

**EQUITY AND ACCESS EFFECT OF STUDENT LOANS TO UNIVERSITY  
EDUCATION IN KENYA. THE CASE OF MOI UNIVERSITY AND  
UNIVERSITY OF EASTERN AFRICA BARATON.**

**BY**

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STUDIES**

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## DECLARATION

### DECLARATION BY CANDIDATE

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## ABSTRACT

This study was undertaken to critically examine the extent to which the Higher Education loans has and can help promote equity and access to university education. It was aimed at establishing the socio-economic status of students awarded financial support by HELB and course of study, determining the effect of student financial support on the participation of female students in higher education and determining the socio-economic background of beneficiaries of other non HELB financial support. The study was carried out in Moi University and Baraton University. This study employed the ex-post-factor research design as a paradigm to investigate possible cause and effect relationships. Samples for the study were selected using probability sampling technique. In particular, stratified random sampling technique was employed to collect 379 respondents from the two universities. Data was collected using questionnaires and interview guide. The data collected was analyzed by descriptive statistics. Primary and secondary data was collected from students and university admission office, by use of questionnaire and interview guide. The data was summed up by use of tabulations, bar graphs, and charts. The income share tables, Lorenz Curves and the Gini coefficients were used to determine the level of inequality in the provision of loans to the recipients. Chi-square and Pearson's Product Moment Coefficient (Pearson's  $r$ ) were used to test relationships. The findings of this study showed that there's a gap in the attempt to equalize opportunities in higher education. Not all students of all socio economic background are enrolled in the higher education. It was found that female students are least represented at high professional and science based courses in favour of men. The findings of the study are useful to policy makers in providing guidance on how best the award of the student loans will help in promoting equity and access to higher education.

## **DEDICATION**

To my beloved God Parents and Guardians Mr and Mrs Elkana and Emily Kalya, who defied all odds to ensure that I go to school in an environment that no tangible hope was forthcoming. Thank you may God Bless your family.

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**LIST OF ACRONYMS**

HELB	Higher Education Loans Board
CHE	Commission for Higher Education
KCSE	Kenya Certificate of Secondary Examinations
GOK	Government of Kenya
HE	Higher Education
SAPs	Structural Adjustment Programmes
IAE	Institute of Adult Education
JAB	Joint Admission Board
UGC	University Grants Committee
FTEF	Full Time Equivalent Faculty
FTES	Full Time Equivalent Student
USAID	United States Agency for International Development
JAICA	Japanese International Co-Operation Agency
SLP	Stafford Loan Programme
PFP	Policy Framework Paper



## **CHAPTER ONE**

### **BACKGROUND OF THE STUDY**

#### **1.0. INTRODUCTION**

This chapter deals with the background of the study, statement of the problem, purpose and objectives of the study, research questions, significance and justification of the study, scope and limitations, underlying assumptions, theoretical framework and definition of terms.

#### **1.1. BACKGROUND TO THE STUDY**

Student loan programmes have been introduced to enable students to receive financial support in order to meet two types of expenses including maintenance or living expenses which include travel and books as in most European and Scandinavian countries or to pay tuition fees as in the case of Japan, the united states, Kenya and Zimbabwe or to meet expenses of student services such as meals, accommodation, medical care as in Greece, Portugal, Spain and in the majority of developing countries for example in Kenya and Malawi (OECD, 1990,1 978,UNESCO, I 999,Johnstone 1986)

Student loan programmes in the developing countries and Africa in particular have a relatively short history. In Africa they have been cited as unworkable because of the problems that have continued to plague these programmes. Critics have based their argument on the fact that no programme so far is self financing. Student loan scheme in Kenya and Nigeria have suffered from poor administration and low loan recovery ratios due to high rates of defaulting and evasion. These have made the loan schemes

more expensive to operate than if outright grants or business had been provided (Ziderman and Albrecht, 1995)

From an equity point of view an income — contingent loan is more likely to encourage participation in higher education of students from poor backgrounds who often tend to be risk averse and likely to be discouraged from borrowing (Barr, 1989, & Bowman et al, 1986). According to Albrecht and Ziderman, (1991) a well functioning, effective and efficient government subsidized student support scheme must be targeted to the financially needy for it to fulfil intended objectives, Woodhall (1987) argues too in support of a targeted, or what she refers to as selective student support scheme, on account of cost — effectiveness, she distinguishes from sets of eligibility criteria for selecting recipients for supports which include 1) academic merit 2) financial need 3) a combination of both merit and need 4) type or subject of study and institution.

Ability to pay criteria requires that students who are financially able, particularly those from the upper socio-economic scale should be made to pay their way through higher education while the poor and needy, for equity consideration, ought to be financially assisted through some form of delayed payment programme combined with bursary or scholarships and tuition fees. In other words, selective subsidies are targeted to the needy students. Economists have no simple, cross-societal, time invariant definition of the socio-economic classes. But we can compare across countries the absolute and relative positions of the lower, middle and high classes' stratum (Nelson 2000). For example, households with percapita income between 75% and 125% of the median can be termed as middle class. Middle stratum in many

households in developing countries is obviously much poorer in absolute terms than their counterparts in rich countries. They also tend to be poorer relative to their rich fellow citizens. Middle income households in developing countries are not only closer to poverty (obviously given their lower average income) but also probably more downwardly mobile.

In Kenya, the current status in education is characterized by huge demand for higher Education.

After the fiesta among parents and candidates who did well in KCSE 2010 the hard part begins; which is the contest for diminishing places in public universities?

The cutthroat competition for limited places, which increase marginally per year but not in proportion with growth in enrolment, will be fiercer this year (2010) after more than 10,000 more students qualified for university admission.

*“When the Joint Admissions Board (JAB) met to consider admission for the 2009 KCSE candidates last week, it allowed only 24,221 to join the universities leaving out 56,827 students. It did this by admitting only those with 61 points and above for girls and 63 points and higher for boys” (Daily Nation 15<sup>th</sup> may 2011 pg 5)*

For the few who will make it into regular degree programmes, it will also mean lesser fees to pay because of Government subsidy. But for the majority, estimated to be over 70,000 who attained C+ and above — or above 55 per cent performance — options firmly remain in the high-priced parallel degree programmes or the limited opportunities in middle-level colleges such as those run by the State like Kenya Medical Training College (KMTC).

The trickier part, however, is that Kenya's job market no longer absorbs Diploma holders as fast as it did a decade ago, and certificate courses are all but gone because of irrelevance to market needs and the higher sophistication and qualifications employers seek.

This has been aggravated by the increased chances for degree courses under the Parallel Degree Programme, which have cut down the number of Kenyan students going abroad — say to India and Europe — for further 'studies'.

It is estimated that the public universities take at least 30,000 students for degree courses under the self-sponsorship programme. (Daily nation Attention of parents and students who met the minimum C+ for university entry will now be riveted on the Joint Admissions Board, which sets the cut-off points for the various public universities and courses, with medicine and engineering courses, expected to take up the top performers.

*In the KCSE 2010 results released, 1,566 students passed with A grade or 80 to 100 per cent marks, 6,565 passed with an A- or 75 to 79 marks, 12,737 (B+) or 70 to 74 marks, 18,173 (B) or 65 to 69 marks, 24,727 (B-), or 60 to 65 marks and 33,366 (C+) or 55 to 59 marks. (Daily Nation 15<sup>th</sup> may 2011 pg 6)*

Those who scored less than 55 marks or grade C will either have to join middle level colleges or re-sit the examination to improve their grades. Even though C+ is the minimum grade that qualifies one to join university, JAB oversees admissions to these institutions using a 'cut-off points' system that locks out majority of those who are qualified because not all can be accommodated in the country's universities. Admission is usually determined by facilities the various universities have. If the facilities at the local universities are not improved any soon, then the cut-off point

could be raised by JAB to lock out even more students even though they are due for admission.

More students qualify to join university each subsequent year but majority who pass with good grades fail to secure space in the country's institutions of higher learning due to the space and facilities factor. More than 70,000 out of the 97,134 students, who attained sufficient grades to qualify for admission to State universities, may be denied a chance to study at the institutions because of lack of sufficient facilities if drastic measures are not taken to improve the capacity of universities. Out of the 81,048 students who qualified for university in the 2009 KCSE, State universities were only able to admit 24,221 translating to 30 per cent. Every year, more pressure is put on secondary schools to ensure students pass with good grades, but the more they try, the farther the ceiling for university admission is raised. Those who did not qualify for admission to university are 43,769 who passed with C grade, 52,410 (C-), 56,762 (D+), 56,861 (D) and 41,207 (D-). Students with the lowest grade E were 6,198.

*Kenyatta University Vice Chancellor Prof Olive Mugenda who chairs JAB admits Kenya is in a crisis that has been building up over the years. "The infrastructure that is in place cannot accommodate the high number of students that qualify from secondary school. We appeal to the Government and other stakeholders to budget for infrastructure improvement in public universities," she told The Standard.*

Even though Prof Mugenda downplayed the magnitude of the crisis, it is becoming clear that unless drastic measures are taken, the number of students who will continue to miss out on university education will continue to increase year after year. Mugenda, however, feels some of those who miss admission can access university

education through parallel degree programmes. "We expect parallel degree programmes to absorb at least 15 per cent, while the rest will join private universities," Prof Mugenda said.

Education Minister Sam Ogeri said his ministry has put in place measures to realise its goals at the secondary school level. "We have realized an unprecedented increase in the total number of secondary schools in the country from 4,071 in 2003 to 6,163 2010 representing an additional 2,542 schools translating to a 62.44 per cent increase," Prof Ogeri said.

While the number of secondary schools has increased to more than 6,000, there are only seven public universities with more than 14 constituent colleges. However, it is the number of private universities that seems to be on the increase. There are currently 30 private universities up from 17 in 2008. Results of the secondary school exams released also bring to the fore, the inconsistencies in Kenya's education system. Besides denying bright students opportunity to study at State universities, the system has also relegated the needs of those who do not attain high grades. Over the years, tertiary colleges have been taken over and converted into university colleges to meet the increasing demand for higher education. But in the race to provide more space for degree students, the Government has relegated the needs of the majority of those who do not make it to university.

Economies have no simple, cross-societal, time invariant definition of the social classes. But comparison can be drawn countries the absolute and relative positions of the middle stratum (Nelson 2000) for example, households with per capita income

between 75 and 125 percent of the median – recognizing that in many countries this group may not fit our prior notion of the middle class. Middle stratum households in developing countries are obviously much poorer in absolute terms than their counterparts in rich countries. They also tend to be poorer relative to their rich fellow citizens. Middle income households in developing countries are not only closer to poverty (obviously given their lower average income), but also probably more downwardly mobile.

With such disparities, there is a big question as to whether Higher Education loans can help enhance equity in access to higher education. This study sought to determine the socio-economic status of students enrolled in Kenyan universities in order to answer the question ‘who gains access to Higher Education and who benefits from higher education loans.

## **1.2. STATEMENT OF THE PROBLEM**

Education is one of the sectors of the economy that can be used by any government to enhance equity in the society. Its effectiveness in accomplishing this however depends greatly on accurate formulation and application of education policies. Education has greatly been affected by the problems of uncontrolled growth of enrolments, increased expenditure in an economic environment of constrained national budget and the generally declining financial resources, exacerbated by international and domestic economic stringency (Ziderman and Albrecht, 1995, Eicher and Cheveillier, 1995). The crisis which has serious implication for equity, efficiency, quality of teaching, research and scholarship was also aggravated by policies to democratize access to higher education adopted by governments in a number of low and middle income

developing countries in the 1980s (Woodhall 1992, Hincheliffe 1987, world bank 1988)

Student loans are able to relieve pressures on national budgets by facilitating greater cost sharing through the raising of tuition and other university fees. They both enable students to avoid the burden of the up-front payment of increased tuition fees, as well as enabling them to delay loan repayment until they are in receipt of the higher salaries that generally accrue to university graduates. Liberated resources can be used in areas of greater priority for society, both outside and within the education sector and notably basic education. However there is a general feeling among the stakeholders and students that the loan scheme tends to benefit students from the middle and high income families, which could further be compounded by the belief that universities attract students from high level socio-economic status. (Salmi, 1992; Tilak, 1997). Further, imperfection in capital markets related to the lack of collateral security for education investments restricts the ability of poor students to borrow for education. In early 1980s Psacharopoulos et al. (1986) found that in developing countries, the highest income group gain the highly government subsidized or free tuition in higher education. Moreover, in Indonesia, the upper 30 percent group enjoyed about 83 percent higher education subsidized whereas the lower 40 percent income group received only about 7 percent (Salmi and Hauptman, 2006). The higher education expansion in most developing countries has generated a significant growth in student's gross enrollment. The high growth of student enrollments also increases the number of extra places for students who come from socially and culturally underrepresented groups (Salmi and Hauptman, 2006). The research about the relationships of SES student's background and educational achievement is one of the



best-established results of educational attainment research. However, there is only a little research about the success of the recent expansion policies in higher education in diminishing the inequalities of access (Lewis and Dunder, 2002). Lewis and Dunder argue that expansion of higher education and some government's supply side policies were necessary but not sufficient to lower the equity access gap.

It should be noted that equal educational opportunity does not necessarily imply that people will end up equal but simply that an individual's socioeconomic position will be the result of a "fair and open contest—one in which the winners are those who work hardest and demonstrate the most ability" (Parelius and Parelius, p. 264). In the debate over inequality, one critical question concerns the degree to which advantage is passed on from one generation to another. For example, if the social-class standing of a family is high in terms of income, occupational status, and educational attainment, will the family's offspring have greater access to the highest levels of a school system? And what is the effect of family socioeconomic position on the relationship between level of schooling attained and subsequent income and occupational status? Christopher J. Hurn noted in 1993 that if a society's education system is truly meritocratic (that is, based on ability and not on inscriptive factors such as social class, gender, and ethnicity), then (1) the correlation between individuals' educational attainment (how far one goes in school) and future occupational status should increase over time; (2) the correlation between students' educational attainment and their parents' socioeconomic status should decrease over time; and (3) the correlation between parents' SES and their offspring's SES should also decrease. (Parelius, R J, and Parelius, A. P. 1987). Instead, educational attainment and years of schooling have been identified as the key factors in determining subsequent occupational attainment,

income, and SES, particularly in highly industrialized countries. Education systems and teachers most frequently bear the brunt in cost reductions in social spending, resulting in the erosion of previous gains for the poorest and most marginalized sectors of the society and an undermining of public schooling relative to that of the private sector. (Hernes, G. 2000). Socioeconomic and regional participation imbalances can be found in most developed nations, despite the massification of higher education systems.

This study therefore strived to ascertain how far, the loan scheme has helped to enhance equity of access of students from all socio-economic backgrounds. This work sought to define appropriate measures of inequalities in university education, and document the scope, significance and consequences of disparities in university education opportunities. The study expanded the understanding of the main determinants of these inequalities, and offer concrete recommendations for effective policies, both monetary and non-financial, directed toward widening participation and improving the chances of success of under-privileged youths.

### **1.3. PURPOSE OF THE STUDY**

The purpose of this study was to determine the extent to which university loans could promote equity of access to Higher Education in Kenya.

### **1.4. OBJECTIVES OF THE STUDY**

The specific objectives were:

1. To establish the socio-economic status of students awarded financial support by HELB.

2. To determine the socio-economic background of beneficiaries of other non HELB financial support.
3. To determine the effect of student financial support on the participation of female students in higher education.
4. To examine socio economic background of students enrolled in different programmes of the university

### **1.5. RESEARCH HYPOTHESES**

**Hypothesis 1:** There's no statistically significant relationship between students socio economic status and the amount of HELB loan awarded.

**Hypothesis 2:** There's no statistically significant relationship between the students socio-economic background and the students loan award status.

**Hypothesis 3:** There's no statistically significant Relationship between amount of loan awarded and gender of students enrolled in university education.

**Hypothesis 4:** there's no statistically significant relationship between the students' socio-economic background and the course of study.

### **1.6. SIGNIFICANCE AND JUSTIFICATION OF THE STUDY**

The study will have the following significance and justifications

#### **1.6.1. JUSTIFICATION**

Since the introduction of HELB loans to Kenyan university students there's need for a focused policy guidelines to ensure that equity considerations are achieved. Information regarding the impact of student loans on equity and access to higher education is of interest to a large number of institutions that are currently dealing with

ways to finance the academic programs in the global university community. Although this study concentrates upon two universities for reasons of economy and scale, the investigation was designed in such a way as to be useful to a wide range of situations, particularly where demographic and cultural factors were similar to the studied institution. The general aim of the project was to provide information that will assist in the design, development and formulation of financing policies in the changing global situation, and in particular to highlight those factors that should be emphasized in order to further encourage universities to enhance their funding options. It is anticipated that this investigation will provide new perspectives on this issue because the research methods employed focused on qualitative understandings drawn from key informants in the area.

The study is also expected to provide guidance on how best information concerning student socio-economic status can be properly captured to enhance equity. It's also expected that once the loans are forwarded to the students they should be able to repay thus posing a question how best the loan scheme equalizes resource distribution. It will be useful to HELB, higher education institution and will also add to knowledge and assist policy makers to formulate appropriate policies in this area. It is also useful to private practitioners.

### **1.6.2 SIGNIFICANCE**

Public spending on education in Kenya is highly inequitable (Jane Knight 2008). First, the government is spending a significantly higher proportion of its resources on relatively few students. Second, the proportion of students in higher education is highly skewed in favor of the rich. More than two-thirds of students in university education come from the richest and second richest quintile, while the two poorest

quintiles represent only 7.5% of enrollments in higher education. Third, there is considerable discrepancy in institutional funding in both absolute and relative terms. Fourth, the student loan program is inequitably distributed, with 80% of the loans being accessed by public university students to the detriment of private university students. This pattern is particularly inequitable as most of those students seeking access in private institutions come from lower socio-economic backgrounds. Access to higher education has been stimulated through the introduction of cost-sharing initiatives in the public system and through the expansion of the private university component. However, the public funding mechanisms are highly inequitable, as costs are not shared equally. Some students, invariably those from the better schools and richer households, are fully

Government sponsored and are spared any private costs. The costs for needy students are mitigated to some extent by the provision of loans and bursaries by the Higher Education Loans Board. However, access to Higher Education Loans Board funds is limited for students in the private higher education system.

## **1.7. SCOPE AND LIMITATION OF THE STUDY**

### **1.7.1. SCOPE**

The study was carried out in two universities; one public university (Moi University) and private University (Baraton University). Moi University has 11 schools and the total population of 27,000 students. Baraton University has 5 schools, with a total of about 3,000 students.

Firstly, establishment of Moi University differs significantly from other public universities in Kenya. In appointing the Presidential Working Party into the second

university in Kenya, the Government emphasised the new university was expected to introduce new areas of learning which would help meet the high level manpower requirements of a modern and increasingly technical society (Kenya, Moi University Calendar, 1988; page 1). The University of Nairobi had been criticised for adopting its objectives from the University of London without modification and therefore, they do not relate to the cultural development, social and physical requirements of Kenya's rural area where 80% of the people live. (Kenya, Ministry of Education, 1981) In view of the above observations, the second university was established with some modifications; As a result of this, Moi University is commonly referred to as a university with a 'difference'.

Secondly, Moi University is among the universities with the highest number of both post graduate and undergraduate students (CHE, 2008; Kenya, Moi University Strategic Plan, 2005 Kenya Education Directory, 2009)

On the other hand University of Eastern Africa Baraton is one of the oldest private universities in Kenya with a rich history. It is a private coeducational Seventh - day Adventist University located about 50 km from Eldoret Kenya. It is built on a land allotted by the Kenya Government to the Baraton Animal Husbandry Research station of 339 acres (1.37km<sup>2</sup>) in Nandi County. Classes began in January 1980 in the temporary farm structures which have since been replaced with new and modern buildings. It offers various degrees in a number of graduate and undergraduate programmes in the fields of business, the humanities, agriculture, health sciences and education housed in five Schools: School of Business, school of Humanities and Social sciences, school of Health Sciences, School of Science and Technology and

school of Education. It is fully accredited by the commission of higher education, Kenyan government and was the first private university to receive the charter granted by the republic of Kenya on March 28, 1991. The University is also a member of the Inter University council for East Africa, the Association of Commonwealth Universities and the association of African Universities.

### **1.7.2. LIMITATIONS**

1. Correlation between students' socio-economic status and loans does not necessarily imply causation although researchers often tend to interpret such a relationship to mean causation. The correlation coefficient is very sensitive to the size of the sample.
2. As sample size increases, the correlation drops and then stabilizes when the sample size is big enough. Therefore, a small sample in co-relational studies yields erroneous results. By use of Krejcie Morgan and Daryle matrix this limitation could be mitigated.
3. Generalizability is also a limitation in this study (2 universities out of over 40 universities)

### **1.8. ASSUMPTIONS**

The study will have the following assumptions:

1. During the research period all the loans for the 2010/2011 academic year has been processed and the data is available
2. University catchment area is representative of the whole country.

### 1.9. THEORETICAL FRAMEWORK

This study will be guided by the theory of socialist economics of education postulated by a French Writer called Louis Blanc in the 1948. He focused on the excesses of unregulated capitalism and underlined the need to create an economy that redistributed income from the rich to the poor so as to create an economy of well being (Colander, 1994)

This theory was the basis on which the Lorenz Curve (that is the geometric representation of the distribution of income among families in a given country at a given time; (Baumol and Blinder, 1979) was mooted. The Lorenz curve measures the cumulative percentage of families from the poorest to the richest on the horizontal axis while cumulative percentage of income is put on the vertical axis.

The cumulative percentages are described in terms of quartiles, quintiles or deciles. According to Psacharopoulos and Woodhall (1985), quartiles, quintiles, and deciles are divided into; four, five and ten portions respectively. The measures are then used to compare the relative share going to specific groups such as the top quintile or the bottom quintile as shown in table 1

**Table 1. Income shares by quintiles.**

<b>Income Quintiles</b>	<b>Percentage of family income</b>	<b>Cumulative percentage of family income</b>
I	3.9	3.9
II	9.6	13.5
III	16.0	24.5
IV	24.1	53.6
V	46.4	100.0

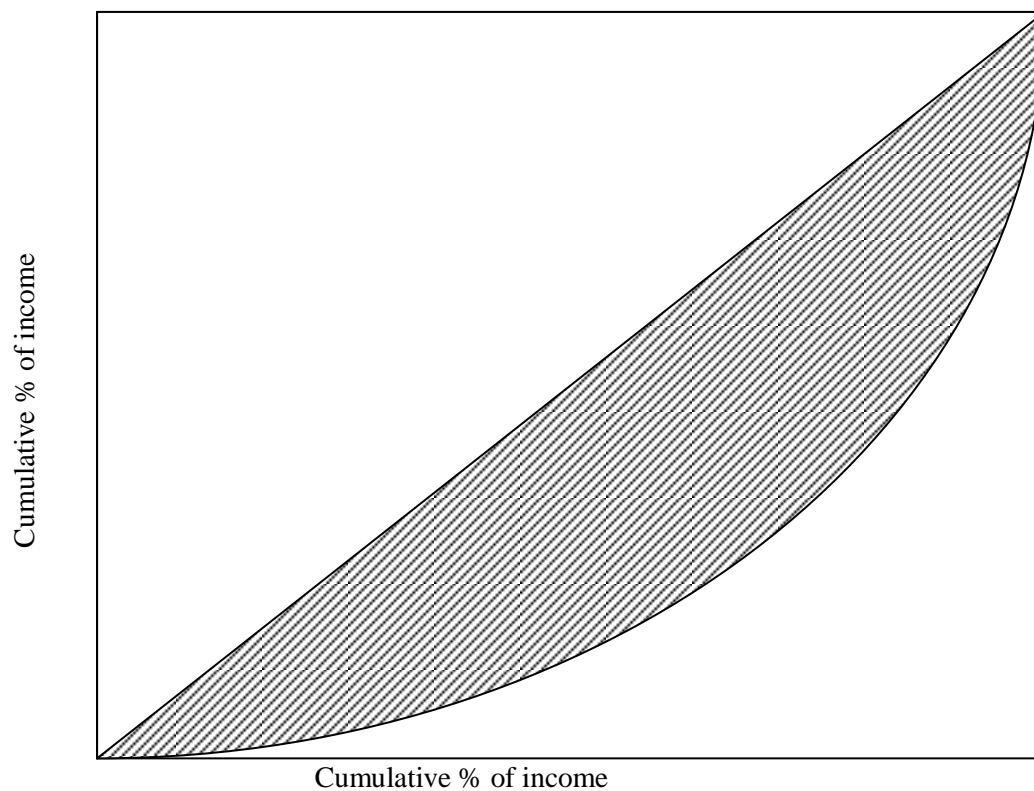


*Source: Baumol and Blinder, 1979*

A diagonal line would represent a perfect allotment of income. If there is any discrimination at all, the poorest 20% of families will get less than 20% of all the income. Discrimination in allotment of income corresponds to points below the parity line. Public subsidy in education is justified because of both equality and equity of educational opportunity. If education were provided at market prices, only those who can afford to pay tuition fees and other related costs would enrol.

This would lead to under investment in education from the social point of view. In addition to this, income inequalities would be preserved from one generation to the next because education is itself a determinant of lifetime (Psacharopoulos and Woodhall 1985). Thus if the student loan is perceived as a social input among the students from low socio-economic status, the expected returns in this investment would be increased graduation rates in university education by the recipients. The distribution of student loans among the recipients would then be shown on the curve of concentration (Lorenz Curve). The allocation of student loans among university students in Moi and Baraton University was compared with a perfectly equal distribution that is, the actual share received by every group of recipients was compared with what would have received if the allocation were equitable. Perfect distribution would give a straight diagonal line shown.

Deviations from this diagonal indicate inequalities in distribution and would be revealed by the Lorenz Curve. The bigger the area below the parity line, the more unequal is the student loan allocation.

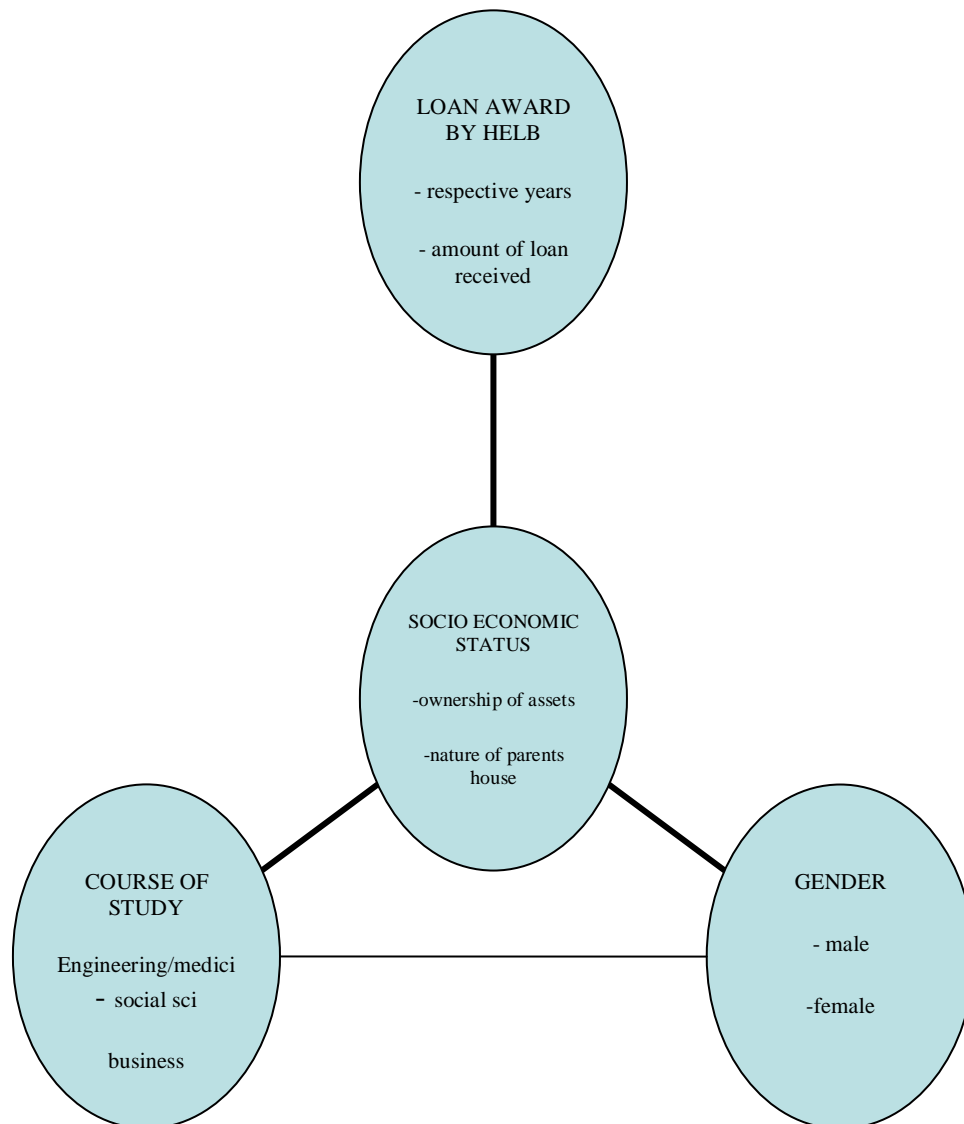


**Figure 1.1 (a)**

The socialist economics theory of education made it necessary to collect data on the socioeconomic background of every loan recipient involved in this study. Besides this data, every recipient provided information on the amount of loan received on an annual basis whose aim is to equalize educational opportunities for the four academic years. The foregoing data made it possible to determine the levels of inequalities in the provision of loans to the undergraduate students of Moi and Baraton Universities. Inequalities in the loan allocations were determined by drawing Lorenz Curves and by calculating Gini coefficient for the various academic years. The Gini coefficient is the

area between the line of perfect equality and the observed Lorenz Curve as a percentage of the area between the line of perfect equality. The higher the coefficient the more unequal the distribution is.

## 1.20 CONCEPTUAL FRAME WORK



## 1.21 OPERATIONALIZATION OF KEY TERMS

**University Education:** The training provided by universities in order to prepare people to work in various sectors of the economy or areas of culture. University

graduates may find employment in research and design institutions, general-education schools, and secondary and higher specialized educational institutions. In the Kenya, university education provides training primarily in the most important areas of the humanities and natural sciences. The term “university education” also means the totality of general and specialized knowledge and skills that enable a university graduate to solve problems that he encounters in industry or to perform scientific research or pedagogical work within the area of specialized knowledge that he has acquired.

**Access:** Access is the process of enabling entry to higher education. Access has two linked but distinct meanings. The general concept that relates to making higher education accessible and shorthand for programmes that provides preparation for entry to higher education, such as pre university courses. Access is usually associated with widening access that is, facilitating the entry of a wider range of people into higher education than are traditionally included. It may also be linked to deepening access that is, ensuring that significant proportions of students from non-traditional areas (such as working class or some ethnic minorities) enter higher education. For the purposes of this study it is defined accessibility (including affordability and opportunity) as the freedom to obtain and make use of a post-secondary education. (Doherty-Delorme and Shaker 2001, p. 7), it depicts that learners successfully completing programmes that gain approval will gain a qualification for entry into Higher Education that has national recognition (LOCN, 2004).

**Socio-economic status/background:** "Social class refers to the hierarchical distinctions between individuals or groups in societies or cultures."

([http://en.wikipedia.org/wiki/Social class](http://en.wikipedia.org/wiki/Social_class)) Social class influences socioeconomic status because of how people are treated depending on the class they come from, which may be determined by various factors. Socioeconomic status strongly influences the varying student perspectives on the value and attainability of higher education. The probability of students attending schools of higher education is more likely in students from higher socio-economic backgrounds.

**Equity:** Equitable tertiary systems are those that ensure that access to, participation in and outcomes of tertiary education are based only on individuals' innate ability and study effort. They ensure that educational potential at tertiary level is not the result of personal and social circumstances, including of factors such as socio-economic status, gender, ethnic origin, and immigrant status, place of residence, age, or disability.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 INTRODUCTION**

This chapter gives a review of related literature for the study that will be based on available literature drawn from various sources. The chapter gives a discussion on the purpose of education, financing educational investment, the balance between public and private financing of education, the arguments for public subsidy of education, the effect of public subsidies on equity; grants, loans and graduate taxes, the use of student loans in developing countries; equity and quality of education; equity implications of cost recovery mechanisms; the role of government in financing higher education; higher education crisis; potential solutions to higher education crisis and the concept of equity

#### **2.1 WORLDWIDE TRENDS IN FINANCING HIGHER EDUCATION**

The financing of higher education throughout the world has seen dramatic changes in the last decades of the 20th and the first decade of the 21st centuries.<sup>1</sup> In the main, these changes in financing are responses to a worldwide phenomenon of higher educational costs tending to rise at rates considerably in excess of the corresponding rates of increase of available revenues, especially revenues that depend on taxation. (UNESCO – UIS/OECD 2005). The consequence in most of the world has been a shortage of revenue to accommodate, first, the increasing costs of instruction and research, and, second, the increasing revenue needs of rising enrollments. These trajectories obviously diverge: Resource needs are increasing very rapidly while state budgets are static or even faltering. Solutions must be implemented on the cost and/or

the revenue sides. The cost-revenue squeeze itself, as well as some of the so-called solutions employed to meet it, can have a deleterious impact on both the quality and the capacity of universities and other institutions of postsecondary education and thus on the goal in virtually all countries to expand higher educational participation and access. (UNESCO 2006)

Herbst 2007 points out six trends in the latter years of the 20th and early years of the 21st centuries—each with economic, political, and social roots and consequences—are noteworthy for their impacts on the financing of higher education and in turn on higher educational participation and accessibility. These trends, while varying both among countries and within each country, form the context for higher education's currently widespread financial austerity as well as for the emerging policy solutions which exhibit some very similar patterns despite local variations. These trends are:

- The increasing unit, or per-student, costs of instruction.
- The increasing enrollments.
- The increasingly knowledge-based economies and the consequent additional expectations heaped on higher education to serve as a major engine of economic development and individual betterment.
- The failure of governmental, or public, revenues to maintain their share of the cost increases resulting from these pressures on higher educational expenditures.
- The trend toward increased globalization, which contributes both to the increasing cost trajectories and to the faltering governmental revenues.
- The pattern of increasing liberalization of economies and the resulting decentralization, devolution, and privatization of public and private systems, including institutions of higher education.



The fundamental financial problem of higher education all over the world—and the reason that even wealthy institutions feel the pinch of austerity—begins with the fact that universities face a trajectory of annual cost increases. This trajectory is the natural and quite appropriate rate of increase in the wages and salaries they pay. This rate tends to track the rate of increase of wages and salaries in the general economy—or, if there is any real growth in the economy, at a rate in excess of the prevailing rate of inflation. This phenomenon of rising relative unit costs in sectors of the economy that are labor intensive and productivity immune, or at least productivity resistant, was first articulated by Baumol and Bowen (1966). Examples include symphony orchestras, schools, and universities. Accelerating this natural rate of unit (or per-student) cost increase are other factors peculiar to many universities that further accelerate annual cost increases in varying degrees in different countries, depending mostly on available revenues:

- Technology. In goods-producing industries in the private sector, technology lowers costs by substituting capital for labor and driving down unit costs. In contrast, technology in higher education increases costs—supposedly altering the very nature and improving the value of the product, but still requiring more, not less, revenue.
- Constant change. In higher education, new programs are added almost always faster than it can shed old programs with their faculty and staff.
- Research. The costs are already high and rapidly increasing, especially in the physical and biomedical sciences with their high technology expenses. This trend is especially exacerbated when faculty and administrators aspire beyond their constant share of prestige or of the enrollment market. It is particularly evident in elite and would-be elite universities, which seek greater scholarly recognition, better and more

academically qualified students, and higher rankings on such international league tables as the Times Higher Education Supplement's *World's Top 200 Universities* or Shanghai Jiao Tong University's Academic Ranking of World Universities.

Higher education finance, in short, is burdened with a natural unit cost trajectory that in normal years will exceed the average rate of increase of consumer prices generally. That is, even in ordinary times, the cost trajectory will naturally exceed the rate of inflation year-in and year-out. Despite the insistence of some politicians and journalists that such a rate of increase “just can't continue to rise like this,” the rate of increase very well can and probably will continue to rise at such rates as long as taxpayers, parents, students, or all of them together are willing to continue paying. This does not mean that spending will equally inevitably increase.

But this *natural* per-student expenditure is what it would take to truly “keep up” and not to be plagued by the manifestations of austerity.

Furthermore, this natural unit-cost increase beyond inflation is not a mark of managerial ineptitude or of faculty inefficiency. It is, rather, the entirely natural consequence of higher education's underlying production function. This natural consequence is reinforced by the fact that, in any set of measures to be averaged, approximately half will be above and about one-half below this average. And since an official rate of inflation is nothing more or less than an average of a great many price increases, it should be no surprise that the cost and price increases of about half of the goods and/or services produced in any economy—including higher education with its limited capacity for replacing faculty with technology—will be in this “greater than” half.

### 2.1.1 Increasing Enrollments

The second trend, affecting national systems more than individual universities, is increasing enrollments. These increases accelerate the financial impact of the aforementioned increases in per-student costs because of three forces, which vary greatly among countries. The first of these is demographics: specifically the change (generally the growth) over time in the number of youth in the conventional college or university age cohort (usually 18 through about 24). Some countries such as Italy, Germany, and other countries in Southern Europe, Russia, and Japan are experiencing demographic declines. Most countries, however—and nearly all low income countries—are experiencing increases in the traditional university age cohort (UNESCO-UIS/OECD, 2005).

The second force affecting enrollments is the higher participation rate of this cohort (UNESCO Institute for Statistics, 2006). This increased participation rate is a function of: (a) increases in enrollments at secondary levels; (b) changing employment opportunities and a perception of increasing competition for these fewer “good” jobs which will be enhanced by higher education; and (c) an increasing regard for social and economic mobility and justice. This third factor leads to policies designed to increase higher educational participation, particularly among segments of the population who have traditionally been less well represented: ethnic and linguistic minorities, women in some cultures, students from poor secondary schools, or other groups considered to be educationally disadvantaged.

A final factor affecting enrollments in some countries is the increasing amount of higher education sought by each entering student, usually expressed in terms of final degree. This factor, too, shows an accelerating trend as first-degree graduates perceive

a need for even higher levels of education to be competitive. A well known example is the increased demand for MBAs and other professional master's degrees. Licensed professions such as teachers and the non-physician health professions also show a trend of attaching new status to their degrees, both to raise their stature and to limit the numbers allowed to practice, which limits competition and enhances status and remuneration.<sup>3</sup>

The first impact that increased enrollments has on financing higher education is to increase the cost. Thus, maintaining quality requires yearly budget increases, which are usually not forthcoming. At the same time, however, increased enrollments make it easier to take management actions that are extremely difficult in a time of stable or declining enrollments. Such management tactics include, for example, raising student-to-faculty ratios or implementing new and more cost-effective pedagogies. But when enrollment remains level or declines, efficiency measures almost inevitably mean terminating jobs, accompanied by the extraordinary levels of resistance and demoralization that attend the downsizing of any institution.

### **2.1.2 The Increasingly Knowledge-Based Economy**

The third factor affecting the financing of higher education in virtually all countries is the increasing tilt, especially in already industrialized countries, toward services or the knowledge-based economy of high tech, design, finance, management, and the like. Even in manufacturing, the trend is toward modes that are less labor-intensive and more capital-intensive. The result is to increase the value, both to countries and to individuals, of at least some forms of higher education. Chief among them are management, finance, law, and the STEM fields of science, mathematics, engineering, and technology (World Bank, 2002).

The financial impact of this increasingly knowledge-based economy on higher education is manifested by the new and usually more expensive educational programs offered and by a redistribution of faculty and students among these new programs, both effects tending to further accelerate the increase in per-student costs. The increasingly knowledge-based economy also gives a premium to both individuals who have the requisite higher education and also to countries with higher education systems that are high quality, oriented to needs of employers, and broadly inclusive.

This trend forms a third source for the increasing revenue needs of higher education everywhere and for the even greater austerity that results when the needed revenue is not forthcoming. At the same time, it constitutes a strong argument for increased investments in higher education from governments (where such increases are possible and politically feasible) and from students or parents (also where such contributions are politically feasible and technically possible).

Student loans offer such opportunities, since the possibility that students will be able to repay them is high, thanks to the better jobs they will thereby obtain.

### **2.1.3 Faltering Government (Tax) Revenues**

Governments everywhere struggle increasingly under escalating burdens of pensions and the rising costs of elementary and secondary education, health care, public infrastructure, security, and other social welfare costs. Electorates in many highly industrialized countries have been getting more conservative, particularly in their distaste for taxation and what they perceive to be wasteful government spending. Many European countries have high social welfare costs and typically spend from one-third to more than one-half of their national gross domestic product in the public

sector. Such countries are seeing a growing trend of trying to shift productive resources to the private sector and reduce public deficits to comply with the requirements of the European Community and the Euro Zone. Russia, the rest of the countries that have emerged from the former Soviet Union, and the former Communist countries of Central and Eastern Europe all labor under the enormous costs of building an internationally competitive productive infrastructure and weaning a labor force away from its deeply rooted dependence on state enterprises and governmental employment. The United States struggles with an over-consuming population that saves too little of its income, demands many public benefits, and is unwilling to tax itself to get them.

Taxation in the developing countries, where production and incomes often tend to be low anyway, is technically difficult. The financial challenge for these governments is how to get a share of purchasing power when relatively little wealth comes from large, stable enterprises that can be taxed and that can also be counted on to withhold taxes from their employees. Former Communist countries, once dependent on easy and extensive turnover taxes on state-owned enterprises, now need to tax personal or corporate incomes, retail or commercial transactions, and/or property—all of which are difficult to calculate, expensive to collect, and relatively easy to evade. Businesses and individuals in many countries seem increasingly able to hide incomes and conceal the value of their taxable assets. And even in wealthy, highly industrialized countries with efficient tax systems, the increasing globalization of the world economy encourages productive enterprises and wealthy individuals to flee to countries with lower taxes.

Finally, governments everywhere are contending with politically and socially compelling competing needs for these increasingly scarce tax revenues. In much of the developing world and in many transitional countries, competition for public revenue includes the need to replace decrepit public infrastructure, meet unfunded pension obligations, provide a workable social safety net, and reverse generations of environmental degradation. In Sub-Saharan Africa, the competition for the extremely scarce public dollar is truly formidable and includes, in addition to the needs listed above, public health, the old scourge of malaria and the new pandemic of HIV-AIDS, the pressing needs of elementary and secondary education, and assistance to a badly faltering regional economy. Finally, although the government or taxpayer in most developing countries will continue to be the principal revenue source for public higher education, most or even all of whatever limited additional revenue can be squeezed out of the public treasuries for higher education will be absorbed by the need to accommodate the inevitably expanding enrollments, leaving little or nothing to accommodate what ought to be the rising unit, or per student, costs—much less allowing investment in new programs, innovative pedagogies, or academic research.

#### **2..4 The Trend toward Increased Globalization**

Globalization is not a well-defined phenomenon. The term is almost certainly overused in the discourse of higher education and in the economic, political, and social trends against which the financing of higher education must be discussed.

For the purpose of this research, however, “globalization” refers to the increasing internationalization (and the corresponding lessened significance attached to national borders and nation states) of: (a) information and knowledge, which is greatly facilitated by telecommunications that can send billions of digitized bits of

information per second by optical fiber or microwave for fractions of pennies per mile; (b) capital, or the flows of claims on wealth between savers and borrowers/investors, including students; and (c) production, which is increasingly sophisticated, technical, and capital-intensive, and which is therefore increasingly mobile and predisposed to locating where politics are stable, labor costs are low, contracts are enforceable, and tax and regulatory climates are benign.

Thus, in the globalized economy, wealth and power increasingly flow less from the location of natural resources (with the exception of oil and gas) and the production of goods, and more from the ownership of capital and knowledge, protected by enforceable contracts, patents, copyrights, and licensing agreements.

Globalization further diminishes the significance of national and local language, culture, traditions, or norms. In its place is a correspondingly hegemonic flow of language and culture from the highly industrialized and technologically sophisticated countries represented by the members of the Organization for Economic and Cooperative Development (OECD) and especially by the United States and the other English-speaking members.

Globalization's impact on financing higher education is to further heighten the advantages to both nations and individuals of obtaining high levels of knowledge and skills—and thus to increase the quality of their higher education. Globalization also applies directly to higher education in the increased ability of universities and other suppliers of knowledge to transmit this knowledge across borders electronically and without much, if any, control or regulation by local or national governments. Finally, globalization has a profound impact on the financing of all publicly financed agencies, including universities (both public and private), because it limits the ability



of governments to tax and thus diminishes their ability to keep up with higher education's voracious and continuous revenue needs. An obvious corollary of this phenomenon is that increasing non-governmental revenues becomes even more imperative.

### **2.1.5 The Increasing Liberalization of Economies**

A final trend or set of related trends in most countries is a movement in the direction of liberalized economies. This trend, which has had the most wrenching impact in former Communist countries, conveys a greater reliance on or acceptance of market forces and a commensurately reduced dependence on government to allocate resources, set prices, determine production technologies, and establish wages. Along with this increasing liberalization come increased decentralization, devolution, and privatization of the productive economy. What this means for higher education is that universities may remain publicly owned and ultimately publicly controlled but they are increasingly privatized in their reliance on non-governmental revenues, responsiveness to market forces, and incorporation of managerial norms associated with private enterprise. Large public sectors, generous economic safety nets, and redistributive taxes remain the norm in many countries. (An example is the Nordic countries.) Moreover, public ownership and heavy regulation of factories and financial institutions continue as the norm in most formerly Communist countries (e.g., Russia and China). However, the governmental ownership of all means of production and the *dirigisme* of governmental bureaucracies in most countries are giving way to a less intrusive pattern of governmental steering and to the policies and procedures associated with the New Public Management (Almaral, Meek, & Larsen, 2003; Barzeley, 2001).

Two complementary effects of this liberalization on higher education are, first, the encouragement of private higher education (both for-profit and not-for-profit), and second and equally important, the privatization of public higher education.

Regardless of the legal status of being public or private in ownership, mission, or degree of dependence on public revenue, public and private universities around the world are moving (or being forced to move) in the direction of public corporations.

In other words, they formerly occupied very much the same niche as other state agencies: clear governmental ownership, substantial governmental or ministerial control, and governmental or civil service employment of faculty and staff. Their new public corporation status means that they are empowered to raise and keep supplemental revenues, employ and compensate staff, make contracts, incur debt, and sue and be sued in courts of law.

## **2.2 HIGHER EDUCATIONAL AUSTERITY**

The immediate effect of these trends on the financing of higher education (again, varying by country) has been increasing austerity in universities, in other institutions of postsecondary education, and in national systems of higher education. This nearly universal austerity, which shows no signs of lessening, has resulted in the following characteristics:

– *Universities and other institutions of higher education.* They are experiencing the results of austerity as manifested by overcrowding in lecture theaters; restive and unhappy faculty; insufficient or outdated library holdings, computing capability, and internet connectivity; a deterioration of physical plants; less time and support for faculty research; and a widely assumed diminution of quality in teaching, learning, and research.

– *National systems of higher education.* They are also experiencing dire consequences: capacity constraints, the inability to accommodate all graduates of academic secondary levels who are capable and desirous of further study, a loss of the most talented faculty to countries with fewer financial troubles, and an increasing inability to compete in the global knowledge economy.

– *Students* are dismayed and resentful to be charged tuition fees where there used to be none or to deal with very rapid increases where fees already existed.

Living expenses have also increased, requiring a larger percentage of students to work part-time or full-time while attending school, to go into debt, or both. Many students are not even fortunate enough to find a place, while those who left the secondary school system without obtaining a diploma cannot even hope for the possibility of tertiary education.

This austerity has been most crippling in Sub-Saharan Africa but is also serious throughout the world's developing countries and in many "transitional" countries, especially those emerging from the former Soviet Union. But the kind of austerity manifested in serious overcrowding can be seen in much of Europe and Latin America. Students are unable to find seats in lecture theaters, and instruction is reduced to lectures with only rare opportunities for students to discuss an idea or ask a question. The loss of secure faculty positions, dipping faculty morale, and students graduating with burdensome levels of debt can be seen in countries as affluent as the United States, the United Kingdom, Sweden, and Canada.

Beyond these manifestations of financial austerity is diminished trust in government and in the public sector generally, especially in countries that have moved toward the political right. Public universities are perhaps special targets for this suspicion. This

mistrust goes beyond tighter public budgets. It includes a loss of the esteem in which public universities were once held, calls for additional and frequently burdensome systems of accountability, and new forms of governmental intrusion into the management of universities, even when such oversight contradicts the more general trend toward greater university autonomy.

### **2.2.1 POLICY SOLUTIONS TO HIGHER EDUCATIONAL AUSTERITY**

In response to these financial pressures and increasing demands for accountability, universities and national systems have sought solutions on both the cost and the revenue sides. Solutions on the cost side include increasing class sizes and teaching loads, deferring maintenance, substituting lower-cost part-time faculty for higher cost full-time faculty, and dropping low priority programs. These solutions are difficult, academically problematic, and heavily contested, especially by the faculty and their political allies who frequently reject outright the claims of insufficient public revenues. Even when they accept the basic economic principle of scarcity, they may have very different notions of proper academic priorities than either their governments or their university leaders.

The simplest solution is frequently to impose enrollment ceilings or otherwise limit capacity in the low-price public institutions of higher education, including both research universities and teaching-oriented colleges and technical institutes. This solution inflicts the greatest damage on the goals of greater participation and accessibility. It forces increasing numbers of well-qualified graduates from secondary schools into higher priced (and generally lower quality) private colleges and universities or into the fee-paying tracks of the public universities. And if family

resources preclude paying these costs of private instruction and also meeting the high costs everywhere of food and lodging, then these young people are forced into jobs and must foreclose their aspirations to a postsecondary education.

At some point after serious political negotiation for additional public resources, strategic cost-side solutions accept the revenue limitations and seek to use available resources more wisely—that is, strategically. Such an approach requires negotiating among the mix of goals that include even such occasionally divergent aims as academic quality, capacity, social equity, and responsiveness to the needs of students, employers, and society alike. The management of governmental agencies and the norms of civil service employment—which prize continuity of employment above all else—are generally incompatible with many strategic cost side solutions to the financial problems characteristic of universities and other institutions of higher education. Typical problems with government agencies are laws, contracts, and political considerations that forbid terminating staff for any but the most egregious reason, hiring part time or temporary workers, contracting out services, carrying unspent funds forward from one fiscal year to the next, or transferring available funds from one budget category to another.

There has been a clear shift in governmental laws and regulations dealing with public universities in the last decade or two, especially in Europe (examples are the Netherlands and the United Kingdom), in many Canadian provinces, in virtually all American states, and very recently in China and Japan. These shifts have all occurred in the direction of greater managerial autonomy and flexibility. They have frequently transformed public universities from simple governmental agencies into public corporations with the new authorities described under the *liberalization* trend

described above. These new developments use models associated with private enterprise, allow greater managerial autonomy, and incorporate more flexibility in strategies. These approaches are sometimes referred to collectively as New Public Management and are designed to maximize the university's outputs of teaching and research for the public, or taxpayer, dollar. In addition they provide incentives for maximizing revenue from non-government sources (Amaral, Meek, & Larsen, 2003; Herbst, 2007).

In New Public Management, the university rather than the ministry or the state budget office may be given authority, for example, to:

- establish wage and salary policies, a power formerly reserved to the ministry or parliament and to the government's financial, personnel, and civil service bureaucracies;
- reallocate expenditures from one category to another in response to institutionally determined priorities, a hitherto forbidden option;
- carry forward unspent funds from one fiscal period to the next, thus encouraging savings and institutional investment and discouraging spending for no reason other than avoidance of loss or the appearance of an excessive budget;
- enter into contracts with outside agencies and businesses expeditiously and competitively, a process that was formerly frequently politicized and prolonged; and
- receive and own assets and sometimes even borrow and incur debt, an option not permitted to ordinary government agencies.

Such authority is increasingly vested in a president or chief executive officer selected by a governing board (as in the United States, the United Kingdom, and other non-European countries) rather than in a faculty-elected rector (typical of most European

countries). With this authority, university presidents may seek cost side solutions by lowering the average per-student costs of instruction. Tactics include (a) substituting lower-cost junior or part-time faculty for higher-cost senior faculty; (b) lowering the faculty-student ratio by increasing average class size, (c) Increasing teaching loads, and (d) differentiating faculty workloads. All such solutions are painful, and all will be resisted, especially by faculty, staff, and their political allies.

In the end, while cutting instructional expenses needs to be part of the solution to higher education's underlying financial dilemma, cost-side solutions alone are insufficient for both substantive and political reasons. They are too divisive and too easily politicized from both sides—that is, from those on the outside who believe that many more cuts are required, and from those on the inside who believe that the cuts already made were unnecessary and have seriously damaged their universities.

But more importantly, the gap from the diverging trajectories of higher educational costs and available revenues is simply too wide to be closed by further cuts in expenditures alone, even with such radical cost-side solutions as mergers and distance education.

Finally, in many, or even in most, countries, the low-hanging fruits of easy expenditure cuts and other efficiency measures were taken long ago, leaving only the most difficult and educationally problematic solutions on the cost-side. In short, higher education in almost all countries must turn to non-governmental revenues to supplement the increasingly insufficient revenue available from governments.

### 2.2.2 REVENUE SUPPLEMENTATION AND COST-SHARING

Revenue supplementation is an alternative to cost cutting and presents a preferred route to financial viability. It may take these forms: (a) faculty and institutional entrepreneurship (e.g., selling specialized and marketable teaching or scholarship); (b) Renting university facilities to commercial entities; (c) commercially marketing research discoveries; or (d) fund raising, by appealing to alumni and other donors. However, its most sustainable and potentially lucrative form is what has come to be known as cost-sharing. The term “cost-sharing” refers to shifting at least some of the higher educational cost burden from governments, or taxpayers, to parents and/or students (Johnstone, 1986, 2003, 2004, 2006). Cost-sharing is first a statement of fact—that is, that the costs of higher education are shared among governments/taxpayers, parents/students, and philanthropists. However, it also refers to the articulation of a policy that some of these costs must be met, not by relying predominantly or even exclusively on governments, but by being shared among parents and/or students in addition to taxpayers.

Cost-sharing is most frequently associated with tuition fees and “user charges,” especially for governmentally or institutionally provided room and board. However, a policy shift in the direction of greater cost-sharing can take several forms.

1. Instituting tuition fees where higher education was formerly free or nearly so.

This is the situation that occurred in China in 1997, in the United Kingdom in 1998, and in Austria in 2001.

2. Adding a special tuition-paying track for some students while maintaining free higher education for the regularly admitted, state-supported students. Such a dual-track tuition fee preserves the legal and political appearance of free higher education,



which is particularly important and is frequently enshrined in a constitution or other framework law in formerly Marxist countries such as Russia, most of East and Central Europe, the former Soviet Union, and countries in East Africa with their legacy of African Socialism.

3. Very sharply raising tuition fees where charging tuition in public universities is already a practice. A shift in the direction of greater cost-sharing requires that the rise in tuition be greater than the rise in institutional costs generally. Otherwise, the share paid by the government (or taxpayer) will not be lessened. This requirement inevitably means that the parent's/student's shares see the greatest rise. Examples are most of the states in the United States and most of the provinces in Canada. Many state and provincial governments have recently cut back on their former "shares" of public university expenses while tuition at public universities has increased very rapidly to fill the gap left by the failure of government funding to keep pace with the rising costs of higher education.

4. Imposing "user charges," or fees, to recover the expenses of residence and dining halls that were once governmentally or institutionally provided and heavily subsidized: This pattern is typical of virtually all the formerly Communist/Socialist countries and, most notably and controversially, most of the countries in Sub-Saharan Africa, where subsidized living costs at one time absorbed the bulk higher educational budgets. In the Nordic countries of Sweden, Norway, Finland, and Denmark, where higher education remains "free," the students are required to pay their own living expenses, which are typically very high. Neither taxpayers nor (at least officially) parents participate in their payment. Rather, students assume them mainly or entirely, in the form of student loans, in which taxpayers participate by subsidizing repayment.

5. Eliminating or reducing student grants or scholarships. This goal is sometimes accomplished simply by freezing grant or loan levels or by holding them constant in the face of general inflation, which then erodes their real value. Great Britain once supplied very generous grants to students, then froze them, and finally abandoned them altogether. A similar pattern is apparent in the value of the maintenance grants in most of the Communist or Socialist countries of the former Soviet Union, Eastern and Central Europe, and Asia, and many African countries.

6. Increasing the effective cost recovery on student loans. This goal can be accomplished by reducing the subsidies on student loans, much like employing a reduction in the value of non-repayable grants. Ways of accomplishing this goal include increasing the interest rates, reducing the length of time that the loan is interest-free, or reducing the number of loans for which repayment, for any number of reasons, is forgiven. The same effect can be achieved by tightening the collection procedure or otherwise reducing the instances of default without changing the effective rates of interest paid by those who were repaying anyway. The United States employed this last method successfully in the 1990s.

7. Limiting the capacity in the low-tuition or tuition-free public sector together with the official encouragement (and frequently some public subsidization) of a tuition-dependent private higher education sector: A number of countries—notably Japan, Korea, the Philippines, Indonesia, Brazil, and other countries in Latin America and East Asia—have avoided much of what would otherwise have been significant government expenditures for higher education by retaining a limited public sector, which is usually elite and selective, but encouraging a substantial and growing private

higher education sector. This tactic shifts many of the costs of expanded participation to parents and students.

Although cost-sharing may take all of these different forms, the imposition of, and/or large increases in, tuition fees provides the greatest financial impact. True, some of the aggregate income must be rebated in the form of grants or discounts to preserve accessibility. Still, raises in tuition fees can be both financially significant and on-going. It can even be designed to increase at regular intervals, thus keeping pace with the inevitably rising per-student costs of instruction. Also, unlike most forms of faculty entrepreneurship, tuition fees do not divert faculty from the core instructional mission. According to many observers, this approach actually has the beneficial effect of improving the quality of teaching and the relevance of the curriculum. Perhaps for these reasons, tuition fees are also the most politically charged and ideologically resisted form of cost-sharing and thus have become a symbol of the conflict between those who believe that government must continue to provide higher education free of any charge and those who believe in the imperative of cost-sharing and especially of tuition fees.

### **2.3 POLITICAL AND IDEOLOGICAL CONTEXT**

Trends in financing higher education are influenced by complex factors: (a) the country-specific context, (b) global politics, (c) worldwide ideologies, and (d) the fiscal austerity with which almost all nations are grappling. These factors impact the various policy solutions that are proposed. At the risk of gross oversimplification, a spectrum exists. At the extreme political and ideological left is the view that the government should own virtually all institutionalized means of production (including universities and colleges), allocate resources, establish prices, and remunerate

workers. However, the former command economies have given way to the transitional economies, which accept a large role for private enterprise and the useful place of markets in allocating resources and rewards. The political left is now characterized, among other ways, less by its adherence to the former Soviet-style system of production, distribution, and rewards, and more by its continuing advocacy of high levels of taxation, governmental regulation, and public employment, and by its criticism of the income disparities, economic instability, competition, and commercialism associated with markets and capitalism. This critical left is preoccupied with what it sees as the pervasive role of race/ethnicity, gender, and socioeconomic class in the distribution of power, status, and wealth in those countries that embrace markets and private enterprise. It tends to view poor countries and poor people primarily as victims of the World Bank, of other agencies of international finance, and of the investment and trade policies of the advanced industrialized nations.

At the other extreme are views associated with the far right that would diminish public employment and the size of the public sector generally, including publicly owned and financed higher education. The political right tends to view government, including both politicians and civil servants, as less productive and more frequently self-serving, as preoccupied with maintaining the salaries and other emoluments that go with governmental employment, and as generally oblivious to the view that they must live off the wealth created mainly in the private sector and diverted to public use only by taxation or inflationary deficit financing. In keeping with this mistrust of governmental institutions (including public universities) and governmental employees (including faculty and staff of these public universities), those on the right tend to be

more critical of what they perceive to be governmental waste and more insistent on greater measures of accountability. At the same time, the political right is more accepting of the economic instabilities and the disparities in income and wealth that follow capitalism, considering them a necessary price to maintain the dynamism and high productivity of private enterprise. The right generally prefers private higher education, although most will accept some governmental cash transfers to their private institutions in order to “level the playing field” and to provide constructive examples to the public universities. The political right also tends to stress making selections on the basis of “merit.” Adherents therefore favor more rigor and “merit”—and less or fewer compensatory preferences (e.g., affirmative action) in admitting students to higher education. Correspondingly, the right tends to downplay or ignore the influence of race, class, and gender in determining who comes into power, privilege, and remuneration. As in any portrayal of a range, most countries, most governments, and polities are somewhere near the center, generally vacillating between a center right and a center left, but always feeling pressures from the extremes. Both public and private universities, but especially public institutions, always operate in a country-specific political and economic context as well as in a historical context and in an increasingly globalized international context. The financial problems as well as the possible solutions and their likelihood of adoption all occur within these larger contexts. Many scholars of comparative higher education are non-economists and tend to cluster on the left. Many therefore tend to blame capitalism or neoliberalism or the World Bank or globalization for the financial austerity that is besetting higher education worldwide. This chapter differs from the position they most commonly take and asserts that the factors most directly affecting

the financing of higher education are (a) the inexorably rising per-student costs, (b) increasing participation and consequent increasing enrollments, (c) limits in most countries on governmental taxing capabilities, and (d) the lengthy queue of socially and politically compelling competing public needs. This chapter also argues that such conditions are beyond politics and ideologies, both in explaining their cause and in proposing solutions for them. Certainly politics and ideology are not immaterial. The aggressively capitalistic United States and the United Kingdom had different priorities and employed different solutions to the problems of higher educational austerity than did the former Soviet Union under its Marxist-Leninist command economy. They will probably continue to differ from the new transitional countries, with their socialist market systems or from the social welfare democracies of Scandinavia. However, the increasing reach of tuition fees, the search for other forms of revenue diversification, and the increasing pressures for accountability or more institutional autonomy owe far more to the virtually universal higher educational production function (that is, the tendency of higher educational costs to rise at rates in excess of prevailing rates of inflation), to the increasing demand for higher education, and to demographics than to political abstractions like globalization or capitalism (academic or otherwise), or to any prescriptions of the World Bank, multinational corporations, or a hegemonic Anglo-America.

#### **2.4 HIGHER EDUCATIONAL FINANCE AND ACCESSIBILITY**

The costs of higher education, including the per-student costs of instruction, the institutionally borne costs of research (that is, research costs that are not funded by external entities), the capital demands and operating costs of accommodating increased enrollments, and the expenses of student maintenance are increasing rapidly

and continuously throughout the world. In most countries, these costs greatly exceed the increases that are possible from tax-generated revenues. The resulting divergence in the trajectories of total higher educational costs (or revenue needs) and the total available public revenues is leading in most countries toward increasing higher educational austerity. This austerity is especially acute in developing countries that face the most financially devastating combination of: (a) pressures to accommodate the greatly increasing demand for additional higher educational places, (b) very limited availability of public revenues, and (c) extreme competition for these limited available public revenues.

This financial austerity is being met with a variety of solutions of differing effectiveness. The most obvious solution on the cost side is to constrain the budgets of the existing universities and to constrain the numbers of students, primarily by imposing academic entrance requirements that hold capacity to the number that the scarce governmental funds can (barely) accommodate. Of course, this kind of rationing, while clearly superior to rationing purely by the market or by the ability of parents to bribe universities into admitting their children, still favors those aspiring secondary school graduates who have had the advantages of the best preparation and who are, unsurprisingly, disproportionately from the most advantaged classes.

The principal barriers to increasing higher educational accessibility in the poorest countries will continue to lie at the middle and secondary levels of education. Moreover, the combination of living expenses and fees can also constitute barriers to higher educational entry. Still, the biggest single barrier to access in low-income countries is the limited capacity of public universities. The solution to this physical

limitation requires new revenue from somewhere to build the lecture theaters, laboratory space, and dormitory rooms to accommodate the rising numbers of higher educational aspirants from low income, rural, ethnic minorities, linguistic minorities, and in some countries women. This cost-revenue squeeze is also leading to attempts at revenue-side solutions, the most financially promising of which are the various forms of cost-sharing, or measures that require parents and/or students to bear an increasing share of these higher educational expenses. Imposing or increasing tuition and other fees is a proven source of additional revenue, best exemplified by the financial success of the dual-track tuition fee policies of Uganda, Kenya, and other East African countries (Marcucci & Johnstone 2007; Marcucci, Johnstone, & Ngolovoi, 2007).

This solution, however, also imposes barriers on both access and completion. As in the United States and elsewhere in the OECD countries, these financial barriers are increasingly being met most cost-effectively with a combination of (a) moderate tuition and other fees, (b) targeted or means-tested grants, and (c) student loans. The additional public costs of these grants and loans can, at least in theory, be met with the additional fee revenue from those parents and students who can and will assume some of the costs of their higher education. The link between finance and access in higher education is, therefore, essentially circular. Rising costs lead to capacity constraints, which limit higher education either to those who have the academic preparation to be accepted into low-tuition public universities or to the children of families affluent enough to give them the more expensive private education or to take the second, fee-paying track of public universities. The shortage of revenue is forcing higher fees at private and public colleges and universities throughout the world, accompanied by



technically difficult and sometimes costly policies and programs of means-testing and student loans.

## **2.5 ACCESS AND EQUITY IN AFRICAN HIGHER EDUCATION**

Obtaining a measure of access and equity is difficult in Africa partly because it is not always clear what is meant by higher education. In many countries (e.g., Egypt, Botswana) higher or tertiary education is defined as all post-school or postsecondary education. In South Africa, on the other hand, higher education refers only to university education. As a result, comparing gross enrollment ratios can be inappropriate. For example, South Africa's gross enrollment ratio (GER) for higher education is 15% while Egypt's (for tertiary education more broadly) is around 30%. Notwithstanding this definitional problem, it is evident that participation in higher education in Sub-Saharan Africa is low in both absolute and relative terms. Of 23 countries in that region for which data is available, only Mauritius and South Africa has a GER in double figures. Among these countries, the GER ranges from 0.4% in Malawi to 15% in South Africa and 15.3% in Mauritius. The average for both developing countries and industrialized/developed countries (See Table 1.) In addition, the median participation rate for Sub-Saharan Africa is 2.5%, compared to the developing country median of 13% and the industrialized country median of 58% (UNESCO, 2008).

**Table 2.1. Participation rates in tertiary education: GER (%), weighted average**

<i>Region</i>	<i>1999 (total)</i>	<i>1999 (female)</i>	<i>2005 (total)</i>	<i>2005 (female)</i>
Developed countries	55	60	66	74
Developing countries	11	10	17	16
Sub-Saharan Africa	4	3	5	4

*Source:* UNESCO (2008).

In addition to low participation rates, access to higher education is highly inequitable.

There are three important determinants of inequity: gender, socioeconomic status, and region. In almost all Sub-Saharan Africa countries, with the possible exceptions of Mauritius and South Africa, women have substantially lower participation rates. Table 1 reports some of this inequity, particularly in relation to developed countries where female participation on average, exceeds that of males. Moreover, where women have managed to enter higher education, their participation is often concentrated in so-called traditional women's disciplines such as humanities and education, rather than in commerce, engineering, and science.

Second, access to higher education is often dependent on socio-economic status. In many Sub-Saharan African countries, participation in universities and other institutions of higher education is dominated by students from the highest income quintiles. Often, public funding mechanisms act to exacerbate such inequities by providing free higher education to the "best" students who invariably come from the wealthiest households.

Third, in almost all Sub-Saharan Africa countries, participation in higher education is skewed in favor of students from urban and metropolitan areas. Students from rural households face enormous barriers to accessing higher education in general and higher quality higher education institutions (HEIs) in particular.

In summary, these three stratifying factors—gender, socio-economic status, and region or location of origin—act to skew the already low participation rate in favor of males, richer families, and urban households.

Access and equity in higher education in Sub-Saharan Africa are fundamentally determined by access to and the quality of secondary education. In the past two decades, most Sub-Saharan Africa countries have pursued a policy of universal primary education although not all of them have succeeded in this goal. One critical outcome of this policy has been the vast increase in primary school leavers who then seek secondary education. In countries such as Kenya, Mozambique, Uganda, and Tanzania, the capacity to absorb more than a small proportion of primary school leavers in the secondary school system is extremely limited (OECD, 2006; UNESCO, 2008).

In light of the public sector's limited capacity for secondary schooling, households have had to seek places in the growing private sector, which requires fee-paying and is often of poor quality in many of the countries being reviewed in this chapter. In addition, large numbers of children drop out of schooling after the primary phase, as the gross and net enrollment figures in Table 2 demonstrate. These data reveal that average participation rates in secondary education in Sub-Saharan Africa are, at best, only about half those of developing countries. In addition, the richer countries of Sub-Saharan Africa, such as South Africa, where participation rates in secondary education are much higher, show substantial differentiation in the quality of primary and secondary schools. In these countries, factors such as socio-economic status and region of origin act to determine access to better quality secondary education and eventually to better quality higher education.

**Table 2.2. Gross enrolment ratio (GER) and net enrolment ratio (NER) in secondary education, 2005, by percentages and weighted averages**

<i>Region</i>	<i>GER Lower Secondary</i>	<i>GER: Upper Secondary</i>	<i>NER: Total Secondary</i>	<i>NER: Total Secondary</i>
Developed countries	104	99	102	92
Developing countries	75	46	60	53
Sub-Saharan Africa	38	24	32	25

*Source:* UNESCO (2008).

## **2.6 PUBLIC COMMITMENT TO HIGHER EDUCATION SPENDING**

As a percentage of total national income, spending on education by most countries in the East and Southern African region is relatively high in a comparative sense. (See Table 3.) In fact, in countries, such as Lesotho, Kenya, and Namibia, public expenditure on education is relatively high. However, public spending on higher education as a proportion of the education budget varies substantially among the five countries considered in this chapter. In the case of Mozambique, Namibia, and South Africa, higher education spending is relatively high as a percentage of the education budget. In the case of the two East African countries, it is relatively low.

**Table 2.3. Public expenditure on education as a percentage of gross national income, 1999-2004, East and Southern Africa**

Country	Percentage of GNI
Angola	2.8
Botswana	3.3
DRC	4.6
Kenya	6.2
Lesotho	10.0
Malawi	4.0
Mauritius	3.3
Mozambique	2.4
Namibia	7.9
South Africa	5.7
Swaziland	5.5
Tanzania	2.2
Uganda	2.5
Zambia	1.9
Zimbabwe	4.7
Africa	4.8
Developing Countries	4.5
Industrialized Countries	5.5

*Sources: OECD (2006); UNESCO (2008).*

Where higher education expenditure is low, there are often several reasons for this situation. First, funding for education generally, as a percentage of the government's budget, may be inadequate across the board. Second, where education expenditure may be considered to be adequate or reasonable, there are considerable political pressures toward ensuring that elementary and secondary schooling get the overwhelming share of the public sector's commitment to education. Third, in many developing countries where resources are seriously constrained, there is often keen inter-sectoral competition among health, housing, social welfare, and other government functions in addition to education for financial resources. Finally, the case for increased higher education financing has not been helped by the low priority assigned to higher education by many African governments. The value of higher

education for economic growth and broader social and sustainable development has not yet been fully recognized by African governments.

## **2.7 CHALLENGES AND LESSONS FROM KENYA**

Kenya has four dichotomous ways of classifying higher education institutions: (a) university and non-university; (b) academic and technical, training, and research, (c) public and private, and, (d) non-profit and for-profit. Other parties of interest on the higher education landscape are the Commission for Higher Education, which regulates the provision of higher education, and the Higher Education Loans Board (HELB), that provides loans, scholarships and bursaries.

### **2.7.1 EXPANSION OF UNIVERSITY EDUCATION**

Kenya placed considerable importance on the role of education in promoting economic and social development after the achievement of independence in 1963 (Sifuna, 1998). This resulted in the rapid expansion of the education system to provide qualified persons for the growing economic and administrative institutions, and to undertake some reforms to reflect the aspirations of an independent state (Court and Ghai, 1974)

Throughout the 1970s the government strengthened and expanded the University of Nairobi, the only one then, as a conscious effort to provide university education to all qualified Kenyans and as a move to develop the necessary human resource for the private and public sectors. As years went by, the number of Kenyans seeking university education exceeded the capacity of the University of Nairobi. This led to the establishment of Moi University in 1984 as the second university in Kenya following the recommendations of the Presidential Working Commission – the

Mackay Report – which collected views from many people and found an overwhelming support by Kenyans for the establishment of a second and technologically oriented university in the country. From then, university education in Kenya has expanded with a rise in student enrolments, expansion of universities, diversity of programmes and setting up of new universities and campuses. Kenyatta University which had operated as a constituent college of the University of Nairobi since 1972 became a full-fledged university in 1985. A previous agricultural college also gave way to Egerton University in 1988. Over the last four decades, the social demands with respect to higher education in Kenya have clearly intensified. This has been exemplified by the rise in enrolments in public and private universities, the proliferation of more private universities and the establishment of private wings (self sponsored programmes) in the public universities. Student enrolment in public universities in Kenya increased very rapidly between 1964 to date, with the current student enrolment in Kenya's universities standing roughly at 55,200 (Sifuna, 1998). With the additional students in the parallel degree programmes, the numbers are now much higher.

### **2.7.2 DOUBLE INTAKES**

The first double intake occurred in 1987/88 academic year. Following the 1982 attempted coup, the government ordered an indefinite closure of the university, which lasted for about one year. This meant that about 8000 applicants who qualified for university admission by end of 1982 could not be selected for admission in the 1983/84 academic year. This prolonged closure, coupled with other shorter duration closures, contributed to a backlog of qualified students due for admission. To clear the backlog, universities were directed to embark on a double intake of students starting

with 1987/88 academic year. According to a study by Sifuna (1998), the rapid expansion of university education starting from mid 1980s was never planned. Sifuna (1998) as cited by Boit J Mugun 1998 continues to observe as follows:

*There has been no planning in university education for a considerable length of time. The last planning effort in university education was before rapid expansion started. Since then, planning was thrown in a state of confusion. University development seems to be guided by directives from sections of the ministries of Education or Finance and Economic Development and the Chancellors of the public universities.*

The increasing demand for higher education is also seen to have contributed to the lack of planning. Sifuna's study (1998) also cited by Boit Mugun 1998 reveals as follows:

*The rapid expansion of university education was a spontaneous response to the high demand. With the increasing large flows of students from schools, popular demand for higher education increased. People seem to have put a lot of hope in higher education and this appears unique in the countries of this region.*

The second double intake of students occurred in 1990/91. This was prompted by the shift in the country's education cycle from 7-4-2-3 cycle to the 8-4-4 cycle. The main changes that occasioned this shift were the primary school cycle, which was extended to eight years after the advanced (A) level certificate of secondary education had been abolished, reducing the number of secondary education from six to four years and increasing the university undergraduate cycle from three to four years.

By abolishing the A-level segment of the education system, a situation had been created where over 170,000 applicants for university entry were available as opposed to no more than 20,000 potential applicants in the A-level system. The 1990/91 admission process had, however, to accommodate both O- and A-level applicants for



entry into university. This further stretched the meagre facilities that these institutions had in place.

### **2.7.3 THE DEMISE OF MIDDLE-LEVEL COLLEGES IN FAVOUR OF UNIVERSITIES**

The large enrolment of university students was a key corollary to the establishment of more public universities (Sifuna, 1998). In 1984 Moi University Act established that institution as a second national university. In late 1988, parliament made Jomo Kenyatta College of Agriculture and Technology a constituent college of Kenyatta University. It became an independent university through the Jomo Kenyatta University of Agriculture and Technology Act of 1994. Egerton, which offered diploma programmes in agriculture, became a full-fledged university in 1988. Siriba Teachers' College became Maseno University College, a constituent college of Moi University, and later a full-fledged Maseno University. Sergoit Teachers' College was transformed into Chepkoilel campus, which is a constituent college of Moi University. Laikipia and Kisii Teachers' Colleges both became campuses of Egerton University. This meant that many tertiary-level colleges were abolished in favour of university education. The contribution of the few remaining middle-level colleges – including the national polytechnics, teachers' colleges, nursing schools and technical institutes – have not been recognized as they should be.

#### 2.2.5 Sources of Finance

A key feature of higher education financing in Kenya, which is also true of Tanzania and Uganda, is the development of a dual-track funding mechanism: (a) state funding for some students in public institutions, and (b) a private, fee paying track for other students in the same public institutions. The seven public universities receive direct

state funding, though most have been able to launch the private entry schemes by which they have raised substantial revenue. Kenya also has 18 private universities with varying degrees of recognition: seven with full charters, six with letters of interim authority, and five registered universities. Closely related to but apart from the universities are tertiary and middle-level colleges offering various programs. They include six diploma colleges for the training of non-graduate secondary school teachers, 20 teacher training colleges for primary school teachers, four national polytechnics, 17 institutes of technology and 20 technical training institutes. There are also an unknown number of private postsecondary education and training institutions. Non-graduate healthcare professionals (e.g., nurses and clinical officers) are educated in 11 medical training colleges in various parts of the country.

#### **2.7.4 TRENDS IN PARTICIPATION**

Public universities dominate in enrollments, even though private institutions are more numerous. By 2004-2005, the then six public universities had more than 90,000 students, while the private universities had just 10,000 students. Public universities have been able to expand their internal capacity much faster than the private universities, with their private programs accounting for most of this increase. Enrollment in technical and vocation education and training institutions grew from 52,254 to 66,737 students between 2002-2003 and 2003-2004, only to decrease to 29,870 in 2005-2006. Two of the national polytechnics were elevated to degree awarding institutions in 2007, although the degree programs did not begin until 2008.

#### **2.7.5 SOURCES OF FINANCE**

Private universities depend to a large extent on students fees for their operational expenses. At Daystar University, for example, students pay Kenya pounds £4 500 per

annum comprising K£2 000 tuition fees and K£2 500 food and accommodation charges. The fees are paid by the families of the students or their sponsors. However, there is evidence that a large number of students are assisted by their own communities either for part of or the full tuition fees (Mungai, 1995). This community effort is well developed and entrenched in the Kenyan society in the spirit of “Harambee”- a slogan meaning pulling together.

Private universities have, however, developed systems in which students with financial difficulties are helped. Daystar University, for example, operates a kind of a bursary or scholarship fund in which five percent of the total fees paid is set aside to assist needy students who for one reason or another may have difficulty in paying their fees. Financially needy students also get assisted through linkages the university has with a number of overseas non-governmental organisations that assist with grants to meet part of the fees (CHE, 1994). The University of Eastern Africa, Baraton runs a work study scheme where students with fees problems can take time off from their studies to take up jobs with the University for short periods. The University also operates some commercial service units to augment their finances. They operate a garage where vehicles belonging to the members of the public can be repaired and a farm that supplies a wide range of farm produce throughout the year (CHE, 1994).

Private Universities are also maintained through financial contributions from their churches. The University of Eastern Africa, Baraton enjoys such contribution from the divisions of the church world-wide. The Adventist church has ten divisions world-wide and the Eastern Africa region is one such division. The Catholic University of Eastern Africa has also a similar support scheme. It receives financial contributions

from dioceses within the AMECEA region. Other contributions come from well-wishers, Catholic donor agencies and institutions in the church such as the Sacred Congregation for Evangelization of Peoples, Rome, Germany and other organisations in the AMECEA region. The University also benefits from book and equipment donations from donor agencies and foundations.

Three important sources of higher education finance can be distinguished and these include government subventions, tuition fees, external assistance and income generating activities. These sources are briefly discussed below.

#### **2.7.6 GOVERNMENT SUBVENTIONS**

Public universities depend almost entirely on public funds for their recurrent and capital expenditures. Government allocation is channelled through the ministry of education. In the early 1980s, the Universities Grants Committee was the intermediary body responsible for advising the government, based on university plans, the level of capitation grants to be allocated to the university. Under the capitation grants system the university received from the government a budget allocation based on a fixed sum of money for every undergraduate student.

In the 1980/81 academic year, for example, the capitation grant was K£1450 per student per annum (UGC 1981). This allocation was provided to cover staffing remuneration and benefits, staff development, postgraduate education, research, library books, purchasing and maintenance of equipment, furniture and stationary, staff housing, transport and health. The current capitation grant is K£3500 per student per annum.

Since the late 1980s when the University Grants Committee ceased to function, universities have been individually submitting their annual estimates for both current and capital expenditures directly to the ministry of education. There has, however, been suspicion that some aggressive universities with politically correct vice-chancellors and strong working relationships with senior ministry of education officials may have been allocated more than their fair share of funds, particularly, capital expenditure funds. Indeed Ziderman and Albrecht, (1995), make reference to similar concerns in their discussions of mechanisms for the transfer of government funds to universities:

*“Unfortunately, the transfer of resources to universities has, for the most part, been on the basis of political criteria and negotiations, rather than with an objective criteria related to internal workings of the universities.”(Ziderman and Albrecht, 1995, p. 4).*

Although the levels of capitation grants were periodically reviewed by government they were always never adequate to cover all the operational costs of the university. The status of higher education budgets depend largely on resources available to the government. This in turn depends on forces, both external and internal, that exert on the national economy. The adverse macroeconomic conditions of the 1970s and 1980s, for example, forced the Kenyan government to substantially reduce grant allocations to universities (Nkinyangi, 1983). The shortfall in public financing of higher education was also blamed on reviews that failed to take into account annual increases of salaries and other statutory increases of goods and services. Secondly, the reviews were not based on itemized financial requirements of the university (UGC, 1981). Consequently other university functions had to suffer as money was diverted to

activities that were thought to be more critical for the functioning of the university. Areas that became heavily subsidized at the expense of other services included student residential, catering and medical services. According to the University Grants Committee Report of 1981 the University of Nairobi incurred a deficit of K£2,479,768 during the 1979/80 academic year as a result. As a result, the university had to reduce expenditure on staff development, postgraduate education, research, books, equipment and other teaching materials. Reduction of expenditure in these areas must undoubtedly have contributed to reduced quality of instructional service.

Similar deficit trends continue to be reported today in all the public universities' budgets. According to the three year financial plan covering the period 1994-97 Moi university, for example, had a deficit in its recurrent expenditure of K£588 417 and K£2 577 841 respectively during the 1993/94 and 1994/95 financial years. Since funds from the government have continued to decrease in real terms the university has proposed a number of measures aimed at cutting costs and reducing the deficit. The measures are directed particularly at two areas that are considered to have largely been responsible for the deficit expenditure; tuition fees, food and accommodation. The university intends to review tuition fees and recover full costs of food and accommodation, among other subsidized services. The provision of almost free of charge food and accommodation services has been a big drain on university finances. This scenario that is repeated in all the other public universities.

Other measures aimed at improving university finances is reflected in the implementation of the World Bank sponsored reforms introduced in 1994. Within the context these reforms, universities are required to prepare budgets on the basis of

students' unit costs, that is, at what it costs to provide education service to one student per annum. In other words, budgets that take into account full time staff and full time students; full time equivalent faculty (FTEF) and full time equivalent student (FTES). It is argued that budgets prepared, on the basis of unit costs, are easier to rationalise and also reflects a true picture of university financial requirements.

Within the higher education reform programme, the Commission for Higher Education is also being reactivated, reinforced and charged with new responsibilities. In the expanded responsibilities the Commission will be expected to co-ordinate public universities' plans and budgets; a role previously exercised by the defunct UGC. According to the Consolidated Development Plan for Higher Education, a CHE document, the new role of the Commission in this respect will be to co-ordinate:

*“Long Term Planning, Budgeting and Financing of Public Universities. This function entails consolidating all public universities' Plans and Budgets into one after discussion and rationalisation, and subsequently forwarding the consolidated Plans and Budgets to the treasury through the ministry of education” (CHE, 1994, p. 31)*

### **2.7.7 STUDENT FEES**

The other important source of public universities finances is student fees. Partial tuition fees were introduced in 1991 as part of the cost-sharing policy in higher education. Currently the charge is Kenya pounds £40 per student per annum up from Kenya pounds £30 in 199. This money is paid by students directly to the universities. However students who are unable to raise this charge may be helped through a means-tested bursary to acquire part or the full charge. Public

universities also receive capitation grants of Kenya pounds £70 per student per annum. This is a government subsidy only applicable to public universities. Students also pay for accommodation and meals at highly subsidised rates. All these charges, however, need to be reviewed to reflect the actual costs of programmes and services. Differentiation of curriculum costs needs urgent attention if public universities have to recover costs and provide efficient education services. Current uniform charges either in form of partial tuition fees or capitation grants is skewed in favour of children from wealthy families who are more likely to be enrolled in the more expensive courses.

#### **2.8.8 EXTERNAL ASSISTANCE**

Another significant source of support for public universities is external assistance from bilateral, multilateral and voluntary agencies (Okwach, 1997). Funds from these sources are primarily for physical infrastructure and staff development programmes rather for current expenditure. Individual universities also maintain collaborative links with foreign universities, which is an important source of institutional capacity building.

Presently there are four major external assistance programmes to public universities namely; the World Bank; the British Overseas Development Administration (Did) programmes; the United States Agency for International Development (USAID) programmes and the Japanese International Co-operation Agency (JAICA) programmes. In recent years funds from these sources have significantly decreased following the financial squeeze of 1970s and demise of the “cold-war” era.



### **2.7.9 INCOME GENERATING ACTIVITIES**

Public universities have recently been encouraged to broaden and diversify their financial base by undertaking income generating activities in order to supplement government funding. The initiative, to expand the resource base of public universities through resource mobilisation and diversification, is part of recent government policy to reduce the share of public expenditure to higher education (CHE, 1994; GOK, 1997). Although public universities have been generating income from a variety of economic activities on an ad hoc basis the new policy will ensure that they are better co-ordinated and managed.

Among some of the income generating activities universities are engaged in, include; commercial farming and mortuary services at both Moi and Nairobi Universities; guest houses and resource centres services at Egerton and Moi Universities; processing of milk and milk products at Egerton and Jomo Kenyatta university of Agriculture and Technology and consultancy, printing, photocopying and bookshop services in all the universities. Universities also generate income from short term courses to industry and government departments. Outstanding examples are the small scale business enterprise course at Jomo Kenyatta University of Agriculture and Technology, Business and accounting courses at Kenyatta University and long distance learning programme which the University of Nairobi has been running for many number of years (CHE, 1994).

As part of income generating initiative Moi University has, for example, projected to generate income, during the 1995/1996 financial year, from a variety of sources to supplement exchequer grants, revenue from tuition fees and other sources. These

include the generation of K£2,500,000 from university farms; K£150,000 from mortuary services and K£14,400 from guest house services (Moi University development plan 1994)

The education budget as a whole has been rising steadily during the period since 2000, including increases in funding for higher education. In 2002-2003, higher education expenditures totalled 7.204 billion Kenyan shillings (KES), representing 11.5% of the total Ministry of Education expenditure. Expenditure rose slightly to KES 8.413 billion in 2003-2004 and further to 10.674 billion in 2003-2004 (13.8% of the total education budget). During 2005-2006, higher education expenditure rose significantly to 14.174 billion (16.4% of the total). This significant rise in the higher education expenditure was attributed to the increase in lecturer salaries and housing allowances. However, the 2006-2007 fiscal year saw a substantial decline in higher education allocations in both volume and proportion. This decline resulted from a deliberate shift in policy that placed greater focus on lower levels of education and on new areas such as quality assurance.

In summary, higher education spending as a proportion of Kenyan GDP for the five years has averaged 0.88% while, as a proportion of total education spending, it has averaged 13.74%.

#### **2.7.11 STATE FUNDING OF PUBLIC UNIVERSITIES**

In Kenya, state funding of universities is usually presented as a wholesome allocation that is worked out as a function of the total student population. From the assumed unit cost of KES 120,000, funding to individual institutions is arrived at by multiplying enrollment by KES 70,000. The balance of KES 50,000 is met by the student, either through the publicly funded loan and bursary scheme, or other private sources. State

funding constitutes the bulk of universities' income, representing between 50% and 90% of total institutional revenues, depending on the revenue they raise from private programs. Income from these programs constitutes an average of 15% of their total budgets, though the actual proportions vary significantly between institutions. The University of Nairobi derives the highest proportion of its income of any public university from the private programs (an average of 40%), while the Masindo Muliro University of Science and Technology has the lowest at 7.7%.

#### **2.7.12 FINANCING PRIVATE UNIVERSITIES**

While public universities are highly subsidized by the state, private universities have to recover most of their costs from instruction and other services such as hostel accommodation. As is to be expected, this circumstances has made these universities expensive compared to the public institutions—sometimes 11 times higher than public universities. The only form of public funding for these universities comes in the form of student loans. However, this sum is relatively small compared to the amounts received by public universities. In comparison to public universities, private universities charge relatively high fees.

#### **2.7.13 UNIT COSTS AND PER CAPITA STUDENT FUNDING**

As stated earlier, the government uses an assumed unit cost of KES 120,000 per year. However, an analysis of state allocations to universities over the past decade shows that the government has not consistently adhered to this principle. Student per-capita funding varies substantially for government-sponsored students, reflecting both low enrollments at some institutions and underfunding at others.

Student financing schemes are of various types. First are full government sponsored scholarships. These scholarships are opportunities to pursue an all-costs paid higher

education course with funds drawn from the government departments or from foreign donations for study opportunities within Kenya and abroad. These scholarships are administered by the Ministry of Education. Some scholarships are funded externally, or through bilateral and multilateral agreements. Examples include the Indo-Kenya Scholarship program, Sino-Kenya scholarships, and the Commonwealth scholarships. Second is partial government funding. In this option, the government pays a given proportion of the assumed cost of the program for an academic year and the student pays the remaining portion directly from private sources or through a study loan from the Higher Education Loans Board or both. Third is full private sponsorship. In this situation, the student pays all costs of higher education from personal or family sources. This funding mode is most often used by (a) privately sponsored students in public universities and (b) students in private universities.

#### **2.7.14 LOAN FINANCING OF HIGHER EDUCATION**

Loan financing of university education is government-supported. The state, through the Higher Education Loans Board, provides students who meet means tested criteria with loans. The loan allocation stratifications by need level indicate that, while those ranked neediest, received KES 55,000 in addition to a bursary of KES 8,000, the least needy applicants received KES 35,000. The Higher Education Loans Board disburses both undergraduate and postgraduate loans. Other forms of funding include bursaries and scholarships. The number of beneficiaries for undergraduate loans increased from 34,776 in 2002-2003 to 39, 802 beneficiaries in 2006-2007.

#### **2.8 EQUITY IN PUBLIC EXPENDITURE**

Public spending on education in Kenya is highly inequitable. First, the government is spending a significantly higher proportion of its resources on relatively few students.

Second, the proportion of students in higher education is highly skewed in favor of the rich. More than two-thirds of students in university education come from the richest and second richest quintile, while the two poorest quintiles represent only 7.5% of enrollments in higher education. Third, there is considerable discrepancy in institutional funding in both absolute and relative terms. Fourth, the student loan program is inequitably distributed, with 80% of the loans being accessed by public university students to the detriment of private university students. This pattern is particularly inequitable as most of those students seeking access in private institutions come from lower socio-economic backgrounds.

In summary, access to higher education has been stimulated through the introduction of cost-sharing initiatives in the public system and through the expansion of the private university component. However, the public funding mechanisms are highly inequitable, as costs are not shared equally. Some students, invariably those from the better schools and richer households, are fully government sponsored and are spared any private costs. The costs for needy students are mitigated to some extent by the provision of loans and bursaries by the Higher Education Loans Board. However, access to Higher Education Loans Board funds is limited for students in the private higher education system.

## **2.9 SUMMARY**

The debate on the concept of equality and equality of educational opportunity is wide and complex indeed. It is not the intention of this study to delve into the different debates, however. A broader meaning of equality of educational opportunity encompassing the four sets of criteria identified by Levin (1976) is adopted in this study. According to Levin the concept of equality of opportunity is not a unitary

notion. It is a multi-dimensional concept with four distinct factors: the equality of educational access; the equality of educational participation; the equality of educational results; and the equality of educational effects upon life chances. Much of the debate on equality and equality of opportunity that has taken place in the Western World for much of this century has centered mainly on education in relation to class (Burgess, 1981).

The research literature on higher education finance shows that students in developing countries are heavily subsidized, often across the board, regardless of their socio-economic backgrounds. This is contrary to the principle of “he who benefits should pay”. It is strongly argued that since, in higher education, the private rates of return are higher than the social rates, that is, that benefits that accrue to the individual are higher than the benefits to the society; beneficiaries of higher education should be made to meet a large portion of the costs of providing higher education. This can either be through private sources or by means of a deferred payment scheme (Albrecht and Zideman, 1991).

“Ability to pay criteria” requires that students who are financially able, particularly those from the upper end of the socio-economic scale, should be made to pay their way through higher education while the poor and needy, for equity considerations, ought to be financially assisted through some form of delayed payment programme combined with bursary or scholarships and tuition fees. In other words, selective subsidies are targeted to the neediest students.

Higher education is not cheap. The Kenya government must be prepared to support this sector through good funding to enhance the development of adequate human

resources necessary for economic and political prosperity. It is also important to note that:

- Kenya has a very large base in Higher Education capacity
- There are a number of institutions with infrastructural capacity and adequately trained human resource
- Higher Education must be given a central role in national development and social economic transformation of the people
- The existing infrastructural and human resource capacity must, however, be effectively managed and utilized for the benefit of society
- There must be a deliberate policy on financing research and utilizing the research findings
- Universities must be answerable to the people/stakeholders through transparent disclosures, accountability and timely feedback and remedy.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.0. INTRODUCTION**

This chapter describes the research design, area of study, target population, sample size and sampling procedures, data collection instruments, validity and reliability of research instruments, data collection procedures and data analysis procedure employed in carrying out the study,

#### **3.1. RESEARCH DESIGN**

The research paradigm used for this study is the ex-post-facto research design. This design investigates possible cause and effect relationships by observing an existing condition or state of affairs and searching back in time for possible causal factors. According to Kerlinger (1973), an ex-post facto research is one in which the independent variable(s) have already occurred and in which the researcher starts with the observation of a dependent variable(s). its also called Causal Comparative research and involves comparison of two or more groups on a single endogenous variable. the characteristic that differentiates these groups is the exogenous variable. the researcher has no control over exogenous variable. whatever happened occurred before the reseacher arrived. In this study, the socio-economic status is the independent variable while loan award of the recipients is the dependent variable.

#### **3.2. STUDY AREA**

Moi University was established as a second university in Kenya in 1984. It is situated some 35 km south of Eldoret in Eldoret East District, some 312 km from Nairobi. It has 15 schools where a sampled student population was used for purposes of this study. In the private universities category, Baraton University was used. It is situated



in Nandi Central district South West of Eldoret off Eldoret — Kisumu Road at Chepterit shopping centre. The two universities were chosen on the basis that they have a well elaborated level of growth and can capture the desired level of accuracy. Moi University was selected because of the following reasons;

Firstly, establishment of Moi University differs significantly from other public universities in Kenya. In appointing the Presidential Working Party into the second university in Kenya, the Government emphasised the new university was expected to introduce new areas of learning which would help meet the high level manpower requirements of a modern and increasingly technical society (Kenya, Moi University Calendar, 1988; page 1). The University of Nairobi had been criticised for adopting its objectives from the University of London without modification and therefore, they do not relate to the cultural development, social and physical requirements of Kenya's rural area where 80% of the people live. (Kenya, Ministry of Education, 1981) In view of the above observations, the second university was established with some modifications;

*“...the working party reported that it found overwhelming support in the country for the establishment of a university which is technically oriented, focusing on problems of rural development in its training and research programmes. As a technological university, the report further recommended, it should develop linkages with non-degree technical training institutions within the country. The report recommended further that while the bulk of the programmes were to be in the areas of science and technology, there should be programmes of social and cultural orientation. Consequently, the starting of the School of Social Cultural and Development Studies was recommended”. (Kenya, Moi University Development Plan, 1995 P. 1)*

As a result of this, Moi University is commonly referred to as a university with a ‘difference’. Secondly, Moi University is among the universities with the highest

number of both post graduate and undergraduate students (CHE, 2008; Kenya, Moi University Strategic Plan, 2005 Kenya Education Directory, 2009)

On the other hand Baraton University is the oldest chartered university in Kenya.

### **3.4. TARGET POPULATION**

During the time of study, it was estimated that there were 27,000 and 3,000 students enrolled for various courses in Moi University and UEA Baraton respectively.

### **3.5. SAMPLE AND SAMPLING TECHNIQUES**

Neuman (2000) argues that, “The main factor considered in determining the sample size is the need to keep it manageable enough. This enabled the researcher to derive his detailed data at an affordable cost in terms of time, finances, and human resource (Mugenda and Mugenda 1999). The sample size of 379 was randomly selected from the two institutions. This sample size is statistically determined according to Krejcie, Robert V., Morgan, Daryle W (1970) (see Appendix 1)

The study employed stratified random sampling techniques to randomly select students and purposive in identifying the two universities

### **3.6. DATA COLLECTION METHODS**

This section presents the research instruments, the validation and reliability assurance of the research instruments and the data collection procedure.

#### **3.6.1. RESEARCH INSTRUMENTS**

Questionnaires, document analysis and interview schedule will be used to obtain the required data for this study.

### 3.6.1.1. Questionnaires

Questionnaire is a planned set of questions used to collect data. It can be sent to the respondents by mail (when the response rate is poor and the sample of respondees is often biased) or used as the basis of a personal interview (Gallagher, M. et al (1967)). The latter procedure has the advantage of quickly detecting questions that are ambiguous or are couched in terms that will elicit information on the wrong subject. Questionnaires are used: To allow each student the opportunity to provide anonymous feedback on their experience. Structured questionnaires also allow for the exploration of patterns and trends which help to describe what is happening in the Learning & Teaching context and provide a measure of respondents' opinions, attitudes, feelings, and perceptions about issues of particular concern to the evaluator.(Gallagher, M. et al (1967)).

They also help to identify patterns and trends that merit further exploration using qualitative methods and unstructured questionnaires allow for richer feedback that may provide insight into explanations for what is happening and participants' opinions, attitudes, feelings, perceptions etc. They also allow for issues to emerge that are not necessarily foreseen by the evaluator. In developing questionnaire items, the fixed choice were used where Likert and interval/ratio scale was required and open-ended formats of the items was used to collect data from the loanees (students). The open-ended items ensured that the respondents gave answers on certain issues in exactly the manner they perceived. Questionnaires cover a wider scope, since the population is high (Gallagher, M. et al (1967)). It's also convenient where the respondents are able to read and write, which was case in this study. Students also could not have sufficient time to respond through interviews, in this case

questionnaires were relevant since they were able to respond at their own time within the stipulated period.

#### **3.6.1.2. Interview Guide**

Face to face interviews were carried out. In addition to issuing the questionnaires to the students, the researcher also interviewed the management of HELB to clarify some aspects which were not captured in the questionnaire. The interview particularly solicited for more information on the various aspects that affect access and equity issues on the higher education loans. They are quite relevant since it is flexible to use and the target population is small as in this case where the HELB manager, financial managers at the university.

The in-depth interview aims to gain access to, and an understanding of, activities and events which cannot derive from observation directly by the researcher (Minichiello et al. 1995). As such, in-depth interviewing is suitable when the researcher wants to gain a view of what social reality is from the informant's perspective. Because it is believed here that social reality exists as meaningful interaction between individuals that can be studied through understanding others' point of view, interpretations and meanings, in-depth interviewing is an appropriate technique to gain access to the individual's words and interpretations (Minichiello et al. 1995).

Moreover, in-depth interviews are also suitable when the type of research depends on understanding a broad range of people or settings in a short time, especially when the research questions are not appropriately studied by other qualitative methods because of time constraints or if the researcher has reasonably clear and well-defined research interests (Minichiello et al. 1995). Lofland and Lofland (1995), suggested that during

the interview, interviewers should adopt the role of the ‘socially acceptable incompetent’ by offering themselves as someone who does not understand the situation. The interviewer is the quintessential student role that needs to be taught.

### **3.7. VALIDITY OF RESEARCH INSTRUMENT**

The traditional criteria for validity find their roots in a positivist tradition, and to an extent, positivism has been defined by a systematic theory of validity. Within the positivist terminology, validity resided amongst, and was the result and culmination of other empirical conceptions: universal laws, evidence, objectivity, truth, actuality, deduction, reason, fact and mathematical data to name just a few (Winter, 2000).

Joppe (2000) provides the following explanation of what validity is in quantitative research:

*Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit "the bull's eye" of your research object? Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others. (Joppe 2000 p. 1)*

Wainer and Braun (1998) describe the validity in quantitative research as “construct validity”. The construct is the initial concept, notion, question or hypothesis that determines which data is to be gathered and how it is to be gathered. They also assert that quantitative researchers actively cause or affect the interplay between construct and data in order to validate their investigation, usually by the application of a test or other process. In this sense, the involvement of the researchers in the research process would greatly reduce the validity of a test.

Validity therefore refers to the extent to which an instrument can measure what it ought to measure. The researcher discussed the items in the instrument with the supervisors, lectures in the department and colleagues in order to determine the content validity of the research instruments. This facilitated check of phraseology, vocabulary used and semantics. The respondents were expected to indicate by tick or cross every item in the questionnaire if it measured what it is supposed to measure or not.

### **3.8. RELIABILITY OF THE INSTRUMENT**

Although the term ‘Reliability’ is a concept used for testing or evaluating quantitative research, the idea is most often used in all kinds of research. If we see the idea of testing as a way of information elicitation then the most important test of any qualitative study is its quality. A good qualitative study can help us “understand a situation that would otherwise be enigmatic or confusing” (Eisner, 1991, p. 58). This relates to the concept of a good quality research when reliability is a concept to evaluate quality in quantitative study with a “purpose of explaining” while quality concept in qualitative study has the purpose of “generating understanding” (Stenbacka, 2001, p. 551). The difference in purposes of evaluating the quality of studies in quantitative and quantitative research is one of the reasons that the concept of reliability is irrelevant in qualitative research. According to Stenbacka, (2001)

*“the concept of reliability is even misleading in qualitative research. If a qualitative study is discussed with reliability as a criterion, the consequence is rather that the study is no good” (Stenbacka 2001 p. 552).*

According to Mugenda and Mugenda (1999), the reliability of an instrument is the measure of the degree to which a research instrument yields consistent results or data

after repeated trials. In order to test reliability of the instrument to be used in the study, the test retest method was used. The questionnaire was administered twice within an interval of two weeks.

### **3.9. ADMINISTRATION PROCEDURES OF RESEARCH INSTRUMENT**

Research assistants were thoroughly trained both in interpretations of responses from and also in the procedure of administration. They then accompanied the researcher in piloting and modifying the research instruments so that they could comprehend fully the purposes and methods of data collection. The research assistant administered the questionnaires personally to the respondents.

After consulting with the supervisors, the researcher applied for permission to conduct research in Kenya by writing to the National Council of Research and Technology. The Council responded in April 2011 (Attached as appendix VI). This gave the researcher a green light to apply to HELB and Moi University and UEA Baraton for permission to conduct research in the institutions. The data was collected in April the year 2011 towards the end of the second Semester at the University.

### **3.10. DATA ANALYSIS**

Descriptive statistics were employed in analyzing quantitative data collected where frequencies and proportions were used in interpreting the respondent's perception of issues raised in the questionnaire so as to answer the research questions. Lorenz's curves, Graphs, pie-charts and tables were used in data presentation. This was done with the aid of a computer programme - Statistical Package for Social Sciences version 11.5 for windows and Statistical Activation Software version 9.1. An inferential statistics tool, the Chi square test was used to test if there's was any

relationship between Higher Education Loans awards and equity and access to university education. Where a relationship was established, the researcher went further and used Pearson's Product Moment correlation ( $r$ ) in order to find out the direction and nature of the relationship.



## **CHAPTER FOUR**

### **PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA**

#### **4.0 INTRODUCTION**

This chapter presents the analysis of the data on the basis of responses obtained from both open and close ended items on the questionnaire annexed to this thesis as appendix III. The subjects were requested to respond to a total of 27 items: Essentially the questionnaire covered respondents' Biographical data, information on family background, and information on HELB.

The following format has been adopted in the analysis

- Description of data by use of descriptive statistics in order to identify and examine the general patterns of the respondents.
- Comparative analysis of data by use of cross tabulations and chi-square in order to study the distribution and determine the relationships of variables in the sample.
- Responses to socio-economic background status

For each of reference a summary of the results of the analysis is presented in a table. The summary makes it easier to examine at a glance, the relationship between the various variables in the study.

## **4.2 DESCRIPTIVE STATISTICS**

### **4.2.1. RESPONDENTS BIOGRAPHICAL DATA**

For analytical purposes, there is no single, agreed measure of individual or family socioeconomic status. Common measures for classifying students' socioeconomic status include parental employment category, family income, and parental education levels. The study examined the utility of these variables for defining students' socioeconomic status. The biographical data of the respondents entails the gender, distribution according to courses of study, type of secondary school attended fathers and mothers highest level and their occupations.

#### **4.2.1.1 HIGHER EDUCATION INSTITUTION ATTENDED BY RESPONDENTS AND GENDER.**

It was important to determine the respondents' frequency according to university to ascertain the distribution of the sample. From figure 4.1 (a) there's a higher representation of students at Moi University (78%) compared to UEA Baraton (22%). The government support over the years has made Moi University to enrol more than University of Eastern Africa Baraton. Public universities are highly subsidized by the state and hence have a large capital outlay. Payment of teachers' salaries and equipment is the responsibility of government whereas private universities have to recover most of their costs from tuition fees which is their main source of funds. Due to financial challenges Private Universities have not been able to offer high cost programs such as Medicine, and Engineering.

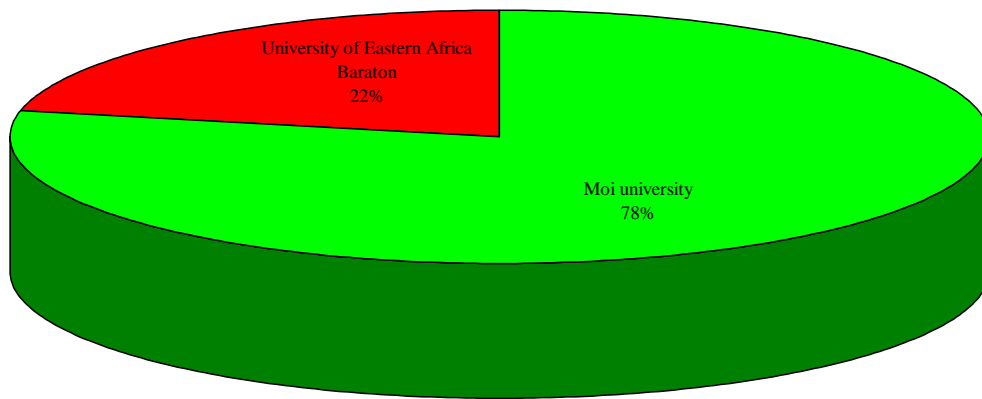


Figure 4.1(a): Respondents Frequency by one's university

#### 4.2.1.2 HIGHER EDUCATION INSTITUTION ATTENDED BY RESPONDENTS AND GENDER.

The researcher sought to establish the distribution of the sample in terms of gender. It was important to establish this since out of it the researcher was able to make informed discussions on gender parity in accessing higher education. As indicated on table 4.1(a) of the 251 respondents from Moi University 161 were male representing 64.1% compared to UEA Baraton that had 41 respondents being male representing 59.4%. There was also more female representation (40.6%) at UEA Baraton compared to Moi University. (35%)

The participation of women in higher education is very low in Kenya, in large part because of traditional cultural values that emphasize women's roles as wife and mother. Women in Kenya are underrepresented in HE institutions as students and as workers. While gender disparities in students' enrolment exist at all levels of HE, they are particularly wide at higher degree levels and in science, mathematics and technology oriented subjects. This is particularly so in private universities where there are less

science oriented courses. At the same time, women are underrepresented in teaching and in the administration of these institutions (Sifuna 1998).

**Table 4.1(a) Higher education institutions attended by respondents by gender.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Gender	Count	%	Count	%	Count	%
Male	161	64.1	41	59.4	202	63.1
Female	90	35.9	28	40.6	118	36.9
Total	251	100	69	100	320	100

#### 4.2.1.3 RESPONDENTS' COURSE OF STUDY AND GENDER

The question on the course being undertaken by the respondents was asked in order to compare the distribution of the students in the High professional (Medicine, Law and Engineering) courses, social sciences and science based. As indicated in table 4.1 (b), Males were highly represented (67.5%) in the professional courses compared to female (32.5%) in the two universities. OECD 2006 pointed out that participation in higher education is highly inequitable in terms of gender, socio-economic status and

region or location. Male students tend to perform better than female counterparts at the KCSE level therefore most likely to enrol in highly ranking courses than female counterparts that's why the government has to enforce affirmative action which has not fully solved the inequality problem. The admission requirements also favour boys since they perform well in science based subjects at the Kenya Certificate of Secondary Education. The studied literature revealed that the participation of women in higher education is very low in Kenya, in large part because of traditional cultural values that emphasize women's roles as wife and mother. While gender disparities in students' enrolment exist at all levels of Higher Education, they are particularly wide at higher degree levels and in science, mathematics and technology oriented subjects. At the same time, women are underrepresented in teaching and in the administration of these institutions. Further, women academics are concentrated in the lower ranks of the hierarchy and in the traditional 'female' social science and education disciplines while as administrators they are few and far in between in the higher ranks of HE administration.

**Table 4.1 (b) Respondents' distribution of gender and course**

	What course are you studying						Total	
	High cost prestigious courses (Engineering Law Medicine)		Social sciences (Education Business studies)		Science Other			
	Count	Percentage	Count	%	Count	%	Count	%
Gender Male	79	67.5	59	55.6	44	77.2	202	63.1
Female	48	32.5	57	44.4	13	22.8	118	36.9
Total	117	100	106	100	57	100	320	100

#### **4.2.1.4 RESPONDENTS' TYPE OF SECONDARY SCHOOL ATTENDED AND HIGHER EDUCATION INSTITUTION**

With respect to access, it was important to ascertain the respondents secondary school attended since there's a difference in the secondary school establishment that makes the respondents chances of joining university non uniform. Secondary schools in Kenya are classified as either National, Provincial, District or Private. This classification affects the level of competence in terms of entry behaviour of the students enrolled in these schools. The selection panels meet to select students upon the release of KCPE results. Students with high marks are selected to join National schools. District schools are mainly day schools and students from these schools have a lot of challenges as they compete with their counterparts in National, Private and Provincial schools. They also differ in terms of the availability of teaching and

learning resources. The output of these schools will vary in terms of transition rates therefore affecting access to higher education.

As indicated on the table 4.1 (c), respondents who attended Provincial schools were highly represented (73.3%) in Moi University compared to National (4.4%), District (17.9%) and Private (4.4%). This is because they were numerically more (about 2,500) than National schools which are only 18 in Number. Due to there KCPE mark and challenges facing District schools, they are least represented at the university. It can also be noted that those from Private school are highly represented in UEA Baraton, where there's 46.4% compared to 1.4% National schools, 37.7% Provincial schools and 14.5%% from District schools. This is attributed to the cost at Private schools which is also higher at Private Universities.

There are some facts that explains such findings: as per the establishment of the secondary schools Provincial schools are many compared to National schools (19) . Due to the entry behaviour, district schools are least represented. By getting admitted through the JAB students are guaranteed assistance from HELB this makes most students who pass to prefer joining Public Universities.

**Table 4.1 (c) Respondent's type of secondary school attended and higher education institution.**

	Higher Education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Type of secondary school you attended	Count	%	Count	%	Count	%
National	11	4.4	1	1.4	12	3.8
Provincial	184	73.3	26	37.7	210	65.6
District	45	17.9	10	14.5	55	17.2
Private	11	4.4	32	46.4	43	13.4
Total	251	100	69	100	320	100

#### **4.2.1.5 RESPONDENTS' HIGHEST LEVEL OF MOTHERS' EDUCATION AND HIGHER EDUCATION INSTITUTION.**

It was also important to seek from the respondents Mothers and fathers level of education since from the literature reviewed, it is factual that parents with a high level of education are most likely to take their students for Higher Education. As displayed in table 4.1 (d), most mothers completed Secondary education (45%) as compared to primary (35.6%) and University education (18.1%) who are least represented even in the community from the two studied institutions. The findings also showed that those whose mothers had University qualification were more in Moi University (1.6%) compared to UEA Baraton (0.00%). A similar trend was observed at the other levels for example those whose mothers had Secondary education were



more at Moi University (45.8%) compared to 42.0% at Baraton University. It was observed that there were more respondents mothers at Moi University with the university Education. Moi University offers some of the most competitive and prestigious courses that educated parents prefer to take their children as compared to Private Universities.

**Table 4.1. (d) Respondent highest level of mothers' education and higher education institution.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Your mother's highest level of education	Count	%	Count	%	Count	%
Primary	86	34.3	28	40.6	114	35.6
Secondary	115	45.8	29	42.0	144	45.0
University	46	18.3	12	17.4	58	18.1
N/A or None	4	1.6	0	0.00	4	1.3
Total	251	100	69	100	320	100

**Table 4.1 (e) Respondents- mother's occupation higher education institution.**

**4.2.1.6 RESPONDENTS- MOTHER'S OCCUPATION HIGHER EDUCATION INSTITUTION**

The occupation of the parents was categorized into Professional/Managerial, semi-professional/secondary teachers, middle level/senior clerical, self employed and farming/semi skilled (UNDP 1998). This distinguishes different levels of income based on the salaries and opportunities attached to these professions. At the higher education level, postsecondary education has become so integrally linked to individual economic well-being that it is now deemed one of the "essential components of cultural and socioeconomic development of individuals, communities and nations" (United Nations Development Programme,1998). As such, the higher education degree credential, over time, has become the principal entry point into the most modernized sectors of the economy and middle or upper-class status.

From the findings shown in table 4.1 (e), Moi University had 3.6% professional/managerial, 14.3% semi professional and UEA Baraton had 2.9% professional/managerial and 24.6% semi skilled. The respondents from UEA Baraton had their Mothers in Professional/managerial 2.9%, semi professional 24.6% middle level/senior clerical 0.00% self employed 11.6% and farming/semiskilled 60.9%. At Moi University those with semi skilled/farming occupation were less (54.2%) than those from Baraton University (60.9%). Most mothers with students at the university are semi skilled/ farming (55.6%). This affects their sources of income for fees to the students since such sources are not steady. The occupation of the mother determines the ability to pay fees by the responses.

Count

	Higher education institution you are currently attending					
	Moi University		University of Eastern Africa Baraton		Total	
Your Mother's current occupation	Count	%	Count	%	Count	%
Professional/Managerial	9	3.6	2	2.9	11	3.4
Semi-Professional/Sec teachers	36	14.3	17	24.6	53	16.6
Middle Level/Senior clerical	3	1.2	0	0.00	3	0.1
Self employed	48	19.1	8	11.6	56	17.5
Farming/ semi skilled	136	54.2	42	60.9	178	55.6
Not indicated/don't know.	19	7.6	0	0.00	19	5.9
Total	251	100	69	100	320	100

#### 4.2.1.7 RESPONDENTS' HIGHEST LEVEL OF FATHER'S EDUCATION AND HIGHER EDUCATION INSTITUTION.

Father's level of education determines the value with which he gives priority to education matters. This helps to ascertain the guidance he will give to the respondents/students as far as education is concerned. From the findings, majority (47.5%) of the respondents had their fathers with secondary education compared to Primary 24.7% and university (23.4%). Moi University had the highest (26.3%) of the

fathers education being University education as compared to UEA Baraton that had 13.0%. according to UNESCO 2008, Sub-Saharan Africa have most parents with the lowest level of education. This is because education in most of these countries is still evolving to an extent that even the definition of Higher Education is still unclear (UNESCO, 2008). The reasons for this observation is that Moi University offers some of the highly competitive courses like engineering, law, medicine this makes it possible that educated fathers are highly represented than UEA Baraton.

**Table 4.1 (f) Respondents' highest level of Father's education and higher education institution.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Your father's highest level of education	Count	%	Count	%	Count	%
Primary	58	23.1	21	30.4	79	24.7
Secondary	117	46.6	36	52.2	153	47.8
University	66	26.3	9	13.0	75	23.4
N/A or None	10	4.00	3	0.04	13	0.04
Total	251	100	69	100	320	100

#### **4.2.1.8 RESPONDENTS- FATHER'S OCCUPATION AND HIGHER EDUCATION INSTITUTION.**

The occupation of the father determines family income which in the long run will determine the ability to pay the fees for higher education. From the findings, there' a

similar trend observed in the two universities concerning the occupation of the respondents' father. From Moi University, those whose fathers had professional/managerial occupation were (14.3%), middle level semi professional (3.2%), self employed (10.4%) and majority (51.4%) were farming/semi skilled. UEA Baraton had professional (5.8%), semi professional (21.7%), middle level/senior clerical (1.4%), self employed (23.2%) and majority (46.4%) are farmers/semiskilled. There were more semi skilled/farmers at Moi University (51.4%) than UEA Baraton (46.4%). This is because at the present set up, we have modern farming methods where there's a lot of technology being applied. Thus can be found that at Moi University we have both professional and farmers/semi skilled.

**Table 4.1 (g) Respondents- Father's occupation and higher education institution.**

Count

		Higher education institution you are currently attending				Total	
		Moi University		UEA Baraton			
Your father's current occupation		Count	%	Count	%	Count	%
	Professional/Managerial	23	9.2	4	5.8	27	8.4
	Semi-Professional/Sec teachers	36	14.3	15	21.7	51	15.9
	Middle Level/Senior clerical	8	3.2	1	1.4	9	2.8
	Self employed	26	10.4	16	23.2	42	13.1
	Farming/ semi skilled	129	51.4	32	46.4	161	50.3
	Not indicated/don't know	29	11.6	1	1.4	30	9.4
Total		251	100	69	100	320	100

**4.2.1.9 RESPONDENTS PARENTS TOTAL MONTHLY INCOME**

Respondents were also asked to estimate the total monthly income for the family to determine the status of their parents. Its clear from the graphs above that most respondents could not tell exactly the earnings from there families (33.4%). This could be attributed to the nature of the economic activities involved i.e. subsistence

farming which does not have a clear record of the income. A few (22.5%) who could tell said that the estimated income was between Kshs. 2,001-8,000 which depicts a relatively poor economic background since this could not even sustain the family. Most of the families also live in the rural areas (89%). Those who reside on the urban areas reside mainly in Eldoret as indicated in table . Psacharopoulos (1991) argue that the student from high income families most likely will not to be excluded from the present higher education system even though the fee tuition is implemented in public university. Students from high SES is assumed have better coaching or attendance at good quality secondary school as it give them a more chances to pass the national university admission system. If they wail to enter the free domestic public higher education, they will enroll to a private university or study abroad. This concludes that the lower income students are most likely the group that will be excluded from the free higher education system. Despite they pay no fees, the opportunity cost or forgone income while studying will discourage them to apply the admissions. Furthermore, if they compete at the national university admission test, they could have lower chance as they did not receive an equal training.

**Table 4.1(h) Respondents parents total monthly income**

**Your parents total monthly income \* Higher education institution you are currently attending Cross tabulation**

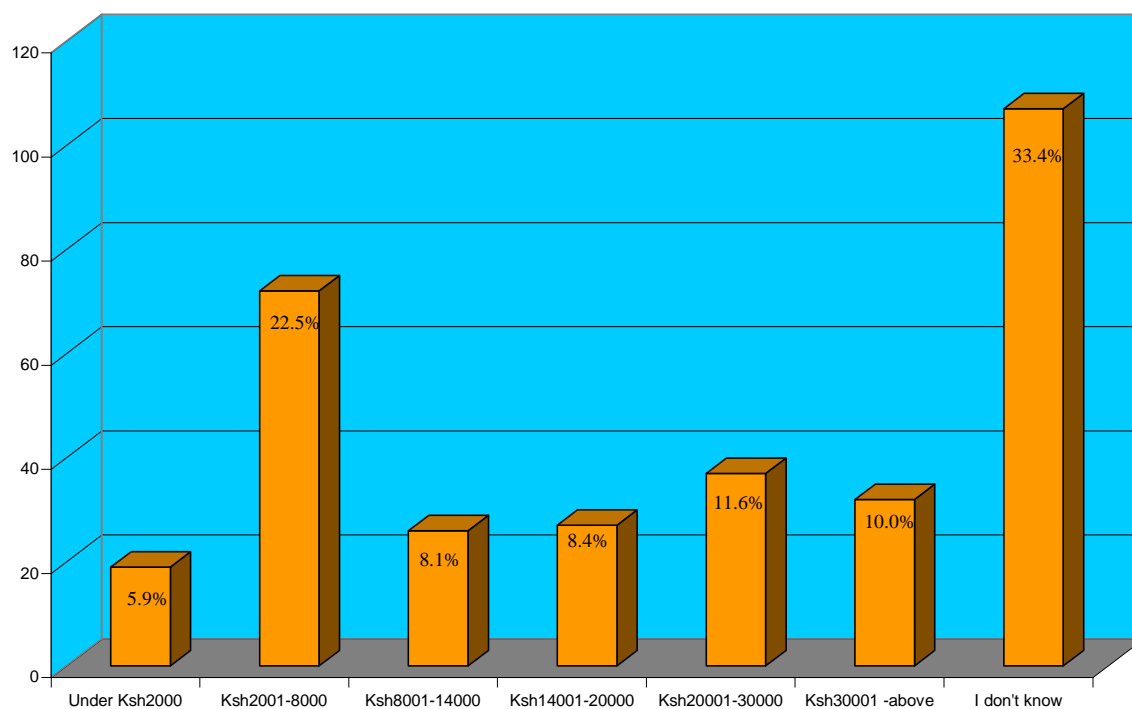
Count

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Your parents total monthly income	Count	%	Count	%	Count	%
Under 2000	15	6.0	4	5.8	19	0.06
2001 – 8000	64	25.5	8	11.6	72	22.5
8001 - 14,000	16	6.4	10	14.5	26	8.1
14,001 - 20,000	16	6.4	11	15.9	27	8.4
20,001 - 30,000	34	13.5	3	4.3	37	11.6
30001and above	27	10.8	5	7.2	32	0.10
I don't know	79	31.5	28	40.6	107	33.4
Total	251	100	69	100	320	100



**Table 4.1(k) : Indicate the town If the region your parents live is urban**

<b>Town</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Eldoret	10	3.1	3.1
Kisumu	4	1.3	4.4
Kapsebet	1	.3	4.7
Nairobi	6	1.9	6.6
Kitale	3	.9	7.5
Iten	2	.6	8.1
Nakuru	3	.9	9.0
Nyahururu	1	.3	9.3
Migori	1	.3	9.6
Mombasa	1	.3	9.9
Kakamega	1	.3	10.2
Kericho	4	1.4	11.6
N/A or Not indicated	283	88.4	100
<b>Total</b>	<b>320</b>	<b>100.0</b>	



**Figure 4.1(l): Your parents total monthly income**

#### **4.2.1.10 RESPONDENT'S COURSE OF STUDY AND TYPE OF SECONDARY SCHOOL ATTENDED**

The researcher sought to establish the contribution that respondent's type of secondary school had on the type of courses they were taking. There were more respondents from private schools taking law, medicine and engineering courses (48.8%), another 46.5% took social sciences and science 4.7%. respondents with a National secondary school experience had a high proportion 50.0% taking social sciences, and another 33.4% taking high professional (medicine Law and engineering courses). They were least represented at sciences and other courses with 8.3% each. These trends are determined by the parents ability to pay fees at secondary level and influence from parents level of education.

**Table 4.1 (m) Respondent's course of study and type of secondary school attended**

Count

	Type of secondary school you attended								Total	
	National		Provincial		District		Private			
What course are you studying	Count	%	Count	%	Count	%	Count	%	Count	%
High professional/prestigious	4	33.4	79	37.6	23	41.8	21	48.8	127	39.7
Social sciences/education	6	50.0	93	44.3	17	30.9	20	46.5	136	42.5
Science	1	08.3	32	15.2	15	27.3	2	4.7	57	17.8
Other	1	08.3	6	02.9	0	0.00	0	0.00	7	02.2
Total	12	100	210	100	55	100	43	100	320	100

#### 4.2.2 RESPONDENTS FAMILY BACKGROUND

Woodhall (1987) notes that for effective assessment of financial need, extensive information on family data is required such as number in a family group, non earned income, number of dependent children, special circumstances (for example unemployment or illness) and earned income of all members of the family. In this section, the following family background variables are analysed on the basis of responses obtained from the two institutions in which the study was undertaken. These variables are: type of family/marital union, number of brothers and sisters/siblings, brother/sisters with higher education qualification or studying in higher education, parents highest level of education, parents total monthly income

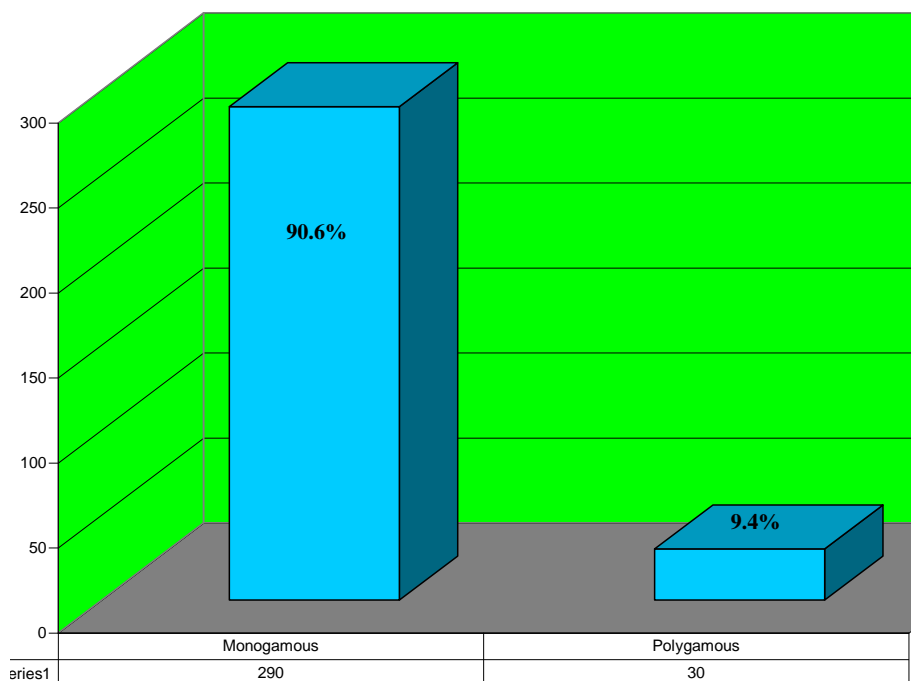
(mother and father), type of family owned house, possession of consumer and investment goods, ownership of assets, ownership of effects, availability of utilities in the house where parents live, possession of household goods, forms of media equipment owned by parents, size of the family farm, type of farming activity carried out on the *shamba* and the area the family live.

#### **4.2.2.1 TYPE OF FAMILY/MARITAL STATUS**

The question on family set up was asked because it affects the number of children in the family financial ability of the family to provide for the children. Similar to studies on tertiary education equity in developed countries (Finnie, Laporte, and Lascelles 2004) multiple studies look into how family backgrounds, which are primarily either parental education or occupation, affect access to tertiary education in developing countries. What they have found is that family backgrounds tend to be a major determinant of access to tertiary education. This rate tends to track the rate of increase of wages and salaries in the general economy—or, if there is any real growth in the economy, at a rate in excess of the prevailing rate of inflation. This phenomenon of rising relative unit costs in sectors of the economy that are labor intensive and productivity immune, or at least productivity resistant, was first articulated by Baumol and Bowen (1966). Generally most families were monogamous (82.8%), polygamous 9.1% and single parent 8.12%. Moi University had the highest representation of the monogamous group 85.7% compared to UEA Baraton 72.5%. While polygamous were more in UEA Baraton 13.0% compared to Moi University 8.0%.

**Table 4.2. (a) Type of family/marital status**

Count		Higher education institution you are currently attending				Total	
		Moi University		University of Eastern Africa Baraton			
Type of family/parents marital status		Count	%	Count	%	Count	%
Monogamous		215	85.7	50	72.5	265	82.8
Polygamous		20	8.00	9	13.0	29	9.10
Single parent		16	6.30	10	14.5	26	8.12
<b>Total</b>		<b>251</b>	<b>100</b>	<b>69</b>	<b>100</b>	<b>320</b>	<b>100</b>



**Figure 4.2(a): Respondents Frequency by Family setup**

#### **4.2.2.2 TYPES OF FAMILY OWNED HOUSE AND HIGHER EDUCATION INSTITUTION**

The type of house that the family live affects the family's monthly expenditure, for example when living in a rented house it will mean more expenses and this affects the families ability to pay the university fee. From the study as shown in table 4.2 (b) most respondents live in own family house (93.1%). It was also clear that those living in houses with corrugated iron with stone were more (37.1%) compared to grass thatched with mud wall houses ( 7%), corrugated iron with mud walls (29.4%) and tiled roof (6.9%) and timber houses ( 7.5%). The two universities' catchment area is rural in nature and that's why most respondents came from family owned houses where rented houses may not be available.

From the findings, it was also noted that most of the respondents had their parents houses being corrugated Iron sheets with stone walls 37.8%. Others were from corrugated Irons with mud walls (29.4%), grass thatched roof with mud walls (7.2%). There was a higher representation of those from grass thatched roof with mud walls at Moi University (8.0%) than Baraton University (4.3%). Moi University had a representation in all the house type compared to UEA Baraton.

**Table 4.2.(b) Types of family owned house and higher education institution**

	Higher education institution you are currently attending					
	Moi University		University of Eastern Africa Baraton		Total	
House nature if family owned	Count	%	Count	%	Count	%
Grass thatched roof with mud walls	20	8.0	3	4.3	23	7.2
Corrugated irons with mud walls	74	29.5	20	29.0	94	29.4
Corrugated irons with stone walls	103	41.0	18	27.5	121	37.8
Tiled roof house	11	4.4	11	15.9	22	6.9
Timber house	18	7.2	6	8.7	24	7.5
N/A	3	1.2	0	0.00	3	0.9
Total	251	100	69	100	320	100

#### 4.2.2.3 RESPONDENTS' HOUSE PARENTS CURRENTLY LIVE IN

House type in terms of whether family owned, rented or employers' house indicates the burden parents have on fee payment. This is because the expenditure is high when the house is rented as opposed to family owned. The researcher found that a high percentage (93.8%) of the respondents were from family owned house. This could be due to the rural set up of the two universities under study. 5.3% were from rented house and 0.9% used employers' house as shown in table 4.2 (c)

**Table 4.2.(c) : Respondents' house parents currently live in**

<b>House type</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Rented house	17	5.3	5.3
Family owned	300	93.8	99.1
Employers house	3	.9	100.0
<b>Total</b>	<b>320</b>	<b>100.0</b>	

#### **4.2.2.4 OWNERSHIP OF ASSETS.**

This question on ownership of assets was asked in order to establish other sources of income for the family. The biggest proportion of the respondents (86.9%) did not own residential rented house nor a business premise but farms (*shamba*). The assets owned by the respondents' family can determine their ability to transact other income generating projects and in the long run determine the ability to pay fees. From the study, it can easily be concluded that the largest proportion of the respondents had land. However, the highest proportion of respondents at UEA Baraton had the largest proportion (94.2%) compared to Moi University (84.8%). This could be because of the rural location of the university which is consistent with the previous analyses. Considering the same background there was 0.00% representation on the sample of those with rental residential houses at Baraton university with 7.6% at Moi University.



**Table 4.2. (d) Ownership of assets**

Count	Higher education institution you are currently attending					
	Moi University		University of Eastern Africa Baraton		Total	
	Count	%	Count	%	Count	%
Asset ownership of your family						
Residential rental house	19	7.6	0	0.00	19	5.9
Business premise	10	4.0	0	0.00	10	3.1
Commercial plots	9	3.6	4	5.8	13	4.1
Farm(shamba)	213	84.8	65	94.2	278	86.9
Total	251	100	69	100	320	100

#### **4.2.2.5 RESPONDENTS' SIZE OF THE FARM AND HIGHER EDUCATION INSTITUTION.**

Land is considered as the principal capital in any economy. It determines one's capital base for other financial opportunities since it can be used as a security. From table 4.2 (e), 44.1% of the respondents indicated that their parents had land of 0-5 acres. Baraton University were the majority in this bracket (50.7%) compared to Moi University (42.2%). Those whose parents had 6-20 acres were 35.5% Moi University and 37.7% from Baraton University while those who had 21-50 acres were 15.1% Moi University and 10.2% UEA Baraton. It is consistently clear that with the introduction of parallel degree programs, parents with a better socio economic status

had taken their students to the public Universities, this is because courses of a higher calibre/prestigious i.e. medicine, law, engineering are offered in this universities. This is reversing the previous trend where a higher proportion of affluent families were believed to take their students to Private Universities.

**Table 4.2. (e) Respondents' Size of the farm and higher education institution.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
If you own the <i>shamba</i> , then indicate the size in acres	Count	%	Count	%	Count	%
5 or less acres	106	42.2	35	50.7	141	44.1
6-20 acres	89	35.5	26	37.7	115	35.9
21-50 acres	38	15.1	7	10.2	45	14.1
51 -100 acres	4	1.6	1	1.4	5	1.6
N/A	14	5.6	0	0.00	14	4.3
Total	251	100	69	100	320	100

#### **4.2.2.6 RESPONDENTS' AVAILABILITY OF UTILITIES AND HIGHER EDUCATION INSTITUTION**

In today's society, students of lower socioeconomic background are generally lacking the technology needed to keep up with the general population. The obvious reason is the high price of technology.

Studies have shown that by using computers and the internet in the classroom helps to equalize students of all socioeconomic backgrounds. It allows students to be more involved academically and professionally in their futures. They may even become as technologically literate as their more economically advantaged peers. It was important therefore to determine the availability of utilities to ascertain their access to technology (Levitt et al 2005). Crnic and Lambarty 1994 discuss the impact of socioeconomic status on children by asserting that social class ethnicity and race entails a set of contextual givens that distance neighbourhood, housing and access to resources that affect enrichment or deprivation as well as the acquisition of specific value systems.

From the two Universities; 34.8% of the respondents from UEA Baraton indicated having Tap (running water) as compared to 23.1% from Moi University. Those with electricity at their parent's houses were 16.7% from Moi University and 18.8% from UEA Baraton. It was also found that 11.6% of the respondents from Moi University indicated as having a telephone connection compared to 21.7% from UEA Baraton.

**Table 4.2 (f) Respondents' Availability of utilities and higher education institution**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Utilities available in the house your parents currently live	Count	%	Count	%	Count	%
Tap(running) water	58	23.1	24	34.8	82	25.6
Electricity	42	16.7	13	18.8	55	17.2
Telephone	29	11.6	15	21.7	44	13.8
None of the above	122	48.6	17	24.6	139	43.4
Total	251	100	69	100	320	100

#### **4.2.2.7 RESPONDENTS' TYPE OF FARMING ACTIVITY, HIGHER EDUCATION INSTITUTION**

In most rural African societies the size of land determines one's financial status and therefore socio economic status. Demarest et al (1993) notes that families with high socio economic status often have more success in preparing their young children for school because they typically have access to a wide range of resources to promote and support young children development. They are able to provide their young children with high quality child care, books and toys to encourage children in various learning activities at home. From the findings, the respondents from Moi Universities (53.0%) had mixed farming compared to UEA Baraton 53.6%. those whose parents practiced subsistence farming were 29.1% from Moi University and 36.2% from UEA Baraton. Moi University had a higher representation (12.4%) compared with UEA Baraton (10.1%).

**Table 4.2. (g) Respondents' type of farming activity, higher education institution Count**

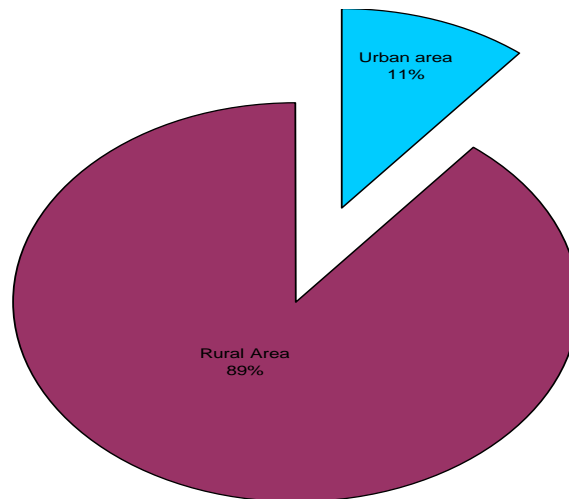
	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
The type of farming activity that is carried out in the farm	Count	%	Count	%	Count	%
Growing of cash crop	31	12.4	7	10.1	38	11.9
Subsistence farming	73	29.1	25	36.2	98	30.6
Mixed farming	133	53.0	37	53.6	170	53.1
N/A	14	5.5	0	0.00	14	4.4
Total	251	100	69	100	320	100

#### 4.2.2.8 AREA RESPONDENTS LIVE AND HIGHER EDUCATION INSTITUTION.

This question was asked in order to find out the family background of the respondents in terms of access to basic amenities like medical, schools. Most respondents lived in the rural areas (89.06%), Moi university had 89.2% and Baraton University had 88.4%.

**Table 4.2.(h) Area respondents live and higher education institution.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Region your parents currently live	Count	%	Count	%	Count	%
Urban area	27	10.8	8	11.6	35	10.9
Rural area	224	89.2	61	88.4	285	89.1
Total	251	100	69	100	320	100



**Figure 4.2 (d) Region your parents live**

#### **4.2.2.9 RESPONDENTS' SIBLINGS IN SCHOOL AND HIGHER EDUCATION INSTITUTION.**

The question on the number of siblings was asked in order to establish the level of dependence in the family unit. Those who had siblings between 4-8 were of a high proportion (70.9%) in the two universities with a higher representation at UEA Baraton (84.1% compared to Moi University 67.3%). Those with less than 3 children were (17.5%) from the two universities. There was a higher representation at Moi University (19.5%) than UEA Baraton (10.1%). Its also notable from table 4.2 (i) that those with siblings between 9 and 13 were more at Moi University 10.8% than UEA Baraton that had no representation.



**Table 4.2.(i) Respondents' Siblings in school and higher education institution.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Number of siblings	Count	%	Count	%	Count	%
0-3	49	19.5	7	10.1	56	17.5
4-8	169	67.3	58	84.1	227	70.9
9-13	27	10.8	4	5.8	31	9.7
14-above	6	2.4	0	0.00	6	1.9
Total	251	100	69	100	320	100

#### **4.2.2.9 RESPONDENTS' HOUSEHOLD GOODS AND HIGHER EDUCATION INSTITUTION.**

It was important also to determine the respondents household goods ie the refrigerator, electric cooker, microwave oven, gas cooker etc. In determining the SES of the respondents, possession of these item indicates the financial ability of the parents. A highest proportion of the respondents (66.3%) did not have Refrigerators (14.1%), electric cooker (2.5), microwave oven( 1.3%) nor Gas cooker (15.9%). Comparing universities, it can be noted that those whose parents had refrigerators were 13.5 Moi University and 15.9% UEA Baraton. Those whose parents had Micro wave oven were 1.6% from Moi University and none from Baraton University while those who had Gas cookers were the same for the two institutions at 15.9%. The availability of these utilities is largely determined by the availability of electricity in the respondent's home area. Given that most of the respondents were from rural areas, they therefore could not have these utilities

**Table 4.2 (j) Respondents' Household goods and higher education institution.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Household goods your parents have	Count	%	Count	%	Count	%
Refrigerator	34	13.5	11	15.9	45	14.1
Electric cooker	4	1.6	4	5.9	8	2.5
Microwave oven	4	1.6	0	0.00	4	1.2
Gas cooker	40	15.9	11	15.9	51	15.9
None of the above	169	67.4	43	62.3	212	66.3
Total	251	100	69	100	320	100

#### **4.1.3 RESPONDENTS SOCIO-ECONOMIC BACKGROUNDS**

In order to answer the question, who gains access to higher education in Kenya and particularly benefits from Public University subsidies, the respondents were divided into five socio economic groups labelled: SES (I) Low, SES (II) middle low, SES (III) Middle, SES (IV) Middle High and SESB (V) High. These social and economic groups are thought to index relative social and economic positions of respondents. The SES groups were also cross tabulated with type of family, type of school respondents attended, courses respondents were studying, type of home area i.e. urban/rural. This was done in order to assess how these variables were distributed across the SES groups and the extent to which they were characterised by these variables. To arrive at the five socio-economic groups, the means of the 5 social and economic indicators comprising occupation and education status of father and mother respectively and family income were calculated. Raw scores were transferred into Z scores that were obtained for each of the respondents then subdivided into 5 SES (Borg and Gall 1989). Based on the stannine scale standard score system enables normal distribution to be divided into 5 parts ranging from 1 to five. Score 1 being the lowest and score 5 the highest and score 3, the middle point of the distribution (Borg and Gall 1989). To determine the number of respondents in each of the 5 SES groups the percentage share of each group was multiplied by the total number of respondents in the sample. The type of measurement chosen to analyse the extent of equality or inequality in the distribution of educational resources depend largely on the way the population is divided into groups (Psacharopoulos and Woodhall (1985)

**Table 4.3 (a) Comparison of SES of type of secondary school one attended**

Possession	SES1	SES2	SES3	SES4	SES5	$\chi^2$	$\delta\phi$	Sig
National	1	1	7	3	1	55.083	18	0.000
Provincial	13	17	118	45	18			
District	33	45	31	12	5			
Private	3	4	24	10	4			

From the findings presented, of the 4% students who attended national secondary school 53% were from the middle SES group. The same trend is also seen at the provincial schools where of the 65.9% who attended provincial majority (55.9%) were from the SES3 (middle Group.) Those who attended district schools were mainly (61.6%) from low and middle low. Few (15.5%) students who attended private schools came from the lower SES. According to reviewed literature three key determinants— gender, socio-economic status, and region—skew the already low participation rates in favor of males, richer families, and urban households. Access and equity in higher education in Sub-Saharan Africa are fundamentally determined by access to and the quality of secondary education. In most countries, access to secondary schooling is extremely limited and often of poor quality.

**Table 4.3. (b) Comparison of SES of type of courses of respondents were studying**

Possession	SES1	SES2	SES3	SES4	SES5	$\chi^2$	$\delta\phi$	Sig
Engineering	3	4	27	10	4	109.980	36	0.000
Business Studies	4	5	35	13	5			
Law	3	4	15	6	2			
Medicine	3	4	29	11	5			
Education	5	6	42	16	6			
Science	3	4	28	11	4			
Other	1	6	4	2	1			

It was important to compare the SES of the respondents with the course of study so as to ascertain the level of inequality existing in the studied Universities. From the table in all the courses, there are a higher representation of students from SES3 i.e. High professional courses (engineering, law and Medicine) (59%), social sciences ie education and business studies (56.2%) and Sciences (70%) this is followed by SES4 which also has a high proportion compared to the remaining social classes. It is to be noted that there is no income ceiling on students / parents for the eligibility of this loan scheme. Neither the academic achievement is considered as an eligibility criterion, that is, there is no minimum qualifying marks required. There are no special provisions of any kind for the weaker sections in terms of security, government guarantee, lower rate of interest or repayment period, repayment in accordance with earnings, waivers, etc. It is to be noted that the scheme neither adheres to the

efficiency nor the equity principles unlike in many other countries, where merit-cum-means determine the eligibility for student loan.

**Table 4.3 (c) Respondents with brothers and sisters studying in higher education or with higher education qualification by SES**

Possession	SES1	SES2	SES3	SES4	SES5	$\chi^2$	$\delta\phi$	Sig
Indicated	11	14	95	37	15	108.744	36	0.000
Not Indicated	9	12	82	32	13			

The question on the siblings in higher education training was asked in order to ascertain the level of dependence. Increasing reliance on student fees, student loans and privatisation without considering the low-income groups may produce regressive effects in the society. Hence, an alternative student loan scheme specifically for the weaker sections should be evolved. Such a programme must be flexible enough to suit their requirements, which may involve government guaranteed loans, subsidised interest rates, liberal terms of repayment, waivers for those students with less future incomes, etc, in addition to a strong student support system. Under the deep waves of globalisation and competition, important economic rationale for government funding especially for higher education is neglected. Public support for higher education remains essential to ensure a balanced achievement of educational and social missions, apart from surviving in the knowledge-based society.

#### **4.1.3. FINANCIAL SUPPORT BY HELB**

The question on the amount of loan award granted by HELB was asked in order to ascertain the amount of loan given to the student on average and in the process

establish the level of need satisfied by the HELB. HELB is the only institution established by an act of parliament to grant loans to the students.(GOK 1995).

The largest proportion of the students/respondents (33.8%) received an average of between 35,000 and 45,000 Kshs from HELB in form of loans. It is also clear that students from Baraton University (37.7%) do not access HELB loans as opposed to Moi University (22.3%). Over along time HELB were not awarding loans to the Private Universities. Efforts have been put in place to reach out to the student population in the Private universities. Of late, educational loan is very popular among students because of its simple and appealing logic, despite its inherent weaknesses.

There has been a paradigm shift in the attitude towards financing higher education *per se* and student loans in particular. The features of second generation of loan programmes around the world are such that loan is not guaranteed by government; sanction of loan requires 100 per cent collateral security and a guarantor that of co-signatory of parent or family member; the loan schemes are operated by commercial banks / private sector / private banks; the loan amounts are charged at market rate of interest; and marketability of a course scores for high probability of a loan getting sanctioned. A major shift can be observed from the choice of administering agency from government/agency or institutions/universities to commercial banks and private banks or private sector. There is gradual shift from a regime of interest-free loans to subsidized interest on student loans. With the changes in economic reform polices around the world, there is sudden upsurge of market rate of interest or even above the market rate of interest being charged for student loans.



**Table 4.4(a) How much HELB loan and bursary did you receive this in the indicated years.**

	Higher education institution you are currently attending				Total	
	Moi University		University of Eastern Africa Baraton			
Average annual loan from HELB	Count	%	Count	%	Count	%
Nil	53	21.1	26	37.7	79	24.7
0-35,000	81	32.3	21	30.4	102	31.9
35,000-45,000	86	34.3	22	31.9	108	33.8
45,000-50,000	19	7.6	5	7.2	24	7.5
50,00-above	12	4.7	4	5.8	16	5.1
Total	251	100	69	100	320	100

#### 4.1.5. OTHER NON HELB INSTITUTIONS

It was important to determine respondent's status as far as the benefit of other non HELB loans were concerned. From the study 60.3% of the respondents had received funding from other non HELB sources as indicated by table 4.1 (r). The sources are mainly from CDF (27.8%) followed by harrabee/well-wishers ( 21.6%) Ministry of Education Bursary (5.3%) commercial banks (3.1%). The living expenses and fees have sky rocketed so much so that one should seek for financial assistance from other financial institutions.

**Table 4.1(r): Have you ever benefited from any other non HELB source of loan**

Response	Frequency	Percent	Cumulative Percent
Yes	193	60.3	60.3
No	126	39.4	99.7
Not indicated	1	.3	100.0
<b>Total</b>	<b>320</b>	<b>100.0</b>	

#### **4.1.6 AMOUNT RECEIVED FROM OTHER NON HELB SOURCES**

The researcher also went further to inquire on the amount of funds received from the indicated sources of non HELB loans. The amount had been classified in the brackets of 0-35,000; 35,000-45,000; 45,000- 50,000 and 50,000 and above. In the first category, there was a near equal percentage representation from the two universities ie Moi University 50.5% and UEA Baraton 50.8%. in the second category 35,000-45,000 the percentage was 3.2% for Moi University and 2.9 for UEA Baraton. Those who had received 45,000-50,000 were 3.8% and 4.3% for Moi University and UEA Baraton respectively. There was also another 5.3% from Moi University and 4.3% from UEA Baraton who had received 50,000 and above.

With a higher percentage (60.3%) of respondents receiving funds from other non HELB sources, it's clear that HELB is not meeting the demand and probably not satisfying the equity aspect.

**Table 4.1 (s) How much Non HELB loan did you receive in the indicated years.**

		Higher education institution you are currently attending				Total	
		Moi University		University of Eastern Africa Baraton			
Amount of grants from non HELB institutions.		Count	%	Count	%	Count	%
Nil		93	37.1	26	37.7	119	37.2
0-35,000		127	50.5	35	50.8	162	50.6
35,001-45,000		8	3.2	2	2.9	10	3.1
45,001-50,000		10	3.9	3	4.3	13	4.1
50,001 - above		13	5.3	3	4.3	16	5.0
<b>Total</b>		<b>251</b>	<b>100</b>	<b>69</b>	<b>100</b>	<b>320</b>	<b>100</b>

#### 4.1.7 OTHER SOURCES

In the attempt to determine alternative sources of funds, the researcher asked the respondents on the specific sources of funds. The researcher classified the sources as either CDF, MOE Bursary, Harambee/Well wishers, NGO, Commercial bank loan, others. The largest proportion from the two studied institutions received the funds from CDF 27.8%, followed by those who received from Harambees/well wishers (21.6%), those who received from NGOs were only 0.8% and commercial Banks 3.1%.

Other sources

**Table 4.1(t) : If you are getting other non-loan, indicate source of funds**

Non-Helb Loan Funding source	Frequency	Percent	Cumulative Percent
CDF	89	27.8	27.8
M.O.E bursary	17	5.3	33.1
Harambee/Well wishers	69	21.6	54.7
NGO	3	.9	55.6
Commercial bank loan	10	3.1	58.8
Other	8	2.5	61.3
N/A	124	38.8	100.0
<b>Total</b>	<b>320</b>	<b>100.0</b>	

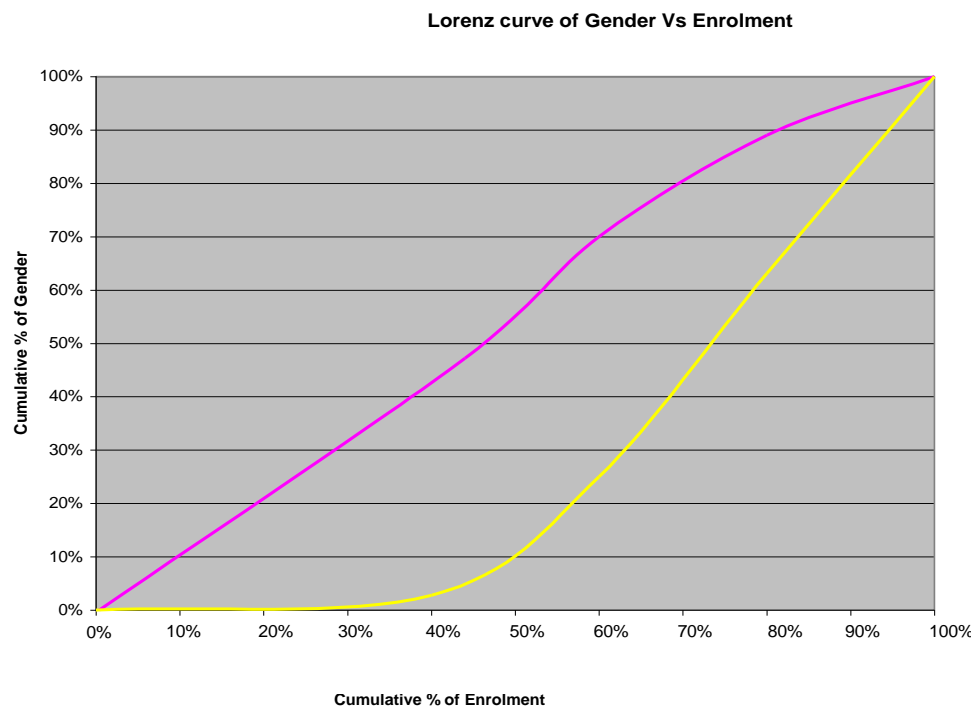
#### 4.2 LORENZ CURVES

In economics Lorenz curve is a graphical representation of the cumulative distribution function of the empirical probability distribution of wealth. It is a graph showing the

proportion of the distribution . it can also be used distribution of assets, in such use, many consider it to measure social inequality. A Lorenz curve shows the degree of inequality that exists in the distribution of two variables and is often used to illustrate the extent that income or wealth are distributed in a particular society. To do this Gini coefficients are used. Gini coefficient is a summary numerical measure of how unequally one variable is related to another. It is a number between 0 and 1, where perfect equality has a Gini coefficient of zero and absolute inequality yields a gini coefficient of 1. It is calculated using areas of the Lorenz curve.

#### **4.2.1 GENDER VS ENROLMENT**

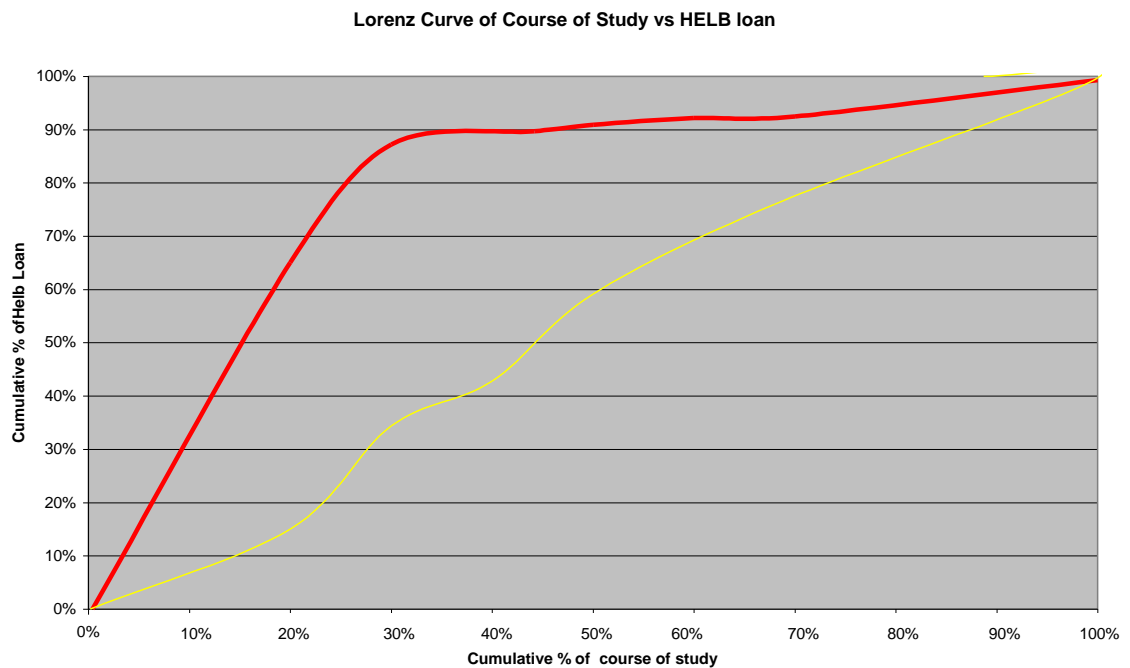
From the Lorenz's curve, there's little relationship between gender and enrolment. The gini coefficient of 0.5 depicts the disparity. This means that there's need to address the gender parity issues are involved. East African countries provide a mixed picture of gender gaps in access to tertiary education. In many countries, females have been under-represented in tertiary education, but their representation has much improved over time. The gender parity of participation in tertiary education in Kenya can be partly explained by equal participation rates of females and males in secondary education (Wicaksono and Friawan 2008). Also, the gap between sexes in terms of gross tertiary enrollment rates is relatively lower in the low income group rather than high income group (Wicaksono and Friawan 2008).



**Figure 4.4 (a): Lorenz Curve of Gender vs Enrolment**

#### **4.2.2 COURSE OF STUDY AND HELB LOAN**

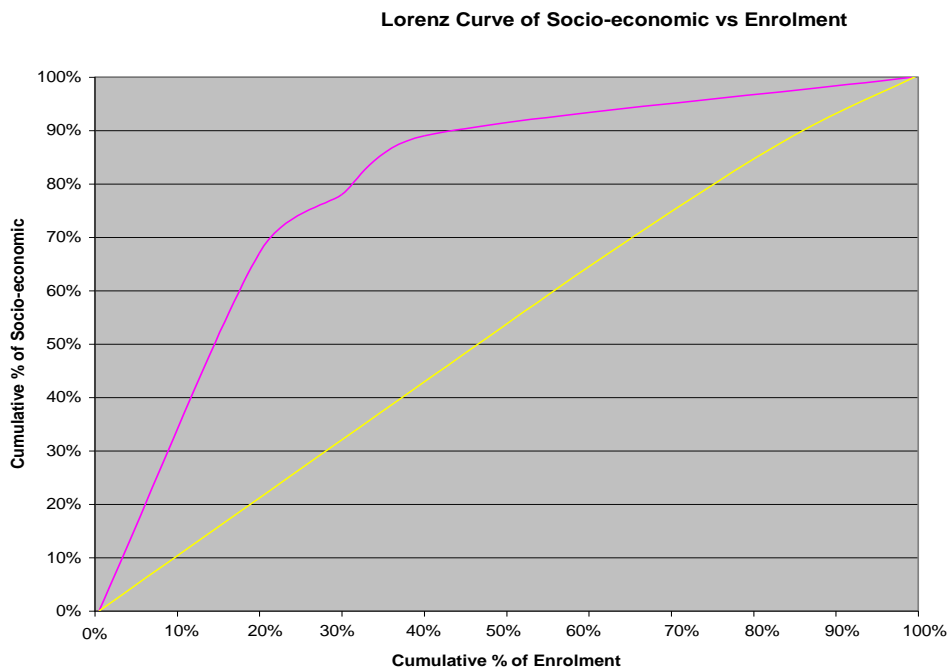
The level of inequality is also high when the course of study is compared with the amount of HELB loan awarded. At its peak the gini coefficient is 0.52. This shows that there's no relationship between the amount of loan awarded and the course of study. Different courses require different costs for the learning process. It is prudent to award loans depending on the cost of the programme being taken by the students



**Figure 4.4 (b): Lorenz Curve of Course of study vs HELB loan**

#### 4.2.3 SOCIO-ECONOMIC STATUS AND ENROLMENT

The representation of students at higher education has no meaningful relationship with the socio-economic status. There's a gini coefficient of about 0.42 on the Lorenz's curve shown. This shows that students of the middle stratum of the socio-economic status are enrolled in higher education. Hannum (2002) argues that disparities in tertiary education are translated from those in general education. The sorting process of students in tertiary education begins much earlier in life (Broaded and Liu 1996; Zhang, Huan, and Li 2007). Rural students in Kenya who are poorer than urban ones have limited access to quality secondary education and are thus seriously disadvantaged in terms of opportunities for higher education (Fry 2009). Even if poorer students can access secondary education, their financial difficulties may force them to drop out.

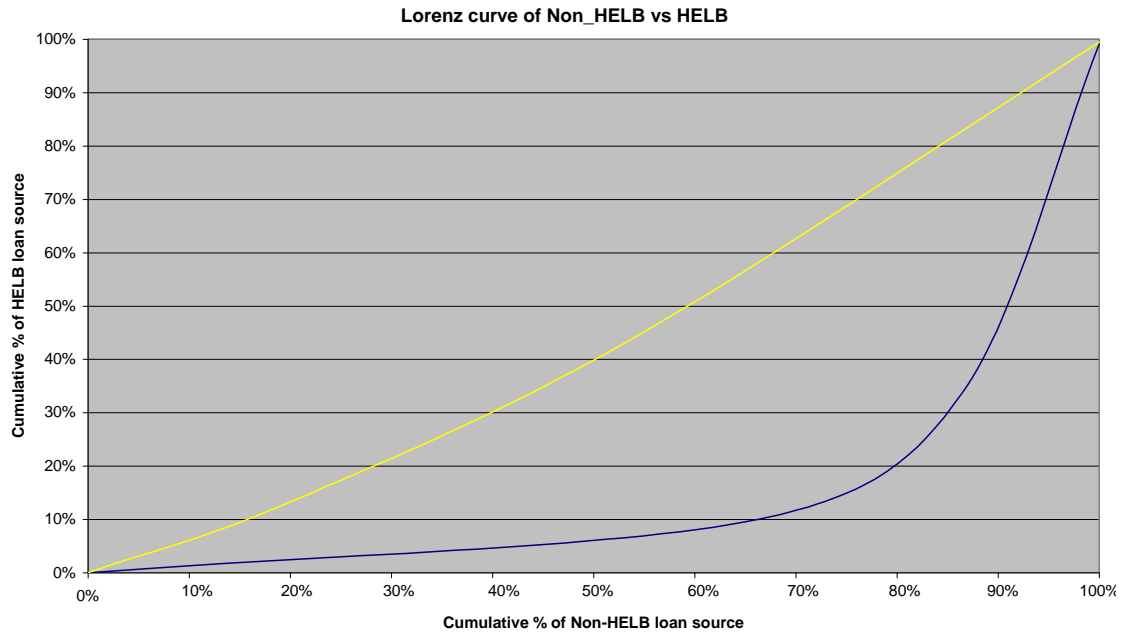


**Figure 4.4 (c): Lorenz Curve of Socio-economic status vs Enrolment**

#### **4.2.4 NON-HELB AND HELB**

There's also no significant relationship between the amount of HELB loan awarded and other sources of loans. There's a gini coefficient of about 0.45.

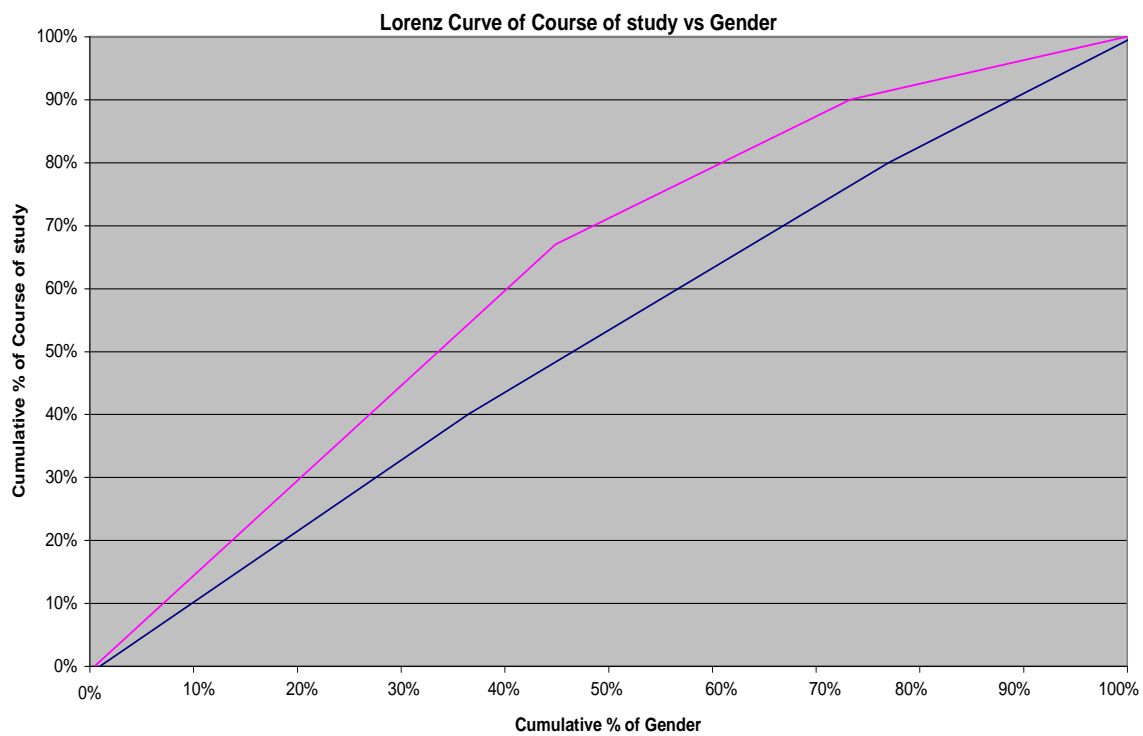




**Figure 4.4 (d): Lorenz Curve of Non-Helb vs HELB**

#### 4.2.5 COURSE OF STUDY AND GENDER

The participation of women in higher education is very low in Kenya, in large part because of traditional cultural values that emphasize women's roles as wife and mother. Women in Kenya are underrepresented in HE institutions as students and as workers. While gender disparities in students' enrolment exist at all levels of HE, they are particularly wide at higher degree levels and in science, mathematics and technology oriented subjects. At the same time, women are underrepresented in teaching and in the administration of these institutions. Further, women academics are concentrated in the lower ranks of the hierarchy and in the traditional 'female' social science and education disciplines while as administrators they are few and far in between in the higher ranks of HE administration.



**Figure 4.4 (e): Lorenz Curve of Course of study vs Gender**

### 4.3 NON-PARAMETRIC TESTS:

Besides using descriptive statistics in which parameters of the distribution such as means, cumulative percentages were assumed to be from normal distribution( $n=320$ ), the researcher undertook the non-parametric statistical test to determine whether the data so obtained and thought to be normally distributed actually conform to that pattern. The researcher therefore used the Chi-square( $\chi^2$ ) and Pearson's correlation coefficients ( $r$ ) to ascertain whether assumptions made elsewhere in this work conform to the conclusions arrived.

#### 4.3.1 CHI SQUARE TESTS

##### 4.3.1.1 Test of hypotheses

In order to establish the goodness of fit between populations, three tests of hypothesis was adapted in this study namely:

##### **Hypothesis 1.**

**H<sub>0</sub>:** *Students of all socio-economic background are enrolled in Higher education*

Versus

**H<sub>1</sub>:** *Not all Students of all socio-economic background are enrolled in Higher Education*

The data collected was analyzed using SAS version 9.1 and the output testing hypothesis 1 was generated as shown below:

**Table 4.6(a): Statistics for Table of SOCIO\_ECONOMIC STATUS by ENROLMENT**

Statistic	DF	Value	Prob
Chi-Square	78	211.3980	<.0001
Likelihood Ratio Chi-Square	78	274.8552	<.0001
Mantel-Haenszel Chi-Square	1	1.9616	0.1613
Phi Coefficient		0.8128	
Contingency Coefficient		0.6307	
Cramer's V		0.8128	

Sample Size = 320

**Summary:**

The Chi-Square value in Table 4.7(a) above is 211.3980 with **p-value=.0001<0.05**, is highly statistically significant at 5% level of significance.

This provides evidence to **reject** the null hypothesis and conclude that not all Students of all socio-economic background are enrolled in Higher education. This is particularly so due to the secondary school criteria of admission which forms the basis of admission by JAB. The link between finance and access in higher education is, therefore, essentially circular. Rising costs lead to capacity constraints, which limit higher education either to those who have the academic preparation to be accepted into low-tuition public universities or to the children of families affluent enough to give them the more expensive private education or to take the second, fee-paying track of public universities. The shortage of revenue is forcing higher fees at private

and public colleges and universities throughout the world, accompanied by technically difficult and sometimes costly policies and programs of means-testing and student loans.

– Raising higher educational participation and access in the poorest countries needs to begin with basic education by increasing the numbers of low income and other traditionally underrepresented students through a quality academic secondary education.

### **Hypothesis 2.**

**H<sub>0</sub>:** *There is no significant relationship between students course of study and the Amount of HELB loan awarded.*

Versus

**H<sub>1</sub>:** *There is some significant relationship between students course of study and the Amount of HELB loan awarded.*

**Table 4.6(b): Statistics for Table of COURSE by HELB**

Statistic	DF	Value	Prob
Chi-Square	468	1201.3020	<.0001
Likelihood Ratio Chi-Square	468	819.4600	<.0001
Mantel-Haenszel Chi-Square	1	4.9197	0.0266
Phi Coefficient		1.9375	
Contingency Coefficient		0.8886	
Cramer's V		0.7910	

Sample Size = 320

### Summary

From Table 4.7(b) above the Chi-Square value is 1201.3020 with **p-value=0.0001<0.05**, is highly statistically significant at 5% level of significance.

This provides evidence to **reject** the null hypothesis and conclude that there is some significant relationship between students' course of study and the amount of HELB loan awarded. This is expected in the sense that not all courses require the same cost for training.. The costs of higher education, including the per-student costs of instruction, the institutionally borne costs of research (that is, research costs that are not funded by external entities), the capital demands and operating costs of accommodating increased enrollments, and the expenses of student maintenance are increasing rapidly and continuously throughout the world. In most countries, these costs greatly exceed the increases that are possible from tax-generated revenues. HELB should be reinforced in order to reflect the various needs of the students as per the demands of a course of study.

### Hypothesis 3.

**H<sub>0</sub>:** *There is no significant relationship between the students socio-economic*

*Background and the students' loan award status*

Versus

**H<sub>1</sub>:** *There is some significant relationship between the students socio-economic*

*Background and the students' loan award status*

**Table 4.6(c): Statistics for Table of SOCIO\_ECONOMIC STATUS by LOAN AWARD STATUS**

Statistic	DF	Value	Prob
Chi-Square	6	7.2132	0.3016
Likelihood Ratio Chi-Square	6	7.6443	0.2653
Mantel-Haenszel Chi-Square	1	2.9340	0.0867
Phi Coefficient		0.1501	
Contingency Coefficient		0.1485	
Cramer's V		0.1062	

Sample Size = 320

**Summary:**

In Table 4.3(b) above the Chi-Square value is 7.2132 with **p-value=.3016>0.05**, is not statistically significant

Thus we **accept** the null hypothesis at 5% level of significance and conclude that there is no significant relationship between the students' socio-economic background and the students' loan award status. Public spending on education in Kenya is highly inequitable. First, the government is spending a significantly higher proportion of its resources on relatively few students. Second, the proportion of students in higher education is highly skewed in favor of the rich. More than two-thirds of students in university education come from the richest and second richest quintile, while the two poorest quintiles represent only of enrollments in higher education. Third, there is considerable discrepancy in institutional funding in both absolute and relative terms.

### 4.3.2 PEARSON'S PRODUCT MOMENT COEFFICIENT

SAS program was also used to compute whether there is some causal linear relationship between various variables;

The number under each correlation is a p-value. It tests to see if  $r$  is statistically significant. This is a test of the following hypotheses

$H_0$ :  $\rho = 0$  (the null hypothesis)

$H_a$ :  $\rho \neq 0$  (the alternative hypothesis)

**If the p-value for the test is less than 0.05 (when 5% level of significance is used) then the conclusion is that  $\rho$  is *not* 0, thus the relationship is *statistically significant*.**

#### Hypothesis 1.

$H_0$ : *Students of all socio-economic background are enrolled in Higher education*

Versus

$H_1$ : *Not all Students of all socio-economic background are enrolled in Higher education*

**Table 4.7(a): Pearson Correlation Coefficients, N = 320**

	Prob >  r  under H0: Rho=0	
	ENROLMENT	SOCIO_ECONOMIC
ENROLMENT	1.00000	0.13517
ENROLMENT	1.0000	0.0155
SOCIO_ECONOMIC	0.13517	1.00000
SOCIO_ECONOMIC	0.0155	



Table 4.7(d) above shows that the correlation between ENROLMENT and SOCIO\_ECONOMIC is 0.13517, or  $r=0.13517$ , with  $p\text{-value}=0.0155$ .

We arrive at a conclusion that there is a correlation between enrolment and socio-economic background of students at the Kenyan universities.

### Hypothesis 2.

$H_0$ : *There is no significant relationship between students course of study and the amount of HELB loan awarded.*

Versus

$H_1$ : *There is some significant relationship between students course of study and the amount of HELB loan awarded.*

**Table 4.7(b): Pearson Correlation Coefficients, N = 320**

Prob >  r  under H0: Rho=0		
	COURSE	HELB
COURSE	1.00000	0.10974
COURSE	1.00000	0.0498
HELB	0.10974	1.00000
HELB	0.0498	

Table 4.3(e) above shows that the correlation between COURSE and HELB is 0.10974, or  $r=0.10974$ , with  $p\text{-value}=0.0498$ .

We arrive at a conclusion that there is some significant relationship between students' course of study and the amount of HELB loan award

**Hypothesis 3.**

**H<sub>0</sub>:** *There is no significant relationship between the students socio-economic background and the students loan award status*

Versus

**H<sub>1</sub>:** *There is some significant relationship between the students socio-economic background and the students loan award status*

**Table 4.7(c): Pearson Correlation Coefficients, N = 320**

Prob > |r| under H0: Rho=0

	SOCIO_ECONOMIC STATUS	LOAN_STATUS
SOCIO_ECONOMIC STATUS	1.00000	0.09590
SOCIO_ECONOMIC STATUS	1.0000	0.0867
LOAN_STATUS	0.09590	1.00000
LOAN_STATUS	0.0867	

Table 4.3(f) above shows that the correlation between SOCIO\_ECONOMIC and LOAN\_STATUS is 0.09590, or  $r=0.09590$ , with **p-value=0.0867**.

We arrive at a conclusion that there is no significant relationship between the students socio-economic background and the students loan award status

#### 4.8 SUMMARY

In the era of massification in higher education whereas some developing countries in process to transform from “elite” to “mass” higher education, policy issues to increase a greater access in higher education system remains important. Moreover, in Kenya, despite the rapid expansion in the enrollment, equity on access in disadvantages groups such as woman, rural populations, minority ethnic groups, and students from low socio economic status (SES) group remain a big problem (UNESCO, 2003). In addition, James (2007) argues that low SES is a group that have the most widespread and persistence disadvantage in access to higher education. Furthermore, even in some countries that have achieved an increasing in access, large disparities in the participation rates of different groups of students remain exist.

Student loans are able to relieve pressures on national budgets by facilitating greater cost sharing though the raising of tuition and other university fees. They both enable students to avoid the burden of the up-front payment of increased tuition fees, as well as enabling them to delay loan repayment until they are in receipt of the higher salaries that generally accrue to university graduates. Liberated resources can be used in areas of greater priority for society, both outside and within the education sector and notably basic education. Greater cost recovery can provide additional funds for the expansion of the university system, to accommodate increases in the social demand for tertiary education. Targeted at the disadvantaged, subsidized loans schemes may lead to greater access to university education for the poor and minority groups, thus contributing to social equity. And loans offered at favorable conditions for study in particular fields, can lead to a loosening of skilled manpower bottlenecks that inhibit social, economic and industrial development

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0 INTRODUCTION**

This chapter presents; summary of findings, conclusions, recommendations and suggestions for further study. In addition, the closing remarks will point out some applications of the current findings in order to facilitate their possible use in similar contexts.

#### **5.1 SUMMARY OF FINDINGS**

The challenge to public policy on higher education in Kenya remain to combine private providers with continuing responsibility of governments to guide, regulate, monitor and continuing the provision of subsidised higher education with a view to strike a balance between equity (assurance of access for the low-income students) and efficiency (quality and academic coverage for the needs of the globalised economy and society) principles.

##### **5.1.1 SOCIO-ECONOMIC STATUS OF STUDENTS ENROLLED IN HIGHER EDUCATION.**

Not all students of all socio economic background are enrolled in the higher education with a chi-square value of 211.3980 and p-value 0.0001 is highly statistically significant. This is so true considering the fact that by the time a student get enrolled in higher education, there are a number of stages gone through that require funds. For example the population under study for the purposes of this research never benefited from the Free Compulsory Primary and Secondary Education. This made it difficult for the many who may have dropped at early level in the schools. The representation of the lower socio-economic status raises a big

question on how best higher education can be made equitable with particular concern on the funding challenges incurred.

### **5.1.2 STUDENTS' COURSE OF STUDY AND THE LOAN AWARD**

The findings of this research also confirmed that there is a significant relationship between students' course of study and the amount of HELB loan awarded. The chi square value obtained is 1201.3020 with a p value of 0.0001 is highly statistically significant at 5% level of significance. This is particularly so considering that the cost of study is not the same. There was also a concern by the management at the studied universities that a scheme should be developed by the HELB to give the loans in relation to the course of study. Public universities in Kenya have traditionally relied on Government funding to carry out their activities. Due to the harsh economic situations witnessed by the region over the recent past, Government support to these institutions has seen a steady decline, and the universities have been forced to operate under very tight budgets. The situation has not been made any better by the structural adjustment programmes prescribed by our bilateral partners. The universities have therefore been forced to rethink their strategy, and possibly look for extra sources of financing including establishing income-generating activities.

### **5.2.3 GENDER PARITY IN ENROLMENT**

From the study it is clearly shown that there's no gender parity in the enrollment. The findings indicate that an average of 67.5% of the respondents were taking medicine, law and engineering compared to 32.5% female representation in this category. It's also replicated in the science based courses where we had 77.2% male and 22.8% female. There's also an imbalance as far as gender enrolment is concerned, for

example from the findings at Moi University it is found that 64.1% were male compared to 35.9% female, its better at UEA Baraton where male representation was determined as 59.4% compared with 40.6% female. The difference could be attributed to the fact that most of the competitive and science based courses were offered at Moi University where male students perform better at secondary school level. Boys also are assumed to prefer choosing science based subjects at secondary level which ultimately determines the courses they were to do at the university. These were imbalances that need to be addressed. Although the problem could have developed at earlier stages its good to note that there's a continued effort to enhance gender parity at the basic education level. There's still a problem at the level of performance at the KCSE level, this makes their competence for science based courses affected. The participation of women in higher education is very low in Kenya, in large part because of traditional cultural values that emphasize women's roles as wife and mother. Women in Kenya are underrepresented in HE institutions as students and as workers. While gender disparities in students' enrolment exist at all levels of HE, they are particularly wide at higher degree levels and in science, mathematics and technology oriented subjects. At the same time, women are underrepresented in teaching and in the administration of these institutions. Further, women academics are concentrated in the lower ranks of the hierarchy and in the traditional 'female' social science and education disciplines while as administrators they are few and far in between in the higher ranks of HE administration.

#### **5.2.4 STUDENT LOAN AWARD STATUS AND COURSE OF STUDY**

The rapid expansion of university education has led to a number of challenges. According to UNESCO World Conference on Higher Education (1998), low funding

from the exchequer, increased enrolment, limited access compared to the population level, increased enrolment without commensurate improvement in available facilities, gender inequality, and a low research capacity, are some of the problems facing universities in the region. These problems have led to fears that quality of education is in a downward trend in most of these universities.

From the foregoing again, it is clearly indicated that there's no significant relationship between the students socio-economic background and the student loan award status. The loans were introduced with the aim of lessening the burden borne by parents of low socio-economic status. With this findings it's quite discouraging that it could be possible that the funds are not reaching the destined groups who should actually benefit. This could have been caused by first the fact that students of low socio-economic status are less represented in higher education. Secondly it could be possible that the Higher Education Loans Board might not be capturing the true position of the economic background of the students to deserve the award.

On the same note, it was realized that students who benefit from other non HELB loans especially from well wishers/harrabee and CDF have no relationship with the socio-economic status. These awards mainly arise from ones connections and not necessarily the low socioeconomic status. Others who benefited from bank loans from financial institutions also should have provided the required security which also makes it difficult to benefit the students of low socio-economic status.

### **5.3 CONCLUDING REMARKS**

Further, the recent policy directions in Kenya exacerbate full cost recovery from students even in public higher education institutions including hike in fees. Under the deep waves of globalization and competition, important economic rationale for government funding for higher education is neglected. Cost recovery measures comprising increase in fees, student loans currently operated by commercial banks and privatisation will exacerbate inequality in the society. Indeed, there seems to be a nexus between the present student loan scheme and full cost recovery. Further, it is important to notice that self-financing courses are short term in nature and heavy reliance on them will have repercussions on the equity, balance and quality of education system in the long run. This will also lead to lack of teachers and researchers in pure and basic disciplines in the near future as it is being experienced in United Kingdom. Increasing reliance on student fees, student loans and privatisation without considering the low-income groups may produce regressive effects in the society. Hence, an alternative student loan scheme specifically for the weaker sections should be evolved. Such a programme must be flexible enough to suit their requirements, which may involve government guaranteed loans, subsidised interest rates, liberal terms of repayment, waivers for those students with less future incomes, etc, in addition to a strong student support system.

Under the deep waves of globalisation and competition, important economic rationale for government funding especially for higher education is neglected. Public support for higher education remains essential to ensure a balanced achievement of educational and social missions, apart from surviving in the knowledge-based society.



Sequencing of policies, for example, universal primary education first, secondary and higher education later (as and when resources are available or / and left to private initiatives) would be very costly strategies in the era of globalisation. It is equally important to note the required fundamental transformation at both system level and at institutional level in higher education.

Effective financial management at institutional level is mandatory. It is essential that funding sources must be diversified but cost-sharing with students has social and political limits, and excessive commercialization of higher education should be forbidden.

### **5.3 RECOMMENDATIONS.**

These very broad brush strokes in this study lead to several recommendations regarding the higher educational finance-access linkage:

- i) Raising higher educational participation and access in Kenya needs to begin with basic education by increasing the numbers of low income and other traditionally underrepresented students through a quality academic secondary education. The Ministry of education through necessary legislation can enhance this
- ii) The necessary rationing of higher educational places at the low-cost public higher educational alternatives must be sensitive to the class, regional, and ethnic/linguistic differences in middle and secondary school preparation. The admissions process should resist excessive reliance on screens that simply select for socioeconomic class or for the level and cost of the secondary school preparation.

- iii) In Kenya, where distances and the absence of accessible public transportation make commuting to a college or university impossible, financially accessible (preferably means-tested) lodging and food must be made available. (This does not mean that it must be provided by the government or the public institution of higher education itself.)
- iv) A combination of moderate tuition fees, means-tested grants, and moderately subsidized student loans is necessary for the cost-effective use of public higher educational revenue in the policy pursuit of expanding accessibility.
- v) Revenue supplementation, especially including tuition fees and other forms of cost-sharing, is necessary in most countries but should be used to supplement public revenues, not substitute for them. Students should be able to perceive benefits to them of any newly imposed tuition or other fees.
- vi) Private alternatives should be encouraged; but governments should not restrict public attention and public resources only to elite public universities and assume that the inevitable enrollment expansion can be handled by a perpetually expanding private higher educational sector.
- vii) A mix of higher or postsecondary educational alternatives (e.g., research universities, polytechnics, and other short-cycle institutions) should be available, with attention given to high-quality equipment and facilities, appropriate programs and curricula, and competent faculty at the non-university alternatives.
- viii) Cost-sharing is usually politically contested when first implemented, but this strategy will be more acceptable when: (a) financial assistance is in place and has been made understandable, (b) the university management is perceived to be doing (or

to have done) its share of difficult economizing, and (c) the government that is imposing the cost-sharing is perceived as generally efficient and free from corruption. In these and other ways, governmental policies can pursue affordable, quality higher education for the inevitably growing numbers of traditional and nontraditional age students.

#### **5.4 SUGGESTIONS FOR FURTHER STUDY.**

The following are some of the areas suggested for further research.

1. The role of other non HELB sources of funds in enhancing equity and access to higher education especially scholarships as evident in private universities.
2. The influence of basic education on the future enrolment to higher education for a student
3. The role of admission criteria on enhancing gender parity access to specific courses by the universities vis a vis subject curriculum offered in high schools in Kenya.

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**APPENDIX: BUDGET**

The following is the estimated cost of the study

Activity/cost centre		Estimated cost	Total cost
1	Proposal writing	1. Library 2,000 2. Transport 3,000 3. Internet 1,500 4 Copies and binding 3,000 5. Stationary 1,500	11,000
2	Piloting	Instruments copies Research assistants 2x2x500	2,360 2,000
3	Data collection	Copies of research instruments 4,400 Stationary copies and binding 5,000	9,500
4	Data analysis and report writing	SPSS data entry and analysis 7,500 Stationary , copies and binding 5,000	12,500
5	Thesis	Defence, correction, copies and binding 10,000	10,000
6	Accessories	Computer purchase	60,000
			<b>106,860</b>



**APPENDIX II: KREJCIES, ROBERT V., MORGAN, DARYLE W TABLE**

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: 'N' is Population size. 'S' is sample size.

Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities", Educational and Psychological Measurement, 1970.

**APPENDIX III: QUESTIONNAIRE ON THE SOCIO-ECONOMIC PROFILES  
OF STUDENTS ENROLLED IN HIGHER EDUCATION.**

**INTRODUCTION.**

The purpose of this study is to determine the extent to which university loans can promote equity of access to higher education in Kenya.

This questionnaire aims to seek background information about you and your family. It has been designed to allow you to place a tick in the boxes or write in the spaces provided

Your kind assistance and support, honest and thoughtful responses are important in order to achieve the aims and objectives of the study. Your responses will remain absolutely confidential and will not be disclosed under any circumstances. You are requested not to write your name anywhere on the questionnaire.

Kindly complete all the questions

Researcher: **Jackson Kipkorir Kurgat**

M.Phil Student Moi University

P.O Box 3900- 30100, Eldoret

Telephone: **0721-488-409.**

**SECTION 1. PERSONAL INFORMATION**

1. What is your gender? Male  Female
  
2. Which higher education institution are you currently attending? Moi   
University of Eastern Africa Baraton
  
3. What course are you studying? Engineering (*Chemical, Electricity civil etc*)   
Business studies (*Business Adm, Secretarial etc.*)  Law   
Medicine (*Surgery, Nursing etc.*)  Education (*Bed Sc, Arts*)   
Science (*Physics, information sciences, forestry etc*)  others (*Specify*)  
.....
  
4. Which one of these best describes the type of secondary school you attended?  
National  Provincial  District  Private   
  
Others (*Specify*).....

**SECTION 2. FAMILY BACKGROUND**

5. How would you describe your family? Monogamous (Marriage in which there's one wife)  Polygamous (Marriage in which there's more than one wife)
  
6. How many brothers and sisters do you have altogether?  
.....

7. Please indicate the number of brothers and sisters with higher education qualification or currently studying in higher education.

Number..... Course(s) currently studying/studied.

8. Please indicate the highest level of your fathers' formal education.

Primary  Secondary  University

9. Please indicate the highest level of your mothers' formal education.

Primary  Secondary  University

10. Please indicate the current occupation of your parents

*(State the actual job i.e. primary school teacher, major in army, retail trader, lorry driver, large scale farmer, fisherman etc)*

Father.....

Mother.....

11. Please indicate if any of the following assets are owned by your parents.

Residential rental house  Business premise  commercial

Farm (shamba)  others (*please specify*).....

12. If the answer to question 11 above is a farm (shamba) please indicate the size of the farm in acres.

5 or less  6-20  21-50  1-200  1 or above

13. Please indicate the type of farming activity that is carried out in the farm

Growing of cash crop (*tea, coffee, sugarcane, rice, wheat, maize etc*)

Subsistence farming (*Home consumption*)

Mixed farming (Keeping animals as well as growing crops)

14. Please indicate if any of the following assets are owned by your parents

Car for private family use  commercial vehicle (*lorry, matatu, pick up, van etc*)  Machinery (*tractor combine harvester, saw mill etc*)

Non of the above

Other (*please specify*).....

15. Which best describes your parents current total monthly income (*Combine income from father and mother from employment or business*)

Under 2,000  2001-8,000  8001-14,000

14,001-20,000  20,001-30,000  30001-above

I don't know

16. Which one of the following describes the region your parents currently live

Urban area  Rural area

17. If your answer to question 16 above is urban area please the actual city or town that your parents currently live in.

City/Town.....

18. Please indicate the type of house your parents presently live in

Rented house  Family Owned  Employers house

Others(Please specify).....

19. If your parents currently live in a family owned house which one of the following closely describes the nature of the house

Grass thatched roof with mud walls  Corrugated iron with mud walls

Corrugated irons with mud walls  Corrugated irons with stone walls

Tiled roof house  Timber house

Other *(please Specify)*.....

20. Which one of the following utilities is available in the house your parents currently live in?

Tap (running) water  Electricity  Telephone

None of the above

21. Which one of the following household goods do your parents have?

Refrigerator  Electric cooker  Microwave oven

Gas Cooker

None of the above

22. Which one of the following form of media equipments do your parents have

Coloured TV  Black and white TV  Music System

Video Recorder  None of the above

**SECTION 3 INFORMATION ON HELB**

23. Which year of study are you at the moment?

1<sup>ST</sup>  2<sup>ND</sup>  3<sup>RD</sup>  4<sup>TH</sup>  5<sup>TH</sup>  6<sup>TH</sup>

24. How much HELB loan and bursary did you receive in the following years

1<sup>ST</sup>  2<sup>ND</sup>  3<sup>RD</sup>   
 4<sup>TH</sup>  5<sup>TH</sup>  6<sup>TH</sup>

25. Have you ever benefited from any other non HELB source of loan?

Yes  No

26. If your answer is yes in 25 above indicate the source of funds

CDF  M.O.E Bursary  Harambee/Well wishers  NGO   
 Commercial Bank loan  Others (please *specify*).....

27. Indicate the amount received from the mentioned source in 26 above in respective year of study.

1<sup>ST</sup>  2<sup>ND</sup>  3<sup>RD</sup>   
 4<sup>TH</sup>  5<sup>TH</sup>  6<sup>TH</sup>

**APPENDIX IV: INTERVIEW GUIDE FOR MANAGER(S) OF HELB**

1. How much loan was allocated to the following universities for the last four years
  - i) Moi University
  - ii) University of Eastern Africa Baraton
2. How has the board been managing the application process, allocation and disbursement of the loans to the students
3. What mechanisms have you put in place to ensure that Equity issues are well addressed in the allocation of the loans with respect to
  - i) Universities (private and Public)
  - ii) Courses of study
  - iii) Gender
  - iv) Socio-economic background
  - v) Regional
4. In your own opinion, do you think that the board has been able to capture the needy students and allocate loans appropriately? Please comment.
5. What is the board current policy on its operations? Do you think this captures the current mood envisaged by the sessional paper no 1 of 2005 of promoting Access/participation to university education?
6. Generally what are the key challenges being faced by the board in its quest to ensure that equity considerations are put in place?



**APPENDIX V: INTERVIEW SCHEDULE FOR DEPARTMENTAL HEADS  
/UNIVERSITY FINANCE OFFICERS**

1. Which department are heading currently in the university
2. What are the total number of students enrolled in your department
3. Could you please give the distribution by gender?
  - i) Male
  - ii) Female
4. How many are accommodated within the university and outside, who meets their cost of living? Is there enough accommodation from the university surroundings from personal developers? Is these favourable for both sexes?
5. How much HELB loan did you receive in support of undergraduate students in the last four years?
6. In your own opinion, do you think that your department requires more funds than in other departments because of training cost? Elaborate. Should HELB consider giving a varied amount depending on the cost of training?
7. How many students have had to defer their studies on grounds of lack of fees
8. In your own opinion, do you think HELB has managed to capture the students of low socio-economic status and award them loans appropriately?
9. Generally, what could be challenges facing the university as far as loan application, loan reception and handling of appeals as far as equity considerations are concerned on the basis of
  - i) Gender
  - ii) Course of study
  - iii) Socio-economic background
  - iv) Regional
  - v) Universities.

**APPENDIX IV: AUTHORITY PERMIT**

PAGE 2

THIS IS TO CERTIFY THAT:

**Prof./Dr./Mr./Mrs./Miss** Jackson Kipkorir  
Kurgat

**of (Address)** Moi University Box  
3900 Eldoret

has been permitted to conduct research in

Location,  
Dasin Gisha District  
Rift valley Province,  
on the topic, "The impact of students  
loans on equity and access to  
university education in Kenya;  
The case of Moi University and  
University of Eastern Africa Baraton"

for a period ending 30th December 2011


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NCST/RRI/12/1/88011/363

**Research Permit No.**.....

**Date of issue** 6/4/2011

**Fee received** Kshs. 1000



*Bungath*  
Applicant's  
Signature

*[Signature]*  
Secretary  
National Council for  
Science and Technology

CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed with-out prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

RESEARCH CLEARANCE  
PERMIT

(CONDITIONS— see back page)

CPK60553mt10/2009