PhD Enrolment in selected Universities during the 2018/19 Academic Year

University	**Enrolment (*N*)**					
	Master's	***%***	**PhD**	***%***	**Total**	***%***
University of Nairobi	13,292	34.5	1,412	3.7	14,704	38.2
Kenyatta University	9,172	23.8	768	2.0	9,940	25.8
JKUAT	7,340	19.1	1,379	3.5	8,719	22.6
Egerton University	1,415	3.7	364	0.9	1,779	4.6
Daystar University	728	1.9	60	0.2	788	2.1
Mount Kenya University	1,126	2.9	15	0.03	1,141	3.0
USIU Africa	1,280	3.3	145	0.4	1,425	3.7
Total	**34,353**	**89.2**	**4,143**	**10.8**	**38,496**	**100**

As Table 3.4, indicates, during the 2018/19 academic year, 34,353 Master's degree students and 4,143 PhD students were enrolled in the 7 private and public chartered universities, giving a total of 38,496 students**.** Thus the population under study was 38,496.

Since prior information of the population under study was unknown to the researcher, the researcher used Slovin's formula which allowed her to obtain a sample of the population with a desired degree of accuracy (Ellen, 2017). The Slovin's formula was calculated as follows:

$$n = \frac{N}{1+Ne^2}$$ (Ellen, 2017)

Where,

n = the sample size,

N = the target population,

e = the sampling error.

As pertains the level of accuracy, a confidence level of 95%, as recommended by Kothari (2004) was chosen for this study. This gave an alpha level of 0.05, meaning that in 100 chances, there were 95 chances (or 0.95 in 1) that the sample findings would accurately reflect the state of the population within a defined range of precision, against 5 in 100 chances (or 0.05 in 1) that it will not (Kothari, 2004). To determine the sample size of the Master's and PhD students required for the study, Slovin's formula was applied as follows:

$$n = \frac{N}{1+Ne^2}$$

Where,

N =38,496 and *e* = 0.05

$$n = \frac{38,496}{1+38,496(0.05)^2}$$

$$n = 396$$

This was the representative sample size.

To determine the number of the postgraduate students who would be considered from each university, the formula advocated by Kothari (2004) for proportional allocation was applied.

$n_i = n \times p_i$

Where,

n_i = the sample size for each stratum,

n= the required sample size (396),

$$p_i = \frac{Total\ target\ population\ in\ stratum}{Total\ target\ population}$$

The summary of the respondents who were to fill questionnaires in the quantitative phase of the study is as shown in Table 3.5.

Table 3.5

Summary of Master's and PhD Students who were to fill the questionnaires in the selected Universities

University	Master's *N*	PhD *N*	Total	Master's *n*	%	PhD *n*	%	Total	%
University of Nairobi	13,292	1,412	14,704	**136**	34.5	**15**	3.7	**151**	38.1
Kenyatta University	9,172	768	9,940	**94**	23.8	**8**	2.0	**102**	25.8
JKUAT	7,340	1,379	8,719	**75**	19.1	**14**	3.5	**89**	22.5
Egerton	1,415	364	1,779	**14**	3.7	**4**	0.9	**18**	4.5
University Daystar University	728	60	788	**8**	1.9	**1**	0.2	**9**	2.3
Mount Kenya University	1,126	15	1,141	**11**	2.9	**1**	0.03	**12**	3.0
USIU Africa	1,280	145	1,425	**13**	3.3	**2**	0.4	**15**	3.8
Total	**34,353**	**4,143**	**38,496**	**351**	**88.6**	**45**	**11.4**	**396**	**100**

According to the data presented in Table 3.5, the distribution of the questionnaires was planned to be conducted in a proportional manner among the postgraduate students in the

selected universities. A total of 351 questionnaires were allocated to Master's students, while 45 questionnaires were allocated to PhD students from the participating universities. This distribution ensured that the sample size for each university accurately represented the proportion of Master's and PhD students in the population. The distribution was as follows: University of Nairobi, 136 Master's and 15 PhD respondents; Kenyatta University, 94 Master's and 8 PhD respondents; Jomo Kenyatta University of Agriculture and Technology, 75 Master's and 14 PhD respondents; Egerton University, 14 Master's and 4 PhD respondents; Daystar University, 8 Master's and 1 PhD respondents; Mount Kenya University 11 Master's and 1 PhD respondents and United States International University 13 Master's and 2 PhD respondents. A total of 396 postgraduate students were targeted to complete the questionnaires.

The respondents were asked to respond to the questions in the questionnaires via Google forms as it was during COVID-19 period.

Given the explanatory sequential mixed methods design utilized in this study, the selection of participants for the second (qualitative) phase was determined by the findings obtained from the quantitative phase (Creswell and Plano Clark, 2011). The selection process focused on identifying extreme or outlier cases as well as unexpected results that emerged from the quantitative analysis in the first phase (Creswell, 2014).

Secondly, as the specific model that was used by the study is the follow-up explanations variant, the qualitative sample was derived from the initial quantitative sample (Creswell, 2014). Sekaran and Bougie (2016) assert that an ideal sample is one that is efficient, representative, reliable and flexible, and should be in a range of 10-30%. As the qualitative sample in explanatory sequential design is a subset of the quantitative sample (Creswell,

2014), the study sampled 10% of the respondents who responded to the questionnaires. 345 out of the 396 Master's and PhD students successfully responded to the questionnaires in the quantitative phase of the study. Therefore 35 Master's and PhD students were selected to participate in the qualitative phase of the study. The formula for proportionate allocation by Kothari (2004), $n_i = n\ x\ p_i$, was used to determine how many Master's and how many PhD students would be included. There were 295 (85.5%) and 50 (14.5%) Master's and PhD successful respondents respectively. Therefore out of the 35 participants that were selected for the second (qualitative) phase of the study, 30 (85.5%) and 5 (14.5%) of the Master's and PhD students respectively were chosen. Since the idea was to select participants who would best answer the research questions (Patton, 2015) and who were "information rich" persons on the effects of labour market determinants of private demand for postgraduate studies on private demand for postgraduate studies, the sample was purposefully selected.

3.6 Research Instruments

The study relied on primary data, which refers to information collected directly from original sources in the field (Kothari, 2008). In order to collect the required data, the study utilized two different types of data collection tools namely:

1) Labour Market Determinants of Private Demand for Postgraduate Studies Questionnaire for Master's and PhD Students in the quantitative phase of the study.
2) Labour Market Determinants of Private Demand for Postgraduate Studies Interview Schedule for Master's and PhD Students in the qualitative phase of the study.

3.6.1 Labour Market Determinants Questionnaire for Postgraduate Students

A self-developed questionnaire, titled "Labour Market Determinants Questionnaire for Postgraduate Students", was used to collect data from Master's and PhD students (see appendix I). The questionnaire was ideal for data collection in this study because as Jackson (2015) observes, this approach provides a uniform stimulus potential to a large number of individuals simultaneously, and facilitates the convenient accumulation of data for the research investigation.The items in the questionnaires consisted of different formats such as asking either for one alternative or all that apply, questions requiring dichotomous answers like "Yes" and "No", and self-assessment items that were measured on a scale of 1 to 5 using the Likert scale.

The respondents scored their level of agreement using the 5-point Likert Scale where: 1 represented Strongly Disagree, 2 represented Disagree, 3 represented Neutral, 4 represented Agree, and 5 represented Strongly Agree. As recommended by Sözen and Güven (2019), the Likert scale was scored on the mean scale of; 1.00-1.80 to mean Strongly Disagree, 1.81-2.60 to mean Disagree, 2.61-3.40 to mean Neutral, 3.41-4.20 to mean Agree, and 4.21-5.00 to mean Strongly Agree.

The questionnaire was structured into various sections and in accordance with the study's objectives. Section one collected data pertaining to demographic characteristics of the study respondents. This information was vital for the study as it availed information on the postgraduate students' gender, age and discipline enrolled in, funding of postgraduate studies, reasons for enrolling for postgraduate studies and previous and current employment status of the postgraduate students. Section two collected data on perceived returns and private demand for postgraduate studies. This was used to measure the postgraduate students' perceptions on the effect of perceived returns on private demand for

postgraduate studies. Section three collected data on skills requirements for a knowledge economy and private demand for postgraduate studies. The data were used to measure the postgraduate students' perceptions on the effect of skills requirements for a knowledge economy on private demand for postgraduate studies. Section four collected data on labour force status and private demand for postgraduate studies. The resulting data were used to measure the postgraduate students' perceptions on labour force status effect on private demand for postgraduate studies. Section five collected data on shifting workforce demographics and private demand for postgraduate studies. This was used to measure the postgraduate students' perceptions on the effect of shifting workforce demographics on private demand for postgraduate studies.

Section six gave information on private demand for postgraduate studies using postgraduate students' perception of the private demand for postgraduate studies.

3.6.2 Labour Market Determinants Interview Schedule for Postgraduate Students

The Interview Schedule for Master's and PhD Students titled "Labour Market Determinants Interview Schedule for Postgraduate Students", was developed by considering the findings of the initial quantitative phase of the study. The selection criteria for participants and the specific questions asked during the qualitative phase were determined based on the quantitative findings (Creswell, 2014). The purpose of the interview schedule was to further investigate and delve deeper into the quantitative findings (Creswell and Patton Clark, 2011). The interview schedule comprised of general questions, which were open-ended. Following recommendation by Mugenda and Mugenda, (2003), the questions were formulated in a way that minimized the amount of writing required by the interviewer and facilitated the organization and grouping of the responses.

3.7 Pilot Study

A pilot study was carried out prior to conducting the main data collection. This assisted in improving the research instruments' reliability and validity (Turner & Hagstrom-Schmidt, 2022). A pilot study sample size that represents 10% of the total study population is recommended (Mugenda & Mugenda, 2003). Hence, a pilot study was carried out in one public university and one private university, using a sample of 40 respondents who were randomly selected. The pilot study's purpose was to evaluate and assess the effectiveness of the questionnaires and gather feedback on their clarity and effectiveness. These universities were not included in the main study. The selected postgraduate students were sent online Google forms to complete as part of the initial phase of the pilot study, which was quantitative. Results were analyzed to inform the kind of questions to be asked in the subsequent (qualitative) phase of the pilot study.

3.7.1 Validity of Research Instruments

The study implemented content validity as a method of ensuring the relevance and representativeness of the content used. Almanasreh et al. (2019) advance that content validity assessment involves using a panel of experts to assess the elements of an instrument and assign ratings based on their relevance and adequacy in representing the content domain. Employing content validity helped to demonstrate the degree to which the survey items and the resulting scores accurately represented all potential questions regarding the labour market determinants of postgraduate studies that affect private demand for postgraduate studies. To achieve content validity, the questionnaire for Master's and PhD Students and the Interview Schedule for Master's and PhD Students were presented to specialists in Educational Planning. Content validity was achieved through subjecting the instruments to a rational analysis conducted by three experts in

Educational Planning who were teaching Educational Planning at university level. These experts helped in assessing the importance, usefulness or necessity of each measurement question in the questionnaire and interview schedule (Blumberg et al.; 2014; Saunders & Lewis, 2017) in determining the effect of labour market determinants of postgraduate studies on private demand for postgraduate studies in the universities that were selected for the study.

3.7.1.1 Confirmability of Postgraduate Student's' Interview Guide

Member checking, also known as respondent validation, with the view to improve the study's validity, was carried out to enable the researcher to confirm or validate the accuracy and completeness of the findings (Cohen & Crabtree, 2006; Creswell, 2007). This took place towards the end of the study when a summary of the analyzed data and report was given to the participants to check whether a true representation was made of what he or she delivered during the interview. This was done through e-mail or telephone conversations.

3.7.2 Reliability of Research Instruments

To assess the internal consistency of the questionnaires administered to one public chartered and one private chartered university, Cronbach's alpha method was used. Cronbach's alpha statistic, developed by Cronbach (1951) and validated by subsequent studies (Bland & Altman, 1997; Tavakol & Dennick, 2011), was used to determine the research instruments reliability. Cronbach's alpha is quantified as a number between 0 and 1 (Tavakol & Dennick 2011). A value of 0 signifies a lack of consistency in measurement, whereas a value of 1 represents complete or perfect consistency in measurement (Zikmund et al., 2013). Bajpai (2011) recommends reliabilities of between 0.70 and 0.80 for basic research. Hence, a reliability coefficient of 0.7 or above would be considered acceptable, indicating that the instruments utilized in the study were reliable.

To achieve this, some 40 postgraduate students picked from 1 public chartered and 1 private chartered university filled questionnaires on an experimental basis. The alpha coefficient was computed by entering response scores into SPSS, resulting in an alpha value of $\alpha = 0.7$. Items that did not meet the predetermined alpha coefficient threshold were excluded from the analysis to improve the coefficient and reach the intended level of 0.7.

3.8 Data Collection Procedures

In order to facilitate the application process for a research permit from the National Council for Science and Technology Innovation (NACOSTI), the researcher obtained a letter of introduction from Kenyatta University's Graduate School. The permit granted the researcher permission to conduct fieldwork and collect data. Data were collected in three phases as indicated below.

Phase 1: Searched for Master's and PhD students in the selected seven universities who could refer the researcher to other students.

Phase 2:

a) Sent a link to the sampled Master's and PhD students and requested them to fill the online questionnaires. In the questionnaires, the consent of the respondents was sought and the purpose as well as the intended use of the study was explained. The researcher provided an assurance to the respondents that the collected data would be handled with utmost confidentiality.
b) Retrieved the filled in online questionnaires.

Phases 1 and 2 of data collection was conducted between November 2021 and January 2022.

Phase 3: Arranged for face to face meetings with each of the selected participants and collected qualitative data for phase two of the study. The participants received the interview questions prior to the face to face meeting. Phase 3 of data collection was conducted in February and March 2022.

During the actual data collection, three hundred and ninety six (396) structured self-administered questionnaires (with pre-coded responses) were distributed to the respondents electronically through an online platform, during the initial quantitative phase of the study. These questionnaires collected quantitative primary data, which was then analysed. The results realized were used to determine the participants and types of questions that helped provide qualitative data.

3.9 Data Analysis

Quantitative and qualitative data analysis was done during the first and second phase of the study respectively.

3.9.1 Quantitative Analysis

Quantitative data were analysed using descriptive statistics. The analysis was done using SPSS version 22. Adhering to Zikmund et al. (2013) data processing procedure, the data were coded, edited, entered, and the whole data processing procedure monitored. To convert the raw data into a format that could facilitate ease of comprehension and interpretation, descriptive statistics were used. The SPSS software was employed to replace missing scores with a substitute value in the data analysis process (Creswell, 2012).

The first form of analysis involved computation of averages, frequency distributions and percentage distributions. To analyse the data, derive conclusions and generalizations

regarding the population under study, descriptive statistics namely frequency counts and means were used.

Mean scores were used to rate the agreement levels in each of the determinants (perceived returns, skills requirements for a knowledge economy, labour force status, and shifting workforce demographics). To measure the variability of the responses, standard deviation of each of the determinants was calculated. The analysed data were interpreted and presented in pie charts, bar charts and frequency tables. Each variable was analysed descriptively and inferences were then made on how each variable affected the dependent variable. Regression analysis was done so as to test the independent variable's effect on the dependent variable.

Data analysis was done as per the study's objectives.

3.9.1.1 Objective one: To establish the extent to which perceived returns, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in selected universities in Kenya

In analyzing this objective, quantitative data were gathered and examined on the following indicators: (i) direct private returns of postgraduate studies which include economic returns (expected earnings in form of high salary and allowances, and better job opportunities) and non-economic returns (improved health and longevity, improved social status, job satisfaction). Frequency counts, percentages, means and standard deviation statistical tools were used to analyse quantitative data. Information was presented through the use of a pie-chart and frequency tables. Bivariate regression analysis was employed to establish how perceived returns affects private demand for postgraduate studies. The coefficient of determination (R^2) statistic was employed to assess the extent to which the perceived returns variable explains the variability in private demand for postgraduate studies.

3.9.1.2 Objective two: To establish how skills requirements for a knowledge economy, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in selected universities in Kenya.

In analyzing this objective, quantitative data were gathered and examined on the following indicators: (i) current job skill requirements, (ii) future job skills requirements, (iii) enhancing employability, (iv) maintaining global competitiveness and (v) sharpening innovation. Quantitative data were analysed using frequency counts and percentages. Bar-charts and frequency tables were used to present the information. Bivariate regression analysis was employed to establish how skills requirements for a knowledge economy affects private demand for postgraduate studies. The coefficient of determination (R^2) statistic was employed to assess the extent to which the skills requirements for a knowledge economy variable explains the variability in private demand for postgraduate studies.

3.9.1.3 Objective three: To determine the effects of labour force status, as a determinant of private demand for postgraduate studies, on private demand for postgraduate studies in selected universities in Kenya

In analyzing this objective, quantitative data were gathered and examined on the following indicators: (i) the unemployed, (ii) the employed (wage/salary employed) and (iii) the self-employed. Frequency counts and percentages were used to analyse quantitative data. Frequency tables were used to present the information. Multivariate regression analysis was used to determine how labour force status components (unemployment, employment and self-employment) affect private demand for postgraduate studies. The coefficient of determination (R^2) statistic was employed to assess the extent to which the labour force status variables explain the variability in private demand for postgraduate studies.

3.9.1.4 Objective Four: To determine how shifting workforce demographics, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in selected universities in Kenya

In analyzing this objective, quantitative data were gathered and examined on the following indicators: (i) ageing workforce, (ii) emerging gender gaps in the labour force and (iii) declining birth rates. Quantitative data pertaining to this objective were analysed using frequencies, percentages, means, and standard deviation, and the findings were presented through the use of frequency tables. Bivariate regression analysis was employed to establish how shifting workforce demographics affects private demand for postgraduate studies. The coefficient of determination (R^2) statistic was employed to assess the extent to which the shifting workforce demographics variable explains the variability in private demand for postgraduate studies.

3.9.2 Qualitative Analysis

The collected data were analyzed using the following recommended six steps of thematic analysis by Braun and Clarke (2006) and (Creswell (2014).

Step 1: Organizing and preparing the data for analysis.

The first stage of qualitative data analysis encompassed organizing and preparing data for analysis. The interviews were transcribed, the collected data were read and re-read, field notes were typed up, all the visual material was catalogued, and the data were sorted and arranged into different types depending on the information sources. Reading through all data provided a broad understanding of the information and an opportunity to consider and analyze the overall implication of the information. (Creswell, 2014). In this way, the researcher got an insight into identifying the main themes expressed by the participants, assess the tone of their ideas, and evaluate the overall depth, credibility, and utility of the information provided (Creswell, 2014).

By organizing the data in this way, the researcher developed a thorough understanding of the collected data (Braun & Clarke, 2006).

Step 2: Coding

According to Rossman and Rallis (2012), coding involves categorizing and grouping the information into relevant sections or brackets for further analysis. The researcher hence organized data into distinct categories and tagged the categories with a phrase or the language of the participant (Rossman & Rallis, 2012). This guaranteed that the original context of the qualitative data were adequately maintained and captured.

Steps that were employed in the coding process as recommended by Tesch (2013)

The researcher;

i. Read all the transcriptions keenly and noted down the major ideas,

ii. Composed a record of all topics related to the various objectives,

iii. Grouped together alike topics and arranged them as most important, exceptional, less important and residual topics.

iv. Condensed the obtained themes and topics into codes and wrote down the suitable codes adjacent to the text's relevant section.

v. Determined the most descriptive wording for the established themes or topics and then turned the identified topics into separate categories that were associated with the study objectives.

vi. Grouped topics in accordance with the study objectives.

vii. Established the connections between the topics' different categories.

viii. Made a final determination regarding the abbreviation to be used for each category of topic and alphabetized the codes.

ix. The qualitative data pertaining to each category of topic were consolidated and gathered in a central location, where a preliminary analysis and evaluation of each established topic took place.

x. The different categories were assigned codes and entered into the computer system for analysis, arranged in alphabetical order for ease of examination.

Step 3. Searching for themes

In line with Braun and Clarke (2006), the process of theme searching involves identifying coherent, logical and meaningful patterns within the qualitative data that are relevant and applicable to the research question. The researcher achieved this through engaging in an active search to discover the themes. The researcher then collated codes into prospective and applicable themes and sorted all data that was relevant and pertinent to each individual theme.

Step 4: Reviewing themes

At this stage, the researcher examined whether the established themes were meaningful in relation to both the coded extracts and research objectives. This entailed the researcher reflecting on whether those established themes adequately revealed convincing outcomes in relation to the research objectives. Further, the nature and context of each established theme, and the association among the established themes was redefined and re-examined (Braun & Clarke, 2006; Creswell, 2014).

Step 5: Defining and naming themes

During this stage, a comprehensive analysis of each theme was conducted, considering its relationship to the general research questions. This analysis involved determining the appropriateness of each theme to the study's objectives and creating concise and

informative identifications for each theme that were distinct and easily distinguishable (Braun & Clarke, 2006; Creswell, 2014).

Step 6: Writing up

Finally, interpretations of the findings were made (Braun & Clarke, 2006; Creswell, 2014). In particular the analytic narrative, verbal descriptions and data extracts, were selected, woven and contextualized collectively to produce a clear and scholarly report that effectively addressed the research questions of the study and connected with the existing literature.

3.9.3 Methodological Matrix

An overview of the measurement techniques used to assess the variables in the study, the nature of the data collected, and the specific analytical methods employed for data analysis is given in Table 3.6.

Table 3.6

Methodological Matrix

Objective	Independent Variable	Dependent Variable	Type	Test Statistic
- Objective one: To establish the extent to which perceived returns affects private demand for postgraduate studies in selected universities in Kenya	Perceived returns	Private demand for postgraduate studies	Quantitative	Frequency counts, percentages, means and standard deviation. -Bivariate regression analysis -Coefficient of determination (R^2) statistic
			Qualitative	Thematic and content analyses
- Objective two: To establish how skills requirements for a knowledge economy affects private demand for postgraduate studies in selected universities in Kenya	Skills requirements for a knowledge economy	Private demand for postgraduate studies	Quantitative	Frequency counts, percentages, means and standard deviation. -Bivariate regression analysis -Coefficient of determination (R^2) statistic
			Qualitative	Thematic and content analyses
- Objective three: To determine the effects of labour force status on private demand for postgraduate studies in selected universities in Kenya	Labour force status	Private demand for postgraduate studies	Quantitative	Frequency counts, percentages, means and standard deviation. -Multivariate regression analysis -Coefficient of determination (R^2) statistic
			Qualitative	Thematic and content analyses
- Objective four: To determine how shifting workforce demographics affects private demand for postgraduate studies in selected universities in Kenya	Shifting workforce demographics	Private demand for postgraduate studies	Quantitative	Frequency counts, percentages, means and standard deviation. -Bivariate regression analysis -Coefficient of determination (R^2) statistic
			Qualitative	Thematic and content analyses

3.10 Logistical and Ethical Considerations

3.10.1 Logistical Considerations

Efforts were made to implement cost-saving measures while maintaining the integrity and quality of the research and ensuring that the research's standards were not compromised.

3.10.2 Ethical Considerations

The researcher considered the legal framework that governs the conduct of academic research during the whole process of conducting the research. As well as observing

respondents' confidentiality, the researcher assured the respondents that all information given during the research would be kept confidential. During data analysis, participants were only identified by use of case numbers that were randomly assigned on the survey instruments. The study also ensured that there was neither deception nor invasion of privacy (Fraenkel et al., 2012). The researcher sought a go-ahead from all relevant authorities in order to conduct the study. She also sought informed consent from the respondents. Additionally, the study ensured that the analyzed data would remain anonymous.

CHAPTER FOUR
FINDINGS AND DISCUSSION

4.1 Introduction

The study aimed to establish the effect of labour market determinants of private demand for postgraduate studies on private demand for postgraduate studies in selected universities in Kenya. The study employed an Explanatory Sequential Mixed Methods design, specifically employing the Follow-up explanations model. The study involved two distinct phases: a quantitative phase followed by a qualitative phase. During the quantitative phase, data were collected to address the research objectives, focusing on specific themes. The obtained quantitative results were then further explored and explained during the qualitative phase using qualitative research methods. The design gave priority to the quantitative phase as the main focus, with the qualitative phase following up to enhance understanding and gain deeper insights into the initial findings as advocated by Creswell and Creswell (2017).

By employing this approach, the study aimed to provide a comprehensive understanding of the research topic. By integrating statistical analysis with in-depth qualitative insights, the study aimed to enhance the overall validity and depth of the findings, thereby enriching the research outcomes (Creswell, 2014). Upon examining the data gathered from the selected universities, presentation of the findings was done in line with the study's objectives, which were formulated along the following thematic areas:

i Establishing the extent to which perceived returns, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies.

ii Establishing how skills requirements for a knowledge economy, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies.

iii Determining the effects of labour force status, as a determinant of private demand for postgraduate studies, on private demand for postgraduate studies.

iv Determining how shifting workforce demographics, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies.

The initial stage of data collection involved obtaining quantitative data through a survey conducted among 345 postgraduate students from various universities that were selected for the study. In the quantitative data analysis phase, a combination of descriptive and inferential statistics was employed. Descriptive statistics namely: frequency counts, percentages as well as means and standard deviation were employed to summarize and illustrate the perspectives of the participants. These measures provided a clear description of the respondents' views. Additionally, inferential statistics, specifically the coefficient of determination (R^2), were employed in regression analysis. The R^2 value was used to predict the scores of the outcome variable, draw inferences and reach conclusions based on the data analysis. By employing these statistical techniques, the study aimed to provide a comprehensive understanding of the relationships and patterns within the collected quantitative data.

Quantitative data analysis was conducted through the use of Statistical Package for Social Sciences, namely SPSS version 20.0. The analysis aimed to examine and interpret the quantitative results obtained in the study. The resulting quantitative data brought in new questions, leading to the choosing of participants for the subsequent qualitative phase.

Specifically, the quantitative findings that demanded further exploration were identified, taking into consideration extreme or outlier cases as well as unexpected outcomes that emerged during the initial quantitative phase. This approach ensured that the qualitative phase of the study focused on providing additional explanations and insights into the specific findings that required further investigation, thus enhancing the overall understanding of the study's objectives.

In the second phase, qualitative data were gathered from a purposefully selected group of 28 postgraduate students who were deemed most suitable for providing in-depth qualitative insights to explain the quantitative findings, as recommended by Creswell (2014). These 28 participants were chosen from the initial quantitative sample of 345 postgraduate students involved in the first phase of the study. Thematic and content analysis techniques were employed to analyze the qualitative data obtained during this phase. By utilizing these methods, the study aimed to identify recurring themes and extract meaningful insights from the qualitative responses, thereby enhancing the overall understanding and interpretation of the research findings.

The research results were presented using the Explanatory Sequential Mixed Methods design, which involved a three-step process. Firstly, the quantitative findings were presented, and specific quantitative results requiring further explanation were identified. Secondly, the qualitative results were presented. The third stage involved integrating the quantitative and qualitative findings, illustrating how the qualitative data were used to explain the quantitative results (Creswell, 2014). A discussion section was included to interpret the follow-up findings, as suggested by Creswell and Creswell (2017). This section, located in Section 4.8, examined the study's findings and explained how the

qualitative results contributed to expanding and/or clarifying the quantitative results. Following the approach recommended by Creswell and Plano Clark (2018), in interpreting the results of an explanatory sequential mixed methods design, the conclusion was drawn regarding whether the qualitative data provided a deeper understanding of the research findings compared to the quantitative results alone.

The chapter commences by providing an overview of the demographic characteristics of the respondents, aiming to describe the population under investigation. Subsequently, the study's findings are thematically presented and organized according to each objective addressed in the research. As recommended by Creswell and Creswell (2017) in the context of an explanatory sequential mixed methods design, the study's findings are presented within the discussion section (Section 4.8). The quantitative analysis relied on primary data obtained from structured questionnaires, while the qualitative analysis involved the utilization of interview schedules. This ensured a comprehensive exploration of the quantitative and qualitative aspects of the study.

4.2 Response Rate and Demographic Characteristics of Postgraduate Students

4.2.1 Response Rate

During the quantitative phase of the study, a set of 396 questionnaires in the form of Google Forms was distributed among Master's and PhD university students from the universities that were selected for the study. Out of the 396 distributed questionnaires, 345 were received, resulting in a response rate of 87%. During the qualitative phase, 35 interviews were scheduled, out of which 28 interviews were successfully conducted, yielding a response rate of 80%

Mugenda and Mugenda (2003) provide guidance on response rates in survey studies, suggesting that a response rate of 50% is adequate, 60% is good, and a response rate of 70% or higher is excellent for analysis and reporting purposes. Therefore, considering this criterion, the achieved response rates of 87% and 80% obtained in this study's quantitative and qualitative phases respectively, are deemed adequate and representative, as they can be classified as excellent. This indicates a high level of participation and engagement from the participants, thus enhancing the reliability and also the validity of the collected data.

4.2.2 Demographic Characteristics of the Postgraduate Students

The study aimed to gain insights into the demographic characteristics of the respondents, as it was essential to determine the representativeness of the sample and the generalizability of the study's findings. According to the American Psychological Association (2013) and Hughes et al. (2016), common demographic factors encompass aspects such as age, gender identity, ethnicity and race, educational level, disabilities, geographical location, employment status, socioeconomic background, and topic-specific attributes. In this study, the demographic characteristics examined included gender, age, field of study, sources of funding for postgraduate studies, motivations for pursuing postgraduate studies, and the participants' past and present employment statuses. By exploring these components, the study aimed to establish a comprehensive understanding of the demographic profile of the respondents and its relevance to the research outcomes.

4.2.2.1 Postgraduate Students' Gender, Age, Type of the University, Discipline Enrolled in and Postgraduate Degree Being Pursued

Disaggregation of data by the postgraduate students' gender, age, type of the university, discipline enrolled in and postgraduate degree being pursued was given. This provided an

in-depth understanding of the particular characteristics of the sub-categories of the postgraduate students under study. The data obtained is as shown in Table 4.1.

Table 4.1

Disaggregated Data on Postgraduate Students' Gender, Age, Type of the University, Discipline Enrolled in and Postgraduate Degree being Pursued (n=345)

Demographic Characteristics		**Postgraduate degree being pursued**							
		Master's			**PhD**			**Total**	
		n	***%***	***% of Overall***	***n***	***%***	***% of Overall***	***n***	***%***
▪ **Gender**	Male	166	56.5	48.1	32	62.7	9.3	198	57.4
	Female	128	43.5	37.1	19	37.3	5.5	147	42.6
	Total	**294**	**100**	**85.2**	**51**	**100**	**14.8**	**345**	**100**
• **Age**	25-30	49	16.7	14.2	0	0	0	49	14.2
	31-40	144	48.9	41.7	13	25.5	3.8	157	45.5
	41-50	82	27.9	23.8	28	54.9	8.1	110	31.9
	51-60	12	4.1	3.5	7	13.7	2.0	19	5.5
	Above 60	7	2.4	2	3	5.9	0.9	10	2.9
	Total	**294**	**100**	**85.2**	**51**	**100**	**14.8**	**345**	**100**
• **Type of university**	Public chartered	261	88.8	75.6	42	82.4	12.2	303	87.8
	Private chartered	33	11.2	9.6	9	17.6	2.6	42	12.2
	Total	**294**	**100**	**85.2**	**51**	**100**	**14.8**	**345**	**100**
• **Discipline Enrolled in**	Arts and Humanities	102	34.7	29.6	16	31.4	4.6	118	34.2
	Education	94	32	27.2	15	29.4	4.4	109	31.6
	Business	56	19.1	16.2	14	27.5	4.1	70	20.3
	Science	42	14.2	12.2	6	11.7	1.7	48	13.9
	Total	**294**	**100**	**85.2**	**51**	**100**	**14.8**	**345**	**100**

According to Table 4.1, the study yielded the following results concerning the postgraduates' gender representation, age, type of university, discipline enrolled in and postgraduate degree being pursued.

i. Gender

In terms of gender representation among the postgraduate students, Table 4.1 reveals that there was a higher proportion of male students at both the Master's (56.5%) and PhD (62.7%) levels compared to female students. Table 4.1 also indicates that among the total

number of postgraduate students surveyed, the majority (57.4%) were male, while 42.6% were female. These findings highlight a greater presence of male postgraduate students in comparison to their female counterparts.

ii. Age

The findings related to age indicate that a large number of the participants (45.5%) fell within the age range of 31-40 years, while 31.9% were aged between 41 and 50 years. Very few (5.5%) were between the ages of 51 and 60 while 2.9% were aged above 60 years.

When examining the breakdown of age in relation to postgraduate degrees, the findings indicate that a majority (48.9%) of respondents aged between 31 and 40 years were pursuing Master's degrees, while a majority (54.9%) of those aged between 41 and 50 years were pursuing Doctoral degrees. It can therefore be construed that the dominant age for students pursuing Master's degree in universities in Kenya is between 31 and 40 years while that of Doctoral students is dominant between 41 and 50 years.

iii. Type of university

Results for the type of the university show that majority (87.8%) of the postgraduate students pursued their degrees from the public universities and only 12.2% were in the private universities. This was the case for both Master's and PhD degree programmes where 88.8% of all Master's students pursued their studies at public universities and 82.4% of all PhD students pursued their studies at public universities.

iv. Discipline enrolled in

Based on the data presented in Table 4.1, the highest percentage (34.2%) of respondents were pursuing disciplines related to Arts and Humanities, while a smaller percentage (13.9%) were enrolled in Science-related disciplines. This indicates a comparatively greater enrolment of postgraduate students in fields such as Arts, Humanities, Education, and Business, in contrast to Science-related disciplines. The results show that Arts and Humanities were represented by 34.2%, Education was represented by 31.6% while Business and Sciences were represented by 20.3% and 13.9% respectively, implying that Arts and Humanities, Education and Business related disciplines were common disciplines for pursuit among PhD and Master's students. The Science related disciplines had the least enrolment.

v. Postgraduate degree being pursued

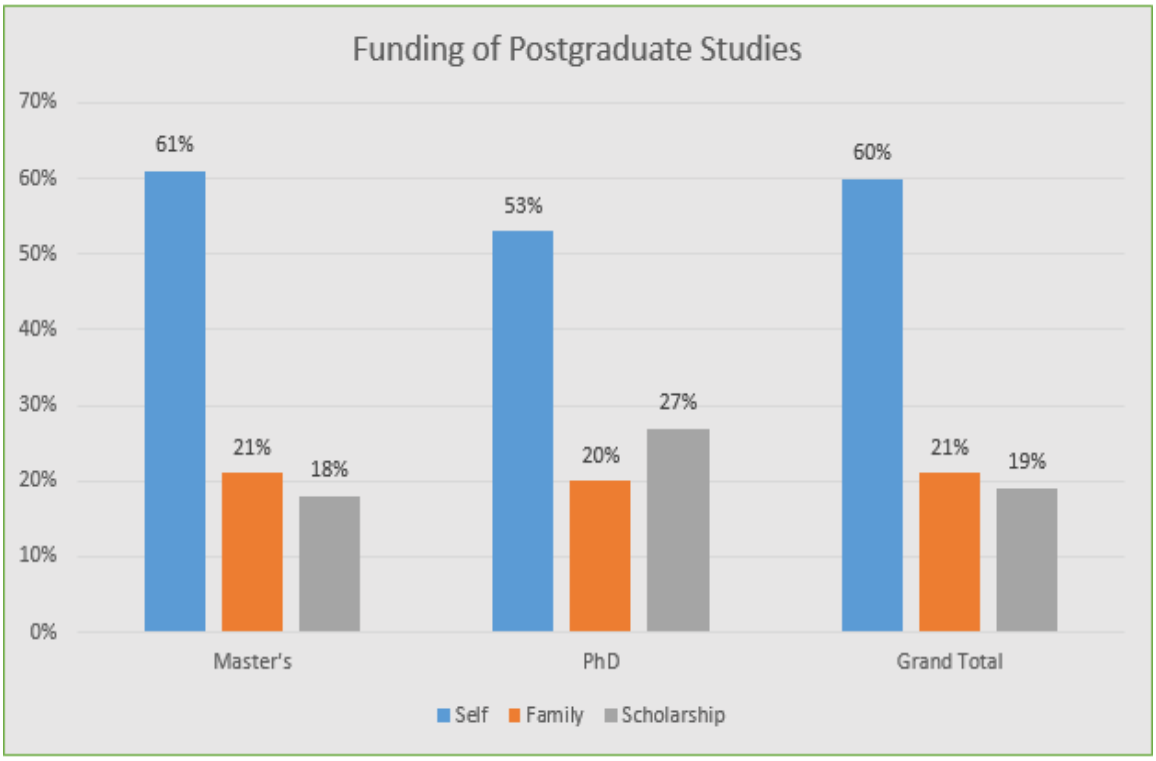
Also as indicated in Table 4.1, there were more (85.2 %) Master's students compared to (14.8%) PhD students. This gives a Master's to PhD ratio of 1:6.

4.2.2.2 Funding of Postgraduate Studies

Information on the funding of postgraduate studies was critical for informing the private demand for postgraduate studies. Respondents were requested to provide information on how their postgraduate studies were funded. The information was summarized and displayed in Figure 4.1.

Figure 4.1

Funding of Postgraduate Studies (N=345)



As indicated in Figure 4.1, majority (60%) of the postgraduate students financed their studies on their own. A few (21%) had the cost of their studies being met by their families. Only 19% had their studies being financed through scholarship.

4.2.2.3 Reasons for Enrolling for Postgraduate Studies

To understand the private demand for postgraduate studies, it was critical for the postgraduate students to provide information on reasons that made them enrol for postgraduate studies.

Respondents were requested to specify the motivations behind their decision to enrol for postgraduate studies. Data obtained were summarized as illustrated in Table 4.2.

Table 4.2

Reasons for Enrolling for Postgraduate Studies (n=345)

Reasons for Enrolling for Postgraduate Studies	***n***	***%***
More earnings expectations	237	69
Job promotion	197	57
Gaining of relevant skills	165	49
Joining another field	103	30
Inability to secure employment	96	28
Loss of job	45	13
Others	40	12

According to Table 4.2, there are three main reasons as to why postgraduate students enrol for postgraduate studies. These include: expectation of more earnings, job promotion and gaining of relevant skills. The least mentioned reasons for enrolling for postgraduate studies are loss of job and inability to secure employment. Other reasons for joining postgraduate studies were given as aspiration to join other fields, acquiring self-satisfaction, gaining social status and complying with policy requirement at the place of work.

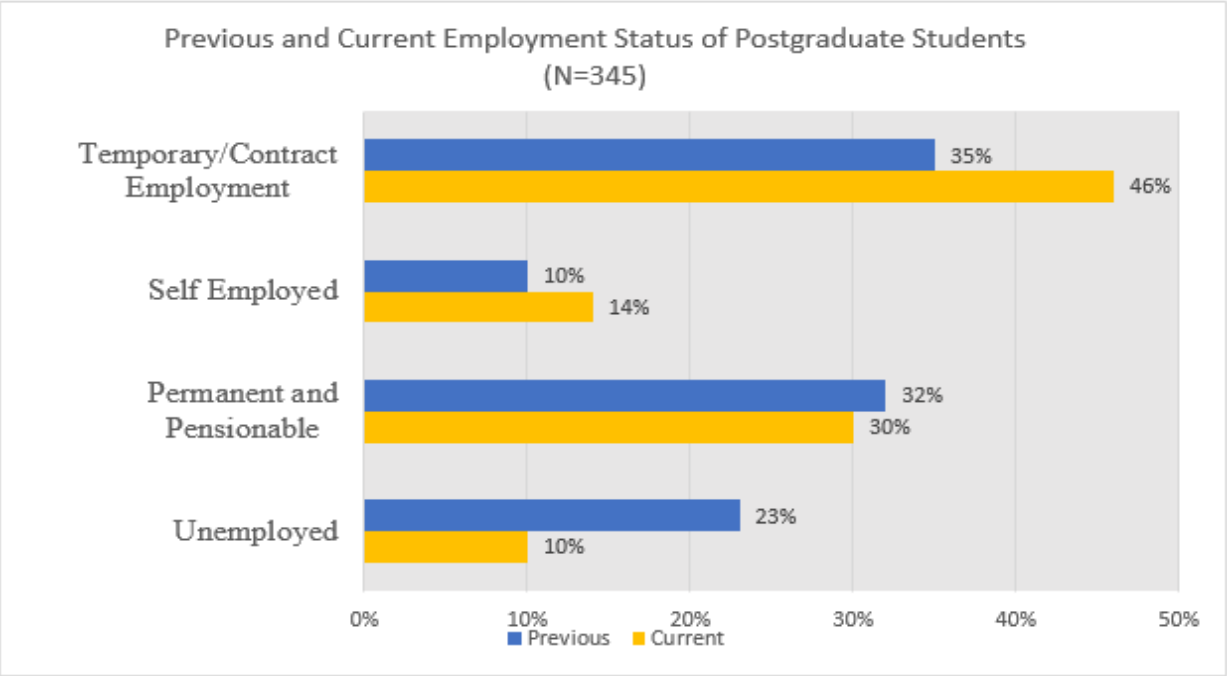
4.2.2.4 Previous and Current Employment Status of Postgraduate Students

In seeking to understand the labour market determinants of private demand for postgraduate studies, information on employment status of the respondents before and after enrolment for postgraduate studies was paramount. This provided a general picture on how the employment status of the postgraduate students changed with their enrolment for postgraduate studies. For the purposes of this study, employment status was categorized as follows: permanent and pensionable employment, temporary (contract) employment, self-employed and unemployed.

Data obtained from the postgraduates' employment status were disaggregated by previous and current employment statuses and presented in Figure 4.2.

Figure 4.2

Previous and Current Employment Status of Postgraduate Students (n=345)



As Figure 4.2 shows, there was a slight increase in postgraduate students in temporary employment and self-employment while there was a reduction in unemployment after the students enrolled for postgraduate studies. Results reflect that at 90%, the majority of postgraduate students in universities in Kenya are employed.

4.3 Private Demand for Postgraduate Studies

The dependent variable for this study was private demand for postgraduate studies. Indicators for this variable were the total number of postgraduate students enrolled across postgraduate programmes, and postgraduate students' perceptions on private demand for postgraduate studies.

The postgraduate students' scoring of the level of private demand for postgraduate studies were captured using a Likert scale with response choices ranging from 1 for "Very Low" to 5 for "Very High." The responses were converted into a continuous scale that ranged

from 1 to 5, to facilitate the interpretation and enable inferential analysis. This allowed for more straightforward statistical analysis and enhanced the applicability of the data in drawing meaningful conclusions. Higher scores represented very high level scoring, and vice versa. The mean response was calculated for each item within the construct variables, as well as the overall mean response for each construct variable. These mean values were then interpreted using the recommended scale ranges by Sözen and Güven (2019), as shown in Table 4.3.

Table 4.3

Likert Scale Scoring Range for Level of Private demand for Postgraduate Studies

Numerical Value	Rating	Mean Scale
1	Very Low	1.00-1.80
2	Low	1.81-2.60
3	Moderate	2.61-3.40
4	High	3.41-4.20
5	Very High	4.21-5.00

Source: Adapted from Sözen and Güven, (2019).

Using the mean scale given in Table 4.3, any score with a scale of 3.41 and above means that the respondents had a high rating of private demand for postgraduate studies while a value of 2.60 and below shows respondents had a low rating of private demand for postgraduate studies.

Standard deviation was used to gauge how far the individual responses to a question deviated from the mean. This showed the level of data concentration around the mean, with a smaller standard deviation indicating a higher concentration of data around the mean (Rumsey, 2019). Given that this study's respondents perceptions were measured using a Likert scale with a mean scale range of 1-5, a standard deviation was considered low when

it ranged from one (1) going downwards (i.e. towards 0), meaning that majority of the respondents were dispersed near the mean. A standard deviation of 1.8 and above implied that the respondents were scattered away from the mean, that is, they had different opinions. The scores were also compared with CUE summarized data on postgraduate enrolment for the 2016-2019 period (see section 4.8.2).

The postgraduate students' scoring of the level of private demand for postgraduate studies was as shown in Table 4.4.

Table 4.4

Postgraduate Students' Scoring of Private Demand for Postgraduate Studies (n=345)

Questions for Level of Private Demand for Postgraduate Studies	***MN***	***SD***
-How would you score the level of private demand for Masters' programmes in universities in Kenya?	2.3	1.217
-How would you score the level of private demand for PhD programmes in universities in Kenya?	2.8	.968
-How would you score the level of private demand for postgraduate studies in private universities in Kenya	2.6	1.032
-How would you score the level of private demand for postgraduate studies in public universities in Kenya?	2.6	1.023
-How would you score the overall private demand for postgraduate studies in universities in Kenya?	2.3	1.035
Grand mean	**2.5**	**.508**

As indicated in Table 4.4, the postgraduate students indicated that the level of private demand for PhD programmes in universities in Kenya was moderate (mn=2.8 and SD=.968). Additionally, Table 4.4 shows that the postgraduate students had a low scoring for the following areas regarding private demand for postgraduate studies: private demand for Masters' programmes in universities in Kenya (mn = 2.3 and SD = 1.217), private demand for postgraduate studies in private universities in Kenya (mn = 2.6 and SD =

1.032), private demand for postgraduate studies in public universities in Kenya (mn = 2.6 and SD = 1.023) and the overall demand for postgraduate studies in universities in Kenya (mn = 2.3 and SD = 1.035). The overall scoring for private demand for postgraduate studies was 2.5, signifying a low scoring of the level of private demand for postgraduate studies by the postgraduate students.

4.4 Perceived Returns as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The study, through the first objective, aimed at establishing the extent to which perceived returns, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in the universities that were selected for the study. The research question addressed by the study in this objective was: "To what extent does perceived returns affect private demand for postgraduate studies?"

During the initial quantitative phase of the study, this objective was addressed by analyzing the effect of perceived returns on private demand for postgraduate studies in the universities that were selected for the study through descriptive statistics. Additionally, regression analysis was employed, specifically utilizing the coefficient of determination (R^2), to infer and draw conclusions regarding the effect of perceived returns on private demand for postgraduate studies.

In the subsequent qualitative phase, content and thematic analyses were employed to provide further insights and explanations regarding the quantitative findings.

4.4.1 Effect of Perceived Returns on Private Demand for Postgraduate Studies in Selected Universities in Kenya-Quantitative Findings

This section presents quantitative findings for the effect of perceived returns on private demand for postgraduate studies. The data have been summarized into frequency counts as

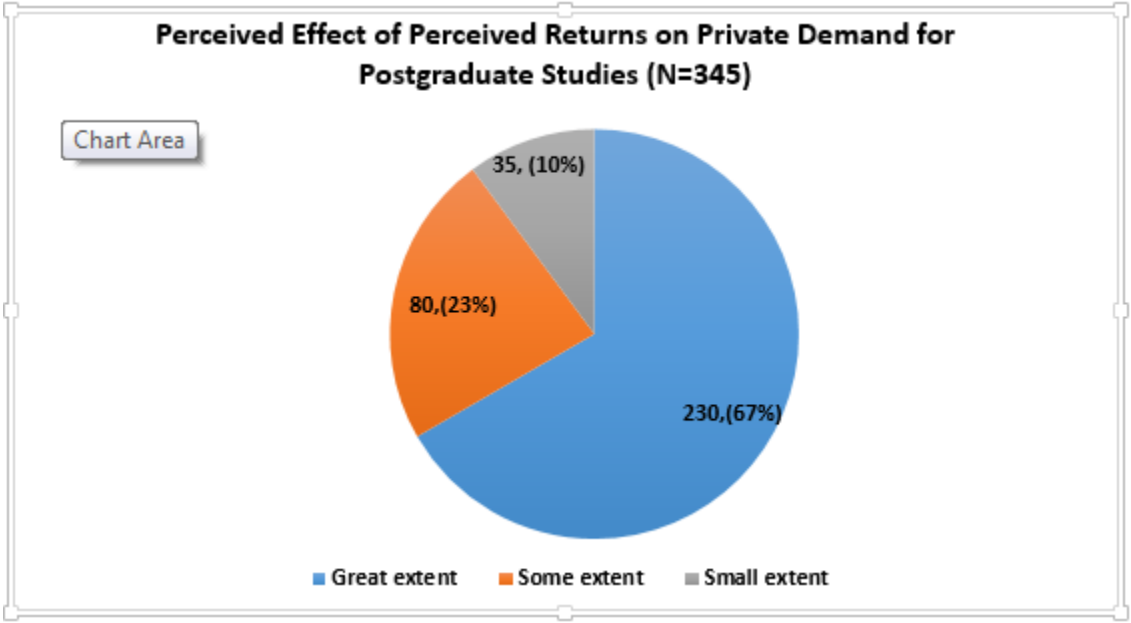
well as percentages, means and standard deviation. The section also presents a regression analysis that indicates the extent to which perceived returns predicts demand for postgraduate studies. Results were presented using a pie chart and tables.

4.4.1.1 Perceived Effect of Perceived Returns on Private Demand for Postgraduate Studies

The study aimed to inquire from the postgraduate students their perceived effect of perceived returns on private demand for postgraduate studies. The postgraduate students were requested to indicate the degree to which perceived returns affects private demand for postgraduate studies in universities in Kenya. Results are displayed in Figure 4.3.

Figure 4.3

Perceived Effect of Perceived Returns on Private Demand for Postgraduate Studies (n=345)



According to the data presented in Figure 4.3, more than half (67%) of the postgraduate students stated that the perceived returns had a substantial effect on the private demand for postgraduate studies. A smaller percentage (23%) mentioned that the perceived returns affected private demand to some degree, while 10% of the respondents reported that the perceived benefits had only a slight effect on the demand for postgraduate studies.

4.4.1.2 Perceived Return Factors affecting Private Demand for Postgraduate Studies

The postgraduate students were asked to select the perceived returns factors affecting private demand for postgraduate studies. The findings obtained are presented in Table 4.5.

Table 4.5

Perceived Return Factors Affecting Private Demand for Postgraduate Studies (n=345)

Perceived Return Factors	***n***	***%***
Increased employment opportunities	204	59
Job mobility	170	49
Salary increment	197	57
Job Promotion	173	50
Improving social status	115	33
Job security	119	34
Others	65	19

According to Table 4.5, postgraduate students identified three major perceived return factors. These include, increased employment opportunities (59%), salary increment (57%) and job promotion (50%).

A proportion of 19% mentioned other perceived return factors such as qualification requirements by employers, increased ability to migrate to abroad, increased knowledge and skills in the field of study, non-economic returns, global competitiveness and meeting demands of the labour market.

4.4.1.3 Postgraduate Students' Perceptions on the Effect of Perceived Returns on Private Demand for Postgraduate Studies

The postgraduate students were requested to share their perceptions on the level of agreement or disagreement regarding the effect of perceived returns on private demand for postgraduate studies. The opinions of the postgraduate students were recorded using a five-point Likert scale that provided response options ranging from 1=Strongly Disagree to 5

=Strongly Agree. This scale allowed the postgraduate students to express their level of agreement or disagreement regarding the stated views.

To facilitate the interpretation and enable inferential analysis, the responses provided by the respondents were converted into a continuous scale that ranged from 1 to 5. This conversion allowed for more straightforward statistical analysis and enhanced the applicability of the data in drawing meaningful conclusions. Higher scores represented very high level of agreement, and vice versa. The mean response was calculated for each item within the construct variables, as well as the overall mean response for each construct variable. These mean values were then interpreted using the recommended scale ranges by Sözen and Güven (2019), as shown in Table 4.6.

Table 4. 6

Likert Scale Scoring Range for the Level of Agreement

Numerical Value	Level of Agreement	Mean Scale
1	Strongly Disagree	1.00-1.80
2	Disagree	1.81-2.60
3	Neutral	2.61-3.40
4	Agree	3.41-4.20
5	Strongly Agree	4.21-5.00

Source: Sözen and Güven, (2019)

Using the mean scale given in Table 4.6, any score with a scale of 3.41 and above means that the respondents agreed with the statement while a value of 2.60 and below shows respondents' disagreement with the statement.

Standard deviation was used to measure how far the individual responses to a question deviated from the mean. This demonstrated the level of data concentration around the

average, with a smaller standard deviation indicating a higher concentration of data around the mean (Rumsey, 2019).

Given that this study's respondents perceptions were measured using a Likert scale with a mean scale range of 1-5, a standard deviation was considered low when it ranged from one (1) going downwards (i.e. towards 0), meaning that majority of the respondents were dispersed near the mean. A standard deviation of 1.8 and above implied that the respondents were scattered away from the mean, that is, they had different opinions.

Postgraduate students' perception on the effect of perceived returns on private demand for postgraduate studies was as shown in Table 4.7.

Table 4.7

Postgraduate Students' Perceptions on the Effect of Perceived Returns on Private Demand for Postgraduate Studies (n=345)

Statements for Perceived Returns	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**		***MN***	***SD***
	n	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**		
- Attaining postgraduate education enables individuals to earn more than undergraduate degree holders	6	1.7	8	2.3	62	18	162	47	107	31	4.0	.86
- There are a lot of monetary benefit accrued after attaining postgraduate education	12	3.5	46	13.3	67	19.4	128	37.1	92	26.7	3.7	1.10
- Students enroll for postgraduate studies to increase their future earnings	10	2.9	32	9.3	79	22.9	101	29.3	123	35.6	3.9	1.10
- Individuals with higher financial ability are more likely to enroll for postgraduate studies	98	28.4	104	30.1	79	22.9	50	14.5	14	4.1	2.4	1.16
Grand mean											**3.5**	

According to Table 4.7, the postgraduate students agreed on the following areas regarding the effect of perceived returns on private demand for postgraduate studies: attaining postgraduate education enables individuals to earn more than undergraduate degree holders (78% with mn = 4.0 and SD = .86), students enrol for postgraduate studies to increase their future earnings (64.9% with mn = 3.9 and SD = 1.10) and that there are a lot of monetary returns accrued after attaining postgraduate education (63.8% with mn = 3.7 and SD = 1.1).

However, as indicated in Table 4.7, postgraduate students disagreed that individuals with higher financial ability are more likely to enrol for postgraduate studies (58.5% with mn = 2.4 and SD = 1.16). The overall mean for postgraduates' perception of the effects of perceived returns on private demand for postgraduate studies was 3.5, implying that respondents agreed that perceived returns affect private demand for postgraduate studies.

4.4.2 Regression Analysis on the Effect of Perceived Returns on Private Demand for Postgraduate Studies

The study conducted bivariate regression analysis to show the amount of change in private demand for postgraduate studies that can be predicted from one unit change in perceived returns.

The four (4) Likert items used in measuring postgraduate students' perceptions on perceived returns were converted into continuous data. The scores were then regressed against the dependent variable (demand for postgraduate studies) that was determined based on the number of postgraduate students enrolled and the postgraduate student's perceptions on private demand for postgraduate studies.

The linear regression formula, $Y = \beta_0 + \beta_1 X_1 + e$, was used where;

- Y = a predicted value of Y (the dependent variable- private demand for postgraduate studies).
- X = the independent variable (perceived returns-the variable expected to be influencing Y).
- β_o = the intercept (the predicted value of Y when the X is 0).
- β_1 = the regression coefficient- the change in Y associated with one-unit increment change in X.
- *e* = the error of the estimate (how much variation there is in the researcher's estimate of the regression coefficient).

This produced the coefficient of determination (R^2) that measures the amount of the variability in the predicted variable that can be explained by the predictor variable in the equation. The analysis yielded a model summary table that reported how much variability in private demand for postgraduate studies is explained by perceived returns.

The analysis also yielded a coefficients table that described the size and direction of the association between the predictor variable (perceived returns) and the response variable (private demand for postgraduate studies).

The results obtained from the analysis are presented in Tables 4.8 and 4.9, which provide information on the strength, direction, and significance of the association between perceived returns and private demand for postgraduate studies.

Table 4.8

Model Summary for Perceived Returns and Private Demand for Postgraduate Studies

Model	*R*	*R*-Square	Adjusted *R*-Square	Std. Error of the Estimate
1	.755[a]	.57	.47	.352

a. Predictors: (Constant), perceived returns

As shown in Table 4.8, *r* (correlation coefficient) =.755 and R^2 (coefficient of determination) = .57. R^2 indicates the degree of variability of private demand for

postgraduate studies in the universities that were selected for the study that is explained by perceived returns. The R^2 of .57 indicates that 57.0% of the variation in private demand for postgraduate studies in the selected universities is explained by perceived returns while the remaining 43.0% is explained by other factors that this objective did not address. This is a fairly large effect on a dependent variable by one predictor. Hence it implies that perceived returns play a major role in private demand for postgraduate studies in universities in Kenya.

The study then conducted an analysis to establish the coefficients for the effect of perceived returns on private demand for postgraduate studies. The results of this analysis are shown in Table 4.9, which presents the specific coefficients associated with the effect of perceived returns on private demand for postgraduate studies.

Table 4.9

Coefficients Table for Effect of Perceived Returns on Private Demand for Postgraduate Studies

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.879	.094		9.307	.000
	Perceived returns	.57	.007	.755	2.907	.004

a. Dependent Variable: private demand for postgraduate studies

According to Table 4.9, the "Constant", which indicates the predicted value of private demand for postgraduate studies when perceived returns is zero, is .879. The analysis in Table 4.9 also shows a regression coefficient (*B)* of .57. According to Hanneman et al. (2012), the slope or unstandardized regression coefficient represents the substantive effect of the independent variable on the dependent variable, and quantifies the amount of change that can be attributed to a one-unit change in the independent variable, without any

standardization or adjustment. Hence the regression coefficient of .57 indicates that for each one unit increase in perceived returns, private demand for postgraduate studies is predicted to increase by .57 units. The regression model for perceived returns and private demand for postgraduate studies is therefore significant.

As indicated in Table 4.9, $p = .004 < .05$. Hanneman et al. (2012) assert that if $p < .05$, the value is statistically significant and if $p > .05$ the value is not statistically significant. This shows that perceived returns (at $p = .004$) significantly predicts private demand for postgraduate studies, at a significance level of $p < .05$

To explain more on these results, the study collected and analyzed qualitative data in the second phase of the study.

4.4.3 Effect of Perceived Returns on Private Demand for Postgraduate Studies in Selected Universities in Kenya-Qualitative Findings

In-depth information was required to explain more on the quantitative findings regarding the postgraduate students' perceptions on the effect of perceived returns on private demand for postgraduate studies. In the qualitative phase of the study, a follow-up was conducted with 28 participants who were deemed most capable of providing in-depth explanations of the results. The selection criteria was based on gender, discipline enrolled in, and those with very high or very low score on perception scores. The selected participants comprised of 14 male, 14 female, 7 aged 25-30 years, 7 aged 31-40 years, 7 aged 41-50 years, 4 aged 51-60 years and 3 aged above 60 years. Seven participants were selected from each discipline type, that is, Arts and Humanities, Education, Business and Science. The participants' selection criteria was also based on the very high mean for perceptions on the effect of perceived returns on private demand for postgraduate studies.

4.4.3.1 Postgraduate Students' Perception on the Effect of Perceived Returns on Private Demand for Postgraduate Studies

Qualitative data on the perception on the effect of perceived returns on private demand for postgraduate studies yielded mixed reaction where some of the postgraduate students felt that perceived returns affected private demand for postgraduate studies while others felt it did not. Those who felt that perceived returns increased private demand for postgraduate studies expressed that they expected increased salaries, promotion in the workplace and access to other work opportunities including moving to better jobs. They cited perceived returns as getting highly paid, joining better employment and increasing their competitiveness for other part-time job opportunities. Postgraduate student number 20 explained that;

> *"I started my Master's once I clocked 38 years. This was after 10 years of being in TSC. I believe that my Master's certificate will give me the opportunity to get extra assignments like recruitment at KICD for curriculum development or becoming an examiner for the TVET programs." (PGS-20).*

It emerged that many participants expressed that they pursue postgraduate studies because of the perceived returns. This was put across through statements like the following by postgraduate student number 26;

> *"The whole business of going back for postgraduate studies is based on what you imagine or believe you will gain. No one would want to waste their money in school if there are no better jobs or better pay. Although most institutions have stopped rewarding graduates, there are other opportunities that people expect to present themselves and this makes them go back for postgraduate studies." (PGS-26).*

Those participants who had low ratings for perceived returns on private demand for postgraduate studies explained that people pursue postgraduate studies as a requirement at the work place or for self-satisfaction. Further qualitative results showed that there is high

unpredictability of employment as it is not guaranteed that someone with a postgraduate degree will get a job or better salary. Postgraduate student number 15 explained it this way;

> *"You cannot say that perceived gains determines the pursuit of postgraduate studies. Most people who have pursued postgraduate studies with this mind-set have ended up being frustrated because what they thought would be did not happen because of increasing unemployment and lack of employer's recognition of postgraduate employees. For me it is more of achieving my life goal of attaining all levels of education." (PGS-15).*

The view by postgraduate student number 15 was shared by postgraduate student number 22 who had this to say;

> *"I can tell you for free that there are so many people I know with Master's degrees and they do not have permanent jobs. Worse still are the people with PhDs and have no jobs…You can also see them being publicized by the media stations that show people raising posters pleading with the government and other employers to give them jobs. There are no jobs and this is not about education level attainment." (PGS-22).*

Some participants elaborated on social reasons such as attaining a name in the society. They felt that being called a Doctor is prestigious. From these sentiments it is clear that these participants' pursuit of postgraduate studies is propelled by personal reasons of achieving their life goals more than by economic gains. These statements also bring out the non-economic reasons as perceived gains for pursing postgraduate studies.

Qualitative data also revealed that perceived returns differ by type of discipline to be pursued and age. Further findings showed that minimum qualification for labour market entry differ depending on the type of course required for the specific career.

Postgraduate student number 16 expressed that;

> *"You will observe that most adverts indicate Master's qualification as an added advantage. Because of this, people will seek to pursue postgraduate studies in marketable courses such as Business Management, Education and other courses." (PGS-16).*

Postgraduate student number 23 shared his opinion thus;

> "*While perceived gains motivate people to pursue postgraduate studies, this will depend on the career and course. Some courses or careers only require minimal educational training. For instance, in the health sector you will find that people easily get employed even with a diploma. Such scenarios have caused low postgraduate enrolment in these courses in Kenya*" (*PGS-23).*

Postgraduate student number 18 brought out that middle aged people had higher perceived returns from postgraduate studies than the young people. She explained the age difference in perceived gains as follows;

> **"***Normally when one finishes an undergraduate course at around 24-23 years of age, he starts exploring the labour market as he hunts for jobs. This process can take someone at least 3-5 years before landing anything good. While out there, one realizes that the competition is high and postgraduate studies increase chances for employment. Thus, whether employed or not, the person will purpose to pursue postgraduate studies to get a job or if they are already employed, gain higher benefits in their place of employment." (PGS-18).*

More themes generated by qualitative data include; competitive advantage, economic gains, social status, and career goals as perceived returns from postgraduate studies.

In a discussion with postgraduate number 1, the following came up.

> *"Many people consider gains for pursuing postgraduate studies before enrolling for the same. Some of the perceived drivers are established from the career development of people who have already graduated. You will observe that most adverts indicate Master's qualification as an added advantage. Because of this, people will seek to pursue postgraduate studies in marketable courses such as Business Management, Education and other courses." (PGS-01).*

These discussions shows that perceived returns play a critical role in the students' pursuit of postgraduate studies. This is likely to affect private demand for postgraduate studies.

4.5 Skills requirements for a Knowledge Economy as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The study, through the second objective, aimed to establish how skills requirements for a knowledge economy, as a determinant of private demand for postgraduate studies, affects

private demand for postgraduate studies in the universities that were selected for the study. The research question addressed by the study in this objective was: "How does skills requirements for a knowledge economy affect private demand for postgraduate studies?" During the initial quantitative phase of the study, this objective was addressed through two main approaches. Firstly, descriptive statistics were employed to assess the effect of skills requirements for a knowledge economy on private demand for postgraduate studies in the universities that were selected for the study. Secondly, regression analysis was employed, specifically utilizing the coefficient of determination (R^2), to infer and draw conclusions regarding the effect of skills requirements for a knowledge economy on private demand for postgraduate studies.

In the subsequent qualitative phase, content and thematic analyses were employed to provide further explanations and insights into the quantitative results.

4.5.1 Effect of Skills requirements for a Knowledge Economy on Private Demand for Postgraduate Studies in Selected Universities in Kenya-Quantitative Findings

This section presents quantitative results for the effects of skills requirements for a knowledge economy on private demand for postgraduate studies. The data have been summarized into frequency counts, percentages, means and standard deviation. The section also presents a regression analysis that indicates the extent to which skills requirements for a knowledge economy predicts demand for postgraduate studies.

The postgraduate students were requested to give their perceptions of the extent to which skills requirements for a knowledge economy affects private demand for postgraduate studies; select factors within skills requirements for a knowledge economy that affect private demand for postgraduate studies and share their perception of effects of various

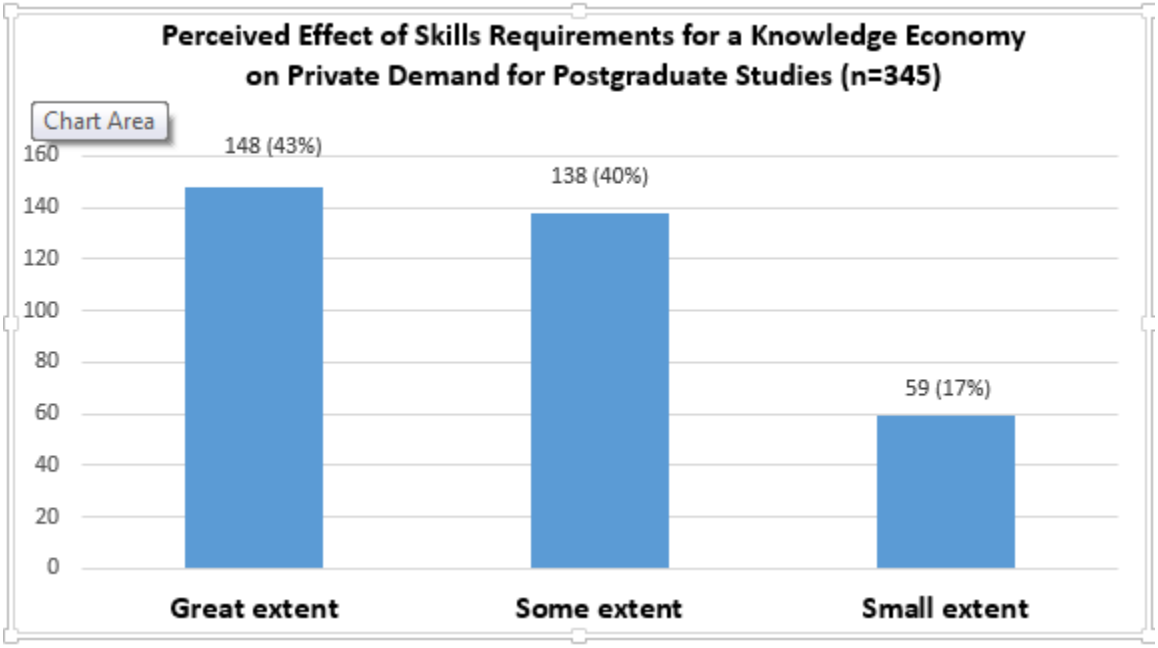
aspects of skills requirements for a knowledge economy on private demand for postgraduate studies. Data obtained were summarized in charts and tables.

4.5.1.1 Perceived Effect of Skills requirements for a Knowledge Economy on Private Demand for Postgraduate Studies in Selected Universities in Kenya

The study aimed to inquire from the postgraduate students their perceived effect of skills requirements for a knowledge economy on private demand for postgraduate studies. They were asked to share their perceptions regarding the extent to which skills requirements for a knowledge economy affect private demand for postgraduate studies. Data obtained were summarized and presented as illustrated in Figure 4.4.

Figure 4.4

Perceived Effect of Skills requirements for a Knowledge Economy on Private Demand for Postgraduate Studies



According to Figure 4.4, less than half (43%) of the respondents indicated that skills requirements for a knowledge economy affected private demand for postgraduate studies to a great extent while 17% indicated that skills requirements for a knowledge economy

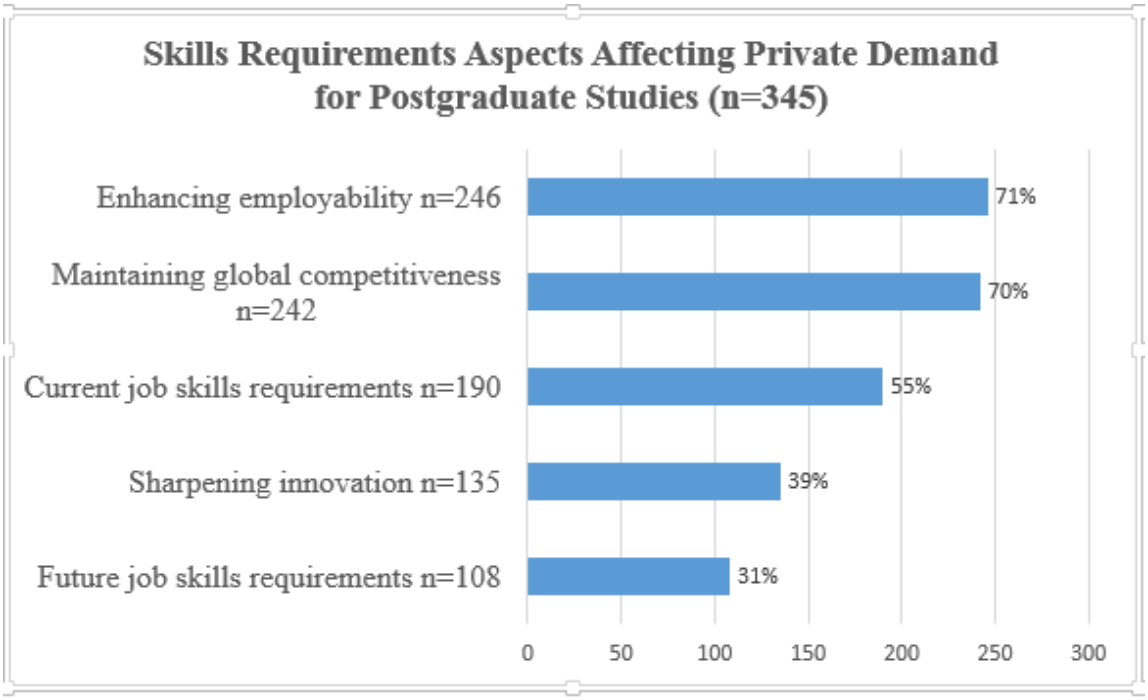
affects private demand for postgraduate studies to a small extent. These results show that skills requirements for a knowledge economy has a moderate effect on private demand for postgraduate studies, implying that postgraduate studies are perceived to have a low impact on generation of skills required for a knowledge economy.

4.5.1.2 Perceived Skills Requirements Aspects Affecting Private Demand for Postgraduate Studies in Selected Universities in Kenya

The postgraduate students were requested to select their preference for the given skills requirements aspects affecting private demand for postgraduate studies. Data obtained were summarized in Figure 4.5.

Figure 4.5

Skills Requirements Aspects Affecting Private Demand for Postgraduate Studies (n=345)



According to Figure 4.5, postgraduate students identified two major skill requirement factors that affected private demand for postgraduate studies in the selected universities. These are enhancing employability (71%) and maintaining global competitiveness (70%). Future job skills requirements was shown to be the skills requirements factor that least

affected private demand for postgraduate studies among the postgraduate students in the selected universities.

4.5.1.3 Postgraduate Students Perception on the Effect of Skills Requirements for a Knowledge Economy on Private Demand for Postgraduate Studies in Selected Universities in Kenya

The postgraduate students were asked to share their perceptions on the level of agreement or disagreement regarding the effect of skills requirements for a knowledge economy on private demand for postgraduate studies. The opinions of the postgraduate students were recorded using a five-point Likert scale that provided response options ranging from 1 = Strongly Disagree to 5 = Strongly Agree. This scale allowed the students to express their level of agreement or disagreement regarding the stated views.

To facilitate the interpretation and enable inferential analysis, the responses provided by the participants were converted into a continuous scale that ranged from 1 to 5. This conversion allowed for more straightforward statistical analysis and enhanced the applicability of the data in drawing meaningful conclusions. Higher scores represented very high level of agreement, and vice versa. The mean response was calculated for each item within the construct variables, as well as the overall mean response for each construct variable. These mean values were then interpreted using the recommended scale ranges by Sözen and Güven (2019), as shown in Table 4.6.

Data obtained were summarized as illustrated in Table 4.10

Table 4.10

Postgraduate Students' Perceptions on the Effect of Skills requirements for a Knowledge Economy on Private Demand for Postgraduate Studies (n=345)

Statements for Skills requirements for a Knowledge Economy	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		*MN*	*SD*
	n	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**		
- The demand for highly skilled workers increases demand for postgraduate degree holders	16	4.6	16	4.6	19	5.5	194	56.2	100	29.1	4.0	.98
- Many working students aim at improving their skills	31	9.0	75	21.7	135	39.2	67	19.4	37	10.7	3.0	1.097
- Students are acquiring human skills as a form of investment	9	2.6	25	7.2	75	21.7	162	47.1	74	21.4	3.8	.86
- Increased education is likely to make the skills of a worker more valuable to production	53	15.4	110	31.9	129	37.4	37	10.7	16	4.6	2.6	1.024
- Individuals pursue postgraduate degrees to remain competitive in the labour market	14	4.1	6	1.7	43	12.5	98	28.4	184	53.3	4.2	1.02
- Employers requirement for enhanced skills to operate new technology increases demand for postgraduate studies	32	9.3	54	15.7	98	28.4	96	27.8	65	18.8	3.3	1.097
- Employers mainly prefer more skilled workers to less skilled ones	15	4.3	13	3.8	51	14.8	135	39.1	131	38.0	4.0	1.04
Grand mean											**3.6**	

As depicted in Table 4.10, there was consensus among the postgraduate students regarding the following areas on the effect of skills requirements for a knowledge economy on private demand for postgraduate studies: the demand for highly skilled workers increases private

demand for postgraduate degree holders (85.3%) with mn = 4.0 and SD = 0.98), individuals pursue postgraduate degrees to remain competitive in the labour market (81.7% with mn =4.2 and SD = 1.02), employers mainly prefer more skilled workers to less skilled ones (77.1% with mn = 4.0 and SD=1.04) and that students are acquiring human skills as a form of investment (68.5% with mn = 3.8 and SD = .86.

However, as Table 4.10 shows, postgraduate students disagreed that increased education makes skills of a worker more valuable to production (47.3% with mn = 2.6 and SD = 1.024).

The overall mean for postgraduate students' perception of the effect of skills requirements for a knowledge economy on private demand for postgraduate studies was 3.6. This implies that postgraduate students moderately agreed that skills requirements for a knowledge economy affected private demand for postgraduate studies.

4.5.2 Regression Analysis on the Effect of Skills requirements for a Knowledge Economy on Private Demand for Postgraduate Studies in Universities in Kenya

Bivariate regression analysis was performed to show the amount of change in private demand for postgraduate studies that can be predicted from one unit change in skills requirements for a knowledge economy.

The seven (7) Likert items used in measuring respondents' perceptions on skills requirements for a knowledge economy were converted into continuous data. The scores were then regressed against the dependent variable (demand for postgraduate studies) that was determined by considering the number of postgraduate students enrolled and the postgraduate student's perceptions on private demand for postgraduate studies.

The linear regression formula, $Y = \beta_0 + \beta_1 X_1 + e$, was used where;

- Y = a predicted value of Y (the dependent variable- private demand for postgraduate studies).
- X = the independent variable (skills requirements for a knowledge economy-the variable expected to be influencing Y).
- β_o = the intercept (the predicted value of Y when the X is 0).
- β_1 = the regression coefficient- the change in Y associated with one-unit increment change in X.
- *e* = the error of the estimate (how much variation there is in the researcher's estimate of the regression coefficient).

This produced the coefficient of determination (R^2) that measures the proportion of the variability in the predicted variable that can be explained by the predictor variable in the equation. The analysis yielded a model summary table that reported how much variability in private demand for postgraduate studies is explained by skills requirements for a knowledge economy.

The analysis also yielded a coefficients table that described the magnitude and direction of the relationship between the predictor variable (skills requirements for a knowledge economy) and the response variable (private demand for postgraduate studies). The results obtained from the analysis are presented in Tables 4.11 and 4.12 which provide information on the strength, direction, and significance of the association between skills requirements for a knowledge economy and private demand for postgraduate studies.

Table 4.11

Model summary for skills requirements for a knowledge economy and private demand for postgraduate studies

Model	*R*	*R*- Square	Adjusted *R*- Square	Std. Error of the Estimate
1	.689[a]	.475	.435	.455

a. Predictors: (Constant), skills requirements for a knowledge economy

The model summary in Table 4.11 shows *r* (correlation coefficient) =.689 and that R^2 (coefficient of determination) = .47.5. R^2 indicates the degree of variability of private demand for postgraduate studies that is explained by skills requirements for a knowledge economy. The *R*-square of .475 indicates that 47.5% of the variation in private demand for postgraduate studies is explained by skills requirements for a knowledge economy while 52.5% is explained by other factors that this objective did not address. However, this is a fairly large effect on a dependent variable by one predictor. Hence it implies that skills requirements for a knowledge economy has some effect on private demand for postgraduate studies.

The study then conducted an analysis to establish the coefficients for the effect of skills requirements for a knowledge economy on private demand for postgraduate studies. The results of this analysis are shown in Table 4.12, which presents the specific coefficients associated with the effect of skills requirements for a knowledge economy on private demand for postgraduate studies.

Table 4.12

Coefficients Table for Effect of Skills requirements for a Knowledge Economy on Private Demand for Postgraduate Studies

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	***t***	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	.982	.102		9.651	.000
	Skills requirements for a Knowledge Economy	.447	.328	.689	1.655	.099

a. Dependent Variable: Private demand for postgraduate studies

As indicated in Table 4.12, the "Constant", which indicates the predicted value of private demand for postgraduate studies when skills requirements for a knowledge economy is

zero is .982. The analysis in Table 4.12 also shows a regression coefficient of .447. According to Hanneman et al. (2012), the slope or unstandardized regression coefficient represents the independent variable substantive effect on the dependent variable, and quantifies the amount of change that can be attributed to a one-unit change in the independent variable, without any standardization or adjustment. Hence the regression coefficient of .447 indicates that for each one unit increase in skills requirements for a knowledge economy, private demand for postgraduate studies is predicted to increase by .447 units. The regression model for skills requirements for a knowledge economy and private demand for postgraduate studies is therefore significant.

As indicated in Table 4.12, $p = .099 > .05$. Hanneman et al. (2012) assert that if $p < .05$, the value is statistically significant and if $p > .05$ the value is not statistically significant. This shows that skills requirements for a knowledge economy (at $p = .099$) is not a significant predictor of private demand for postgraduate studies, at a significance level of $p < .05$.

The study sought additional information through qualitative data to explain why skills requirements for a knowledge economy is not a significant predictor of private demand for postgraduate studies.

4.5.3 Effect of Skills requirements for a Knowledge Economy on Private Demand for Postgraduate Studies in Universities in Kenya-Qualitative Findings

Following the unexpected quantitative results that rated skills requirements for a knowledge economy low as a factor affecting demand for postgraduate studies, a follow-up with 28 participants who could best explain the results was done in the second phase of the study. A total of 20 Master's and 8 PhD students were purposively selected from the original quantitative sample. Selection criteria was based on course type. It was also based

on those who scored very high or very low on effect of various aspects of skills requirements on private demand for postgraduate studies.

4.5.3.1 Explaining the Low Rating of Skills requirements for a Knowledge Economy as a Factor Affecting Private Demand for Postgraduate Studies

The quantitative study did not seek responses on the skills that were required by the labour market. Thus, to explain the unexpected quantitative results that rated skills requirements low, the study sought further information to find out which skills were required by the labour market and which skills were being offered at the postgraduate level. During the interviews, the postgraduate students were asked to discuss skills that they anticipated to gain through postgraduate studies. Results revealed that apart from research skills, management, leadership and presentation skills were some of the other important skills expected to be acquired by pursuing postgraduate studies.

While most participants mentioned that skills were more critical for labour market sustenance than education level qualification, some indicated that postgraduate studies were not providing all the required skills for a knowledge economy as explained by postgraduate student number 11;

> *Out there in the employment world, it is more of what you can do (competency) than which papers you have. Interestingly, during job application, your postgraduate qualification is sought but most skills are learnt on the job. Thus, I would not say quest for skills made me enrol for master's studies; rather they are the advantages I will obtain from having the Master's certificate such as promotion and salary increment. The pursuit of postgraduate studies is often considered an added advantage depending on the institution" (PGS-11).*

The same view was shared by postgraduate student number 14 who said;

> *The labour market is in high demand for different skills, soft and hard. With the increase in technology and globalization, labour market skills requirements especially for new jobs vary. University education does not provide all the skills. I am pursuing my doctorate degree because I can use*

> *the certificate to gain added advantage in future employment opportunities. However, I believe I get my skills from practicing in the industry.*" *(PGS-14).*

Also, postgraduate student number 12 had the following to say;

> *"Some of the skills I have acquired as I pursue postgraduate skills include presentation, leadership and organizational skills. While pursuing my postgraduate studies I am yet to be exposed to some technical skills such as digital marketing, and application of modern technology in procurement." (PGS-12).*

The above discussions reveal that attaining postgraduate qualifications (which can be used to secure employment or earn promotion in the workplace) was perceived to be a determinant for private demand for postgraduate studies.

Some participants, especially from the private institutions, explained that they were pursuing postgraduate studies to attain some skills which their employers deemed critical for productivity purposes. It emerged that some of these participants had their studies being sponsored by their employers, as explained by postgraduate student number 3.

> *"I was enrolled for master's programme by my organization so that I can develop effective skills in communication which is critical for our organization that is internationally competitive. Gaining the skills will be useful for my organization's operations in new regions that we will be launching in a years' time." (PGS-03).*

4.6 Labour Force Status as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The study, through the third objective, aimed to determine the effects of labour force status, as a determinant of private demand for postgraduate studies, on private demand for postgraduate studies in the universities that were selected for the study. The research question addressed by the study in this objective was: "What are the effects of labour force status on private demand for postgraduate studies?"

In the initial quantitative phase of the study, this objective was addressed by analyzing the effect of labour force status on private demand for postgraduate studies through descriptive statistics. Additionally, regression analysis was employed, specifically utilizing the coefficient of determination (R^2), to infer and draw conclusions regarding the effects of labour force status on private demand for postgraduate studies.

In the subsequent qualitative phase, content and thematic analyses were employed to provide further insights and explanations regarding the quantitative findings.

4.6.1 Effect of Labour Force Status on Private Demand for Postgraduate Studies in Selected Universities in Kenya-Quantitative Findings

This section gathered data on labour force status and its effect on private demand for postgraduate studies. The objective also assessed student's perception on how labour force status (unemployment, employment and self-employment) affects private demand for postgraduate studies in universities in Kenya. The data have been summarized into frequency counts, percentages, means and standard deviation. The section also presents a regression analysis that indicates the extent to which labour force status predicts demand for postgraduate studies in the universities that were selected for the study. Data obtained were summarized and presented in tables.

4.6.1.1 Postgraduate Students Labour Force Status

This study classified labour force into four categories, namely: those who were unemployed, those who were salaried/wage employed, those who were self-employed and those who were outside the workforce. Respondents were requested to give information regarding their current labour force status. The collected data were analyzed and subsequently presented in Table 4.13.

Table 4.13

Postgraduate Students' Labour Force Status

Labour Force Status	***n***	***%***
Unemployed (actively looking for employment)	25	7
Salaried/ Wage employed	263	76
Self employed	47	14
Outside the labour force (not seeking employment)	10	3
Total	**345**	**100**

According to Table 4.13, majority (97%) of the postgraduate students in universities in Kenya were in the labour force of the country as they were either employed, unemployed (but actively seeking employment) or self-employed. Only 3% were outside the labour force. The unemployed and those outside the labour force constituted 10% of the postgraduate students.

When asked whether labour force status affected their private demand for postgraduate studies, 59% of the postgraduate students said "Yes" and a proportion of 41% said "No". This shows mixed reaction on labour force status effect on private demand for postgraduate status. .

Respondents who agreed that labour force status affected private demand for postgraduate studies gave the following reasons: need for improved remuneration, labour market competitiveness, job insecurity and instability, and preference of employees with postgraduate qualifications by employers.

For the purposes of data collection and analysis, labour force status as a determinant of private demand for postgraduate studies in universities in Kenya was divided into three categories; unemployment, employment and self-employment.

4.6.1.2 Postgraduate Students' Perceptions on the Effect of Unemployment on Private Demand for Postgraduate Studies

The postgraduate students were asked to share their perceptions on the level of agreement or disagreement regarding the effect of unemployment on private demand for postgraduate studies. The views of the postgraduate students were captured using a Likert scale consisting of five points, that ranged from 1 = Strongly Disagree to 5 = Strongly Agree. This scale allowed the postgraduate students to express their agreement or disagreement level regarding the provided statements. To facilitate interpretation and enable inferential analysis, the respondents' responses were transformed into a continuous scale ranging from 1 to 5. This transformation facilitated easier statistical analysis and increased the usefulness of the data for drawing meaningful conclusions. Higher scores indicated a higher level of agreement, while lower scores indicated the opposite. The mean response was computed for each item within the construct variables, as well as the overall mean response for each construct variable. These mean values were then interpreted using the scale ranges recommended by Sözen and Güven (2019), as presented in Table 4.6. The obtained data were summarized and presented in Table 4.14.

Table 4.14

Postgraduate Students' Perceptions on the Effect of Unemployment on Private Demand for Postgraduate Studies (n=345)

Statements for Unemployment	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		*MN*	*SD*
	n	%	*n*	%	*n*	%	*n*	%	*n*	%		
- Increase in unemployment rates influences private demand for postgraduate studies	7	2.0	14	4.1	55	15.9	169	49.0	100	29.0	4.0	0.89
- Industrial friction where workers are unable to fill existing vacancies affect demand for postgraduate studies	32	9.3	62	18.0	71	20.6	125	36.2	55	15.9	3.3	1.21
- Lack of awareness of existing job opportunities affect private demand for postgraduate studies	13	3.8	40	11.6	51	14.8	163	47.2	78	22.6	3.7	1.11
- Problems related to labour mobility affect private demand for postgraduate studies	15	4.3	52	15.1	57	16.5	148	42.9	73	21.2	3.6	1.11
Grand mean											**3.7**	

As indicated in Table 4.14, postgraduate students agreed on the following areas regarding the effect of unemployment on private demand for postgraduate studies: increase in unemployment rates affected private demand for postgraduate studies (78% with mn = 4.0 and SD = 0.89), lack of awareness of existing job opportunities affects private demand for postgraduate studies (69.8% with mn = 3.7 and SD = 1.11) and problems related to job mobility affects private demand for postgraduate studies (64.1% with mn = 3.6 and SD = 1.11). However, as Table 4.14 shows, postgraduate students were neutral on the statement that industrial friction, where workers are unable to fill existing vacancies, affect private demand for postgraduate studies (20.6% with mn = 3.3 and SD = 1.21).

The overall mean was 3.7, implying that the postgraduate students agreed that unemployment affected private demand for postgraduate studies.

4.6.1.3 Postgraduate Students' Perceptions on the Effect of Employment on Private Demand for Postgraduate Studies in Universities in Kenya

The postgraduate students were asked to share their perceptions regarding the level of agreement or disagreement concerning the effect of employment on private demand for postgraduate studies. The postgraduate students' views were recorded using a Likert scale consisting of five points, that ranged from 1 = Strongly Disagree to 5 = Strongly Agree. This scale provided a means for the postgraduate students to express their agreement or disagreement with the statements provided. To facilitate interpretation and enable inferential analysis, the respondents' responses were converted into a continuous scale ranging from 1 to 5. This conversion aided in easier statistical analysis and increased the utility of the data for drawing meaningful conclusions. Higher scores indicated a higher level of agreement, while lower scores indicated the opposite. The mean response was calculated for each item within the construct variables, as well as the overall mean response for each construct variable. These mean values were then interpreted using the scale ranges recommended by Sözen and Güven (2019), as presented in Table 4.6. The collected data were summarized and presented in Table 4.15.

Table 4.15

Postgraduate Students' Perceptions on the Effect of Employment on Private Demand for Postgraduate Studies (n=345)

Statements for Employment	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**		***MN***	***SD***
	n	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**		
- Employers' requirement for postgraduate studies qualifications increases demand for postgraduate studies	16	4.6	17	4.9	19	5.5	193	56	100	29	4.0	0.994
- Many employees enrol for postgraduate studies in fear of losing their jobs	18	5.2	20	5.8	60	17.4	115	33.3	132	38.3	3.9	0.767
- Postgraduate studies enable one to be competitive in the labour market	14	4.1	6	1.7	43	12.5	98	28.4	184	53.3	4.3	1.110
- Most employees enrol for postgraduate studies for promotion at the workplace	24	7	21	6.1	64	18.5	115	33.3	121	35.1	3.8	0.736
Grand mean											**4.0**	

According to Table 4.15, majority of the postgraduate students agreed on the following areas regarding the effect of employment on private demand for postgraduate studies: Engaging in postgraduate studies enhances one's competitiveness in the job market (81.7% with mn = 4.3 and SD = 1.110), employers' requirement for postgraduate studies qualifications increases private demand for postgraduate studies (85% with mn = 4.0 and SD = 0.994), many employees enrol for postgraduate studies in fear of losing their jobs (71.6% with mn = 3.9 and SD = 0.767) and that most employees enrol for postgraduate studies for promotion at the workplace (68.4% with mn = 3.9 and SD = 0.736).

The overall mean was 4.0 implying the postgraduate students agreed that employment, as a labour force status, affects private demand for postgraduate studies.

4.6.1.4 Postgraduate Students' Perceptions on the Effect of Self-Employment on Private Demand for Postgraduate Studies in universities in Kenya

The postgraduate students were asked to share their opinions regarding the extent of agreement or disagreement concerning the effect of self-employment on private demand for postgraduate studies. Their perceptions were captured using a Likert scale consisting of five points, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale enabled the postgraduate students to express their level of agreement or disagreement with the given statements. To facilitate interpretation and statistical analysis, the respondents' responses were transformed into a continuous scale from 1 to 5. This transformation allowed for easier analysis and enhanced the data's applicability in drawing meaningful conclusions. Higher scores indicated a higher degree of agreement, while lower scores indicated the opposite. The mean response was calculated for each item within the construct variables, as well as the overall mean response for each construct variable. These mean values were then interpreted using the scale ranges recommended by Sözen and Güven (2019), as shown in Table 4.6. The generated information is presented in Table 4.16.

Table 4.16

Postgraduate Students' Perceptions on Effect of Self-Employment on Private Demand for Postgraduate Studies (n=345)

Statements for Self-Employment	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		*MN*	*SD*
	n	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**		
- Postgraduate education increases the ability to understand market prospects	32	9.3	83	24.0	188	54.5	31	9.0	11	3.2	2.7	1.08
- Individuals who attain postgraduate education are better freelancers than those who do not.	43	12.5	146	42.3	89	25.8	58	16.8	9	2.6	2.5	1.04
- Postgraduate studies enable better management of self-employment business.	62	18.0	107	31.0	112	32.5	46	13.3	18	5.2	2.6	1.11
- Businesses owned by individuals who have attained postgraduate education are more competitive.	23	6.7	125	36.2	149	43.2	40	11.6	8	2.3	2.7	1.15
- Desire for self-employment increases private demand for postgraduate studies.	81	23.5	108	31.3	117	33.9	33	9.6	6	1.7	2.4	1.03
Grand mean											**2.6**	

As indicated in Table 4.16, postgraduate students were neutral on the following areas regarding the effect of self-employment on private demand for postgraduate studies: postgraduate education increases the ability to understand market prospects (54.5% with mean = 2.7 and SD = 1.08) and businesses owned by individuals who have attained postgraduate education are more competitive (43.2% with mn = 2.7 and SD = 1.15). It has also been shown in Table 4.16 that postgraduate students disagreed on the following areas regarding the effect of self-employment on private demand for postgraduate studies: desire for self-employment increases private demand for postgraduate studies (54.8 % with mn = 2.4 and SD = 1.03), individuals who attain postgraduate education are better freelancers than those who do not (54.8% with mean = 2.5 and SD = 1.04) and that postgraduate studies

enable better management of self-employment business (49% with mn = 2.6 and SD = 1.11).

The overall mean rating for self-employment was 2.6 implying that respondents disagreed that self-employment, as a component of labour force status, contributes to private demand for postgraduate studies.

4.6.2 Regression Analysis for Effect of Labour Forces Status on Private Demand for Postgraduate Studies in Selected Universities in Kenya

Multivariate regression analysis was performed to show the amount of change in private demand for postgraduate studies that can be predicted from one unit change in labour force status. Labor force status was measured as a composite of the employed, the self- employed and the unemployed.

The Likert items used in measuring respondents' perceptions on labour force status were converted into continuous data. The scores were then regressed against the dependent variable (demand for postgraduate studies) that was determined based on postgraduate enrolment and the perceptions of the postgraduate students on private demand for postgraduate studies.

To establish the relative contribution of each of the components of labour force status and determine how much unique variance in the dependent variable each of the components explained, the following linear model was used:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

- Y= Private demand for postgraduate studies
- X_1= Employed
- X_2 = Unemployed
- X_3 = Self-employed

- β_0 = is constant (intercept) which is the value of the dependent valuable (private demand for postgraduate studies) when all the independent variables are 0.
- $\beta_1, \beta_2,$ and β_3 = regression constants or the regression coefficients or rate change induced by $X_1, X_2,$ and X_3 on Y.
- e = the error term.

The equation produced the coefficient of determination (R^2) that indicates the extent to which the independent variables used in the equation explain the variability in the outcome variable. The analysis resulted in a model summary table, which provides information on the amount of variability in the predicted variable that can be accounted for by the predictor variables.

Additionally, the analysis generated a coefficients table, which presents the magnitude and direction of the relationship between the predictor variables (employment, unemployment and self-employment) and the response variable (private demand for postgraduate studies). Table 4.17 displays the model summary, indicating the variability explained by the independent variable, while table 4.18 presents the coefficients, offering insights into the size and direction of the relationship between the predictor variables and the response variable.

Table 4.17

Model Summary for Labour Force Status and Private Demand for Postgraduate Studies

Model	*R*	*R* Square	Adjusted *R* Square	Std. Error of the Estimate
1	.722 [a]	.524	.452	.449

a. Predictors: (Constant), labour force status (unemployed, employed, self-employed)

According to Table 4.17, *r* (correlation coefficient) = .722 and R^2 (coefficient of determination) = .524. R^2 indicates the degree of variability of private demand for postgraduate studies that is explained by labour force status. The R^2 of .524 implies that

52.4% of the variation in private demand for postgraduate studies is explained by labour force status while the remaining 47.6% is explained by other factors that this objective did not address. This is a fairly large effect on a dependent variable by one predictor. Hence it implies that labour force status plays a major role in private demand for postgraduate studies.

The study then established the coefficients for effect of labour force status on private demand for postgraduate studies. Results are as presented in Table 4.18.

Table 4.18

Coefficients Table for Effect of Labour Force Status on Private Demand for Postgraduate Studies in Kenya

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	.862	.139		6.180	.000
	Employed	.015	.008	.124	1.967	.002
	Unemployed	.019	.007	.179	2.885	.004
	Self-employed	-.007	.006	-.064	-1.166	.244

a. Dependent Variable: private demand for postgraduate studies

According to Table 4.18, the "Constant", which indicates the predicted value of private demand for postgraduate studies when labour force status is zero, is .862. Also Table 4.18 shows a regression coefficient of .015, .019 and -.007 for those who are employed, unemployed and self-employed respectively. According to Hanneman et al. (2012), the slope or unstandardized regression coefficient represents the substantive effect of the independent variable on the dependent variable, and quantifies the amount of change that can be attributed to a one-unit change in the independent variable, without any standardization or adjustment. Hence the regression coefficients indicate that for each one unit increase in employment and unemployment, private demand for postgraduate studies

is predicted to increase by .015 and .019 units respectively. The regression models for employment and unemployment are therefore significant. Hence, employment and unemployment as components of labour force status, predict private demand for postgraduate studies.

However, the analysis shows that for each one unit increase in self-employment, private demand for postgraduate studies decreases by -.007 units. The regression model for self-employment and private demand for postgraduate studies is therefore non-significant and therefore, self-employment does not predict private demand for postgraduate studies.

Hanneman et al. (2012) assert that if $p < .05$, the value is statistically significant and if $p > .05$ the value is not statistically significant. As indicated in Table 4.18, $p = .002 < .05$ for employment. This shows that employment (at $p = .002$) significantly predicts private demand for postgraduate studies, at a significance level of $p < .05$. It is also shown that for unemployment, $p = .004 < .05$. This shows that unemployment (at $p = .004$) significantly predicts private demand for postgraduate studies, at a significance level of $p < .05$. However, for self-employment, Table 4.18 shows that $p = .244 > .05$. This shows that self-employment (at $p = .244$) is not a significant predictor of private demand for postgraduate studies, at a significance level of $p < .05$.

To explain more on the quantitative findings on the effect of labour force status on private demand for postgraduate studies, the study sought more information through qualitative data.

4.6.3 Effect of Labour Force Status on Private Demand for Postgraduate Studies in Selected Universities in Kenya-Qualitative Findings

Quantitative data provided information on respondent's perceptions of the effect of labour force status (employment, unemployment and self-employment) on private demand for

postgraduate studies. The findings had a significant effect on individuals who were employed (.015) and those who were unemployed (.019). However, the findings showed that a unit increase in self-employment decreases private demand for postgraduate studies by -.007. There was therefore need to explain these quantitative results with qualitative findings.

To generate additional information on effects of labour force status on private demand for postgraduate studies, twenty-eight (28) participants drawn from the quantitative sample of 345 postgraduate students were interviewed. Selection criteria was based on the employment status of the respondent where; 7 participants were in permanent employment, 7 were in contract based employment, 7 were in self-employment while another 7 were unemployed. Participants were asked to explain how their labour force status affected their individual demand for postgraduate studies.

4.6.3.1 Effect of Unemployment on Private Demand for Postgraduate Studies-Qualitative Findings

Results for effect of unemployment on private demand for postgraduate studies revealed that many of the unemployed postgraduate students perceived that pursuing postgraduate studies would improve their employability. Postgraduate student number 19 noted;

> *"I have observed that some people join postgraduate programmes after completing their undergraduate studies because there are no jobs. Others do it to be competitive and to avoid being unemployed." (PGS-19).*

Some of the postgraduate students also explained that many people prefer studying rather than staying unemployed, as expressed by postgraduate student number 21.

> *"If you can get money maybe from parents, one is advised to pursue postgraduate studies rather than stay looking for a job that you do not know when it will come. Take teachers for instance: these days it is very hard to be employed immediately after graduating. Thus, parents of students pursuing educational courses enrol them for Master's as they wait for employment by the government" (PGS-21).*

Most of the postgraduate students felt that postgraduate studies increased one's prospects for employment. Postgraduate student number 07, for instance, had this to say;

> *"Pursuing postgraduate studies increases one's chances for employment. Out there, there are many people who have undergraduate degrees only; thus if you have postgraduate qualification, you are more competitive than an undergraduate degree holder. I personally pursue this postgraduate degree knowing that it will increase my advantage in getting a better job or getting promoted to a higher rank at the place of work." (PGS-07).*

The discussion explains that unemployment, as a labour force status, contributes to private demand for postgraduate studies in universities in Kenya.

4.6.3.2 Effect of Employment on Private Demand for Postgraduate Studies-Qualitative Analysis

The discussion with employed graduates revealed that employment, as a labour force status, could prompt private demand for postgraduate studies. The themes generated from the interviews included requirement for promotion, career/professional development and gaining competitive advantage. During the discussion postgraduate student number 26 stated that;

> *"While employed, one needs to improve their qualification status by acquiring more papers and qualifications. In my place of work, I observed that with a Master's certificate, one would be promoted to a director's position and the salary too would improve."(PGS-26).*

The view by Postgraduate student number 26 was also held by postgraduate student number 10 who said that;

> *"I work in the finance sector (bank) and I have realized that lately people are enrolling for Master's and PhD programmes for career progression and professional development. Sometimes you find that you cannot be promoted because there is no clear policy concerning that, but attaining a Master's or a PhD degree can give you an added advantage when it comes to seeking a job elsewhere."(PGS-10).*

This explanation indicates that employment plays a role in the private demand for postgraduate studies as employees seek to enhance their promotion and career progress, as well as secure better employment.

It also emerged that the postgraduate students felt that by acquiring postgraduate degrees, they would render themselves employable by institutions that retire their employees at a more advanced age than the mandatory retirement age set by their current employers.

Postgraduate student number 5 for instance, had this to say concerning her reason to enrol for postgraduate studies;

> *"I enrolled for my Master's degree programme because I want to teach in the university after retirement or even before. When I retire, I do not see much that I would be doing so I want to have finished my Master's and PhD by then." (PGS-05).*

This view by postgraduate number 05 was also held by postgraduate number 02 who said;

> *"I am pursing my PhD. I have been doing it for 5 years now. When I started, I enrolled so that I could become a lecturer but then things got complicated in the 2nd semester when funds lacked and I stopped. I resumed after 1 year but was not able to secure part time engagement as a lecturer as I had anticipated while enrolling. Thus, my focus for pursing the PhD started changing and now I want to complete it and see what it will bring about." (PGS-02).*

The views of postgraduate student number 05 and number 02 were shared by majority of the respondents pursing PhD degrees in fields such as business courses, sciences and education. They expressed that their aim for pursing PhD was to attain employment in institutions of higher learning as they felt that going through postgraduate studies would expose them to better employment opportunities.

4.6.3.3 Effect of Self-Employment on Private Demand for Postgraduate Studies-Qualitative Findings

The study sought more answers on the effect of self-employment on private demand for postgraduate studies. The participants were asked to explain the effect of self-employment on their private demand for postgraduate studies. A majority of the postgraduate students explained that none of the postgraduate qualifications was required for operating self-employment ventures. Postgraduate number 24 had this to say:

> *"I do business as an extra source of income and to avoid being idle. My Master's degree will help me secure a job and when I do I will not close my business because it has sustained me since I finished my undergraduate studies and could not find a job."(PGS-24).*

Also, Postgraduate number 28 stated that;

> *"….If you look into the self-employment sector of our country, you will see that many of the self-employed people operate in informal markets such as Jua kali, sole proprietor businesses, hotel business and so forth…Most of these people do not have very high level education. Some are secondary school dropouts or form four leavers. This is so because self-employment highly relies on individuals' attitude, entrepreneurship skills and other things which are not education related. Thus, I strongly believe that pursing postgraduate studies does not make one good to venture into self-employment."(PGS-28).*

These statements imply that most of the self-employed graduates pursuing postgraduate studies were not doing it to enhance their self-employed status but rather to get employment. The results show that to operate self-employment ventures, one did not require postgraduate qualifications but rather the entrepreneurial skills on ability to take risks and market the businesses.

However, some postgraduate students shared a different opinion as explained by postgraduate number 14 who stated that;

> *"After being in the NGO for long, I will be retiring to start a business. I started my PhD last year so that I can now become a consultant. I know many NGO's that seek the services of consultants for short term technical jobs. One of the criterion for selection for consultants is being a specialist in a specific area achieved by attaining a PhD in the area. 4 years from now I see myself engaging in such consultancy". (PGS-14).*

This statement indicates that some areas of self-employment such as professional consultancy require postgraduate education qualifications, which could be a reason for private demand for postgraduate studies.

4.7 Shifting Workforce Demographics as a determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The study, through the fourth objective, aimed to determine how shifting workforce demographics, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies in the universities that were selected for the study.

The research question addressed by the study in this objective was: "How does shifting workforce demographics affect private demand for postgraduate studies?"

During the initial quantitative phase of the study, this objective was addressed through two main approaches. Firstly, descriptive statistics were employed to assess the effect of shifting workforce demographics on private demand for postgraduate studies. Secondly, regression analysis, utilizing the coefficient of determination (R^2), was utilized to draw conclusions and make inferences regarding the effect of shifting workforce demographics on private demand for postgraduate studies.

In the subsequent qualitative phase, content and thematic analysis were employed to provide further explanations and insights into the quantitative results.

4.7.1 Effect of Shifting Workforce Demographics on Private Demand for Postgraduate Studies in Universities in Kenya-Quantitative Findings

This section presents quantitative results for the effect of shifting workforce demographics on private demand for postgraduate studies. The data have been summarized into frequency counts, percentages, means and standard deviation. The section also presents a regression analysis that indicates the extent to which shifting workforce demographics predicts demand for postgraduate studies. Results were presented using tables.

4.7.1.1 Perceptions of the Effect of Shifting Workforce Demographics on Private Demand for Postgraduate Studies in Universities in Kenya.

The participants were requested to express their opinions regarding the degree of agreement or disagreement on the effect of shifting workforce demographics on private demand for postgraduate studies. Their viewpoints were collected using a Likert scale consisting of five points that ranged from 1 = Strongly Disagree to 5 = Strongly Agree.

To interpret the scores on the Likert scale, the mean scale ranges recommended by Sözen and Güven (2019) were utilized, as presented in Table 4.6. These ranges provided guidance on understanding the level of agreement or disagreement based on the mean values.

The collected data were then summarized and presented in Table 4.19, which provides an overview of the responses obtained from the participants regarding the effect of shifting workforce demographics on private demand for postgraduate studies.

Table 4.19

Postgraduate students' Perceptions on Effect of Shifting Workforce Demographics on Private Demand for Postgraduate Studies (n=345)

Statements for Shifting Workforce demographics	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**		***MN***	***SD***
	n	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**		
- Trends like aging in the labour market motivate many individuals to pursue postgraduate studies	4	1.2	7	2.0	38	11.0	194	56.2	102	29.6	4.1	0.76
- Diminishing male dominance in the labour market is increasing private demand for postgraduate studies	25	7.2	49	14.3	86	24.9	115	33.3	70	20.3	3.5	1.17
- Lower birthrate among women has increased women's demand for postgraduate studies	7	2.0	12	3.5	53	15.4	206	59.7	67	19.4	3.9	0.82
- Change in social attitude towards gender roles affects demand for postgraduate studies	9	2.6	30	8.7	104	30.1	102	29.6	100	29.0	3.7	1.05
- The demand for female labour in various fields is increasing demand for postgraduate studies	11	3.2	32	9.3	52	15.1	148	42.8	102	29.6	3.9	1.04
Grand mean											**3.8**	

According to Table 4.19, postgraduate students agreed on the following areas regarding the effect of shifting workforce demographics on private demand for postgraduate studies: trends like aging in the labour market motivate many individuals to pursue postgraduate studies (85.8% with mn = 4.1 and SD = 0.76), lower birthrate among women has increased women's demand for postgraduate studies (mn = 3.9 and SD = 0.82), the demand for female labour in various fields is increasing demand for postgraduate studies (79.1% with mn = 3.9 and SD = 1.04), change in social attitude towards gender roles affects demand for

postgraduate studies (58.6% with mn = 3.7 and SD = 1.05) and that diminishing male dominance in the labour market is increasing private demand for postgraduate studies (53.6% with mn = 3.5 and SD = 1.17).

The overall rating of shifting workforce demographics on private demand for postgraduate studies was 3.8, implying that the postgraduate students were in agreement that shifting workforce demographics affects private demand for postgraduate studies.

4.7.2 Regression Analysis for the Effect of Shifting Workforce Demographics on Private Demand for Postgraduate Studies in Selected Universities in Kenya

Bivariate regression analysis was performed to show the amount of change in private demand for postgraduate studies in universities in Kenya that can be predicted from one unit change in shifting workforce demographics.

The five (5) Likert items used in measuring respondents' perceptions on shifting workforce demographics were converted into continuous data. The scores were then regressed against the dependent variable (demand for postgraduate studies) that was determined by the number of postgraduate students enrolled and the postgraduate student's perceptions on private demand for postgraduate studies.

The linear regression formula, $Y = \beta_0 + \beta_1 X_1 + e$, was used where;

- Y = a predicted value of Y (the dependent variable- private demand for postgraduate studies).
- X = the independent variable (shifting workforce demographics-the variable expected to be influencing Y).
- β_o = the intercept (the predicted value of Y when the X is 0).
- β_1 = the regression coefficient- the change in Y associated with one-unit increment change in X.

- e = the error of the estimate (how much variation there is in the researcher's estimate of the regression coefficient).

This produced the coefficient of determination (R^2) that measures the proportion of the variability in the predicted variable that can be explained by the predictor variable in the equation. The analysis yielded a model summary table that reported how much variability in private demand for postgraduate studies is explained by shifting workforce demographics.

The analysis also yielded a coefficients table that described the size and direction of the association between the predictor variable (shifting workforce demographics) and the response variable (private demand for postgraduate studies).

The results obtained from the analysis are presented in Tables 4.20 and 4.21, which provide information on the strength, direction, and significance of the association between shifting workforce demographics and private demand for postgraduate studies.

Table 4.20

Model Summary for Shifting Workforce Demographics and Private Demand for Postgraduate Studies

Model	*R*	*R* Square	Adjusted *R*-Square	Std. Error of the Estimate
1	.364[a]	.132	.13	.355

a. Predictors: (Constant), shifting work demographics

According to Table 4.20, r (correlation coefficient) = .364 and R^2 (coefficient of determination) = .132. R^2 indicates the degree of variability of private demand for postgraduate studies that is explained by shifting workforce demographics. The *R*-square of .132 implies that only 13.2% of the variation in private demand for postgraduate studies in the universities that were selected for the study is explained by shifting workforce demographics, and the rest (86.8%) is explained by other factors that this objective did not

address. Hence, it implies that shifting workforce demographics has a small effect on postgraduate studies.

The study then determined the coefficients for effect of shifting workforce demographics on private demand for postgraduate studies. The findings are presented in Table 4.21 which displays the numerical values representing the size and direction of the relationship between shifting workforce demographics and private demand for postgraduate studies.

Table 4.21

Coefficients Table for Effect of Shifting Workforce Demographics on Private Demand for Postgraduate Studies

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.024	.106		9.621	.020
	Shifting Workforce Demographics	.034	.029	.064	1.184	.237

a. Dependent Variable: private demand for postgraduate studies

As Table 4.21 indicates, the "Constant", which indicates the predicted value of private demand for postgraduate studies when shifting workforce demographics is zero is 1.024. The analysis in Table 4.21 also shows a regression coefficient of .034. According to Hanneman et al. (2012), the slope or unstandardized regression coefficient represents the substantive effect of the independent variable on the dependent variable, and quantifies the amount of change that can be attributed to a one-unit change in the independent variable, without any standardization or adjustment. Hence the regression coefficient of .034 indicates that for each one unit increase in shifting workforce demographics, private demand for postgraduate studies is predicted to increase by .034 units. The regression

model for shifting workforce demographics and private demand for postgraduate studies is therefore significant.

As indicated in Table 4.19, $p = .237 > .05$. Hanneman et al. (2012) assert that if $p < .05$, the value is statistically significant and if $p > .05$ the value is not statistically significant. This shows that shifting workforce demographics (at $p = .237$) is a non- significant predictor variable of private demand for postgraduate studies, at a significance level of $p < .05$.

The study sought for more information through qualitative data.

4.7.3 Effect of Shifting Labour Force Demographics on Private Demand for Postgraduate Studies- Qualitative Findings

To further understand shifting workforce demographics effect on private demand for postgraduate studies, the study conducted interviewees among 28 purposively selected participants drawn from the original sample of 345 respondents. The selection criteria for the interview was based on gender, age and those who scored very low and very high on respondents' perception on shifting workforce demographics Likert scale. The selected participants comprised of 14 males and 14 females aged as follows: 7 aged between 25 and 30 years, 6 aged between 31 and 35 years, 6 aged between 36 and 40 years, 3 aged between 41 and 50 years, 3 aged between 51 and 60 years and 3 aged above 60 years.

In-depth interviews were carried out among the selected 28 participants to explain more on the quantitative findings on the effect of shifting workforce demographics on private demand for postgraduate studies. Qualitative data on demographic aspects such as aging, decreasing male dominance, demand for female workers and low birth rate among women

on private demand for postgraduate studies was sought. The discussions revealed that the workforce demographics within the labour market were volatile with shifts occasioned by age, gender policies, and decreasing employment opportunities. In the discussions many participants pointed out the increase of women in the labour market as a workforce demographic shift that has increased competitiveness, leading to more people pursing postgraduate studies to remain at the top academically. Postgraduate student number 22 explained this by saying;

> *"Labour market demographic shift is a reality these days. With most employers pursuing compliance to the two third gender policy, many women have entered labour market space, thus increasing competitiveness. To keep ahead with the competition, many people and men especially, are enrolling for postgraduate studies." (PGS-22).*

In addition, majority of the postgraduate students felt that the pursuit of postgraduate studies delayed child bearing among women, as explained by postgraduate student number 25;

> *"My observation is that many women pursing postgraduate studies have between 1-2 children. This is caused by economic commitments and the need for career stability which can be achieved through higher academic qualifications. Therefore, attaining the highest level of education possible has become more important than child bearing responsibility." (PGS-25).*

The interviews also revealed that young people's skills in technology were an important demographic shift in the labour market. Postgraduate student number 27 had the following to say;

> *"Technological advancement has brought in demographic change in the workforce. Right now most companies require people who are computer proficient. This has propelled people to pursue training in computer related courses along other professional qualifications. This favours the young people who are more enthusiastic and who easily learn the various technologies faster than older people."(PGS-27).*

Age also emerged as an important factor for pursuit of graduate studies. Postgraduate student number 10 noted the following;

> *"As one ages, he/she also acquires some certain level of independence and social status. So you will find people advancing to postgraduate studies by the age of 35 so that as they approach their 40s they will acquire new educational qualifications and titles that will see them working for some industries even beyond the mandatory retirement age set by most employers." (PGS-10).*

This statement implies that older people are going back to pursue postgraduate studies so that they can acquire more academic qualifications and titles to enhance their employment opportunities. It also implies that older people pursue postgraduate studies to secure employment even when they surpass the retirement age set by most employers.

4.8 Discussion

This section discusses the study's findings. It starts by discussing the demographics of the study's population. The subsequent sections present an interpretation of the integrated results of the quantitative and qualitative findings of each of the study's objectives.

4.8.1 Demographic Characteristics of Postgraduate Students

4.8.1.1 Postgraduate Students' Gender, Age, Type of the University, Discipline Enrolled in and Postgraduate Degree Being Pursued

In terms of gender representation results showed that there were more male postgraduate students in both Master's (56.5%) and PhD (62.7%) degree levels as compared to female postgraduate students. The study also found that of the total postgraduate students, majority (57.4%) of the respondents were male while 42.6% were female. This shows that the male postgraduate students were more as compared to female postgraduate students. These results agree with findings by Muoghalu and Eboiyehi (2018) who noted that at Obafemi Awolowo University in Nigeria, 62.2% of the postgraduate students enrolled for postgraduate studies were male while 37.8% were female. The results also agree with an

observation by CUE (2018) where it was reported that male postgraduate students constituted 57.7% while female postgraduate students had a representation of 42.3%. This was still the case in 2019 where CUE reported that male and female postgraduate student representation stood at 58.7% and 41.7% respectively (CUE, 2019). The results of this study however indicate a relatively balanced representation of male and female postgraduate students in the selected universities, with a minimal difference in their percentages. This representation exceeds the 30% constitutional threshold of representation of either gender (The Constitution of Kenya, 2010). As noted by CUE (2018), this serves as an indication that the country is moving towards achieving Sustainable Development Goals by 2030, of ensuring that men and women have equal access to affordable quality, technical, vocational and tertiary education, including University (United Nations, 2015).

The results regarding age distribution reveal that the largest proportion of respondents (45.5%) fell within the age range of 31 to 40 years, followed by 31.9% who were between the ages of 41 and 50 years. Very few (5.5%) were between the ages of 51 and 60 while 2.9% were aged above 60 years. Given that the sampling procedures employed was probabilistic methods giving equal opportunity for participation to all postgraduate students in the selected universities in Kenya, it can be inferred that the dominant age for students pursuing postgraduate studies in Kenya is between 31 and 50 years.

Under the age-postgraduate degree disaggregation, the results indicate that the majority of the respondents (48.9%) in the age range of 31 to 40 years were pursuing Master's degrees, and a majority (54.9%) aged between 41 and 50 were pursuing Doctoral degrees. It can therefore be construed that the dominant age for students pursuing Master's degree in

universities in Kenya is between 31 and 40 years while that of Doctoral students is dominant between 41 and 50 years.

Results for the type of the university show that majority (87.8%) of the postgraduate students pursued their degrees from public universities while 12.2% were in private universities. This was the case for both Master's and PhD degree types where 88.8% of all Master's students pursued their studies at public universities and 82.4% of all PhD students pursued their studies at public universities. This shows that majority of the postgraduate students in Kenya are enrolled in public universities.

On discipline being enrolled in, results showed that majority (34.2%) of the respondents were pursuing Arts and Humanities related disciplines while (13.9%) were pursuing Science related disciplines. The category for discipline pursued show a relatively more postgraduate enrolment in Art/Humanities, Education and Business related disciplines as compared to Science related disciplines.

The results for type of discipline pursued show minimal variance on the various disciplines. Arts and Humanities were represented by 34.2%. Education was represented by 31.6% while Business and Sciences were represented by 20.3% and 13.9% respectively. These results imply that Arts and Humanities, Education and Business related disciplines were common disciplines for pursuit among PhD and Master's students. The Science related disciplines had the least enrolment. Similarly, the Commission for University Education reported that Business, Arts and Humanities and Education courses were leading in enrolment at the postgraduate level in the academic years 2016-2017 and 2017-2018 (CUE, 2017; 2018). The findings also agree with those of Barasa and Omulando (2018) that

showed that science-oriented courses attracted low enrolment for postgraduate studies as compared to Humanities and Education.

In spite of the government's recognition, through Kenya Vision 2030, of the importance of Science, Technology, Engineering, and Mathematics (STEM) programs to accomplish the country's development objectives (Republic of Kenya, 2013), the results of this study indicate that postgraduate student enrolment by course of study is highly biased towards Business, Arts and Humanities as opposed to STEM. There is therefore need for the government to increase its efforts in improving the relevance of the courses on offer in universities in Kenya.

Overall, there were more (85.2 %) Master's students compared to (14.8%) PhD students. This gives a ratio of 1:6 indicating a low transition rate from Master's level to Doctorate level. These results compare with (CUE, 2019) report which showed that Master's enrolment stood at 83.3% while PhD enrolment stood at 16.7%. The results also agree with previous research conducted by Mukhwana et al. (2016), who observed that PhD holders in all the universities in Kenya had a minor representation of 1.3% of the total student population in the universities.

The low transition ratio of Master's students to PhD is of great concern. The government estimated that in order to meet the targeted increase of 10% Gross Enrolment Rate, universities in Kenya required an average yearly output of 2,400 PhDs (Government of Kenya, 2012). Also, a prior report by UNESCO (2010) highlighted that among other challenges that faced the university sector in Kenya was the inadequate number of lecturers to meet the demands of a considerable student population. Therefore, as PhD holders roles in administrative, research and innovation in both academia and industry are critical in

meeting the country's present and future requirements (Mukhwana et al., 2016; CUE, 2018), the low numbers of PhD enrolments is a threat to the realization of Kenya Vision 2030.

4.8.1.2 Funding of Postgraduate Studies

The study revealed that majority (60%) of the postgraduate students financed their studies on their own. A few (21%) had the cost of their studies being met by their families and only 19% had their studies being financed through scholarship. These results show self-funding as the common source of financing postgraduate studies. These findings agree with results from a study by Itegi and Michubu (2020) that highlighted lack of funds as an impediment for completion and demand for postgraduate studies in universities in Kenya. Considering that some findings from other countries, such as China, where Loyalka et al. (2013) found that financial aid increased enrolment for postgraduate studies by 8 percentage points, this finding could explain the low enrolment for postgraduate studies in Kenya and especially at the PhD level.

4.8.1.3 Reasons for Enrolling for Postgraduate Studies

On the reasons that made the postgraduate students enrol for postgraduate studies, the study found that there are three main reasons as to why postgraduate students enrol for postgraduate studies, which include expectation of more earnings, job promotion and gaining of relevant skills. The least mentioned reasons for enrolling for postgraduate studies are loss of job and inability to secure employment. Aspiration to join other fields, acquiring self-satisfaction, gaining social status and complying with policy requirement at the place of work were given as other reasons for enrolling for postgraduate studies.

This implies that financial, professional and personal motives are key in private demand for postgraduate studies in universities in Kenya. This is in line with Khalifa et al. (2018)

who found that self, professional, social and academic motives were reasons for enrolling for postgraduate studies in Syria. Also, Smyth and Banks (2012) and Aslan (2014) show that economic, rational, socio-cultural and professional factors motivated students to enrol for postgraduate studies.

4.8.1.4 Previous and Current Employment Status of Postgraduate Students

Information on employment status of the respondents before and after enrolment for postgraduate studies revealed that there was a slight increase in postgraduate students in temporary employment and self-employment while there was a reduction in unemployment after the students enrolled for postgraduate studies. Results reflect that at 90%, the majority of postgraduate students in universities in Kenya are employed. These findings agree with the research conducted by Bekova and Dzhafarova (2019) who found that 90% of postgraduates in Russia combine study with work. However, these outcomes contradict findings by Diem and Ha (2013) that established that most postgraduate students in Vietnam were unemployed.

Given that earlier findings in this study reveal that 60% of the postgraduate students financed their studies on their own, it can be deduced that lack of financial aid to postgraduate students prompts them to seek out employment while pursuing their postgraduate studies. However, the upward trend in the employment platform for postgraduate students after enrolment imply that employment opportunities increase as students get exposed to postgraduate studies.

4.8.2 Postgraduate Students' Scoring of the Level of Private Demand for Postgraduate Studies

The overall scoring for private demand for postgraduate studies by the postgraduate students was 2.5, signifying that the private demand for postgraduate studies in Kenya is

low. These results agree with data from CUE that shows that although enrolment at the Master's level went up during the 2015/16 and 2016/17 academic years (CUE, 2016, 2018) enrolment at this level went down by 11.5 % and 0.3 % in the 2017/2018 and 2018/2019 academic years respectively (CUE, 2018, 2020). Similarly, CUE records reveal that though there was an increase in PhD enrolment from 2015 to 2018 (CUE, 2016, 2017, 2018, 2019), enrolment at this level went down with 29.7% during the 2018/2019 academic year (CUE, 2020). Additionally the total drop in postgraduate enrolment in the 2018/2019 academic year was 6.8% (CUE, 2020). This shows a fluctuating trend in private demand for postgraduate studies.

4.8.3 Integration of Qualitative and Quantitative Findings on Perceived Returns as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

Quantitative results showed that majority (67%) of the respondents indicated that perceived returns had a great effect on private demand for postgraduate studies. Only 10% indicated that perceived returns affected private demand for postgraduate studies to a small extent. These results show that perceived returns propel the majority of postgraduate students to enrol for postgraduate studies. A study by Jensen (2010) found that perceived returns for education among secondary school students was low. This was explained by lack of information about prospective opportunities in the labour market for secondary education qualification. This study's finding could mean that students pursuing postgraduate studies have more information about the labour market than secondary school students, which could influence their perception on perceived returns from postgraduate studies pursuit. Some studies have argued that postgraduate students earn better wages than those with undergraduate education and below (Lindley and Machin, 2016; Boneva et al., 2019).

On perceived return factors affecting private demand for postgraduate studies, results indicate that increased employment opportunities, salary increment and job promotion were the major perceived returns factors that affect private demand for postgraduate studies. Further, the study found that economic factors dominated the perceived returns from postgraduate studies. These results show that perceived economic returns were the main factors affecting private demand for postgraduate studies in universities in Kenya. This finding agrees with Nikolov et al. (2020) who found that additional schooling increased earnings to 18-20% in South Africa. Similarly, Netcoh (2016) postulated that education and training translate to such economic returns like higher wages and increased domestic product. This argument is upheld by British Council (2014) that urges countries to improve their GDP through increased number of highly trained manpower in postgraduate studies. Also, a study by Boneva et al. (2019) established that employees with postgraduate qualification in the UK and US earn more than those with lower educational qualifications. This, according to the study, had increased demand for postgraduate studies as many employees believe they will increase their earning by attaining postgraduate qualification. Findings by Gunderson and Oreopolous (2020) too show that average annual returns to education in developing countries range from 5-15% with considerable variations based on gender, level of education and type of course.

Job security and improving social status were shown not to be popular perceived returns for pursing postgraduate studies. According to Schendel and Oketch (2014), these are non-economic gains that may also include longevity and job satisfaction.

Other perceived returns factors included non-economic returns, global competitiveness, meeting demands of the labour market, qualification requirements by employer, enhanced

qualifications to help one migrate to other countries and increased knowledge and skills in the field of study.

On levels of agreement, Likert scale results showed that the postgraduate students agreed that attaining postgraduate education enables individuals to earn more than undergraduate education holders (78% with mn = 4.0 and SD = .86), students enrol for postgraduate studies to increase their future earnings (64.9% with mn = 3.9 and SD = 1.10) and that there are a lot of monetary returns accrued after attaining postgraduate education (63.8% with mn = 3.7 and SD = 1.1). These results agree with those of Lindley and Machin (2016) and Boneva et al. (2019) who found that as of 2018, close to 15% and 14% of employees had postgraduate qualifications in the US and UK respectively, and their earnings were considerably high above those of employees who only had a first degree.

However, with mean = 2.4 and SD = 1.16, results show that postgraduate students disagreed that individuals with high financial ability are more likely to enrol for postgraduate studies.

The overall mean for the respondents' perception of the effect of perceived returns on private demand for postgraduate studies was 3.5, implying that respondents agreed that perceived returns affected private demand for postgraduate studies.

Bivariate regression analysis for perceived returns and private demand for postgraduate studies gave an R^2 (coefficient of determination) of .57, showing that perceived returns explains 57% of the variation in private demand for postgraduate studies. The analysis also gave a regression coefficient (B) = .57, showing that the regression model for perceived returns and private demand for postgraduate studies is significant. The p-value for

perceived returns was found to be .004, indicating that at a significance level of $p < .05$, perceived returns significantly predicts private demand for postgraduate studies.

Qualitative study was conducted to explain more on these qualitative results. The study found that middle aged people had higher perceived returns levels from postgraduate studies than the young people. Further findings showed that minimum qualification for labour market entry differed and depended on the type of course required for the specific career. This is likely to affect private demand for postgraduate studies.

Qualitative data also showed mixed reactions on the participant's perceptions on the effect of perceived returns on private demand for postgraduate studies. Discussions with those participants who felt that perceived returns increased demand for postgraduate studies generated themes such as perceived social, economic and non-economic returns. Participants expressed that they expected increased salaries, promotion in the workplace, moving to better jobs, gaining global competitiveness and access to other work opportunities which include part-time job opportunities.

Those participants who had low ratings for perceived returns on private demand for postgraduate studies explained that people pursued postgraduate studies as a requirement at the work place. Further qualitative results showed that there is high unpredictability of employment as it is not guaranteed that someone with a postgraduate degree will get a job or better salary. From these sentiments it can be construed that these participants' pursuit of postgraduate studies is propelled by personal reasons of achieving their life goals more than by economic gains. These statements also bring out non-economic reasons as perceived gains for pursing postgraduate studies.

Generally, this study alludes that perceived returns whether immediate or later-life gains has a considerable effect on people's pursuit of postgraduate studies in universities in Kenya. This is in line with results by Boneva et al. (2019) who found that immediate and later life benefits affected demand for postgraduate studies.

In establishing the effect of perceived returns on private demand for postgraduate studies, the study concludes that the qualitative data gathered during the follow-up qualitative phase offer a deeper comprehension of the research findings compared to solely relying on the quantitative results.

4.8.4 Integration of Quantitative and Qualitative Findings on Skills requirements for a Knowledge Economy as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

Quantitative results on the effect of skills requirements for a knowledge economy showed that majority (43%) of the respondents indicated that perceived returns had a great effect on private demand for postgraduate studies. This indicates that skills requirements for a knowledge economy had a moderate effect on private demand for postgraduate studies. The study also found that enhancing employability (71%) and maintaining global competitiveness (70%) were the two major skills requirement factors that affected private demand for postgraduate studies.

On levels of agreement, Likert scale results show that the overall mean for the respondents' perception of the effect of skills requirements for a knowledge economy on private demand for postgraduate studies was 3.6, implying that respondents agreed that skills requirements for a knowledge economy affected private demand for postgraduate studies. The quantitative findings also show that many postgraduate students did not believe that pursuing postgraduate studies enabled skills acquisition.

Bivariate regression analysis for skills requirements for a knowledge economy and private demand for postgraduate studies gave an R^2 (coefficient of determination) of .475, showing skills requirements for a knowledge economy explains 47.5% of the variation in private demand for postgraduate studies. The analysis also gave a regression coefficient (*B)* of =.447, showing that the regression model for skills requirements for a knowledge economy and private demand for postgraduate studies is significant. The *p*-value for skills requirements for a knowledge economy was found to be .099, indicating that at a significance level of $p < .05$, skills requirements for a knowledge economy is not a significant predictor of private demand for postgraduate studies.

This could imply that postgraduate studies are perceived to have a low impact on generation of skills required for a knowledge economy.

These findings support the argument by Mason et al. (2014) who noted that the knowledge economy required technologies that can be acquired through vocational skills and training other than university education. Similarly, Damoah et al. (2021) reveal that whereas the employers perceive graduate students to be equipped with various critical skills which correspond to industry demands, the graduate students are lacking in these critical skills. The same argument is advanced by Gube and Lajoie (2020) who argue that universities are just imparting a body of passive knowledge instead of approaching teaching and learning with emphasis on flexible, adaptive skills and attitudes that support creativity and innovation.

While it has been asserted that as well as helping in producing advanced skills and generating new knowledge and innovation, higher education can also play a crucial role in up-skilling and re-skilling people to enhance employability (OECD, 2012), this study

found that skills requirements and sharpening innovation, as skills requirements aspects, only affected private demand for postgraduate studies moderately. However, enhancement of employability and maintaining global competitiveness emerged as the main skills factors affecting private demand for postgraduate studies. None the less, skills requirements for a knowledge economy was found to be important in the labour market.

The qualitative findings, as well as elaborating on the skills that postgraduate studies equipped students with, helped to explain the unexpected results. The qualitative data revealed that pursuit of postgraduate studies equipped graduates with management and leadership skills. Other skills required for a knowledge economy such as use of technology, communication and innovativeness were found not to be gained through postgraduate studies pursuit.

The findings also reveal that while pursuit of postgraduate studies increases individuals' competitive advantage and social status within an organization, postgraduate studies in themselves do not offer all the necessary skills required by the labour market. This corresponds with Suarta et al. (2017) findings who note that communication, team-work and problem-solving skills are often lacking in postgraduate studies. Thus, skills transferred through postgraduate training are yet to meet the present requirement for a knowledge economy.

This gap is also expressed by employers who have issued a public outcry on skills work mismatch among graduates. A report by Deloitte (2016) on Global Human Capital highlighted soft skills such as problem solving, communication, innovativeness and critical thinking as essential for their employees This, as noted by the report, was however lacking

among graduates' employees leading to on job training that was not only time consuming but also expensive for the company (Deloitte, 2016).

In line with this, UNESCO (2021) notes that Technical and Vocational Education and Training (TVET) is gaining prominence in tertiary education, as it addresses the growing need for graduates with technical and vocational skills in middle-income nations. Also, Rein and Majumdar (2018) report that in some countries like China and the UK, with the aim of establishing higher vocational colleges the governments are developing policies to transform existing traditional universities into vocational universities and re-integrating polytechnics into the university sector.

These results and discussions indicate that skills requirements for a knowledge economy is key in the labour market. However most skills are lacking in postgraduate training and hence the moderate effect of skills requirements for a knowledge economy on private demand for postgraduate studies. A clear implication of this finding is that there will be a decline in postgraduate enrolment as individuals opt for TVET (Technical and Vocational Education and Training) institutions to acquire the skills demanded by the labour market. Therefore, this study suggests that the insufficient availability of necessary skills in postgraduate training programs is among the factors that contribute to the declining pattern in postgraduate enrolment. It can therefore be construed that although skills requirements for a knowledge economy is a determinant for education and training pursuit, postgraduate studies are yet to offer the same. As had earlier been observed by Dickie and Jay (2010) that there was more emphasis of innovation in technical/vocational training than in postgraduate studies, this study calls for more integration of innovational studies in

postgraduate studies in universities in Kenya in order to meet the advanced skills needs of the country through expanding the scope of training institutions.

After examining the effect of skills requirements for a knowledge economy on private demand for postgraduate studies in the selected universities, this study concludes that the qualitative data obtained in the follow-up qualitative phase of the research offer a deeper comprehension of the study's findings compared to solely relying on the quantitative results.

4.8.5 Integration of Qualitative and Quantitative Findings on Labour Force Status as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

With 59% of the postgraduate students agreeing and 41% disagreeing that labour force status affected their private demand for postgraduate studies, quantitative data revealed that the postgraduate students largely agreed that labour force status affected private demand for postgraduate studies. Those who agreed that labour force status affected their private demand for postgraduate studies gave reasons such as the need for improved remuneration, labour market competitiveness, job insecurity and instability, and preference of postgraduate students by employers. This agrees with Shellhouse et al. (2020) who identified increased pay, personal career advancement and funding opportunities as factors for pursing postgraduate studies. The findings are also in agreement with those of Amani et al. (2022) who point out that employment prospects, better salary and career progress or change are some of the motives for pursuing postgraduate studies.

Multivariate regression analysis for labour force status and private demand for postgraduate studies gave an R^2 (coefficient of determination) of .524, showing that labour force status explains 52.4% of the variation in private demand for postgraduate studies.

On unemployment, quantitative results implied that increase in unemployment rates (mn = 4.0 and SD = 0.89), lack of awareness of existing job opportunities (mean = 3.7 and SD = 1.11) and problems related to job mobility (mean = 3.6 SD = 1.11) had an effect on private demand for postgraduate studies. With an overall mean of 3.7, results imply that the postgraduate students agreed that unemployment affected private demand for postgraduate studies. Multivariate regression analysis gave a regression coefficients (*B)* of =.019 for unemployment (as a component of labour force status) showing that the regression model for unemployment is significant. The obtained *p*-value for unemployment was found to be .004 indicating that at a significance level of $p < .05$, unemployment significantly predicts private demand for postgraduate studies.

These results agree with findings by Barakat et al. (2010) who noted that youth unemployment had raised demand for postgraduate studies in Europe. Similarly, Oni (2013) and Fumilayo (2014) shared similar findings in Nigeria. Findings by Khainga and Mbithi (2019) observed that in Kenya, the private sector employed Master's' graduates more than any other degree holders. Following the results, it could be deduced that individuals pursue postgraduate studies to increase their employability and competitiveness in the labour market.

Qualitative results for effect of unemployment on private demand for postgraduate studies revealed that many of the unemployed postgraduate students perceived that pursuing postgraduate studies would improve their employability. The participants also explained that many people preferred studying to staying unemployed.

From the discussion it is clear that unemployment, as a labour force status component, contributes to the private demand for postgraduate studies in universities in Kenya.

On employment, quantitative results show that postgraduate students agreed that postgraduate studies enable one to be competitive in the labour market (mn = 4.3 and SD = 1.110), employers' requirement for postgraduate studies qualifications increases private demand for postgraduate studies (mn = 4.0 and SD = 0.994), many employees enrol for postgraduate studies in fear of losing their jobs (mn = 3.9 and SD = 0.767) and that most employees enrol for postgraduate studies for promotion at the workplace (mn = 3.9 and SD = 0.736). Multivariate regression analysis gave a regression coefficients (*B)* of =.015 for employment (as a labour force component) showing that the regression model for employment is significant. The obtained *p*-value for employment was found to be .002 indicating that at a significance level of $p < .05$, employment significantly predicts private demand for postgraduate studies.

These results imply that rendering one competitive, employers' requirement for postgraduate studies qualifications and seeking promotion at the workplace were the main employment aspects that affected private demand for postgraduate studies. With an overall mean of 4.0, the study suggests that employment as a labour force status affects private demand for postgraduate studies.

Qualitative data were sought to explain more on the quantitative results. The discussion with employed graduates revealed that employment, as a labour force component, could prompt private demand for postgraduate studies. The themes generated from the interviews included requirement for promotion, career/ professional development and competitive advantage.

Discussions with the participants reveal that employment plays a role in the private demand for postgraduate studies as employees seek to enhance their promotion and career progress

as well as secure better employment. It can therefore be inferred that individuals pursue postgraduate studies to increase their employability and competitiveness in the labour market. This is in agreement with an observation by University of Otago (2017) that asserted that the employed, in order to remain relevant and gain promotion in their work places, are likely to seek postgraduate studies. Hence, this study finds that employment, as a labour force status component, contributes to private demand for postgraduate studies.

With a mean rating ranging between 2.6 and 2.4 for the three items measuring self-employment effect on private demand for postgraduate studies, quantitative results showed that students disagreed that self-employment increased private demand for postgraduate studies. The respondents generally disagreed that individuals who attain postgraduate education are better freelancers than those who do not (mn = 2.7 and SD = 1.15), that desire for self-employment increases private demand for postgraduate studies (mn = 2.4 and SD = 1.03) and that postgraduate studies enable better management of self-employment business (mn = 2.6 and SD = 1.11).

Multivariate regression analysis gave a regression coefficients (*B)* of = -007 for self-employment (as a component of labour force status) indicating that the regression model for self-employment is not statistically significant. The obtained p-value for self-employment was found to be .244, indicating that at a significance level of $p < .05$, self-employment is not a significant predictor for private demand for postgraduate studies.

This finding is a divergence from Ortlieb (2015) who argued that postgraduate studies lead to better success of self-employment businesses. The findings however agree with outcomes by Khainga and Mbithi (2019) who observed that self-employment was the least absorber of postgraduate students in the labour market.

The study noted that while quantitative data showed that there was a significant effect on individuals who were employed and those who were unemployed on private demand for postgraduate studies, the findings did not explain whether pursuing postgraduate studies increased one's opportunities for self-employment. The study hence sought more answers on effect of self-employment on private demand for postgraduate studies. Participants were asked to explain the effect of self-employment on their private demand for postgraduate studies. A majority of the participants explained that none of the postgraduate qualifications was required for operating self-employment ventures. They expressed that they were not pursuing postgraduate studies to enhance their self-employed status but rather to get salaried/waged employment. Qualitative results showed that to operate self-employment ventures, one did not require postgraduate qualifications but rather the entrepreneurial skills on ability to take risks and market the businesses.

Though findings by Sule and Ntawigaya (2021) argued that postgraduate studies did not equip trainees with skills for effective self-employment, qualitative data nevertheless helped to explain that some areas of self-employment, such as professional consultancy, require postgraduate education qualifications. This could be a reason for private demand for postgraduate studies.

From the above explanations it can be construed that, with respect to labour force status, private demand for postgraduate studies is mainly driven by unemployment and employment rather than self-employment**.** A study by Tamvada et al. (2022) found that university education decreases the likelihood of self-employment in India. Van Stel and Van DerZwan (2020) argued that impact of self-employment on demand for education was different in developed and developing countries. According to Van Stel and Van DerZwan

(2020), highly educated individuals in developed countries are more likely to be self-employed than those in developing countries due to social barriers and lack of entrepreneurial aggressiveness. These results show that self-employment has a low effect on private demand for postgraduate studies and as Khilji & Roberts (2021) note, this can explain the high concentration of postgraduate studies on professional skills other than entrepreneurial skills required for self-employment.

The findings also bring out the perception that self-employment is a venture for the non-educated members of the society. Conversely, unemployment as a labour force status was found to have a high effect on demand for postgraduate studies as it increases competitiveness and opportunities for employment among the unemployed.

The qualitative findings on the effect of labour force status on private demand for postgraduate studies agree with the quantitative findings. However, while the quantitative findings show that few self-employment ventures require postgraduate studies, the qualitative results reveal a new trend in self-employment, especially in the service and professional sectors in fields such as consultancy, which have been found to increase demand for postgraduate studies. Pursuit of postgraduate studies was found to be important not only for career progression and getting promoted in the workplace, but also as a place to be in in the absence of jobs.

After examining the effect of labour force status on private demand for postgraduate studies, the study comes to a conclusion that the qualitative data obtained in the follow-up qualitative phase of the research offer a deeper comprehension of the study's findings compared to relying on the quantitative results alone.

4.8.6 Integration of Qualitative and Quantitative Findings on Shifting Workforce Demographics as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

Quantitative results on postgraduate students' perception on shifting workforce demographics effect on private demand for postgraduate studies indicate that trends like aging in the labour market motivate many individuals to pursue postgraduate studies (mn = 4.1 and SD = 0.76). Lower birthrate among women (mn = 3.9 and SD = 0.82), increase in demand for female workers (mn = 3.9 and SD = 1.04) and change in social attitude (mn=3.7 and SD=1.05) were also shown to be high on private demand for postgraduate studies. This finding agrees with those by Chang (2018) who observed a reduced gap in postgraduate gender parity in Taiwan as more women were delaying marriage and childbearing to pursue higher education. Additional findings indicated that a majority of the participants (53.2%) held the belief that diminishing male dominance in the labour market is increasing private demand for postgraduate studies. An earlier study had observed that from January 1970 to January 2020, male labour force participation in the United States had fallen from 80 percent to 69 percent (Ullrich, 2021). On the other hand, Lietzmann and Frodermann (2021) asserted that in Germany, women's participation in the labour market was on the rise. This study's results show that female participation in the labour market as well as in postgraduate studies is increasing and hence the need for institutions offering postgraduate studies to align themselves with this demand by way of offering the skills that are being sought.

Bivariate regression analysis for shifting workforce demographics and private demand for postgraduate studies gave an R^2 (coefficient of determination) of .132, showing that shifting workforce demographics explains 13.2% of the variation in private demand for postgraduate studies. The analysis also gave a regression coefficient (*B)* of =.034, showing

that the regression model for shifting workforce demographics and private demand for postgraduate studies is significant. The *p*-value for perceived returns was found to be .237, indicating that at a significance level of $p < .05$, shifting workforce demographics is not a significant predictor of private demand for postgraduate studies.

The qualitative data revealed other shifting workforce demographics aspects such as the desire for young people in the workforce, preference for career progression over child bearing responsibilities and venturing into new career paths after retirement as factors that were increasing demand for postgraduate studies.

The increase of women in the labour market was for instance pointed out as a workforce demographic shift that has increased competitiveness; leading to more people pursing postgraduate studies to remain at the top academically. It also emerged that the pursuit of postgraduate studies delayed child bearing among women. These results agree with the findings of Molina-García et al. (2019) who suggest that among other factors, pursuing higher levels of education delays motherhood.

Another important demographic shift in the labour market that the interviews revealed was young people's skills in technology. It emerged that technological advancement has brought in demographic changes in the workforce as most organizations require workers who are computer proficient. The study revealed that this favours the young people who are more enthusiastic and who easily grasp the various technologies faster that the older people.

On age, qualitative results expounded that older people are going back to pursue postgraduate studies so as to acquire more academic qualifications and titles, enhance their employment opportunities and also to secure employment even when they surpass the

retirement age set by most employers. This agrees with Ball (2021) who argues that the going back to school for some seniors is a chance for them to engage in a second career in a completely new occupation and one which interests them. These results show that shifting workforce demographics contribute to private demand for postgraduate studies.

Hence, from the findings of the current study, it can be construed that though shifting workforce demographics is not a significant predictor of postgraduate studies, it contributes to private demand for postgraduate studies in the universities that were selected for the study.

In examining the effect of shifting workforce demographics on private demand for postgraduate studies, the study concludes that the qualitative data collected during the follow-up qualitative phase of the research offer a better understanding of the study's findings compared to relying only on the quantitative results.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The primary objective of the study was to establish how labour market determinants of private demand for postgraduate studies affect private demand for postgraduate studies in selected universities in Kenya. The labour market determinants of private demand for postgraduate studies that the study looked at are: perceived returns, skills requirements for a knowledge economy, labour force status and shifting workforce demographics.

In this chapter, the study's summary of findings as well as conclusions were presented. Also presented were the recommendations that the study suggested.

5.2 Summary

The study aimed to accomplish four primary objectives namely: to establish the extent to which perceived returns, skills requirements for a knowledge economy, labour force status and shifting workforce demographics, as determinants of private demand for postgraduate studies, affect private demand for postgraduate studies in selected universities in Kenya.

These objectives were measured using the follow-up model of the explanatory sequential mixed methods mixed approach. Descriptive, inferential and content analysis were done to generate the results. Data were collected from a sample of 345 postgraduate students from 4 public chartered universities and 3 private chartered universities within Kenya, during the initial (quantitative) phase of the study. The distribution of the respondents by type of degree was as follows: 294 (85.2%) were pursuing Master's degree while 51(14.8%) were pursuing PhD. In terms of gender, 198(57.4%) were male and 147(42.6%) were female postgraduate students

During the subsequent qualitative phase, information was gathered from 28 postgraduate students, who were a subset of the initial sample of 345 postgraduate students, in line with the explanatory sequential mixed methods design that the study employed.

The summary of the findings is presented in the subsequent section which is organized in terms of the respective objectives.

5.2.1. Perceived Returns as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The first objective sought to establish the extent to which perceived returns, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies. The study found that perceived returns had a large effect on private demand for postgraduate studies in the universities that were selected for the study. This was shown by a majority of the respondents who indicated that perceived returns had a great effect on private demand for postgraduate studies. In addition, a five Likert scale of 4 items measuring respondents' perception on the effect of perceived returns on private demand for postgraduate studies indicated an overall mean of 3.5. Economic gains emerged as the main perceived returns pushing for private demand for postgraduate studies

The regression model applied showed (*B)* = .57, indicating that the regression model for perceived returns and private demand for postgraduate studies is significant. Also with p = .004 <. 05, perceived returns was found to be a significant predictor of private demand for postgraduate studies. The study found that perceived returns explained 57.0% of the variation in private demand for postgraduate studies, revealing that perceived returns plays a major role in private demand for postgraduate studies.

Qualitative data revealed themes such as perceived social, economic and non-economic returns. Thus, the study found that perceived returns, mostly economic, have a considerable

effect on private demand for postgraduate studies. In addition, the study found that middle aged people had higher perceived returns levels from postgraduate studies than the young people. Further findings showed that minimum qualification for labour market entry differed and depended on the type of course offered.

5.2.2 Skills requirements for a Knowledge Economy as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The second objective sought to establish how skills requirements for a knowledge economy, as a determinant of private demand for postgraduate studies, affects private demand for postgraduate studies. The study found that skills requirements for a knowledge economy had a moderate effect on private demand for postgraduate studies in the universities that were selected for the study. This was deduced from the postgraduate students' perceptions of the extent to which skills requirements for a knowledge economy affected private demand for postgraduate studies. 43% said that skills requirements for a knowledge economy affected private demand for postgraduate studies to a great extent while an almost equal percentage (40%) indicated that the effect was to some extent. The study found that enhancing employability (71%) and maintaining global competitiveness (70%) were the two major skills requirement factors that affected private demand for postgraduate studies. Postgraduate students' perceptions on skills requirements for private demand for postgraduate studies were however mixed. Some aspects had a high mean (between 3.3 and 4.3), while others like postgraduate students' perception on the item stating that increased education makes the skills of a worker more valuable to production was low with a mean of 2.6. These results show a mismatch in postgraduate studies and labour market needs in terms of skills requirements for a knowledge economy.

The regression model applied showed (*B)* = .447, indicating that the regression model for skills requirements for a knowledge economy and private demand for postgraduate studies is significant. However, with $p = .099 > .05$, skills requirements for a knowledge economy was found not to be a significant predictor of private demand for postgraduate studies. This could imply that postgraduate studies are perceived to have a low impact on generation of skills required for a knowledge economy.

Qualitative discussion revealed that many of the students' demand for postgraduate studies was mainly driven by the need to secure an upper advantage in the employment platform more than the need to accumulate skills. Many of the postgraduate students argued that most employment skills were acquired mainly through on the job training and from TVET institutions rather than through university education. The study noted that while pursuit of postgraduate studies increases individuals' competitive advantage and social status within an organization, postgraduate studies in themselves do not provide a comprehensive range of skills demanded by the labour market. Findings revealed that although skills requirements for a knowledge economy was a determinant in the pursuit of education and training, postgraduate studies were yet to offer the same.

5.2.3 Labour Force Status as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The third objective addressed the effects of labour force status, as a determinant of private demand for postgraduate studies, on private demand for postgraduate studies in selected universities in Kenya.

The study revealed that a significant majority (76%) of the postgraduate students were salaried/wage employed, 14% were in self-employment while 7% were unemployed. Hence the study showed that majority (97%) of the postgraduate students in the selected

universities in Kenya were in the labour force of the country as they were either employed, unemployed (but actively seeking employment) or self-employed. Only 3% were outside the labour force.

Labour force status was rated highly on its effect on private demand for postgraduate studies, with 59% of the postgraduate students saying that labour force status affects private demand for postgraduate studies. Further findings revealed that unemployment had a great effect on demand for postgraduate studies with a mean range of 4.0-3.6. The study found that increase in unemployment rates affected private demand for postgraduate studies (78% with mn = 4.0 and SD = 0.89). With a mean of 4.0, employment as a labour force status was found to affect private demand for postgraduate studies. The study attributed this to the employers' requirement for postgraduate qualifications. It was also attributed to the employees' aspiration to gain a competitive edge in the labour market.

Self-employment was found to have small effect on private demand for postgraduate studies with a mean range of 2.7-2.4 and an overall mean of 2.6.

Regression analysis for labour force status and private demand for postgraduate studies gave an R^2 (coefficient of determination) of .524, showing that labour force status explains 52.4% of the variation in private demand for postgraduate studies. The regression models for employment and unemployment were found to be significant with regression coefficients (*B)* = .015 and .019 for employment and unemployment respectively. However, the regression model for self-employment, at (*B)* = -.007, was found to be non-significant.

Employment and unemployment were found to significantly predict private demand for postgraduate studies. With the *p*-values for employment and unemployment being .002 and .004 respectively.

However, self-employment had a *p*-value .244, indicating that self-employment is not a significant predictor of private demand for postgraduate studies.

Qualitative results revealed that increasing unemployment had made securing employment with undergraduate qualifications difficult. Thus, individuals enrolled immediately for their postgraduate studies after their undergraduate studies to increase their employability.

On employment, qualitative results generated themes such as requirement for promotion, career/ professional development and gaining competitive advantage in the labour market.

Self-employment was viewed as a non-factor for pursuing postgraduate studies. The argument put forth was that one did not require papers for the successful operation of self-employment ventures, but what was required were entrepreneurial skills which, unfortunately, were not being offered in postgraduate courses.

5.2.4 Summary of Findings: Shifting Work Demographics as a Determinant of Private Demand for Postgraduate Studies in Selected Universities in Kenya

The final objective of the study aimed to determine the effect of shifting work demographics on private demand for postgraduate studies. The study's findings revealed trends such as aging in the labour market motivate many individuals to pursue postgraduate studies (mean = 4.1 and SD = 0.76). Low birthrate among women (mean = 3.9), increase in demand for female workers (mean = 3.9) and change in social attitude (mean = 3.7) affected private demand for postgraduate studies.

The regression model applied showed (*B)* = .034, indicating that the regression model for shifting workforce demographics and private demand for postgraduate studies is significant. However, with $p = .237 > .05$, shifting workforce demographics, was found to be a non-significant predictor of private demand for postgraduate studies. The study found that shifting workforce demographics explained 13.2% of the variation in private demand for postgraduate studies, revealing that perceived returns does not play a major role in private demand for postgraduate studies.

Qualitative analysis revealed that aging and increasing women labour participation were factors that increased demand for postgraduate studies. The study found that influx of women in the labour market had increased employment competition. This was found to contribute to an increase of the men pursuing postgraduate studies in a bid to increase their competitiveness through acquiring higher qualifications.

5.3 Conclusions

Based on the results obtained from this study, it can be inferred that:

- Firstly, perceived returns, as a determinant of private demand for postgraduate studies, was found to play a major role on private demand for postgraduate studies as it was found to explain a high percentage of the variation in private demand for postgraduate studies. The regression model for perceived returns and private demand for postgraduate studies was also found to be statistically significant. In addition, perceived returns was found to be a significant predictor of private demand for postgraduate studies. It is therefore logical to conclude that perceived returns is a good predictor of private demand for postgraduate studies in universities in Kenya. Perceived returns covered social, economic and non-economic returns.

Economic returns emerged as the main perceived returns pushing for private demand for postgraduate studies.

- Secondly, skills requirements for a knowledge economy, as a determinant of private demand for postgraduate studies, was found to have a moderate effect on private demand for postgraduate studies. The regression model for skills requirements for a knowledge economy and private demand for postgraduate studies was also found to be statistically significant. However skills requirements for a knowledge economy was found to be a non-significant predictor of private demand for postgraduate studies.

  Enhancing employability and maintaining global competiveness through educational qualifications were found to be the main skills requirement factors that pulled people towards private demand for postgraduate studies in universities in Kenya. Qualitative discussion revealed that many of the students' demand for postgraduate studies was mainly driven by the need to secure an upper advantage in the employment platform more than the need to accumulate skills. It was also revealed that most employment skills were acquired mainly through on the job training and from TVET institutions rather than through university education. Hence, it can logically be concluded that though skills requirements for a knowledge economy is a determinant of private demand for postgraduate studies, postgraduate studies in Kenya are yet to offer the same.

- Thirdly, the study showed that majority of the postgraduate students in universities in Kenya were in the labour force of the country as they were either employed, unemployed (but actively seeking employment) or self-employed. Labour force

status, as a composite of the unemployed, the employed (waged/salaried) and the self-employed, was rated highly on its effect on private demand for postgraduate studies. Employment and unemployment as labour force components were found to have a great effect on demand for postgraduate studies while self-employment component was found to have low effect on private demand for postgraduate studies. This notwithstanding, labour force status was found to explain a big percentage of the variation in private demand for postgraduate studies. Thus it can be inferred that labour force status is a major predictor of private demand for postgraduate studies in universities in Kenya.

- Finally, shifting workforce demographics was found to have a small effect on private demand for postgraduate studies as it explained only a small percentage of the variation in private demand for postgraduate studies. Though the regression model for shifting workforce demographics and private demand for postgraduate studies was found to be statistically significant, the study infers that shifting workforce demographics is not a significant predictor of private demand for postgraduate studies in universities in Kenya.

In general, perceived returns and labour force status remain key determinants of private demand for postgraduate studies in Kenya. However, while pursuit of postgraduate studies increases individuals' competitive advantage and social status within an organization, postgraduate studies in themselves do not offer all the necessary skills required by the labour market. It is logical to conclude that this has considerably reduced private demand for postgraduate studies and explains why the demand for postgraduate studies is on a downward trend.

5.4 Recommendations of the Study

Based on the study's conclusions and findings, the following recommendations can be suggested.

5.4.1 Policy Recommendations

The study may be beneficial in justifying the implementation of policies aimed at increasing postgraduate studies participation rates through the following ways.

i) The study found that there was low perception among postgraduate students on the role of postgraduate studies in skills acquisition for the labour market and also for innovation. This is in contrast with the role of postgraduate studies as an avenue for knowledge creation and utilization as envisaged by CUE.

- *Recommendation*

There is need for emphasis and review of postgraduate programme implementation to ensure that students pursing these programmes are able to utilize innovations, technology and other resources to generate the relevant knowledge that can be utilized for national development.

ii) The findings of the study indicated that a significant number of the students, were driven by the need to secure employment rather than the need to gain skills. It also emerged that most employment skills were acquired mainly through on the job training and from other technical institutions like TVET institutions rather than through university education.

- *Recommendation*

The study recommends more emphasis on practical skill development within all postgraduate programmes as well as the implementation of mandatory internships,

industry placements, or collaborative projects with businesses for all postgraduate programmes so as to enhance real-world skill acquisition.

5.4.2 Recommendations Related to Practice

i) The study found that while pursuit of postgraduate studies increases individuals' competitive advantage and social status within an organization, postgraduate studies in themselves do not offer all the necessary skills required by the labour market. This could explain why the demand for postgraduate studies is on a downward trend.

- *Recommendation*

The study proposes that universities establish partnerships with employers in both the private and public sectors, as well as other relevant industries in the labour market, to enhance accurate information, training and employment opportunities for postgraduate students. This can also be done by setting up a career department at the postgraduate department in every university for the purposes of coordinating training and labour market programmes, and linking students to employers for field-based training and employment.

ii) The study found postgraduate students perception on the role of postgraduate studies in enabling self-employment to be low. This is in contrast with the reviewed literature in this study which reveals that self-employment is critical in creating jobs, and that more years of education slightly raise the probability of being self-employed. Hence, improving access to university degrees and more so postgraduate degrees is likely to encourage self-employment and at the same time tackle unemployment.

- *Recommendation*

The government needs to improve access to postgraduate studies through making postgraduate programmes affordable and also through offering scholarships. This will increase postgraduate studies participation rates and with the relevant labour market information many people will engage in self-employment. This could help reduce unemployment rates in the country.

5.4.3 Recommendation for Further Studies

The study recommends that further studies be done on the following areas;

i) The study found that perceived returns are a determinant of private demand for postgraduate studies in universities in Kenya. There is need to assess how perceived returns from postgraduate studies have been achieved. This study therefore recommends that a tracer study be carried out to assess the extent to which perceived returns from postgraduate studies have been achieved.

ii) The study recommends that a comparative study be carried out to compare the expectations from postgraduate studies by the freshly enrolled.postgraduate students and those of the ongoing postgraduate students in universities in Kenya.

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APPENDICES

APPENDIX I: Google-Form: Labour Market Determinants Questionnaire for Postgraduate Students on Private Demand for Postgraduate Studies in Selected Universities in Kenya

My name is Anne Macharia. I am a postgraduate student from Kenyatta University pursuing a PhD degree. The objective of this questionnaire is to gather information on: *Labour Market Determinants of Private Demand for Postgraduate Studies in Selected Universities in Kenya***.** The survey is being done for my research proposal to be submitted for the award of the degree of doctor of philosophy of Kenyatta University. I hereby request you to respond to the questionnaire items as honestly as possible and to the best of your knowledge.

Please be assured that this information is sought for research purposes only and your responses will be strictly confidential. All information will be used for academic purposes only. Your participation is entirely voluntary and the questionnaire is completely anonymous.

You can reach me through the following contacts:

Macharia Anne W.
Kenyatta University
Department of Educational Management, Policy & Curriculum Studies
Email address: annemacharia06@gmail.com or anne.macharia@ymail.com
Telephone no. *0722 357 834*

Do you want to participate in this study?

No [ ]

Yes [ ]

If "no" please explain why

……
……
……

SECTION 1: BACKGROUND INFORMATION *(Please put an X in relevant box and / or fill in the spaces provided)*

1. Please indicate your gender?

   Male [ ]

   Female [ ]

2. What is your age bracket?

   20-25 years [ ]

   26-30 years [ ]

   31-35 years [ ]

   36-40 years [ ]

   41-45 years [ ]

   46-50 years [ ]

   51-60 years [ ]

   Over 60 years [ ]

3. What is the type of university you are enrolled in?

   Public Chartered [ ]

   Private Chartered [ ]

4. Select the university you are pursuing your degree from.

   University of Nairobi [ ]
   Kenyatta University [ ]
   Egerton University [ ]
   Jomo Kenyatta University of Science and Technology [ ]
   Mount Kenya University [ ]
   Daystar University [ ]
   United States International University [ ]

5. Please select the type of the degree you are pursuing.

   Master's [ ]

PhD [ ]

6. What type of course are you enrolled in?

   Education [ ]

   Business [ ]

   Science oriented [ ]

   Arts and Humanities oriented [ ]

7. Who meets the costs of your studies?

   Self-sponsored [ ]

   Parents/Guardians/Spouse [ ]

   Employer [ ]

   Sponsor (scholarship) [ ]

   Others [ ]

   If others, specify ……..

8. What made you enrol for a postgraduate degree?

   More earnings expectations [ ]

   Gaining of relevant skills [ ]

   Being laid off [ ]

   Inability to secure employment [ ]

   Joining another field [ ]

   Other [ ]

   If other specify……

9. What was your employment status before joining university to pursue your current degree programme?

   Permanent and pensionable [ ]

   Temporary (contract employment) [ ]

   Self-employed [ ]

Was unemployed [ ]

10. What is your current employment status?

    Permanent and pensionable [ ]
    Temporary (contract employment) [ ]
    Self-employed [ ]
    Unemployed [ ]

11. Are you aware of other alternative jobs in the labour market that require the skills you attained during your undergraduate studies?

    Yes [ ]

    No [ ]

12. If your answer is "Yes" in question "11" above, how did you learn about it? (Kindly tick all relevant alternatives)

    i. Through my parents
    ii. Through my friends
    iii. Through the employment industry
    iv. Others

    Specify……
    ……
    ……
    ……

SECTION 2: PERCEIVED RETURNS AND PRIVATE DEMAND FOR POSTGRADUATE STUDIES

This section seeks information on perceived returns and perceived returns and private demand for postgraduate studies.

13. To what extent does the consideration of the returns to be gained after postgraduate studies have an effect on your private demand for postgraduate studies?

    Great extent [ ]

    Small extent [ ]

Small extent [ ]

Not at all [ ]

14. Which the following factors have an effect on your private demand for postgraduate studies? (Tick all the relevant answers).

    Salary increment [ ]

    Job promotion [ ]

    Better job [ ]

    Job acquisition [ ]

    Job security [ ]

    Improving social status [ ]

    Any other (please specify)

……

……

……;……

……

15. To what level of agreement do you agree with the following statements on the effect of perceived returns on private demand for postgraduate studies in universities in Kenya? (Please put an X as appropriate)

Key:

1	**2**	**3**	**4**	**5**
Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**

Statements for Perceived Returns		**1**	**2**	**3**	**4**	**5**
I	Attaining postgraduate education enables individuals to earn more than undergraduate education holders					

II	There are a lot of monetary benefit accrued after attaining postgraduate education					
III	Students enrol for postgraduate studies to increase their future earnings					
IV	Individuals with higher financial ability are more likely to enrol for postgraduate studies					

SECTION 3: SKILLS REQUIREMENTS FOR A KNOWLEDGE ECONOMY AND PRIVATE DEMAND FOR POSTGRADUATE STUDIES

This section seeks information regarding skills requirements for a knowledge economy and private demand for postgraduate studies

16. To what extent does skills requirements for a knowledge economy have an effect on your private demand for postgraduate studies?

    Great extent [ ]

    Small extent [ ]

    Small extent [ ]

    Not at all [ ]

17. Please rate the effect of the following aspects of skills requirements for a knowledge economy on your private demand for postgraduate studies.

Factor		**Rating**
I	Current job skill requirements	
II	Future job skill requirements	
III	Maintaining global competitiveness	
IV	Enhancing employability	
V	Sharpening innovation	
VI	Others	

Any other (Please specify)

……

……

……

……

……

……

18. What is your level of agreement with the following statements on the effect of skills requirements for a knowledge economy on private demand for postgraduate studies in universities in Kenya?

    (Please put an X as appropriate)

    Key:

1	**2**	**3**	**4**	**5**
Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**

Statement for Skills requirements for a Knowledge Economy		**1**	**2**	**3**	**4**	**5**
I	The demand for highly skilled workers increases demand for postgraduate degree holders					
II	Many working students aim at improving their skills					
III	Students are acquiring human skills as a form of investment					
IV	Increased education is likely to make the skills of a worker more valuable to production					
V	Individuals pursue postgraduate degrees to remain competitive in the labour market.					

VI	Employers requirement for enhanced skills to operate new technology increases demand for postgraduate studies					
VII	Employers mainly prefer more skilled workers to less skilled ones					

SECTION 4: LABOUR FORCE STATUS AND PRIVATE DEMAND FOR POSTGRADUATE STUDIES

This section seeks information on labour force status and private demand for postgraduate studies

19. Please indicate your labour force status

    Salaried/wage employment [ ]

    Self-employed [ ]

    Unemployed [ ]

    Outside the workforce (not seeking employment) [ ]

20. Does your labour force status affect your private demand for postgraduate studies?

    Yes [ ] No [ ]

21. If "Yes" to question '19' above, give the reasons and how it affects your private demand for postgraduate studies…….

    ……

    ……

    ……

    ……

22. What is your level of agreement with the following statements on the effect of labour force status on private demand for postgraduate studies in universities in Kenya? (Please put an X as appropriate)

    Key:

1	**2**	**3**	**4**	**5**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

a) Unemployment and Private Demand for Postgraduate Studies

Statements for Unemployment		**1**	**2**	**3**	**4**	**5**
I	Increase in unemployment rates influences private demand for postgraduate studies					
II	Changes in the structure of demand, technology and problems of labour mobility affect private demand for postgraduate studies					
III	Industrial friction where workers are unable to fill existing vacancies affect demand for postgraduate studies					
IV	Lack of awareness of existing job opportunities affect private demand for postgraduate studies					
V	Problems of labour mobility affect private demand for postgraduate studies					

b) Employment and Private Demand for Postgraduate Studies

Statements for Employment		**1**	**2**	**3**	**4**	**5**
I	Employers' requirement for postgraduate studies qualifications increases demand for postgraduate studies					
II	Most employees enrol for postgraduate studies for promotion in the workplace					
III	Postgraduate studies enable one to be competitive in the labour market					
IV	Many employees enrol for postgraduate studies in fear of losing their jobs					

c) Self-employment and Private Demand for Postgraduate Studies

Statements for Self-employment		1	2	3	4	5
I	Postgraduate education increases the ability to understand market prospects.					
II	Individuals who attain postgraduate education are better freelancers than those who do not.					
III	Postgraduate studies enable better management of self-employment business.					
IV	Businesses owned by individuals who have attained postgraduate education are more competitive.					
VI	Desire for self-employment increases private demand for postgraduate studies.					

SECTION 5: SHIFTING WORKFORCE DEMOGRAPHICS ON PRIVATE DEMAND FOR POSTGRADUATE STUDIES

This section seeks information on shifting workforce demographics on private demand for postgraduate studies

23. What is your level of agreement with the following statements on the effect of shifting workforce demographics on private demand for postgraduate education in Kenya? (Please put an X as appropriate)

Key:

1	2	3	4	5
Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**

Statements for Shifting Workforce Demographics		1	2	3	4	5
I	Trends like aging in the labour market motivate many individuals to pursue postgraduate studies					

II	Diminishing male dominance in the labour market is increasing private demand for postgraduate studies					
III	Lower birthrate among women has increased women's demand for postgraduate studies					
IV	Lower birth rates have enabled many women to participate in postgraduate studies					
V	Change in social attitude towards gender roles affects demand for postgraduate studies					
VI	The demand for female labour in various fields is increasing demand for postgraduate studies					

SECTION 6: QUESTION FOR DEPENDENT VARIABLE: PRIVATE DEMAND FOR POSTGRADUATE STUDIES

This section seeks information on private demand for postgraduate studies.

24. Rate the following statements on private demand for postgraduate studies using the following five point Likert scale.
(Please put an X as appropriate)

Key:

1	2	3	4	5
Very Low	**Low**	**Moderate**	**High**	**Very High**

Private demand for postgraduate studies in universities in Kenya

	Questions for Level of Private Demand for Postgraduate Studies	**1**	**2**	**3**	**4**	**5**
I	How would you score the level of private demand for Masters' programmes in universities in Kenya?					
II	How would you score the level of private demand for PhD programmes in universities in Kenya?					

III	How would you score the level of private demand for postgraduate studies in private universities in Kenya?					
IV	How would you score the level of private demand for postgraduate studies in public universities in Kenya?					
V	How would you score the overall private demand for postgraduate studies in universities in Kenya?					

THE END

Thank You for Your Participation

APPENDIX II: Labour Market Determinants Interview Schedule for Postgraduate Students

1. What is your gender? ……
2. How old are you? ……..
3. Which course are you pursuing? ……...
4. In your view, what are some of the perceived returns that make you pursue postgraduate studies?

   ……
   ……
   ……
   ……..
5. In your view, what aspects of perceived returns increase individual demand for postgraduate studies?

   ……
   ……
   ……
   ……
6. Which skills are you aware of that are required for a knowledge economy?

   ……
   ……
   ……
   ……
   ……
7. While pursuing postgraduate studies, which skills have you attained so far that you think are required in the labour market?

   ……
   ……
   ……
   ……..
8. Which skills do you anticipate to have acquired after completing your postgraduate studies that might be required for knowledge economy?

   .....
   .....
   .....
   .....

9. In your opinion why do people in permanent employment demand postgraduate studies?

---

10. In your view, how does unemployment affect private demand for postgraduate studies in universities in Kenya?

---

11. In your observation, what are the most common age brackets for people pursing Master's and PhD programmes and why do you think these age groups dominate?

……
……
……
……

12. In your view, how has entry of women in the labour market changed private demand for postgraduate studies in universities in Kenya?

……
……
……
……

13. What other demographics changes have you observed that are causing private demand for postgraduate studies in universities in Kenya?

……
……
……
……

Thank you for your time

APPENDIX III: Approval of Research Proposal

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 11th March, 2021

TO: Ms. Macharia A.. Wamuyu
C/o Department of Educ. Mngt. Policy & Curr. Studies
Kenyatta University

REF: E83/CE/21886/2012

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge the receipt of your revised Research Proposal entitled **"Labour Market Factors Effect on Private Demand for Postgraduate Studies in Selected Universities in Kenya"** as per recommendations raised by the Graduate School Board of 27th January, 2021.

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking and Progress Report Forms. The Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

KENYATTA UNIVERSITY OFFICE OF DEAN 11 MAR 2021 GRADUATE SCHOOL P.O. Box 43844-00100 NAIROBI

Thank you.

REUBEN MURIUKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Registrar (Academic) Att; Mr. Richard Chweya
Chairman, Department of Educ. Mngt. Policy & Curriculum Studies

Supervisor

1. Dr. George Onyango
   C/o Dept. of Educ. Mngt. Policy Curr. Studies
   Kenyatta University
2. Dr. Nobert Ogeta
   C/o Dept. of Educ. Mngt. Policy Curr. Studies
   Kenyatta University

Committed to Creativity, Excellence & Self-Reliance

APPENDIX IV: Research Authorization Letter

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

OUR REF: E83/CE/21886/2012

Date: 11th March, 2021

The Director General,
National Commission for Science, Technology & Innovation
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MS. MACHARIA A. WAMUYU REG. NO. E83/CE/21886/2012

I write to introduce Ms. **Wamuyu** who is a Postgraduate Student of this University. She is registered for Ph.D. Degree programme in the **Department of Educational Management Policy & Curriculum Studies in the School of Education.**

Ms. **Wamuyu** intends to conduct research for Ph.D. Thesis entitled, **"Labour Market Factors Effect on Private Demand for Postgraduate Studies in Selected Universities in Kenya"**

Any assistance given will be highly appreciated.

Yours faithfully,

KENYATTA UNIVERSITY * OFFICE OF DEAN * 11 MAR 2021 GRADUATE SCHOOL P.O. Box 43844-00100 NAIROBI

PROF. ELISHIBA KIMANI
DEAN, GRADUATE SCHOOL

RM/cao

Committed to Creativity, Excellence & Self-Reliance

APPENDIX V: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **850850**

Date of Issue: **30/March/2021**

RESEARCH LICENSE

This is to Certify that Ms.. ANNE WAMUYU MACHARIA of Kenyatta University, has been licensed to conduct research in Kiambu on the topic: Labour Market Factors Effect on Private Demand for Postgraduate Studies in Selected Universities in Kenya for the period ending : 30/March/2022.

License No: **NACOSTI/P/21/9696**

850850

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VI: Counties in Kenya

Source: Kenya Facts and figures 2012