

# Trends in doctorate Degree Programmes Enrolment and Completion Rates from Selected Public Universities in Kenya

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**Abstract:** Doctorate holders are central in spurring socioeconomic development of any country, globally. However, studies indicate that most students in Kenyan public universities take long to complete their doctorate programmes. Moreover, enrolment data from selected Kenyan public universities show that fewer students enroll for doctorate programmes in comparison with those who register for Master and Bachelors' programmes. The purpose of this paper was, therefore, to establish the reasons for low enrolment rates and long completion time by the doctorate students in selected Kenyan public universities. The study sought to analyse the trends in doctorate degree programmes enrolment and completion rates from selected public universities in Kenya for the last fifteen years. The Social Support Theory and theory of involvement were utilised to comprehensively reveal the reasons for low enrolment and completion rates of doctorates in selected Kenyan public universities. The study employed the mixed methods research design. Data was collected from four purposively sampled universities using questionnaires, documentary analysis and interview schedules. Qualitative data was coded and then thematically analysed guided by the study objectives while quantitative data was analysed using percentages and graphs. The study revealed that between 2003 and 2017, there was low doctorate programmes enrolment and completion rates at the selected public Universities in Kenya. This was demonstrated from trends in the numbers of those who enrolled and those who graduated from public universities. The trends revealed that more males than females enrolled and completed their studies with the highest being between 2008 and 2013. The study concludes that low enrolment rate and long duration in doctorate degree study are caused by incongruous systemic practices. The research recommends that: institutional doctorate programme procedures' policies to be standardized across universities; the Ministry of Education through the State Department of University Education to have a robust funding programme for the doctorate programmes. The findings of this research are resourceful to university policy makers, administrators and lecturers to improve on institutional policy framework which could be used to enhance doctorate degree enrolment and completion in Kenyan public universities.

## I. Introduction

Enrolling into a doctorate degree programme entails personal sacrifices while earning one is a measure success, given the demands and academic pressure involved. In academics, a doctorate degree is the only avenue for professional growth. However, most of those enrolled for doctorate degree are engaged in fulltime duties in either educational institutions or other sectors of the economy. Doctorates are deemed to be innovative and important in the decision making process. They minimise dependency on public programmes thus enhancing high rates of employability due to skill development. (Sverdlik, Hall, & McAlpine, 2020; Momanyi, 2022). However, doctorate enrolment and completion rates has not made the demands of growing economies of the world (Bekova, 2021). Studies shows persistent low enrolment and completion rates among the doctorates in the world. Costa Bispo and Pereira (2018) indicate that only a mere 37% of those enrolled in doctorate

programme complete within the stipulated time in Brazil. Jeyaraj (2020) found out less than 50% of those enrolled for doctorate programme actually complete in Malaysia while in Iran, only 23% of those enrolled complete their studies.

Despite this increased demand, the global trends in doctorate degree programme enrolment and graduation rates has two parallel fronts; upward trend in developed nations and stagnating or regressing trends in the developing nations. On one hand, doctorate graduation rates in developed nations of the world has reached a saturation point as in the case of China where over 50, 000 doctorate degrees were produced in the year 2011-2012 surpassing even the US and Japan. China's success is attributed to the policy of recruiting and retaining through hiring one thousand doctorate degree holders yearly (Majumder, 2014). However, on the other hand, within developing countries, the number of doctorate holders remain low while enrolment into doctorate programmes has stagnated or is regressing and time to attainment of a doctorate degree is long creating shortages leading to inefficiencies.

Low Enrolment, poor quality and low completion rates of doctorate degrees for a long time among universities in Europe, USA and Australia was associated with inefficient doctorate degree supervision, insurmountable thesis topics and untenable funding (Pitchforth, et al. 2012). This led to high dropout rates, prolonged period of study or even delayed graduation. To address this phenomenon, most universities in Europe and America introduced a raft of policy frameworks. Germany for instance, developed highly structured doctorate programmes with sufficient supervisors to guide the candidates who were already enrolled. She also accelerated the duration into an average of three years to earn a doctorate degree while maintaining the quality thus attracting many doctorate candidates. Furthermore, universities introduced continual charges on research students whose work extended beyond stipulated timelines by respective universities. In the United States, the Harvard University instituted policy framework for doctorate degree candidates to constantly receive progressive report detailing expectations and their yearly standing. These interventions improved doctorate degree programme completion rates by 25% and 16% in humanities and social sciences respectively between 2005 and 2009 (Protivnak & Foss, 2009).

Universities among the emerging economies have increased their doctorate enrolment and graduation rates. Indian universities have increased enrolment to 18 percent and graduated 24,300 doctorates per year by 2016. Chinese government through universities has increased fully- funded scholarships for doctorate students, retained, experienced staff at the same time offering mentorship programmes for doctorate students. China and India are poised to produce 40% of the world's doctorates by 2030. However, quality of the doctorates produced in China has been a concern rendering difficulties for such graduates to secure jobs beyond China (Huang, 2017). The Brazilian universities have increased doctorate production to 12, 000 per year with the University of Sao Paulo alone graduating 2,244 doctorates in the 2010. The success has been credited to support from the academic community, funding, four year period of study, political commitment, hosting of over 3,000 postgraduate programmes and publications becoming compulsory from the year 2005. The number of students in Malaysia pursuing doctorate degree programmes had increased from about 4,000 in 2002 to almost 40,000 in 2012 while international doctorate degree students had improved from 25% in 2002 to nearly 50% in 2012 (Hansen, 2013). This has been attributed to the Malaysian government's open policies with regard to improved admission criteria, enhanced student-staff ratios, mobilizing finances, enhanced supervisor-student relationship and tracking of doctorate training programmes.

In Africa, there is a growing recognition that doctorate graduates are critical contributors of knowledge and innovation as a foundation of national wealth (Cloete, et al. 2015; Rey, 2014). Consequently, Africa is in dire need of more doctorate degrees' holders in order for her to meet the demands of rapidly expanding higher education systems as teachers and renewing the aging professoriates. They will furthermore, enhance research,

generate high-level skills needed to expand Africa's economies. Universities in Africa are responding with enthusiasm towards these demands by enhancing doctorate education. This is being effected through establishing graduate schools, provision of academic support programmes of mentorship, funding through partial or fully-funded scholarships, selecting academic supervisors and training them on conducting research.

South Africa, through the National Research Foundation (NRF) launched a doctorate project with the ultimate intention of multiplying doctorate degree graduates annually. This is reflected in her National Development Plan 2030. This has seen the increase in both enrolment and graduations of doctorates (Cloete, et al.; 2015). This success has been linked to massive government investments towards doctorate production, attracting and retaining local and international staff especially through post-doctoral degree programmes, improving doctorate supervisory capacity among academics, provision of incentives and supporting jobless doctorate graduates. South Africa is also seen to be a less expensive destination for those in search of doctorate education in terms of cost. However, the recent xenophobic attacks has painted a gloom picture on the security of the country, and the country also continues to face financial challenges especially in the doctorate education sector to match demand.

The Commission for University Education (CUE) identifies lack of institutional capacity to mount quality doctorate degree programmes as a major hindrance. This is linked to doctorate degree programme duplication by universities, poor management of doctorate programmes, slow processes in admissions, insufficient academic and administrative staff to manage the programmes, weak doctorate candidates' supervision process resulting from supervisors and examiners who are discouraged, underpaid and overburdened with a high ratio of supervisor-supervisee. Most of the Doctorate students are fulltime academic staff (Tutorial Fellows) representing 53% (8,693) of the total university academic staff with heavy workload, possess low research skills, are poorly socialized and integrated into the institutions offering these doctorate programmes. This poses a challenge of inefficiency and inadequate time dedicated to their doctorate studies which may result into long time to earn a doctorate degree. On the other hand, doctorate programmes mounted by most public universities in all disciplines are overpriced in terms of cost. This has locked out many potential doctorate programme candidates from enrolling. Furthermore, due to cost, those already enrolled, take long to complete since they have to get their school fees cleared. Consequently, the estimated doctorate degree programme completion time is nine years (CUE, 2016, Rong'uno, 2016)

The efficiency of doctorate student admission, preparation and supervision remains weak in Kenyan public universities. This has prompted enrolment to remain low while preparing the doctorate candidates which include the period of admission to completion take a long time (Mukhwana, et al. 2016). However, universities are responding by establishing postgraduate schools or boards but not much headway has been attained. The recommended staff-student ratio remains a mirage. For instance, CUE (2016) recommends a standard ratio of supervisor- supervisee to be at 1:7 for Medical and Applied Science, 1:10 for Applied Science, 1:15 for Arts and Humanities, 1:18 for social sciences and 1:10 for Pure and Natural Sciences but in most universities, supervisors exceed the limit due to inadequate staff (CUE, 2016)

### **Problem Statement**

The problem of this study was to establish trends in enrolment and completion rates in doctorate programmes from selected public universities in Kenya. Trends in doctorate programme enrolment and completion rates is higher in developed nations than in developing nations of the world. In Kenya, university education has rapidly expanded in the last two decades. This is linked to the importance attached to a doctorate degree of creating a critical pool of the human resources for socioeconomic development. This also has to cater for academicians working as teachers and administrators in the universities. The demand increased the number of those registering for doctorate programmes. Despite the rising number of candidates enrolling for doctorate programmes, those graduating continue to dwindle while time to completion is apparently long in many universities in Africa and Kenya warranting a study thus this paper.

## II. Methodology

This study employed a mixed method approach, embedded design in nature to examine institutional practices influencing trends in enrolment and completion rates in doctorate programmes from selected Kenyan public universities. Creswell and Clark (2007) opine that a mixed method approach encompasses gathering, examining, and interpreting qualitative and quantitative data in a single study in investigating the same underlying phenomenon

The mixed methods approach, embedded design in nature was deemed ideal since the study sought to establish both statistically recorded facts and thoughts from the respondents who were involved in the study. According to Creswell (2007), each research design selected for a study contains some degree of weaknesses. Thus, by selecting mixed methods approach, prejudice is minimised and reliability of the study enhanced.

This study was conducted in four selected Kenyan public universities. The study targeted all 6000 doctorate degree programme students from all public universities in Kenya. The particular focus was on doctorate students in Education, Arts and Social Sciences and Pure and Applied Sciences disciplines, deans of schools offering disciplines in Education, Arts and Social Sciences and Pure and Applied Sciences, and faculty members teaching these disciplines

The study adopted a multi-stage sampling technique, first step, the universities were identified, followed by the schools and finally the departments. As such, purposive sampling was used to select the specific department to pitch the study. Purposive sampling technique is employed when the researcher knows where to obtain the required data with regard to the objectives of the study

In order to arrive at the eventual study participants, the researcher sampled four public universities from the thirty one (31) public chartered universities in Kenya. The choice of four public universities was guided by the fact that they are the first four oldest universities in terms of establishment in Kenya

Stratified sampling was used to sample schools and faculties into three major categories; Education, Arts and Social Sciences, Pure and Applied Sciences. Further, stratified sampling was used to select departments in order of their establishment. This was necessitated by the fact that the researcher was interested in getting specific participants possessing particular characteristics that could meet the objectives of the study.

A simple random sampling was used to select the male and female faculty members and doctorate students who participated in the study. All deans of schools or faculties and chairpersons of departments were included in the sample. Therefore, including participants with information concerning the area of study was critical for this study (Orodho, 2008).

**Table 1: Sample size of doctorate students**

Schools	Departments	Public universities								
		UoN		KU		MU		EU		Total
		M	F	M	F	M	F	M	F	M&F
Education	1	27	24	25	16	12	9	11	9	141
	2	11	6	13	9	10	7	18	30	119
	3	9	4	6	3	3	2	-	-	27
	4	10	9	4	1	-	-	4	2	45
Pure and Applied Sciences	1	6	2	5	4	4	2	2	0	29
	2	3	2	4	2	4	1	5	4	30
	3	8	6	6	3	4	4	4	2	42
	4	7	6	4	3	3	2	6	5	40
Arts and Social Sciences	1	16	14	13	11	6	4	10	7	87
	2	13	9	9	8	3	2	11	7	69

	3	23	19	16	11	6	5	5	3	93
	4	16	19	11	12	5	7	9	6	96
<b>TOTAL</b>	<b>12</b>	<b>149</b>	<b>120</b>	<b>116</b>	<b>83</b>	<b>60</b>	<b>45</b>	<b>85</b>	<b>75</b>	<b>826</b>

Sources: **Universities' enrolment statistics (2017).**

Information from table 1 above indicate the sample size distribution of the respondents in the four universities. A total of 826 candidates enrolled for various doctorate degree programmes in the sampled universities.

**Table 2: Sample size for university administrators**

<b>Officers</b>	<b>Public Universities</b>				<b>TOTALS</b>
	<b>UoN</b>	<b>KU</b>	<b>MU</b>	<b>EU</b>	
Deans	3	3	3	3	<b>12</b>
CPD/ HoD	12	12	12	12	<b>48</b>
Lecturers	89	93	58	49	<b>289</b>
<b>TOTALS</b>	<b>104</b>	<b>108</b>	<b>73</b>	<b>64</b>	<b>349</b>

Source: **Universities' Human Resource Departments (2017)**

Using the sample size of 30%, the study targeted 105 university deans of schools and members of the academic staff. The study employed the following tools in data collection; questionnaires, interview schedule and documentary analysis.

Data obtained from the study were analysed both qualitatively and quantitatively guided by the study objectives. The questionnaires had both the open-ended and closed-ended questions. Data obtained from the open-ended questions and interviews were coded and transcribed then organised and analysed in their thematic areas.

### **III. Literature Review**

Enrolment into doctorate programmes indicates different scenarios globally. Completion and attrition rates are indeed different across universities, countries and continents. For instance, in America, doctorate degree programme attrition rates are really high. It is projected that 40% to 50% of those enrolled for doctorate degree programmes never complete their studies (Litalien, 2015). According to a report published in 2016 in United Kingdom, 72.9% of those enrolled for doctorate degree programmes in 2010-2011 took an average period of seven years to graduate (Alison, 2017). On the other hand, a study carried out in Australia by Abiddin and Ismail (2011) established that about 60% of doctorate programme candidates who enrolled during 1992 were awarded their doctorate degree in 2003. Consequently, majority of doctorate candidates could have earned their degrees after eleven years of study from the time they initially entered into the programme. The attrition rates thus stood at around 40%. This indicates a long period to doctorate graduation in Australia. In Canada, the scenario is different as it is estimated that the attrition rates stand at 20% of those who enroll for doctorate programmes (Galt, 2013).

A survey by Council of Graduate Schools (2015) on the North American region (Canada and USA) established that doctorate programmes enrolment had tremendously increased in the last three decades to 506,927 by 2015. The increment was attributed to the countries open policy for doctorate programmes. The study, however, fails to single out institutional practices which stimulated such increment in student enrolment. Begalla (2013) undertook a descriptive survey on doctorate education in the USA. The findings were that USA is attracting many doctorate students from across the globe. This had been motivated by perceived quality education in the USA, availability of relevant training and applied knowledge as well as availability of partnerships in doctorate education. These studies do not bring out institutional practices that led to the increase in doctorate enrolment across the USA universities which is pertinent to the current study.

Studies on Canadian universities on the other hand indicates that they have grown enrolments into doctorate programmes significantly. For instance, in 1993/1994 academic year, 26,475 individuals were enrolled in doctorate programmes at Canadian universities. This had 16,500, males accounting for 62% while 9,972 were females 38%. The trend changed to a total of 42,801 doctorate enrolment and over 66,000 doctorate candidates by end of 2016 (Statistics Canada, 2017). The increase in enrolment was attributed to foreign students seeking doctorate education in Canada and the doctorate expansion policy where the tuition fees was waived (Golde and Walker, 2006, CGS, 2008, Ehrenberg et al. 2010, Cloete et al. 2017). This study underscores expansion policies put in place by the universities

Mouton (2011) asserts that the serious challenge confronting the Africa as a continent is the small number of those who graduate with doctorate degrees. He further observed that Africa is inherently faced with scarcity of human resource endowed with the ability to train researchers. This has hindered the training of appropriate numbers who could be future scholars, researchers and academicians. The end-result is insufficient numbers of accomplished scholars in universities to train doctorate programme students while incorporating them in the intellectual realm of research. Grossman & Crowther (2015) agree while emphasizing that lack of sufficient thesis supervision capacity will definitely slow down doctorate completion rates. They also noted that most doctorate students take long to graduate due to supervision related challenges. The few qualified thesis supervisors are either busy with university administrative duties and therefore have little or no time for doctorate students. This is further complicated with country to country policies which infringe on the autonomy of universities. This hinders institutional changes inclined towards improvements of the doctorate education (Imma & Calvet, 2012). Lack of autonomy by the universities also affects internal institutional aspects related to training, thesis supervision and research. Imma and Calvet(2012) observe that university autonomy is an on-going process and has not yet been fully realised. They underscore on the need for university education reforms aimed at providing autonomy. These assertion are obviously critical of the doctorate programme situation which the current study endeavor to ascertain.

In Kenya, enrolment into doctorate programmes remains a thorny issue among public universities. According to CUE (2014), there were 4,394 students enrolled for doctorate programmes out of which 1,562 were females representing 35.5%. The remaining proportion of 2,832 was males representing 64.5%. The situation slightly improved in 2015 with total doctorate enrolment increasing to 7,146. Out of this, public universities enrolled 6,069 comprising of 1,794 females. This trend is worrying owing to the massification in university education, which requires the doctorate holders to be teachers and supervisors. CUE (2016) further observes that this enrolments is a meagre 1.1% of the undergraduate students' enrolment which remains at over 448,920 and 40,173 masters representing 10.1%. This low enrolment is a concern to this study with the intention of establishing the institutional constraints which influence these trends. Omanga (2017) agrees through observing that doctorate enrolment in Kenyan public universities remain all-time low.

African universities have continued to enroll and graduate a small number of doctorates for the last fifteen years. This has been compounded by a small number of faculty members and administrators who can work as doctorate programme managers. Earl-Novell (2006) in a descriptive study established that there was employment freeze by most African countries. This made the case of universities complex by creating severe academic gaps among departments and schools hosting doctorate programmes. Massive expansion in university education at bachelors and masters levels has further complicated the situation meaning the available resources, doctorate holders being one of them have been badly overstretched.

The challenge of low doctorate programme completion rates is evident in Kenya like most of African countries (Ayiro & Sang, 2011). The country has doctorate graduates numbering less than eight thousand holders which is way below the demand standing at over 30,000 doctorates who are essential in training and conducting research. Kenyan universities graduate on average, 200 doctorates per annum, while CUE has projected a target to

graduate over 1000 doctorates yearly by 2030. Furthermore, the commission had projected that all university academic staff to have doctorate qualifications by 2018 (Nganga, 2014). Strides have been made although not much has been achieved.

On the other hand, the trend in doctorate completion in Kenyan public universities has been growing minimally. The mainstream universities have been producing less than 100 doctorates per graduation. For instance, Kenyatta University graduated only 44 doctorates in all doctorate programmes in the year 2014. JKUAT is the only one which has managed to produce slightly over 100 doctorates per academic reaching 104 in 2014/2015 academic year. University of Nairobi, Kenyatta University and Maseno all have produced between 40 and 80 per academic year.

According to Ayiro & Sang (2011), Kenya lacks an inbuilt research culture where intrinsically, doctorate candidates will carry out research. The number of scholars involved in serious academic research activities is wanting. Further, this has been complicated by the challenge of low doctorate completion or even taking a longer period to complete doctorate programme studies (Gudo et al., 2011). The number of those dropping out is high sometimes stretching above 50% whereas those who opt to remain in the programme spend long time beyond the policy stipulated period of three years for doctorate studies (Ayiro & Sang, 2011). This study would want to establish whether there are institutional factors or variables within or beyond the universities responsible for influencing this production.

A study also by Rugut, (2017) on doctoral students showed that attrition rate was high in the United States and Australia estimated at 40% to 50% never finished their studies, in the United Kingdom, 72.9% of the graduate students in 2013 took seven years to complete their studies. Canada by 2013 had the lowest attrition rate of 20% compared to other countries. They found out that a portion of these hindrances was fringe to the program such as exhorting issues, learning deficiencies, and individual duties.

This statistical trends on doctorate programme completion from Kenyan public universities presents a gleam picture despite the effort in terms of investment that both the government and private educational actors have put in place. Rong'uno (2016) in a survey study targeting doctorate completion in education programmes only, sampled three Kenyan public universities. He found out that these sampled universities had graduated low number of doctorates in education programmes. This study did not establish the various institutional practices leading to such a scenario. The current study sampled four universities with a focus on education, social sciences, humanities and pure and applied sciences.

#### **IV. Theoretical Framework**

The study was guided by two theories namely; the Social Support Theory by Williams, Barclay and Schmieid (2004) and the Involvement Theory by Astin (1984). The study used the two theories since doctorate degree studies could best be explained using the aspect of support a doctorate candidate gets and the extent to which such a student is involved in the studies particularly from the social environment.

The Social Support Theory encapsulates the general support socially accorded to individuals; in this context, those enrolled for doctorate degree programmes. Furthermore, this entails the arrangements people have while communing with the larger society which contributes to happiness and bonding. The infrastructure here connected to the physical amenities and resources present in the universities offering doctorate programmes and how integrated the doctorate candidate is in the department or faculty hosting the programme which makes up the family and community respectively. It is, therefore, noted that isolation from these community pillars (department and faculty) leads to alienation. The Social Support Theory was utilised in the study to clarify the institutional practices influencing trends in doctorate enrolment and completion rates in selected Kenyan public universities. The theory emphasizes that providing support socially can take the practice of emotive care from supervisors together with other faculty members. This comprises of the warmth and nurturance doctorate

students receive from academic advisors, the tangible support through scholarships, the informational support in coursework and thesis writing skills. Lack of institutional capacity and clear guidelines on how to integrate students into a doctorate programme would alienate them which would make them end up to silently withdraw or take long time to complete their degree course. This study, therefore, tried to determine the influence of social support leading to enrolment and completion rates among doctorate students.

The theory also looks at the concept of the socializer and the socializee. According to Thoits (1995), efficient 'collaborators' are individuals who already have gone through similar challenging situations to those in need of help. This would be pragmatic in twofold; first for doctorate degree holders, having successfully studied through the programme and graduated, secondly, the doctorate students who are in the process of studying for the doctorate degree. The doctorate students need the social support through mentorship programmes and participation in departmental activities. The doctorate degree supervisors who are the academic advisors play a key role in the institution to initiate doctorate students into the programme. They can assign them roles, guide them to participate in conferences and grooming them in presentation skills. This was of concern to the study in finding out the role institutions play and the kind of help they accorded doctorate students. It is worth noting that doctorate students are in much need of social support mechanisms to help them navigate through the doctorate studies which is highly multifaceted. The study looked at the social support aspects that doctorate degree students required in the course of their studies that impact on completion rates.

The second theory is Astin's (1984) Theory of Involvement. This deals with how human beings are involved in doing activities in the society. The concept of involvement here referred to course or path taken in doctorate education or enrolment (Astin, 1993; Pascarella & Terenzini, 2005, Tinto, 1993). The theory operates on the ground that involvement requires an investment of psychosocial and physical energy doctorate student's direct toward their studies. The amount of investment directed by universities in management and governance of doctorate programmes, the processes involved in admitting doctorate degree students, the quality of staff both administrative and academic involved in running the doctorate programmes and regulations on students' status which were indicators of invaluable aspects of involvement.

Various scholars have applied this theory in doctorate education. Gardner (2007) underscored on the importance of doctorate candidates' involvement in expert's organizations which are appropriate to the areas they have selected to pursue as a way of intellectual participation. Tinto (1993) stressed on the fact that the process of interacting among the doctorate programme students as vital for their well-being. He further observed that interacting socially with the academic staff and fellow doctorate students is connected to their intellectual development and acquisition of critical skills for to enable successful doctorate degree completion. These would include capabilities in proposal and thesis writing as well as doing projects which could attract funding in order to lessen the financial burden of the doctorate degree programme student. It is against this background that the association, knowledge and skills gained would determine completion rates at the doctorate level.

Tinto's statement is reinforced through Wenger (1996) who opines that the thoughts of learning and learning organization are interconnected at any given time. He further stated that, informal group exchanges are essential in imagination, being analytical, and gaining understanding through working together in varying contexts. Furthermore, Wenger asserts that, due to complex state of knowledge building process, group collaboration constitutes phenomenal resources of learning. This model of participation presents a wide spectrum within which to theorize and analyse doctorate degree programme education. This is achieved through gaining insights of enrolment and completion rates from the universities.



## Findings

### Doctorate Students' Demographic Information

The doctorate students' demographic data was considered vital because it has a link to the variables which influence enrolment and completion of the doctorate programmes. The demographic information obtained was gender and area of study, age and the mode the study was delivered through. The gender and academic programmes of the candidates who participated in the study were also captured. The aim was to determine their gender and doctorate programme of study distribution across schools and departments in the selected public universities in Kenya and how this influenced doctorate enrolment and completion from public universities.

The gender dispersion of the doctorate programme students who took part in the study were as follows: the University A had 76 males and 84 females, University B had 97 males and 68 females, University C had 69 males and 54 females University while D had 30 males and 24 females respondents respectively). Overall, the majority number of the doctorate programme students who were engaged in the study were male accounting for 54.18% whereas the female doctorate students were 45.82% of the students' respondents. This was summarized and presented in Table 3 below.

**Table 3: Doctorate Candidates Respondents Percentage Distribution**

University	Male	Female
University A	76	84
University B	97	68
University C	69	54
University D	30	24
Total	272	230
<b>Percentage</b>	<b>54.18</b>	<b>45.82</b>

Sources: Researcher's Fieldwork Analysis

The doctorate candidate percentage distribution is in line with a study carried out by Yusuf, Felicia and Aina (2018) on demographic information. The study reported that in any study, the respondents' demographic information demonstrate whether they were representative enough. The percentage distribution confirms that the representation was sufficient for the study.

### Age Bracket of the Doctorate Students

The study also sought to find out the age bracket of doctorate programme students. Data regarding the age of the doctorate programme students was considered significant since it envisages probable socioeconomic duties of the doctorate candidates, which may have influence on the enrolment into a doctorate degree programme and consequent time of completion. The researcher encountered difficulty in accessing admission data since part of the data was recorded and stored manually. This forced the researcher to engage a tracer tool to retrieve, collect and collate critical enrolment statistics. This led to the final number of the respondents for the current study as summarised in Table 4 below.

**Table 4: Summary dispersion of age and gender of doctorate students.**

Universities	UoN		KU		MU		EU		Totals		Percentage	
	M	F	M	F	M	F	M	F	M	F	M	F
18-28 years	-	-	-	-	-	-	-	-	-	-	-	-
29-39 years	12	13	18	21	19	15	9	7	58	56	21.32	24.35
40-49 years	51	56	63	39	36	28	13	11	163	134	59.93	58.26
Over 50 years	13	15	16	8	14	11	8	6	51	40	18.75	17.39

Totals	76	84	97	68	69	54	30	24	272	230	100.00	100.00
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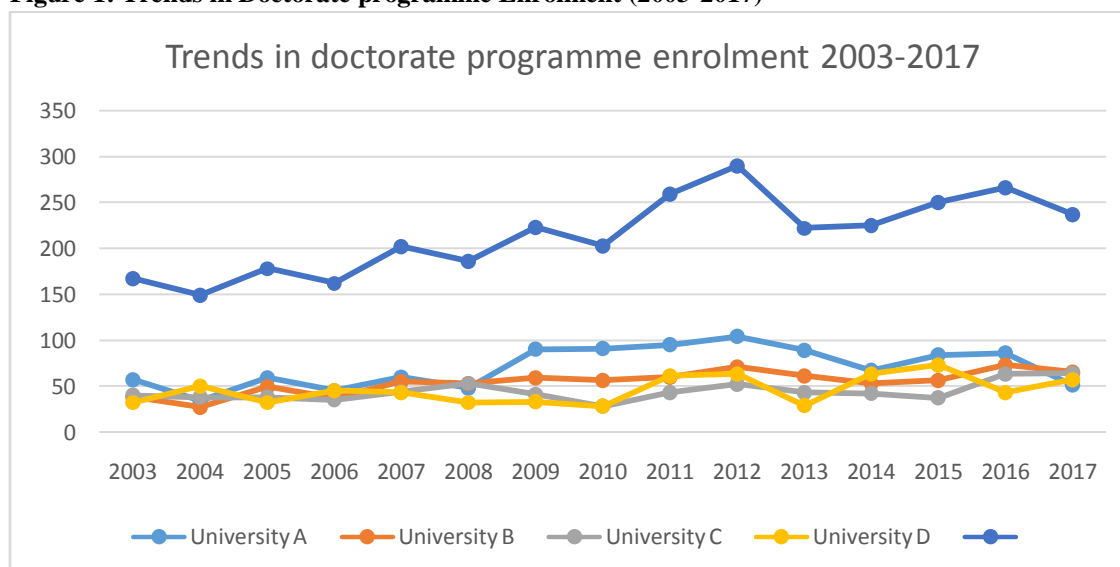
(Sources: Researcher’s Fieldwork Analysis)

The data in table 4 above indicates that the highest percentage (59.93% for males and for 58.26% females) of the doctorate students who took part in the study fall between 40-49 years. The findings that the average age for enrolling for doctorate studies is in agreement with Wamala, Ocaya and Oonyu (2012) whose studies established that the median age for enrolling for doctorate studies was 37 years while Jairam and Kahl (2012) established the age as 43 years. Those who fall between 29-39 years of age consisted of 21.32% males and 24.35% respectively. Those in the age bracket of 28-38years of age were considered young and majority may be settling down in life therefore doctorate degree programme may not be of priority to them.

### Trends in Doctorate programme Enrolment and Completion

The first research objective was to establish trends in doctorate programmes enrolment rates from the sampled four universities covering the period of study between 2003 and 2017. Documentary analysis of enrolment was obtained from universities indicating those who had been duly registered for various doctorate programmes. A review of the admission criteria established that there are two alternatives to admission into a doctorate programme. The first one entails course work followed with presenting a concept paper. This was meant for those doctorate programmes which have both course work and thesis. The second alternative is through thesis only. In this alternative, the doctorate student must first write a concept paper which will be used to identify the student’s area of study and then assigned the supervisors based on the expertise in the area. The candidate will then develop a research proposal and present it at the department or school upon which the doctorate candidate will proceed for data collection upon obtaining the relevant licenses and documentation.

**Figure 1: Trends in Doctorate programme Enrolment (2003-2017)**



(Sources: Researcher’s Analysis)

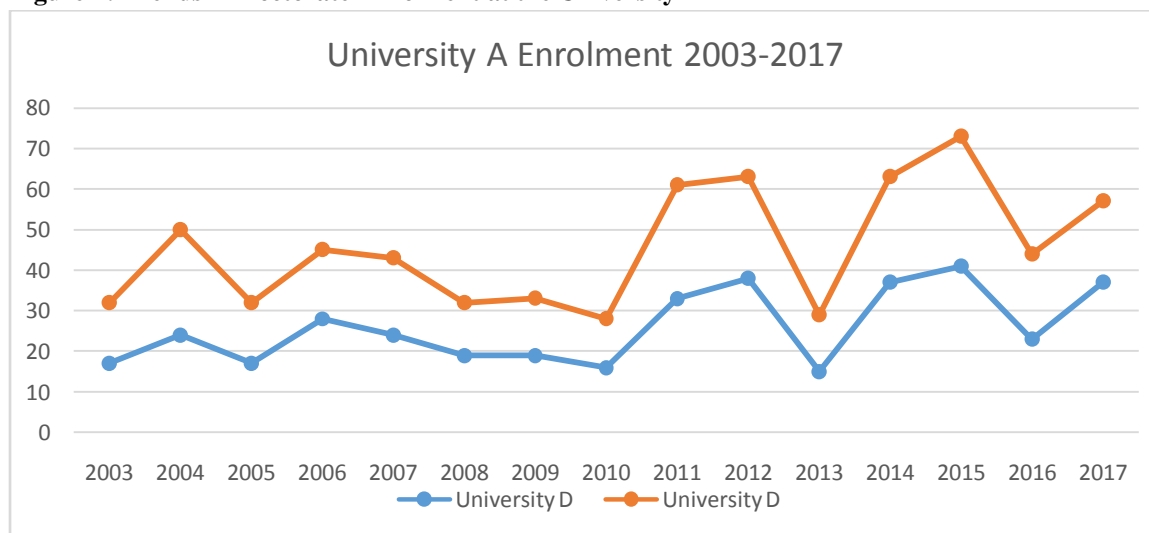
The trends indicate a dismal growth in doctorate degree programme enrolment in all selected universities. The lowest being between the year 2003 and 2008. The situation slightly improves but not satisfactory when compared to the demand of doctorates required by the Kenyan university education and research output for knowledge economy. Generally, more males than females were enrolled for doctorate degree programmes in all

selected universities during the period under review. Doctorate programme enrolment per university was analysed and presented in the subsequent discussions below.

### Doctorate Programme Enrolment Trends - University A

Trends in doctorate programme enrolments at the University A during the period of study was determined and presented in Figure 2 below

**Figure 2: Trends in Doctorate Enrolment at the University A**



Sources: Fieldwork Analysis

Trends in doctorate programme enrolment at the University A indicates slow growth over the period of study. The highest enrolment growth trends were experienced between the year 2008 and 2013. This could be attributed to the emphasis from the Ministry of Education and later by the Commission for the University Education (CUE) that only individuals with doctorate degrees could be allowed to lecture at universities in Kenya. The year 2014 experienced the lowest enrolment of doctorate students for the sampled schools which sharply increased in 2016 and dropped again in 2017. Trends in terms of gender indicates that more males than females enrolled for doctorate programmes during the period of study (2003-2017). During the interviews, respondents were asked why they chose to study at this university. Most of them indicated that it was the oldest and thus assumed to have the best and most experienced faculty in their area of study. A male doctorate student observed the following during the interview;

*“Before I enrolled for my doctorate programme, I did due diligence on the availability of the faculty in my area of study. Indeed, I found out that the university was well endowed with the academic staff in my area. I therefore made a decision to enrol here.” A doctorate student at University A(RS/11/DG/FASS/UA)*

Female doctorate students’ respondents stated that;

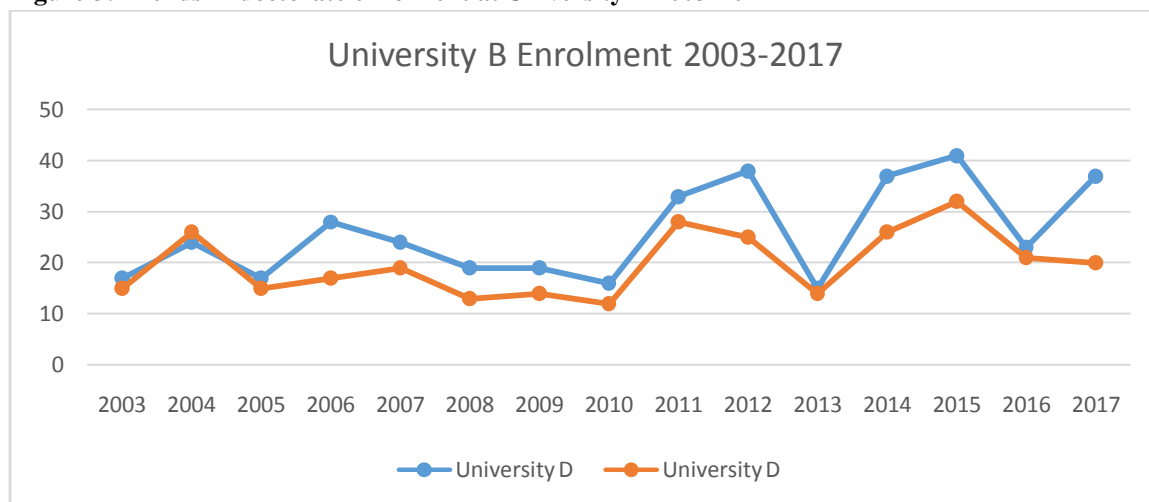
*“I live and work in the vicinity where the university is located. I therefore opted to enrol for a doctorate programme because of the convenience in terms of logistics. Furthermore, this made it flexible to enrol for an evening programme” A female doctorate student -the University A(RS/25/DH/FASS/UA)*

*“I did not want my employer to know that I wanted to further my studies. My immediate boss feels threatened by the mere fact that one has just thought of furthering the studies. I therefore secretly thought and enrolled incognito. This university was therefore the most appropriate as the employer will never notice when I do my studies. I was enrolled for evening and weekend programme. A female doctorate student at University A(RS/19/DBE/FASS/UA)*

### Doctorate Programme Enrolment Trend –University B

Trends in doctorate programme enrolments at University B during the period of study was determined and presented in Figure 3 below

Figure 3: Trends in doctorate enrolment at University B 2003-2017



Sources: Fieldwork Analysis

Trends in doctorate programme enrolment in the sampled schools of University B between 2003 and 2017 indicates a steady growth. There was a sustained enrolment between 2004 and 2013. Trends of enrolment in terms of gender, indicates that the males were more than females enrolled during the study period. The year 2015 recorded the lowest enrolment in terms of the females into the doctorate programmes. Between 2014 and 2016, there was a sharp increase in enrolment in the schools sampled for male doctorate candidates. This trend declined from 2016 to 2017. The study revealed that there were varied reasons why the steady growth was experienced. One former dean of the school in the university observed that;

*“As the dean of the school, I marshaled my departmental heads for doctorate programme recruitment drive. We used most of our graduates to reach out to potential students. Indeed this bore fruits as we saw increase in new enrolments in the departments within the school. We even saw the increase in foreign students in our doctorate programmes” A lecturer -University B (RL/6/SoE/UB)*

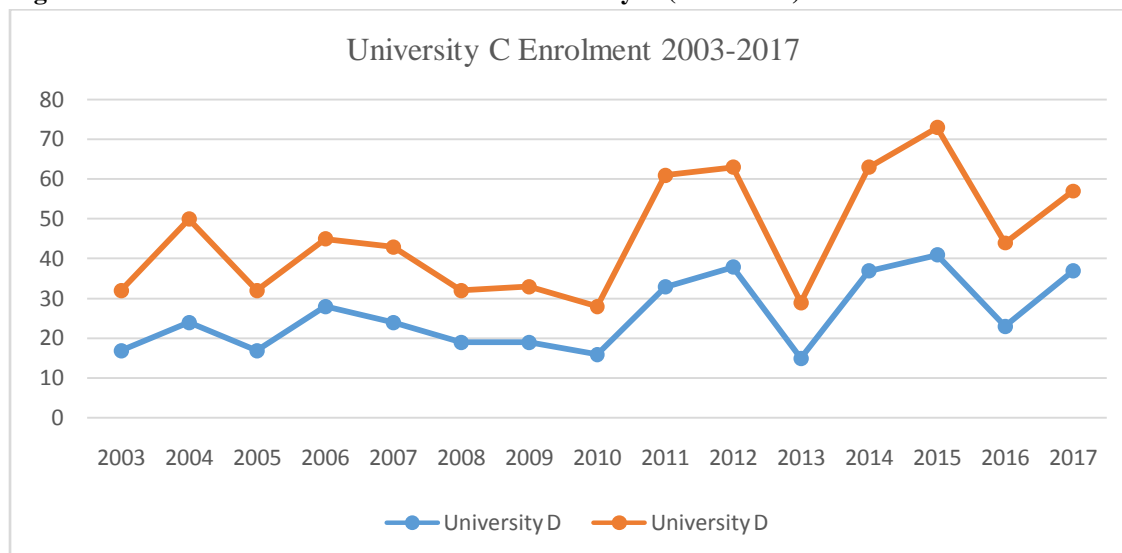
A male faculty member who was formerly a departmental head observed that;

*“The government policy on who could be a lecturer influenced the steady growth. The government had proposed through a policy that only individuals with doctorate degrees would be allowed to lecture at the university. My university then enhanced the programme of employing tutorial fellows with the intention of beefing up the doctorate programmes” A lecturer -University A (RL/9/DG/FASS/UB)*

### Doctorate Programme Enrolment Trend –University C

Trends in doctorate programme enrolments at University C during the period of study was determined and presented in Figure 4 below

**Figure 4: Trends in Doctorate Enrolment at University C (2003-2017)**



Sources: Fieldwork Analysis

Figure 4 demonstrates trends in doctorate programme enrolment at University C between 2003 and 2017. The result in trends indicates that enrolment into doctorate programmes has been fluctuating over the period under review. There was increase in enrolment for male candidates in the year 2004 which went down up to 2006 and started again to rise until 2010 when it again fell. Between 2010 and 2012 the enrolment rose. However, in 2013 it fell again and from then it started rising up to 2017. Female candidates registering for doctorate programmes at University C has also presented a different view. The trends indicate that enrolment fell in 2004 and increased from 2004 to highest being in 2017. However, between 2004 and 2008, the enrolment improved which again declined in 2010. It steadily rose again from then to 2015 when the enrolment slightly fell and grew from then. In terms of gender, more males than females enrolled for doctorate programmes in the period under review. Doctorate programme growth realised in the university was attributed to opening of a number of campuses countrywide during the period of review. Faculty members who were former deans and departmental heads observed the following;

*“When the university entered into an expansion programme, more campuses were opened thus taking education next-door. This saw a number of people enrolling for the doctorate programmes increasing. Most of them were teachers who could not leave their work stations.” A lecturer- the University C(RL/13/DPHY/SPAS/UC)*

Another academic member of staff in the university who was a former chair of the department supported this by noting the following;

*“When I took over as a departmental head, I had to change the landscape of doctorate enrolment within my department. I encouraged my staff members to bring on board more doctorate students to boost their supervision track. This was a prerequisite to promotion to the next cadre in the career path. Many grabbed the opportunity and encouraged new enrolments” A lecturer – A university (RL/12/DH/SASS/UC)*

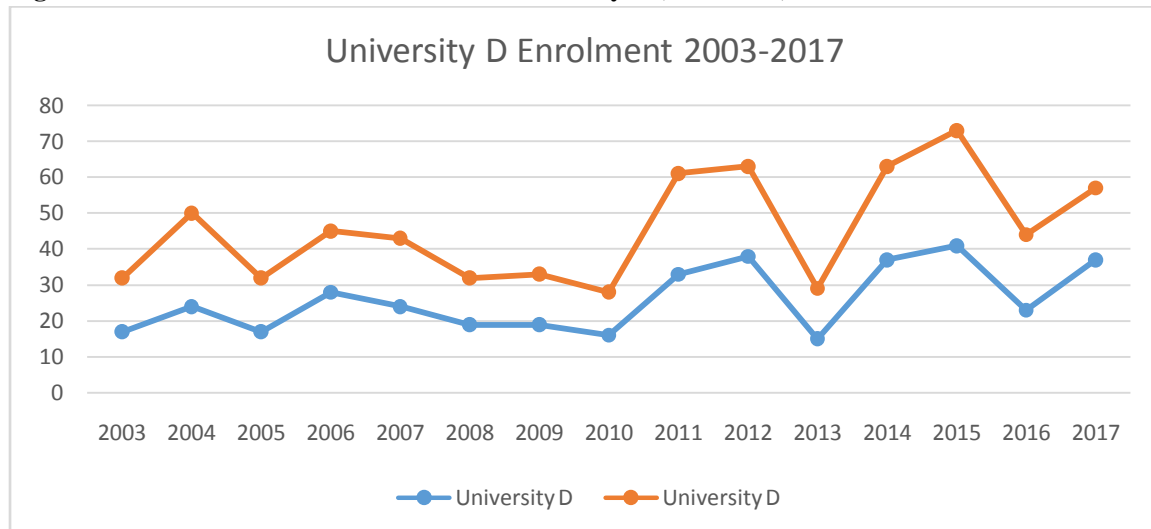
A doctorate student in the university observed that;

*“I felt very encouraged to enrol for a doctorate programme when the university opened a campus near my home. The issues to do with traveling became a thing of the past. I progressed well until the ministry of education compelled universities to close campuses. Yes, I am safe now since I am almost through with the programme. I even saw my fellow teachers enrol for other programmes in the university with opening of the campus” A female doctorate student the University C(RS/16/DCS/FE/UE)*

### Doctorate Programme Enrolment Trend –University D

Trends in doctorate programme enrolments at University D during the period of study was determined and presented in Figure 4.6 below

**Figure 5: Trends in doctorate enrolment at University D (2003-2017)**



Sources: Fieldwork Analysis

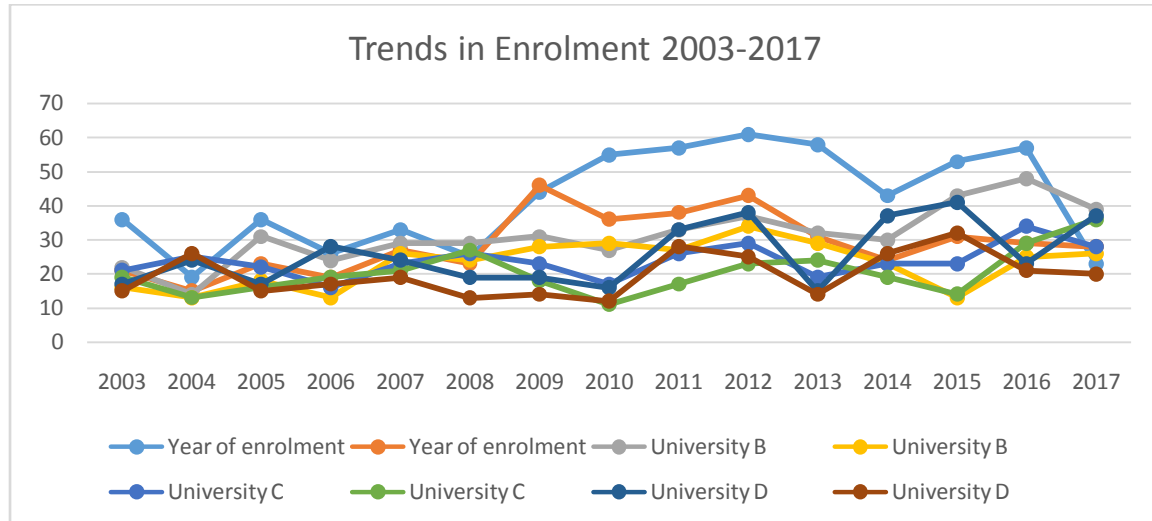
Results from Figure 5 indicates that enrolment into doctorate programmes at University D has over time improved. However, this has happened at a very slow rate. Between 2003 and 2010 the growth trends were slow. However, from 2011 to 2017, there was a slight improvement in enrolment with 2013 recording the lowest number of those who were enrolled. Trends in terms of gender enrolment indicates that more males than females enrolled for the doctorate programmes for the period under study other than 2004 when more females than males enrolled for doctorate programmes. The respondents from the university observed that however slow the growth has been, their doctorate programme were registering positive tremendous changes. Lecturers' respondents reported that some of their programmes were unique and were well known for that. A lecturer observed that;

*“This university was established on unique programmes in agriculture. Most doctorate students we receive are usually referred to us by those who have already graduated. We also have existing partnerships with institutions engaged in research in most of the doctorate programmes we offer. They are comfortable in channeling their sponsorship through us. A female doctorate student at University A(RL/8/DCS/FA/UD).*

### Trends by Gender Enrolment (2003-2017)

Trends in gender enrolment in from the sampled universities were established and presented in figure 6 below.

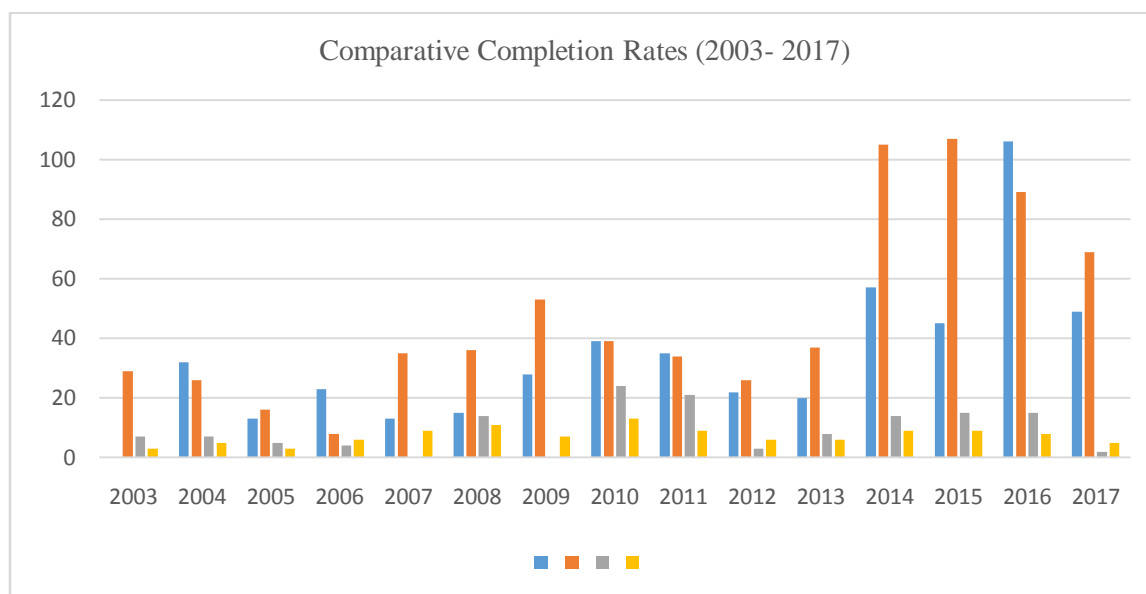
**Figure 6: Gender Trends in Doctorate Programme Enrolment (2003-2017)**



Sources: Fieldwork Analysis

Figure 6 above indicates gender trends in doctorate programmes' enrolment in all universities that were studied (the University A, University B, University C and University D). The trends indicate mixed enrolment characteristics in terms of gender. However, it is evident that between 2003 and 2008, these universities had experienced stagnated trends in gender enrolment into doctorate programmes. The University A and University B progressively on average indicated upward trends in both gender enrolment for various doctorate programmes. University C and University D on the other hand recorded mixed trends in enrolment. A closer examination of enrolment in terms of gender enrolment trends indicate that more males than females enrolled for doctorate programmes in all universities under review for that period. Progressive trends in enrolment were attributed to the Kenyan government policy through the Commission of University Education (CUE) requirement that only those with doctorate degree qualifications would be allowed to teach at the universities by the year 2018. This meant that more enrolled in order not to be locked out from teaching at the universities.

**Figure 7: Comparative Trends in doctorate completion 2003-2017(University A, B, C and D)**



Sources: Fieldwork Analysis

Figure 7 above indicates aggregated comparative trends in doctorate degree completion from the four public universities studied. The trend analysis indicates that University A and University B graduated the highest number of doctorates during the period of study. The trends further demonstrated that there was progressive improvement in terms of the doctorate degrees awarded by the four universities reviewed during the period of 2003-2017. The highest number of those who earned their doctorate degrees is demonstrated from 2013 to 2016 in all the four universities. In the year 2017, the number reduced significantly. The interpretation was that majority of those enrolled for the various doctorate programmes were still writing their thesis. This was supported by a doctorate student from University A, who observed that;

*"I started writing my thesis last year and hope to meet the requirements by the end of this year. However, I note with a lot of concern that the progress is slow than I thought. There are several corrections suggested and sometimes I feel they are too much. I am a family man and besides I am working to earn a living. All these issues combined, I believe are the ones slowing the whole process."*  
A doctorate student the University D(RS/11/DPSY/FECD/UD)

The various doctorate degree programme completion figures were also established. This was determined through working out the cumulative number of candidates graduating with a doctorate degree over the number of candidates enrolled in a cohort. The enrolment cohort was taken to be the year students were registered for the doctorate programme. It was established that enrolment into a doctorate programme in most universities is offered when the potential candidate successfully passes initial examinations. These initial examinations were either oral or written and in some cases both. Oral examination involves the doctorate student defending his or her research proposal at the department and the school respectively. The doctorate degree programme completion date was taken as the graduation date which was contained in selected public universities graduation days (obtained from graduation booklets).

A follow up question with lecturers and administrators indicates that;

*"Some individuals enroll for doctorate programmes as an additional honour to their C.Vs, yet they have no objective of completing their studies any time soon, this is mostly for those who are from Arts, those from Sciences strive to complete.... Perhaps some are consultants so it*



*sounds good to add doctorate degree- Ongoing as part of their academic qualification” A female doctorate student at University A(RL/31/DBE/FASS/UA)*

This was further indicated by one female student who indicated that:

*“As a career woman, it wasn’t easy to complete my doctorate programme studies, so much was expected of me from both my family and at my place of work...the society is not kind to a woman...I was asked severally to drop the studies and concentrate on my career and family...I thank my husband who was understanding and empathized with me. Many other women who wish to pursue their individual doctorate studies but are tied by many other responsibilities and most importantly cultural setback....for your information it took me five and a half years to clear my studies and I almost gave up.” A female doctorate student the University A(RS/15/DBE/FASS/UA)*

This is in line with the challenges experienced by doctorate programme students which have been reported in other studies. Thomas et al. (2017) in a study found that all the participants were working adults who also had other responsibilities, for example family (which included immediate and extended family members) and workplace commitments. This is further reinforced by Maasdorp and Holtzhausen (2011) in their study found out that the challenge of workload experienced by the doctorate students are enormous. They continued to observe that doctorate students are faced with significant complications when beginning their studies related to the worry about expectations, the break from study they have had and because of time in the workplace; an imbalance regarding their studies, employment and family responsibilities. These experiences are supported by Essa (2011) who expounded that harmonizing of academic, work and family duties is a challenge for postgraduate candidates who may be in active employment and have families of their own. Benshoff et al. (2015) added that satisfying numerous roles, duties and expectations is a common feature of doctorate studies. A dean of the school and a director at the Board of Postgraduate reported the following during an interview;

*“As a dean of the school, I am totally unhappy with the number of doctorate degrees we have graduated to this end. We are making more efforts to streamline doctorate education within our school with the help of graduate board. I could be very happy when we graduate more and contribute to the pool of national human resource grid of individuals with doctorates. The government is looking at us and we will usually give the best” A dean of the Faculty - University A(RL/1/FASS/UA)*

*“As the director of the Board, the completion picture is not pleasing at all. We are expected to be the best in doctorate completion. I am aware that yes, issues to do with policies are there but as a board, we have reviewed them and they are waiting for the due process. I don’t want to preempt of what we are planning over doctorate programme training as a university but for sure...., watch the space for changes.” A director of graduate board- University A(RS/1/DBPGS/UA)*

A doctorate student from the university supported the findings in response from the administrators and observed the following;

*“I am more worried when I see that those I met already enrolled for doctorate programmes are not graduating. My fear is even worsened when I realise that they have gone beyond the time provided in the doctorate programme policies. I wish the university could do more to ensure that the timelines are met not only by the doctorate students but also by the university supervisors and administration in ensuring that there is timely completion.” A doctorate student at University A(RS/14/DG/FASS/UA)*

The trends indicate that doctorate completion had improved over time in the schools studied under the period of study. There was a decline in completion between 2003 and 2004 which then sharply rose from 2006 to 2010 when the completion declined and stagnated up to 2012. Again, 2013 all through to 2016, the completion sharply rose again. In terms of gender, more males than females graduated from the university with doctorate degrees in the schools that were studied during 2003-2017 other than 2007 when there were more females than males who graduated with doctorate degrees. This was attributed to the policy of fast-tracking those enrolled for

various doctorate programmes and establishing the Graduate School at the university. The respondents reported the following during the interview;

*“I am glad that the graduate school was established to coordinate all matters to do with postgraduate students. I am particularly interested with the coordination which will improve the graduation or more, more ..... more and more doctorates. Since its inception, the school has seen the revision of postgraduate rules governing doctorate programmes. There is improved number of those enrolling for doctorate programmes and we are fast-tracking those who need to graduate. We hold regular meetings with doctorate students to find out what is constraining them and how we can improve. This is coupled with organising doctorate seminars to expose them to research aspects.” A member of the graduate school- University B(RM/1/GS/UB)*

This was supported by a dean of a school who observed that;

*“During my tenure as a dean, I have seen much effort being put in place by the graduate school. The energies have been directed more especially to doctorate students. That cooperation between my school and the graduate school has seen the number of those graduating increasing steadily.” A dean of the school - University B(RD/1/SHSS/UB)*

A doctorate student observed that;

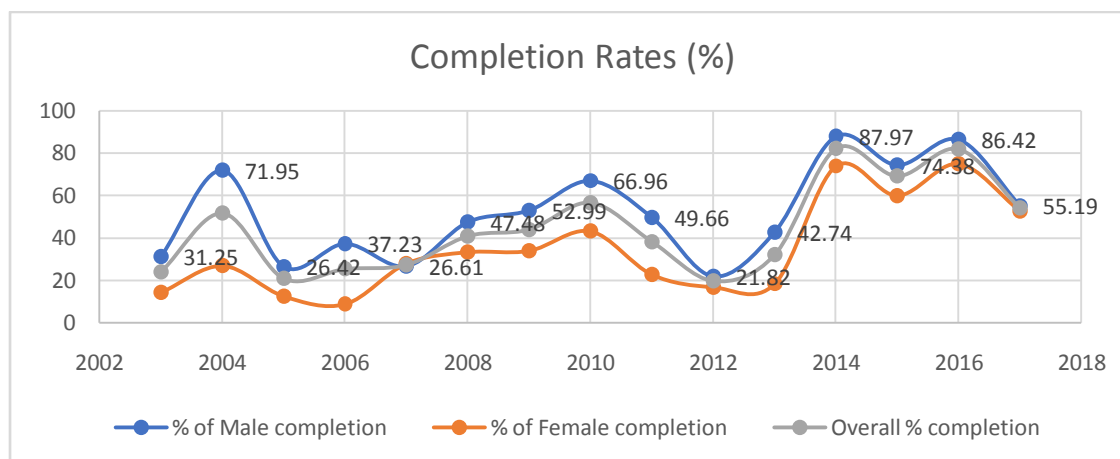
*“With the regular meeting between my supervisor and I, I have made tremendous progress towards realization of my doctorate. The tracking forms which must be forwarded to the graduate school has acted as a check for both my department and school besides my supervisors. I hope to complete my studies the soonest.” A doctorate student the University B(RS/33/DLL /UA)*

The trends indicate a sharp contrast between male and female number of candidates awarded doctorate degrees during the period of study. More males than females were awarded doctorate degrees. It is worth to note that from 2003 to 2006, there was a downward trend in the number of those who received a doctorate degree. Between 2007 and 2008, the numbers rose and then declined in 2009. From 2010 to 2011, the numbers increased and then fell again in 2012. The numbers then increased significantly in 2013 to 2016 and fell again in 2017. The interpretation of this data means that doctorate completion has not been uniform during the period of study for the University. More males than females were awarded doctorate degrees. The increase in those who received doctorate degrees was attributed to the government policy of those who are supposed to teach at the university to possess doctorate degrees themselves.

Figure 4.10 presents trends of those who were awarded doctorate degrees from University D between 2003 and 2017. The trends demonstrate an increase in the number of those awarded degree over the period of study. However, more males than females were awarded doctorate degrees. The trends indicate that between 2003 and 2007, there was a steady increase of those who were awarded doctorate degrees. However, the trend became unstable in the subsequent years with the year 2012 recording the lowest number of those who were awarded with the doctorate degrees from the University. From 2013 to 2016, the number increased and then declined in the year 2017. This data would be interpreted to mean that doctorate completion trends indicate increase in the number of those graduating with doctorate degrees. However, gender disparity is glaring in the data with more males than females graduating with doctorate degrees from the University during the period of study.

Figure 7 above indicates trends in doctorate completion per gender covering the period of study. The trends indicate that more males than females were able to earn their doctorate degrees from the four universities in the period of 2003-2017. The trends indicate that from the four universities, there was an increase in those who earned their doctorate between 2003 and 2004. In 2005, the number went down. This however changed and from 2006 to 2008 more males earned their doctorate degrees. In the year 2009, the number stagnated and the situation changed in the year 2010 which saw the highest number of males earning their doctorate degrees from the four universities cumulatively. The number went down, rising again in the year 2012 and started falling in the year 2015. The trends in the number of females who earned their doctorate degrees between 2003 and 2008

progressively increased with the year 2008 more females than males earning their doctorate degree. This number kept changing with data from 2009 indicating the trends sharply declining.



Sources: Fieldwork Analysis

**Figure 8: Trends on Doctorate Completion Rates**

The Figure 8 above indicates completion rates trends from the four universities (the University A , University B, University C and University D) for the period under review. The plotted figure used the enrolment and completion statistics to arrive at the completion rates. More males than females enrolled for doctorate programmes for the period under study. In terms of completion, more males than females completed and were awarded doctorate degrees during this period of study. The completion rates rotated between 23.95% and 45.22% with the highest completion rates being in the year 2014. However, from 2014, the completion rates increased. This was interpreted to mean that more efforts were being directed to doctorate education in Kenya. Especially with the requirements by CUE that only individuals with doctorate degrees could be allowed to teach at the universities.

## V. Conclusion

The doctorate students' progression trends in the period under study revealed that there was low doctorate student enrolment and completion rates. This was shown by the numbers of those who enrolled and those who graduated. The findings established that doctorate programme procedures, institutional doctorate resources, and doctorate supervision practices account for variations of enrolment and completion rates.

## Recommendation

There is an urgent need for the state agencies charged with the responsibility of offering support to doctorate programme studies in Kenya to greatly improve their operations to include readily financial support for those pursuing doctorate programmes. This will boost doctorate persistence and completion.

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