

**THE EFFECT OF HIGHER EDUCATION LOANS
BOARD FUNDING ON ACCESS AND EQUITY IN
PUBLIC UNIVERSITY UNDERGRADUATE STUDIES IN
KAKAMEGA-EAST SUB-COUNTY, KENYA**

BY

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AND ECONOMICS OF EDUCATION**

**DEPARTMENT OF EDUCATIONAL MANAGEMENT AND
FOUNDATIONS**

MASENO UNIVERSITY

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DECLARATION

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This is my original work and has not been presented for any degree or diploma in this or any other college or university.

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DEDICATION

I dedicate this thesis to my son Wesley Mwani and my daughter Daisy Kavulani. Your tender love and attachment to me always renewed my spirit and strength to work harder. May the Lord Almighty enable both of you to attain greater heights than this!

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ABSTRACT

Before the inception of HELB all students in higher education were being financed for their studies through USLS irrespective of their socio-economic backgrounds (SEBs). This led to 28% participation by needy students in early 90's. In order to enhance access and equity, the government established HELB in 1995 with a mandate to identify and assist the needy cases only by allocating loans to them according to their levels of need. However, the increasing cases of drop-outs, repetitions and deferments of studies at 1.3% per year due to lack of fees amongst HELB applicants raises concerns. Some studies have also cast doubts on whether the genuinely deserving cases are being considered during loan allocations by HELB. Since Kakamega-East sub-county had the highest absolute household poverty index of 67.8% in Kakamega County implying that many of its students were needy, the purpose of this study was therefore to determine the effect of HELB funding on access and equity in public university undergraduate studies in the sub-county. The objectives of the study were to: establish the percentage of HELB undergraduate loan recipients as a proportion of the total university enrolment for the 2011/12 cohort in the sub-county; establish the trend of HELB undergraduate loan allocation to the sub-county between 2011 – 2014 for the cohort; determine the degree of fairness in HELB undergraduate loan allocation to the sub-county based on the criterion used; and to determine the relationship between HELB loan allocation and the students' SEBs. The study was guided by the socialist economics of education theory postulated by Louis Blank. The study used descriptive survey, ex-post facto and correlational research designs. It used the 2011/12 cohort since it was the latest with a full cycle of study. The study population was 788 HELB applicants in undergraduate studies in public universities from the sub-county, 22 University Academic Registrars (UARs) of the chartered public universities in Kenya and the CEO of HELB. The study sample comprised 292 university students, 7 UARs and the CEO of HELB. Whereas systematic sampling was used to select students based on the serial numbers of their HELB forms, purposive sampling was used to select the UARs of the 7 public universities that existed before enactment of the Universities Act No. 42 of 2012 while saturated sampling was used for the CEO of HELB. Primary sources of data were Questionnaires and Interview Schedules while Secondary sources were HELB loan forms for students and proforma for document analysis for UARs and CEO of HELB. Face validity of the instruments determined their appropriateness to yield desired results while test-retest for reliability was done at 0.05 significance level on two-tailed t-test with a 0.96 coefficient for students' questionnaires. In data analysis, it was established that 60.7% of total enrolment in public universities were recipients of HELB loans for the 2011/12 cohort for the sub-county. The trend in HELB loan allocations was found to be increasing at 0.92% per year. However, the study revealed that the loans were relatively inequitably allocated to students due to the *gini* coefficient of 0.45 that was established. The levels of fairness in loan allocations were found to be decreasing at 7.4% per year. A weak inverse relationship between HELB loan allocations and SEBs of students was therefore established through a pearson's correlation coefficient of -0.187. It was concluded that HELB had slightly enhanced access but failed to enhance equity in the financing of public university undergraduate studies for the sub-county. The study recommended for the review of the Means Testing Instrument that HELB uses to allocate loans so as to ensure that deserving cases are properly identified. These findings were significant to HELB in assessing its effectiveness in loan allocations to students.

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LIST OF ACRONYMS

AOI	Asset Ownership Instrument
CDF	Constituency Development Fund
CEO	Chief Executive Officer
CHE	Commission for Higher Education
DEO	District Education Officer
HELB	Higher Education Loans Board
JAB	Joint Admission Board
KESCDP	Kakamega-East Sub-County Development Plan
KRA	Kenya Revenue Authority
KUCCPS	Kenya Universities and Colleges Central Placement Service
LAF	Loan Application Form
MOE	Ministry of Education
MTI	Means Testing Instrument
SAP	Structural Adjustment Programme
SEB	Socio-Economic Background
UAR	University Academic Registrar
USLS	University Students Loan Scheme

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financing of public higher education in Kenya was historically free with the public purse covering both tuition and other expenses of students regardless of their socio-economic backgrounds (SEBs) according to Gravenir, Wangenge and Njihia (2005). This was through the Higher Education Loans Fund (HELF) which had begun in 1952 when the country was still under British colonial rule. The rationale for the subsidy was based on the country's desire to create highly trained manpower that would replace the departing colonial administrators. Eshiwani (1993) established that by 1992 students in public universities were still being financed for their undergraduate studies fully irrespective of their SEB status with about 28% of total enrolment emanating from needy backgrounds. However, this approach not only compromised the social justice dimension of public subsidy, but also posed a great burden to the exchequer.

Upon this realization, the government started introducing the cost-sharing policy in 1991 in which both the students and the state would share the costs of higher education. Students were to pay modest tuition fees of between Ksh. 2,400 - 3,200 annually and also contribute to costs of maintenance and other direct charges which made the total fees rise up to Ksh. 20,000 (World Bank, 2006a). This approach also became unfair to needy students since some could not afford.

Therefore, in an effort to promote social fairness in the financing of higher education as well as minimize the financial burdens on the exchequer, the government decided to create a proactive institution that would address the needs of the vulnerable against the Structural Adjustment

Policies (SAPs) of cost sharing. The Higher Education Loans Board (HELB) was hence created in 1995 through a legal statute in parliament known as “The HELB Act number 3 of 1995”. It came into existence on the 21st day of July 1995 through the Kenya Gazette Supplement (Cap 213A). Its role was to identify needy students and assist them with study loans according to their levels of need. To achieve this goal, HELB was mandated to recover outstanding loans from Kenyans who had benefited from its loan scheme since 1974 when the University Students Loan Scheme (USLS) had been introduced. Employers were also obligated to assist (Otieno, 2004) as well as the KRA and NHIF in both private and public sectors (Ngolovoi, 2006). This was geared towards establishing a revolving fund in HELB that would be self-sustainable for loans in future.

Currently, HELB has a total of Ksh. 5.64 billion annually for loan disbursements out of which the exchequer contributes Ksh. 3.34 billion while recoveries from former beneficiaries net about Ksh. 2.3 billion annually (Ringera, 2014). Out of this, it allocates Ksh. 5.5 billion to continuing students while Ksh. 2.4 billion more is needed for new applicants every year. When HELB was introduced, students used to receive a minimum loan of Ksh.20, 000 and a maximum of Ksh. 42,000 each annually. The maximum was later raised in 2005/06 to Ksh. 55,000 and further in 2008/09 to Ksh. 60,000 while the minimum was revised to Ksh.35, 000. These changes resulted in a trend of cumulative HELB loan allocations shown in Table 1.1 for a few selected years.

Table 1.1: Annual Loan Allocations by HELB in Kenya

Academic Year	Total Number of Recipients	Total HELB Allocations(Ksh.)
2002/2003	18,105	1.0 billion
2004/2005	23,400	1.5 billion
2009/2010	89,888	4.5 billion
2010/2011	109,110	4.83 billion
2012/2013	131,176	5.6 billion
2013/2014	154,000	5.6 billion

Source: HELB Statistics from Loans Disbursement and Recovery Department, 2014.

Table 1.1 generally demonstrates a gradually increasing trend in HELB loan allocations over the years. However, the last two academic years shows the allocation stagnating at Ksh. 5.6 billion annually despite HELB having begun allocating its loans to self-sponsored students in public universities (module II) as well as those in private universities in 2008/2009 (Ringera, 2014).

It is however notable that the enrolments in universities in Kenya is currently increasing every year. For instance, the Kenya Universities and Colleges Central Placement Service (KUCCPS) established that the annual enrolment to universities in 2012 was 53,000 which further increased to 58,000 in 2013 giving a 9.4% increased enrolment (Republic of Kenya, 2014b). World Bank (2012) estimates the Net Enrolment Rate of universities in Kenya at 70.5%. This implies that there is increased access in higher education. However, the contribution of HELB in this access to university education cannot be ascertained since the rates fall short of accounting for the proportion in the enrolments that is as a result of HELB loan funding in the universities.

Although there are other alternative methods of financing university education for the needy students in Kenya including the Institutional-based scholarships like 'the wings to fly' by Equity bank, Constituency Development Fund (CDF) and grants from limited charitable organizations, very few can actually access them. Moreover, despite the government having highly subsidized both primary and secondary education through free primary and subsidized secondary education policies respectively and therefore enhanced increased access at these two levels of education, tertiary education and in particular university education remains out of reach for the many needy students. This is despite the fact that higher education is characterized by high tuition fees and other related expenses that makes it costly for needy students in Kenya to afford as estimated by World Bank (2012) in Table 1.2.

Table 1.2: Expenses Borne by Undergraduate University Students in Kenya per Year

Vote Head	Public Module I	Public Module II	Private (in Ksh.)
*Special “one-time” or “up front” Fees	0	3,000	4,500
Tuition	16,000	150,000	250,000
**Other Fees	12,000	23,000	36,000
Books & other educational expenses	10,000	10,000	10,000
Accommodation	7,000	20,000	71,000
Food	18,000	25,000	80,000
Transportation	1,000	30,000	24,000
Other personal expenses	7,000	10,000	6,000
GRAND-TOTAL COST	71,000	271,000	481,500

Source: World Bank Country Profile Report, 2012.

**refers to charges related to application/registration, caution money and union membership.*

***refers to library fees, medical fees, laboratory fees, activity fees and examination fees.*

The table evidently reveals that for needy students to pursue higher education, they require financial assistance. This is because the cost of public university education stands at Ksh. 271,000 although the government subsidizes for Module I leaving it with Ksh. 71,000 to be paid per student per year. This may not be affordable by many needy students most of whom enroll in public universities for their undergraduate studies hence the need for HELB loans.

One of the sub-counties with the highest number of needy students is Kakamega-East sub-county in Kakamega County. This is due to the fact that it has the highest absolute household poverty index of 67.8% in Kakamega County (Republic of Kenya, 2009) as a result of the other socio-economic factors shown in Table 1.3.

Table 1.3 Socio-Economic Indicators for Kakamega-East Sub-County

Information Category	Specific Area	Statistics
Socio-economic indicators	Total number of households	36,774
	Average households size	5.1
	Female headed households	25,848
	Children headed households	1,107
	No. of disabled persons	2,028
Poverty indicators	Absolute poverty households	24,933
	Percentage of poverty	67.8
	Number of poverty incidences	127,156
	Contribution to National Poverty	0.60

Source: Kakamega-East Sub-County Development Plan 2010-2014

Table 1.3 shows the socio-economic indicators of the sub-county which reveal that it is characterized by high incidences of poverty at 67.8% as well as high contribution of poverty to national poverty at 0.60%.

Furthermore, the Economic survey (2014) which gives the national poverty index of 45.2%, reveals that Kakamega County contributes the highest by 4.77 % which is 25 times more than what the least contributor, Lamu County at 0.19% does (Republic of Kenya, 2014a). From this, the Kakamega County Integrated Development Plan (2013-2017) establishes that Kakamega-East sub-county is the highest poverty contributor to the County poverty index by 0.60% (Republic of Kenya, 2013a) amongst all the twelve sub-counties as shown in Table 1.4.

Table 1.4 HELB Data versus Poverty Ratings of Sub-Counties in Kakamega County

	Name of Sub-County	Total HELB Applicants	Total HELB allocation (Ksh.)	University Education Participation (%)	Absolute Poverty Index (%)	contribution to National Poverty (%)
1.	Kakamega-East	2, 573	147.33 M	2.51	67.8	0.60
2.	Kakamega-South	2,022	197.88 M	4.92	67.5	0.51
3.	Khwisero	1,983	189.99 M	14.16	60.2	0.44
4.	Matungu	1,980	178.91 M	15.57	52.5	0.43
5.	Kakamega-North	1,534	163.57 M	18.45	55.0	0.42
6.	Butere	1,501	159.93 M	37.80	59.8	0.41
7.	Navakholo	1,631	155.65 M	19.74	58.8	0.36
8.	Likuyani	1,486	159.84 M	22.31	47.4	0.34
9.	Matete	1,300	166.66 M	25.22	53.3	0.33
10.	Lugari	985	150.56 M	30.53	42.2	0.32
11.	Mumias	1,003	153.87 M	40.51	50.7	0.31
12.	Kakamega-Central	773	157.90 M	46.12	48.2	0.30
	County: Kakamega				55.3	4.77

Source: Kakamega County Integrated Development Plan 2013-2017

From the table, Kakamega-East sub-county is not only the highest in absolute poverty ratings in the county but also the highest contributor to national poverty amongst all the sub-counties in the county. This implies that many students from the sub-county emanate from poor backgrounds and are therefore needy due to the limited economic activities shown in Table 1.3 and the nature of non-parenthood households prevalent there, where in every ten households, eight are either single or lack parenthood at all (Republic of Kenya, 2009). However, the table also shows that despite the district having the highest number of HELB applicants in the 2011/12 cohort amongst other sub-counties in Kakamega county, it had the lowest HELB allocation.

Nevertheless, most students from the sub-county qualify for university education through the minimum university requirement grade. Subsequently, most of them get selected by the Joint Admission Board (JAB) for admission in public universities as shown in Table 1.5.

Table 1.5: University Qualification for Kakamega-East Sub-County between 2010-2013

Year	KCSE Total Entry	Minimum Entry University Qualifiers		JAB Selected Admissions	
		No. of Candidates	Proportion of Total Entry	No. of Candidates	Proportion of Minimum Entry Qualifiers
2010	2, 112	623	29.5 %	93	14.9 %
2011	2, 517	780	31.0 %	110	14.1 %
2012	2, 574	796	30.9 %	175	22.0 %
2013	2, 624	764	29.1 %	213	27.9 %
Total	9,827	2,963	30.2 %	591	19.9 %

Source: DEO Kakamega-East Sub-County, 2014.

With the number of chartered public universities in Kenya having increased to 22 from the initial 7 upon the enactment of the Universities Act No. 42 of 2012 on 30th June 2013 (Commission for University Education, 2013), it would be expected that majority of these students would enroll and pursue their undergraduate studies in the universities to completion unless hampered by fees.

Since most of them emanate from poor backgrounds, the number of students who have been applying for HELB undergraduate loans in the sub-county to pursue higher education has been characterized by increasing trends. This has made the cumulative HELB loan applicants between 2011-2014 in the sub-county to reach 2,573 currently. Similarly, the first-year applicants for the loans have also been increasing annually in the sub-county and are at 742 as shown in Table 1.6.

Table 1.6: HELB Undergraduate Loan Applicants in Public Universities for Kakamega-East Sub-County

Academic Year	Total Applicants	Applicants in 1st Year	Percentage (%)
2009/2010	1, 917	613	32.0
2010/2011	2, 136	689	32.3
2011/2012	2, 378	788	33.1
2012/2013	2, 562	799	31.2
2013/2014	2, 573	742	28.8

Source: HELB Statistics from Loans Disbursement and Recovery Department, 2014.

Despite the increasing trend in student applications for HELB loans to pursue higher education as shown in Table 1.6, the findings of 2009 national census revealed that out of 84,179 school age-going population in Kakamega-East sub-county, only 2,111 were in education participation in universities. This represented a university education participation of 2.51% of the entire school age-going population which was the lowest as compared to all the other sub-counties in the entire county (Republic of Kenya, 2010). The current Development Plan for the sub-county establishes that there is only one graduate in every 17 households (Republic of Kenya, 2009).

Moreover, a fact-finding tour of Masinde Muliro University by the CDF committee in the sub-county revealed that in the year 2011, a total of 7 students from the sub-county either dropped out of the university or deferred their undergraduate studies due to lack of fees (Shinyalu CDF report, 2012). This was despite the fact that all of them were applicants of HELB loans. Since all of them were found needy, HELB was expected to have played a significant role in their studies.

In contrast, concerns were raised to the fact that HELB loans in Kenya could be inequitably being allocated with students from richer backgrounds getting relatively higher loan allocations than their counterparts from poor backgrounds (Wachiye, 2012). Muriithi, Kihoro, and Waititu (2012) also suggested that there could be a number of miscalculations being made when

allocating HELB loans to students resulting in inequitable disbursements, but recommended for an empirical study to ascertain the truth. Questions were therefore frequently being asked on how students qualify for the HELB loans allocated to them and whether the allocations were in relation to the levels of need of the students (Odebero, *et al.*, 2007). Given that Kakamega-East sub-county is the leading in the annual student applications for HELB undergraduate loans in the entire Kakamega county yet is the one with the least HELB allocations per year since the year 2010 (Republic of Kenya, 2013a), it developed the urge to carry out this study.

1.2 Statement of the Problem

HELB was established to identify and assist needy students according to their levels of need to pursue higher education. This was intended to enhance equity in the financing of higher education in Kenya. However, numerous complains amongst university students on loan inadequacy and inequity imply that students from richer backgrounds could be getting higher loan allocations than their counterparts from poorer backgrounds. Some studies also cast doubt on whether the genuinely deserving cases are being considered during loan allocations by HELB. Given that Kakamega-East sub-county had the highest absolute household poverty index of 67.8% which was also the highest in contribution to national poverty in Kakamega county as shown in Table 1.4, it implied that majority of the students in the sub-county were needy. Despite this, many students from the sub-county qualified for university education every year and subsequently got admission in public universities as shown in Table 1.5. Most of them applied for HELB loans to enable them enroll and pursue their studies as revealed by the increasing trends in HELB loan applications in Table 1.6. However, it was established that the sub-county was characterized by the lowest participation in higher education in the county at 2.51%, a low university output of 1 graduant in every 17 households and a high wastage of

students who either dropped-out or deferred their studies due to lack of fees despite having applied for HELB loans. In view of this, this study focused on the sub-county and endeavoured to establish how effective HELB is in allocating their loans to needy undergraduate students.

1.3 Purpose of the Study

The purpose of this study was to determine the effect of HELB funding on access and equity in public university undergraduate studies in Kakamega-East sub-county in Kenya.

1.4 Objectives of the Study

The specific objectives of the study were to:

- (i) Establish the percentage of HELB undergraduate loan recipients as a proportion of the total university enrolment for the 2011/2012 cohort for Kakamega-East sub-county.
- (ii) Establish the trend of HELB undergraduate loan allocation to Kakamega-East sub-county between 2011 – 2014 for the 2011/2012 cohort.
- (iii) Determine the degree of fairness in HELB undergraduate loan allocation to Kakamega-East sub-county based on the criterion used.
- (iv) Determine the relationship between HELB undergraduate loan allocation and the recipients' socio-economic backgrounds.

1.5 Research Questions

The following research questions guided this study:

- (i) What percentage proportion of the 2011/2012 cohort from Kakamega-East sub-county enrolled in public universities recieved HELB undergraduate loans ?
- (ii) How many students of the 2011/2012 cohort from Kakamega-East sub-county have benefited and by how much from HELB undergraduate loans between 2011-2014 ?
- (iii)What was the level of fairness in allocating the HELB loans based on the criterion used ?

1.6 Hypothesis Testing

For the fourth objective, the concept of hypothesis testing was used.

The null hypothesis that was tested for the fourth objective was:

H_0 : There is no significant relationship between HELB loan allocation and the socio-economic background status of students for Kakamega-East sub-county.

1.7 Significance of the Study

The findings of this study would be instrumental to HELB itself in assessing its effectiveness in allocating undergraduate loans to students. It recommends proposals that are instrumental to assisting HELB improve its administration of the loans in order to enhance equity in allocations.

1.8 Scope of the Study

Mwiria and Wamahili (1995) define scope as the demarcated boundary within which the researcher must operate in. In view of this, the study involved applicants of HELB loan in the 2011/2012 cohort enrolled in four-year undergraduate programmes only, limited to public universities. Recipients in other cohorts were not used since empirical comparisons between students within a cohort are more significant and less biased.

1.9 Delimitations of the Study

Mwiria and Wamahili (1995) state that delimitations include purposeful and conscious actions that make a research manageable. In view of this, the researcher sought the assistance of the officials of Kakamega-East sub-county University Students Association in the universities to organize for meetings that would help in facilitating the filling of the students' questionnaires. Also, the student sample in the study was easily selected using the systematic sampling procedure because of the availability of the serial numbers on the HELB loan application forms which were easily retrievable from HELB itself hence avoiding cases of biasness.

1.10 Assumptions of the Study

The study was carried out based on the following assumptions:

- (i) The needy students in the sub-county get access to on-line application for HELB loans.
- (ii) The applicants give sincere and honest information about their SEB status.
- (iii) HELB has a testing instrument which it uses to determine levels of need of applicants.

1.11 Theoretical Framework

The study was guided by a theoretical framework of the Socialist economics of education pronounced by Louis Blank (Colander, 1994). The theory was the basis on which the Lorenz Curve was mooted, which is a geometric representation of the distribution of income among families in a given country at a given time (Baumol and Blinder, 1979).

The theory focused on the excesses of unregulated capitalism and underlined the need of creating an enabling economy that uplifts the poor by redistributing income from the rich to the poor so as to create equality of well-being. It puts the cumulative percentages of families from the poorest to the richest on the horizontal axis and the cumulative percentages of their income from the least to the highest on the vertical axis. It is used to calculate equity in the distribution of income since the actual share of every group of recipients is compared with the amount of income that the group would have received if the allocation would have been equitable.

In this study, the cumulative percentages of HELB loan recipients were plotted on the horizontal axis from the least to the highest while the cumulative percentages of their actual HELB loan allocations were plotted on the vertical axis, as hypothetically shown in Figure 1.

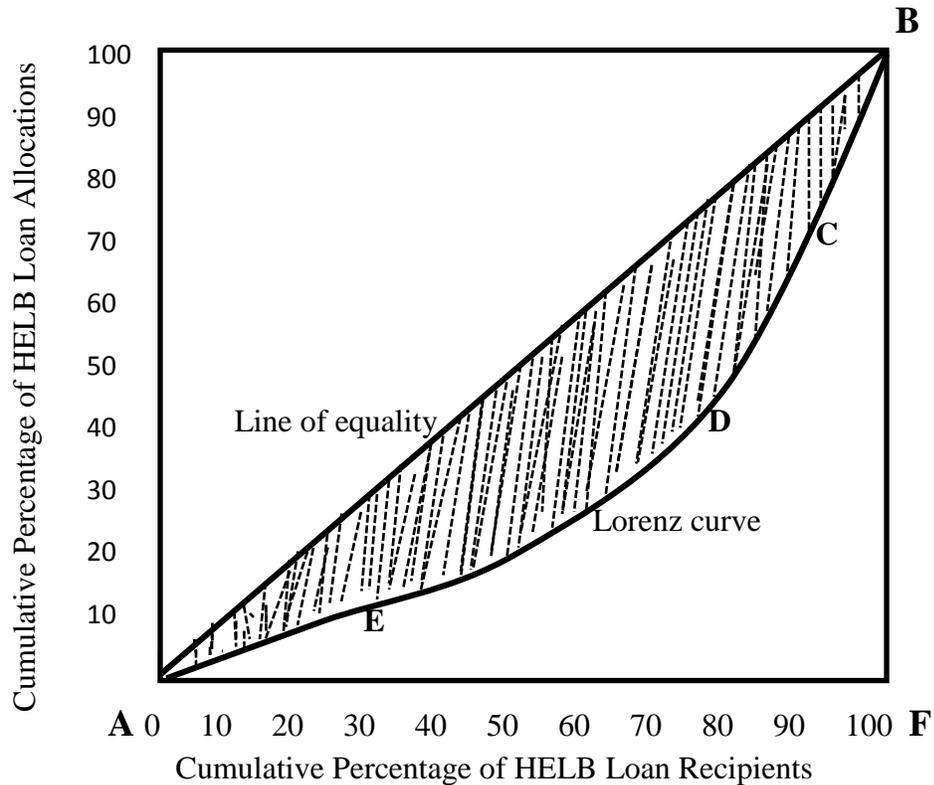


Figure 1: Lorenz Curve for HELB Loan Allocations

Source: Adopted from Todaro & Smith, 2006.

The proportions of the amounts of HELB loans allocated would then be compared with the respective proportions of recipients to ascertain equity in the distributions. This would be used to determine the degree of fairness in loan allocations based on the Gini-coefficient computed. A perfectly equitable distribution would give a straight diagonal line, shown in the figure by line AB. Inequalities in HELB loan allocations would be depicted by the deviation from this straight diagonal line by the line of concentration depicted by the curve AEDCB. The bigger the area below the parity line, the more unequal HELB distribution would be depicted in the sub-county.

If HELB is perceived as a social input whose aim is to equalize educational opportunities among students from low SEB status, the expected returns in this investment would increase access in higher education and enhance equity as depicted by the line of equality in Figure 1. Gini

coefficient would be determined by finding the ratio of the area between the diagonal line and the Lorenz Curve, divided by the area of the half square in which the curve lies.

$$\text{Using Figure 1; Gini Coefficient} = \frac{\text{shadedarea}(ABCDEA)}{\text{totalarea}(AFBA)}$$

Gini coefficients are aggregate inequality measures and vary from 0 for perfect equality to 1 for perfect inequality. According to Todaro and Smith (2006), Gini coefficients that lie between 0 to 0.20 imply extremely highly equitable distributions, between 0.21 to 0.35 imply relatively equitable distributions, 0.36 to 0.49 imply relatively inequitable, 0.50 to 0.70 imply highly inequitable while coefficients between 0.71 to 1 imply extremely perfect inequitable distributions.

This study has established where the Gini coefficient of HELB undergraduate loan allocation for Kakamega-East sub-county lies. High levels of accuracy were enhanced during the computation of the gini coefficients by using the mid-ordinates rule in calculation of areas of the Lorenz Curves. This ensured that only true and valid conclusions were drawn from the analysis.

1.12 Definition of Terms

Access: The number of students enrolled for university education as a proportion of the total number of students who qualify for university admission upon attainment of the minimum qualifications required.

Bursary: Money given out to needy students as assistance for fees which is not refundable.

Cohort: A specific group of students who join the initial grade of education cycle in a particular year and eventually complete the final grade of the cycle in same year.

Contribution to Poverty Indicator: The number of poor people in a smaller unit of administration (like a sub-county) expressed as a proportion of the total number of poor people in a larger unit of administration (like a country).

- Efficiency:** The flow of a student cohort through an education cycle with minimum wastage of repetitions and drop-outs.
- Equality:** Giving same share of resources and opportunities to all students irrespective of their levels of need.
- Equity:** Giving equal share of resources and opportunities to all students based on their respective levels of need.
- Loan:** Money lent out and ought to be recovered after some time with accrued interest.
- Lorenz curve:** A line on a graph showing equality in income distribution among different groups of people in the society according to their levels of need.
- Module I:** Government sponsored students enrolled in public universities.
- Module II:** Privately (self) sponsored students enrolled in public universities.
- Needy:** Being disadvantaged in terms of socio-economic background to pursue education to a desirable level of qualification.
- Poverty:** The measure of the number of people living below the value of a dollar a day.
- Public subsidy:** Money paid by the government to lower the cost of education in educational institutions in the country.
- Quality:** The degree of achievement in education as evidenced by completion rates and performance in examinations.
- Recipient:** A student who receives a loan awarded by HELB upon applying for it.
- Revolving fund:** A self-sustaining and recycling fund that is enhanced by loan recoveries from former beneficiaries that goes into other future loans for posterity.
- Socio-Economic Status:** A level occupied by a group of people with a common means of production and a way of life that has comparable income, wealth and prestige.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed related literature on: Access in higher education through student loans; Trends in funding higher education through student loans; Equity in financing higher education through student loans; and Influence of socio-economic backgrounds on loan allocations. The literature compared and contrasted sampled cases in both developed and developing countries where applicable, critiqued them, related them with Kenyan situation and finally identified the gap per section.

2.2 Access in Higher Education through Student Loans

Countries that had intentions of enhancing increased enrolments in higher education for purposes of sustainable socio-economic development had to embrace the concept of student loan schemes in higher education. The student loan schemes now exist in more than fifty countries with several of them found in developing countries in Latin America and the Caribbean, Africa and Asia (Woodhall, 2004). According to the study, student loan schemes in developing countries especially in Sub-Saharan Africa and Asia accounted for more than half of the total enrolments in higher education. However, the successes or failures of such student loans in enhancing access depended on both the level of public subsidy in the loans as well as how definite their public policies were in terms of eligibility criterion and repayment modes in the respective countries.

According to a study by Mwiria and Wamahili (1995), one of the first African countries to introduce a loan programme for university students was Ghana in 1968 which advocated for a

modest redistribution of the cost burden of university education on the grounds of social justice. Given that the loan was financed by an Insurance Fund called the Social Security and National Insurance Trust (SSNIT), it was limited to tuition fees only with priority given to students taking public employment-guaranteed courses. This greatly hampered the intended access in higher education especially in 80's and 90's when public employment was scarce in the country.

Similarly, the study reveals that in Indonesia, the government introduced a system of student loans in 1984 through commercial banks but the banks lacked proper mechanism for loan recollection leading to the rate of defaults in repayment rising and making the fund to eventually become 'non-revolving'. This resulted in the cancellation of the student loans by the banks when hardly 10% of students had gained enrolment to universities through them. The loans therefore did little to ease financial burdens of students or improve enrolment rates in higher education.

Another study by Bray (2000) reveals that in France there is no definite public policy regarding student loans and that student borrowing is not prevalent. The loans are apparently available only on emergency basis and do not form a regular part of the financing of French higher education. For instance, in 1984/85 there were only 3,465 Government sponsored students representing 11% of total university enrolment in the entire country. The study observed that most student loans in France are private banking transactions, and as such are generally short-term, requiring collateral and co-signers. The loans are generally available only to students from wealthy families or children of university and medical staff upon presentation of two co-signers who produce evidence of current employment. The loans are furthermore strictly repaid in 24 or 48 months disadvantaging those from poor backgrounds. The study further notes that university

education policy in France therefore favours the rich at the expense of the poor students. Consequently, student loans do not therefore enhance access in higher education in France.

However, the study further reveals that Lesotho has a system that facilitates a fairly higher rate in student enrolment for higher education since its loans greatly subsidize education costs by covering all tuition costs, living expenses and books. This is enhanced because the system is made self-sustainable through a clearly defined public policy that ensures that upon completion, graduates work in Lesotho for a minimum of five years and repay 50% of the loan if they work in public sector, 65% if they work in private sector, and 100% (repay the loan in full) if they work abroad. This flexibility in mode of repayment facilitates a high turn-over for the loans which subsequently leads to higher enrolments in higher education in Lesotho.

Similarly, the study reveals that in Thailand, higher enrolments were realized upon introduction of student loans. Thai government established a low-interest Human Resource Development loan fund for students in March 1995. It was allocated Ksh. 10 billion out of which Ksh. 7 billion was demarcated for commodity and construction loans of the institutions, while the remaining Ksh. 3 billion was set aside for student loaning. The student loans were characterized by great public subsidy since the loan covered all educational expenses including tuition fees and personal educational expenses. The fund was available for low income students in high school level, both vocational and general stream, as well as students in higher education within the country. This enhanced high levels of enrolments in high schools and subsequent transitions to higher institutions of learning among the needy students due to the simplified eligibility criterion.

In general, it can be deduced that countries that had high public subsidies in university loan schemes as well as those that had simplified eligibility criterion with a definite repayment policy

realized increased enrolments in higher education as seen in Lesotho and Thailand. This is contrary to countries that had either limited public subsidies like Ghana or lack of definite public policies on subsidy like in France and Indonesia where the loans did not enhance access.

In Kenya, university student loans were introduced through HELB in July 1995, same year as Thailand. The loan is for students who qualify for higher education from low SEB status upon applying for it. They are expected to produce two guarantors with proof of employment. The level of subsidy by HELB is such that it caters for all the tuition costs of students by paying half of it directly to the institution while the remaining half plus other additional subsidies for living expenses such as food, accommodation, stationery and personal requirements are sent directly to the student through his/her bank account. Repayment begins at least one year after completion of the studies for those who secure employment immediately after completion.

Ringera (2014) establishes that in 2005/06 a total of 23,400 undergraduate students were awarded loans by HELB while in the following academic year, a total of 30,000 students were awarded the loans giving a 28.2% increased enrolment in universities as a result of the HELB undergraduate loans. However, several reviews have taken place on the initial HELB Act since then resulting in policy shifts and changes. They include the privately-sponsored students in public universities (module II) and those in private universities also qualifying for award of HELB undergraduate loans since 2008/09. These changes must have had effects on access in higher education which should be investigated. Although the study reveals that HELB currently supports a total of 154,000 undergraduate students in public universities countrywide, this is cumulative enrolment for all the cohorts in the universities hence making it not possible to establish the exact effect on access to public university as a result of the HELB loans.

KUCCPS establishes that the number of students joining institutions of higher learning in Kenya is currently increasing with the annual enrolment to universities increasing for instance from 53,000 in 2012 to 58,000 in 2013 (Republic of Kenya, 2014b). This translates into a 9.4% increased enrolment rate which cannot, however, be wholesomely attributed to HELB funding alone since the number of HELB beneficiaries from this enrolment cannot be easily ascertained. This study had to establish the contribution of HELB to access in higher education by establishing the proportion of university enrolment that is as a result of the HELB funding.

2.3 Trends in Funding Higher Education through Student Loans

Initially, the government through the USLS covered about three quarters (75%) of the total annual higher education costs that were a must to be borne by students in public universities and about 40% of the tuition fee for students in private universities. About 34 % of the loan was earmarked for the students' personal expenses including books while the tuition loan was directly forwarded to the universities for purchase of academic materials (Cheboi, 2004).

According to Odebero *et al* (2007), the trend of financing higher education in Kenya has been influenced by shifting positions determined by local micro-economic changes and policy shifts of funding agencies, particularly the World Bank. Since independence, financing of higher education in Kenya has passed through various funding regimes ranging from full support to cost sharing and even private participation. Studies by Eshiwani (1993), Weidman (1995) and Gravenir *et al* (2005) all reveal that initially, all university students were fully financed for their education irrespective of their SEB status. This kept motivating students to enroll for it, resulting in increasing trends in financing of higher education in Kenya especially in 80's and early 90's.

However, this great subsidy in financing university students' education led to over-reliance on the exchequer, exerting excess pressure and subsequently burdening it a lot. This led to unpredictability in determination of specific levels of subsidies due to other emerging priorities in government expenditures. This resulted in sporadic trends in financing of higher education especially in 90s' when the subsidies could drop or rise or even stagnant without a clear trend.

Kiamba (2004) reveals that the exchequer took advantage of the Structural Adjustment Policies especially that of cost sharing in universities, which was introduced 1991, to greatly reduce its funding for students in higher education. This resulted in a sharply decreasing trend in financing of higher education in the late 90's. Faced with this challenge of declining trends in financing of higher education by HELB, the universities started sourcing for other alternative methods of funding including the introduction of extra charges on fees as well as the introduction of privately sponsored student programmes (Module II or Parallel track) in 1998. The intention was for the financially endowed students to help bridge the gap created by HELB funding of their JAB selected counterparts (Gravenir *et al*, 2005). This indeed raised income for the universities where, for example, at University of Nairobi it rose from 4% of total income in 1998/99 to 40% in 2003/04 (Kiamba, 2004; World Bank, 2012).

Odundo and Njeru (2005) found that HELB allocations had just been characterized by relatively uniform trends in financing higher education slightly before the introduction of Module II programmes in public universities. Their study agrees with Kiamba (2004) that it was during the era of module II programme that a gradually declining trend in HELB loan allocations followed.

It can therefore be generally deduced that the trend in financing higher education in Kenya has been characterized in the past by increasing trends, sporadic, relatively uniform and then

decreasing trends in that order. However, it is not possible to ascertain the current trend in HELB loan allocations unless a study is carried out covering a pre-determined period of time.

Although Table 1.1 generally demonstrates a gradually increasing trend in HELB loan allocations over some years, the last two academic years show that the allocations stagnated at Ksh. 5.6 billion annually despite HELB having begun allocating undergraduate loans to both self-sponsored students in public universities (module II) as well as those in private universities beginning in 2008/2009 (Ringera, 2014). Furthermore, the trend in the table is discrete since it is for some non-continuous years and is also cumulative for all cohorts in the respective years.

For purposes of effectiveness and less biasness, this study used a specific cohort to establish the trend in HELB undergraduate loan allocations for the pre-determined period. The nature of the trend established in allocations shows the level of access in higher education through the loans.

2.4 Equity in Financing Higher Education through Student Loans

According to Woodhall (2004), education increases the earning capacity and indeed the lifetime earnings of educated persons. Both private rates of return and conventional rates of return emphasize that the quantity of education achieved in terms of deepening years of schooling increases the avenues of better jobs by opening up job prospects and raising earnings. This implies that the greater the inequalities in higher education funding, the more likely that its benefits will disproportionately be enjoyed by upper income families whose children are more likely to complete secondary school and enroll for higher education. Besides this, the beneficiaries of education subsidies are likely to move up the socio-economic strata and thus help even out inequalities. This is because, according to the study, the poor look up to education as an escape route from deprivation.

Bray (2000) while using empirical evidence of comparisons from 49 developed and developing countries observed that the greater the inequalities of educational attainment of the population, the greater the income inequality in a country. The study reviewed evidence from five developing countries thus; Brazil, Costa Rica, India, Philippines and Sri-Lanka and concluded that there is a closer relationship between education performance and aggregate economic growth, than between education performance and distribution of earnings.

Accordingly, both Jallade (2000) and Woodhall (2004) reveal that public subsidies in education have always targeted to redistribute income from the rich to the poor. According to their studies, student loans in various countries were advocated for on grounds of both equity and efficiency.

For instance, World Bank (2006b) established that there is an increase in over-reliance on student loans in U.S.A more than any other form of aid since there are two state-subsidized loan schemes for university students namely the National Direct Student Loan Program and the Guaranteed Loan program for Higher Education. The purpose of the two loan schemes is to competitively provide low interest loans for students from low income or middle-income families to enable them pursue higher education. Therefore, the main objective of the two types of loans was the equalization of educational opportunities to all.

In Colombia, Jallade (2000) while studying the effect of student loans on equity in higher education concluded that loans helped increase demand for higher education by reducing private costs and enabling the poor students who could not otherwise afford it to enroll. However, the study observed that the loans failed to be equitably allocated in favour of students from low SEB status who were not readily accessible to the application procedures. Most recipients often came from upper-income families. According to the study, student loans did not do much to shift the

burden of financing higher education away from the taxpayer to students, but were instead a cheap way of channeling funds to private universities and the rich students in public sector. The experience in Colombia, therefore shows that study loans do not on their own solve the financial problems of higher education or redistribute income from the rich to the poor but instead, their effectiveness in achieving equity goals depends on the policies of fees set. Since there was no increase in fees in Colombia, the impact of loans on enhancement of equity was insignificant.

Koigi (2006) notes that equity in the level of distribution of public resources depend on the pattern of subsidy by the level of education, as well as the socio-economic composition of the student population at each level. With regard to the level of education, the study revealed that in developing countries the distribution of public resources among members of a given generation of school-age children is strikingly inequitable. For example, in developing countries, 71% of the cohort with primary or no schooling share only 21% of the overall cohort resources, whereas 64% of those with higher education get 38.6% of the resources. The study further shows that in developing countries other than Francophone Africa, an individual from a non-farmer home receives 2.5 times as many public education resources as his counterpart from a farming background. In Francophone Africa, the scenario is even worse with the figure being 3.5 times as much. In the non-farmer population, individuals from white-collar backgrounds receive resources on average, 5 times as much as those from farming backgrounds. However, evidence from a number of developing countries especially in Africa tend to show that the present pattern of subsidies often favour the rich at the expense of the poor (Woodhall, 2004).

In Kenya, HELB was created intentionally to favour students from low SEB status for purposes of achieving equity in financing higher education. It developed the Means Testing Instrument

(MTI) that would be used to identify and effectively segregate students according to their respective levels of need. The MTI would therefore ensure that the lower the SEB status of an applicant, the higher his/her level of need would be and hence the more the attraction of a higher HELB loan allocation to pursue the university education.

However, Wachiye (2012) in a case study research of Bungoma district in Kenya asserted that students from richer families tend to get relatively higher loan allocations as compared to their counterparts from poorer families. This was after using an own developed Asset-Ownership Instrument (AOI) as a tool to determine the SEB composition of families of loan applicants in the district and compare with the respective HELB loans allocated to them.

Muriithi *et al* (2012) conducted a comparative research design study to predict the amount of loans that students could qualify for if ordinal logistic regression versus multiple binary logistic regression models could be used to determine loan allocations. The study established that the ordinal logistic regression could give more accurate estimates. However, it recommended for an investigation into the model or criteria that HELB uses with the expression of some fears that it could be having a number of miscalculations when allocating its loans leading to inequitable allocations of the loans to needy students. The study, therefore, recommended for an independent empirical study on HELB using the criteria it uses in order to establish whether its loans are awarded equitably in respect of the levels of need of the recipients.

This study has therefore endeavoured to establish if the HELB loans in Kenya are equitably allocated according to the levels of need of the applicants based on the criteria that HELB uses. Unlike the study by Wachiye (2012) that visited households of university students, used parents as research respondents to assess their assets and further used an own-developed Asset

Ownership Instrument (AOI) to ascertain SEB status, this study used questionnaires and actual LAFs filled by university students themselves and further used the MTI that HELB uses to determine their SEB status. This was because the results were to be significant to HELB itself. The empirical analysis of results complies with the recommendations of Muriithi *et al* (2012).

2.5 Influence of Socio-Economic Backgrounds on Loan Allocations

HELB Review (2004) states that HELB uses only one student characteristic called the socio-economic background (SEB) status as a criterion to allocate loans. The SEB status of the applicant is determined using the Means Testing Instrument (MTI) developed in form of an application form for students to fill. This instrument has items called SEB indicators for consideration in establishing the SEB status, hence the level of need of the applicants. Based on the total score obtained per form, the applicant is put into a class using a HELB continuum scale of the instrument. There are three classes of SEB status namely low, medium and high. The HELB continuum scale ranges from 1 to 36 points such that recipients whose scores range between 1-12 points are classified into the low SEB status, those between 13-24 points are in the medium SEB status while those between 25-36 points are in the high SEB status. An applicant is then allocated a loan whose amount corresponds to the SEB score obtained in each class of status. The MTI is such that the lower the SEB status, the higher the loan allocation.

The first SEB indicator used is the amount of household annual income of the applicant whereby different levels of annual incomes correspond to different loan levels. The indicator is such that the higher the annual income, the lesser the loan allocation (Cheboi, 2004). Types of parenthood are significant here such that, for example, an applicant from a dual parenthood household earning less than Ksh. 250,000 per year is eligible for a loan of Ksh. 45,000 while an applicant

whose parental household earn between Ksh. 250,000 and 600,000 is eligible for a loan of Ksh. 40,000. This leaves an applicant from a dual parenthood whose household income is more than Ksh. 600,000 per annum with a loan less than Ksh. 40,000 which in the foregoing literature is equivalent to Ksh. 35,000. Odebero *et al* (2006b) asserts that eligibility for loan allocation depends on the information provided in the student's LAF and the supporting documents but suggests that those who fall below a parental annual income of Ksh. 850,000 are in need of the HELB's assistance in one way or the other.

The second SEB indicator used to modify the score and hence the amount of loan allocation is the type of secondary school attended by the applicant. If, for example, the applicant attended a private secondary school, the maximum loan to which he would be privy to would be Ksh. 35,000 no matter how little was earned by the parents (Odundo and Njeru, 2005). According to the study, the Board's position is that all students selected by the JAB upon attaining the required cut-off points must not fail to get something for their studies in form of loan.

The third SEB indicator used by HELB is the cumulative fees payable to the total number of siblings of the applicant in education participation at various levels of education. They include those at primary, secondary and tertiary levels. Those at tertiary levels would include siblings in universities who are not beneficiaries of HELB.

Although there are other parameters or student characteristics that could be considered during loan allocations, the study was only limited to the SEB characteristics which HELB uses for determination of eligibility for the loans. A correlational study by Odebero *et al* (2007) which investigated whether HELB loans were significantly allocated with respect to characteristics such as gender, location of university, type of university, course of study and the socio-economic

backgrounds of the students established that except for the socio-economic background status of the students, the differences between HELB loan allocations and the other parameters were statistically not significant. For instance, although observations indicate that for gender, female students' expenditure patterns necessitate higher financial allocations than their male counterparts, Odebero *et al* (2007) established that the difference between HELB loan allocations and gender are statistically not significant. This is despite some studies showing that there are variations in indirect private costs in education between the boy child and the girl child. Examples of such studies include Smock (1981) and Serem (2006) which found that there were quite significant disparities in costs between males and females in public universities. This was occasioned by the indirect private costs of women being significantly higher than those for men.

Similarly, although expenditure patterns in universities vary depending on their locations with the expenses for universities located in urban areas being higher than those located in rural areas as established by Nyaundi (2001), Odebero *et al* (2007) also established that the difference between HELB allocations and the location of universities are statistically not significant.

Additionally, although types of universities indicate different fees estimates as shown in table 1.2 where private universities have higher financial requirements than public ones, followed by module II in public universities being more expensive than module I, the difference between HELB loan allocations and the type of university whether public or private is however, found by Odebero *et al* (2007) to be statistically not significant. This study was limited to public universities alone as a scope for effective comparisons and analysis.

Furthermore, although common observations show that expenditure patterns on some courses in universities necessitate higher financial requirements, a study by Odebero *et al* (2007)

established that HELB loan allocations and course of study in universities are statistically not significant. In contrast, the study found upon computing the cross tabulation tables of enrolment to various programmes, that these courses actually attracted students from across backgrounds.

Studies commissioned by the Commission for Higher Education (CHE) in Ndirangu and Bosire (2004) found that the introduction of cost sharing led to the unit cost replacing the *ad hoc* capitation grants where the cost of running the universities was divided by the number of students' population. This indicated that unless students from low SEB status were allocated more loans, they would tend to either change courses, defer studies or drop-out due to lack of fees. The study established an extremely strong inverse relationship between HELB loan allocations and parental incomes of the students which were the indicators of SEB status.

Similarly, the overall conclusion by Odebero *et al* (2007) was that there was no justification for allocation of HELB loans based on gender, location of university, type of university and course of study but rather on the SEBs of students. This was because their correlational study found a close and strong association between HELB loan allocation and the SEBs of students. However, their study further recommended for another thorough, independent and empirical study on HELB based on the SEBs of students only since it had proved to be the only significant factor. Therefore, this study empirically investigated HELB to ascertain the relationship between HELB allocations and SEB status of students by using the many items found on the LAF of students as SEB indicators. The scores from these items would constitute a composite SEB variable. This would ensure that this study deviates from the traditional use of the parental incomes only as the sole determinants of the SEBs of students like in Ndirangu and Bosire (2004) to the use of the several indicators found on the LAF of students as recommended by Odebero *et al* (2007).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methods that were employed in this study. It covers the research design, area of the study, study population, sample size and sampling procedure, research instruments, ethical considerations, data collection and analysis procedures.

3.2 Research Design

This study used descriptive survey, ex-post facto and correlational research designs. Descriptive survey design allows a study to measure, classify, analyze, compare, and interpret collected data for purposes of specific clarification (Kombo and Tromp, 2009).

Ex-post facto design appropriately enhances retrospective examining of the effect of a naturally occurring event or circumstance to establish its relationship with a subsequent outcome that has already taken place (Cohen and Manion, 1992) which in this case was the naturally occurring SEB status of students which subsequently determined the amount of HELB loan allocations.

Correlational research design enhances the measurement of associations and relationships between independent and dependent variables through determination of coefficients of correlations (Frankfort and Nachmias, 2008).

3.3 Area of the Study

Kakamega-East sub-county lies between longitudes 34⁰ 38'' and 34⁰47'' East of the prime meridian and latitudes 0⁰ 03'' and 0⁰ 02'' North of the Equator. It borders Kakamega-South to the South, Hamisi to the East, Kakamega-Central to the West and Kakamega-North sub-county to the North. It is one of the twelve sub-counties found in Kakamega County in Kenya (Republic of Kenya, 2013b), with one constituency called Shinyalu constituency. It is rural-based and covers a

total area of 410.3 km² (Republic of Kenya, 2009). According to the 2009 population census, the sub-county's population was 212,358 persons with a population density of 572 persons per square kilometer (Republic of Kenya, 2010). The main economic activity is agriculture for 80% of the population. It has high poverty index of 67.8% with majority of households either single or non-parenthood. In education sector, it has 188 ECDE centres, 91 public primary schools, 41 public secondary schools, 1 tertiary institution and 18 adult education classes.

3.4 Study Population

The study population comprised of 1 CEO of HELB, 22 University Academic Registrars (UARs) of the 22 chartered public universities in Kenya (Commission for University Education, 2013) and 788 undergraduate students who are HELB loan applicants from Kakamega-East sub-county enrolled in public universities in Kenya in the 2011/12 cohort as shown in Table 1.6.

3.5 Sample Size and Sampling Procedure

The sample for the study comprised of the 1 CEO of HELB, 7 UARs of the 7 chartered public universities which is also approximately a third of the total chartered public universities in Kenya as recommended by Gay (1987), and 292 undergraduate university students out of the 788 HELB loan applicants in the 2011/2012 cohort obtained using a formula advanced by Yamane in 1967 (Israel, 1992) calculated as follows:

$$n = \frac{N}{1 + N(\delta)^2} \quad \text{Where } n \text{ is the sample size, } N \text{ is the population size, and } \delta \text{ is the level of}$$

precision, which in this case was 0.05 significance level. This was calculated as:

$$n = \frac{788}{1 + 788(0.05)^2} = 265, \text{ plus 10\% of the sample size to get a total of 292 university students.}$$

The 10% in the formula takes care of any shortage in the student sample that may arise in the study to interfere with the least number of respondents required for the study. Whereas saturated sampling was used to select the 1 CEO of HELB, Purposive sampling was used to select the UARs from the 7 chartered public universities that existed through individual Acts of Parliament before the enactment of the Universities Act No. 42 of 2012 (on 13th December 2012). This was due to the fact that by this date, the 2011/12 cohort had already been admitted in universities hence the universities were information-rich for the cohort (as reflected in Appendix XII). Systematic random sampling was used to select the students based on the serial numbers of their LAFs, which were retrieved from HELB. After sorting out the forms, an appropriate sampling interval of picking every third form was applied based on their serial numbers. This enabled the 292 students to be sampled out of the 788 student population in the cohort. Whereas their LAFs were used to obtain data on their SEB status, the respective students were contacted to fill questionnaires. These students were in their final years of study.

3.6 Research Instruments

Primary data was collected using questionnaires and interview schedules while secondary data was obtained from the document analysis guides which included the HELB LAFs for students and proforma that was issued to both UARs and CEO of HELB.

3.6.1 Questionnaire for the CEO of HELB

The questionnaire that was administered to the CEO of HELB gathered information on the number of HELB applicants in the cohort, the number of HELB recipients and the cumulative amounts of allocations disbursed to the cohort over the entire study period.

3.6.2 Questionnaires for the UARs

The questionnaires that were administered to the UARs gathered information on the total enrolment for the cohort, the specific number and amounts of loan recipients and the number of repeaters, deferrals and drop-outs that arise due to lack of fees among the HELB applicants.

3.6.3 Questionnaires for the students

The students' questionnaires gathered information mainly on their SEBs, the amounts that were allocated to them and the challenges they face in accessing the HELB loans.

3.6.4 Interview Schedules

In-depth interview schedules were utilized as a primary source of qualitative data and were administered to both the CEO of HELB and the UARs of public universities. For the CEO, it was used to elicit responses on the role of HELB, the criteria of eligibility for the loan, problems encountered in administering the loan and the possible solutions to the problems. For UARs, it was used to capture responses on the successes and failures of HELB, the amounts of HELB allocated to them and the causes of deferrals, repetitions and drop-outs among HELB recipients.

3.6.5 HELB Loan Application Forms (LAFs) of University Students

The filled and already processed HELB LAFs of students were the main secondary sources of information on the SEB status of students since they contained proof of neediness. The forms are normally filled on-line, printed and approved by relevant authorities before submission to HELB. They were retrieved from HELB for use, sought and sampled based on their serial numbers.

3.6.6 Proforma as a Document Analysis Guide

Proforma was administered to both the CEO of HELB and the UARs of public Universities. For HELB, it contained a checklist for the trend in recipients and amounts received for the sub-county over the study period, while the one to UARs contained a summary trend per university.

3.7 Validity and Reliability of the Instruments

3.7.1 Validity of the Instruments

Face validity was enhanced in the study through the use of both the students' LAFs retrievable from HELB and the students' questionnaires individually filled. They both ensured the validity of the information gathered on SEB status of the students and their respective HELB allocations.

To enhance validity and reliability, pilot study was done in one university randomly sampled for students, three UARs and at HELB. This helped to determine the appropriateness of the instruments to yield the desired responses of the study for validity whereby an expert in the Department of Educational Management and Foundation in the University helped to establish whether the information gathered addressed the objectives of the study.

3.7.2 Reliability of the Instruments

The test-retest method was used by administering the questionnaires to the same group of respondents at two different times and a correlation between the two sets of scores computed at 0.05 level of significance on a two tailed t- test. The correlation coefficients obtained were:

Table 3 **Coefficients of Reliability Measures** **(n=89)**

Research Respondents	Correlation Coefficient
University Students	0.96
University Academic Registrars	0.95
HELB	0.97

Since the coefficients were greater than 0.70, then it implied that the instruments were highly reliable (Frankfort and Nachmias, 2008).

3.8 Data Collection Procedures

Permission to do research was sought from the Maseno University Ethics Review Committee (MUERC) on behalf of the National Council of Science and Technology (NCST) through the School of Graduate Studies of Maseno University.

Universities were accessed through permission that was sought from their Vice-Chancellors prior to the onset of data collection. The researcher proceeded to administer the interviews to the UARs and the questionnaires to both UARs and students. Appointment to interview the CEO of HELB was also sought prior to the administration of the questionnaire to him.

3.9 Data Analysis

The researcher analyzed data both quantitatively and qualitatively. Qualitative data from interviews and open ended sections of the questionnaire were analyzed in themes and sub-themes. Raw information on SEB indicators from closed ended sections of questionnaires and LAFs of students was coded accordingly in order to obtain numerical data. Given that the SEB indicator is a composite variable with many contributing factors, each had its own scoring scale, which constituted the final SEB score. These SEB indicators segregate students according to their levels of need effectively. They include: marital status of parents, level of income, level of expenditure, place of residence, payer of fees, occupation of the payer of fees, level of education of parents/guardian, type of secondary school attended by the applicant, cumulative fees paid for siblings and medical capability as shown on the LAF (Appendix VIII).

Based on the computed SEB scores, they were then grouped into three classes of low, medium and high SEB status using a HELB continuum scale. This scale ranges from 1-36 where 1-12

represents low, 13-24 represents medium and 25-36 represents high SEB status. The SEB status of students was the independent variable while HELB loan allocations formed the dependent variable of the study.

Descriptive and inferential statistics were used in the analysis whereby rates in terms of percentages were used to determine access in higher education while tables and graphs were used to show trends in HELB loan allocations. Lorenz curves and Gini-coefficients (as explained in the theoretical framework) were used to establish inequalities in HELB loan allocations which were instrumental in revealing the degree of fairness in HELB loan allocations. Pearson's product-moment correlation and simple linear regression were used in the study to establish the relationship between HELB loan allocations and the students' socio-economic backgrounds.

In order to test the null hypothesis, the significance level was set at 0.05 to enhance 95% confidence level on a 2- tailed t-test. The Pearson's product-moment correlation was then computed for the variables and the significant value obtained (ρ - value) was compared with the set significance value. If the calculated ρ - value would be found to be less than the set significance value, then the null hypothesis would have been rejected implying that the relationship between HELB loan allocations and the SEBs of students is significant. But if the calculated ρ - value is greater or equal to the significant value set, then the null hypothesis would not be rejected implying that the established relationship between the variables would not be significant (Frankfort and Nachmias, 2008).

For simple linear regression, the cumulative percentages of HELB loan share received was plotted on the Y-axis while the cumulative percentages of the loan recipients was plotted on the X-axis which led to a regression line being obtained to illustrate the linear equation for the

relationship. The size of r obtained is determined by the spread of the HELB loan allocations around the regression line. The sign and aggregate value of the correlation coefficient obtained determines the type and level of relationship respectively. It ranges from -1.0 to +1.0 where the sign indicates the type of relationship (whether direct or inverse), while the actual value obtained indicates the level of the relationship (the higher the value, the stronger the relationship). The closer it is to 0 than 1, the weaker the relationship becomes and vice-versa.

3.10 Ethical Considerations and Informed Consent

The researcher was guided in the research by the sole aim of contributing to the development of systematic and verifiable knowledge. The procedures in research design were strictly adhered to during data collection and analysis. There was an obligation to ensure that the research participants' rights and welfare are not violated before, during and after conducting the research.

To enhance informed consent, participants were thoroughly briefed on the research problem, the need for a scientific research on the problem, the reasons for the choice of the area of study and the benefits of the study. The rights and risks associated with their participation in the study were clarified as their voluntary involvement in the research was fully guaranteed. The researcher hence urged them to provide honest, valid and reliable information.

The confidentiality of the information given was strictly observed in the study by the researcher. Great care was taken to avoid identification of real participants in the study with the exception of the CEO of HELB whose identity could not be concealed since he was the sole CEO of HELB. However, the risks that would be associated with him were greatly minimized by the researcher by ensuring that questions posed to him were purely policy-oriented and not personal.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents demographic characteristics of research respondents in the study. It also deals with the analysis of collected data, interpretation of the results obtained and presentation of the findings according to the objectives of the study. This was done under the following themes:

- a) HELB recipients as a proportion of total enrolment for the cohort
- b) Trend in HELB loan allocations for the cohort
- c) Degree of fairness in HELB loan allocations
- d) Relationship between HELB loan allocations and socio-economic backgrounds of students

The returns for questionnaires was 100%.

4.2 Respondents' Demographic Characteristics

This section gives the demographic characteristics of the research respondents as captured in the section of personal information on their respective questionnaires.

4.2.1 Demographic Characteristics of CEO of HELB

The demographic characteristics of the CEO of HELB were concealed since he was the sole provider of research data from HELB. This is pursuant to the confidentiality required under ethical considerations and through informed consent of the respondent.

4.2.2 Demographic Characteristics of University Academic Registrars (UARs)

The characteristics of the University Academic Registrars of the public universities are given in relation to gender, highest academic qualification and experience in university administration in Table 4.21. Their experience was captured based on their length of stay in the universities.

Table 4.21 Demographic Characteristics of University Academic Registrars (n=7)

Demographic Characteristics	Frequency (f)	Percentage (%)
Gender		
Male	4	66.7
Female	3	33.3
Total	7	100.0
Highest Academic Qualification		
Doctorate degree	2	33.3
Master's degree	3	50.0
Bachelor's degree	2	16.7
Diploma	0	00.0
Certificate	0	00.0
Total	7	100.0
Length of stay in the university		
Over 10 years	3	50.0
Between 5-10 years	3	33.3
Less than 5 years	1	16.7
Total	7	100.0

From Table 4.21, two-thirds (66.7%) of the university academic registrars were males while half of them (50%) had master's degree. On experience, also half of them (50%) had stayed in the universities for over 10 years as registrars in charge of academic affairs.

4.2.3 Demographic Characteristics of University Students

The demographic characteristics of the students in the public universities are given in Table 4.22 and Table 4.23 in relation to their gender, university of study and faculty/school of study.

Table 4.22 Demographic Characteristics of University Students (n= 292)

Demographic Characteristics	Frequency (f)	Percentage (%)
Gender		
Male	172	58.9
Female	120	41.1
Total	292	100.0
University of study		
MMUST	53	18.2
MU	43	14.7
KU	40	13.7
MAS	38	13.0
JKUAT	28	9.6
EU	27	9.2
UoN	24	8.2
UoE	14	4.8
PU	5	1.7
KiU	4	1.4
LU	4	1.4
CU	3	1.0
JoUST	2	0.7
TUK	2	0.7
TUM	2	0.7
DKUT	1	0.3
MMUK	1	0.3
SEKU	1	0.3
Total	292	100.0

Key : on page 126 (Appendix XI for university codes)

Majority of the students (58.9 %) were males while the rest (41.1%) were females. The highest number of these students (18.2 %) were from Masinde Muliro university of science and technology. This could be due to the fact that it is the closest public university to the sub-county.

Table 4.23 Other Demographic Characteristics of University Students (n= 292)

Demographic Characteristics	Frequency (f)	Percentage (%)
Faculty/school of:		
Arts and Social Sciences	114	39.0
Education	111	38.0
Business and Economics	19	6.5
Biological and Physical Sciences	16	5.5
Human Resource Development	14	4.8
Tourism, Hospitality and Events management	6	2.1
Law	5	1.7
Information Science	4	1.4
Nursing, Dentistry, Public health	2	0.7
Environment and Earth Sciences	1	0.3
Total	292	100.0

From Table 4.23, most of the students in the universities (39.0%) were enrolled in the school of arts and social sciences followed by those enrolled in the school of education (38.0%).

4.3 HELB Recipients as a Proportion of Total Enrolment for 2011/12 Cohort

The study sought to find out the number of HELB loan recipients as a proportion of the total enrolment for the 2011/12 cohort in undergraduate studies in public universities for Kakamega-East sub-county. Whereas the University Academic Registrars (UARs) provided information on the total enrolment, HELB on the other hand provided the information on the number of HELB loan recipients for the cohort. This information was compiled as shown in Table 4. 31.

Table 4.31 2011/12 Cohort Enrolment and HELB Loan Recipients in Public Universities

University	Total Enrolment	HELB Applicants	HELB Recipients	Percentage of HELB Recipients (%)
MMUST	163	176	116	71.17
MU	152	146	107	70.39
KU	159	131	109	68.55
MAS	139	123	67	48.20
EU	127	85	53	41.73
UoN	101	77	54	53.47
JKUAT	87	50	41	47.13
	928	788	547	58.9

From Table 4.31, it can be established that 58.9% of total university students were HELB loan recipients at admission in first year for their undergraduate studies in public universities for the 2011/12 cohort for Kakamega-East sub-county. This implies that HELB enhanced the enrolment of majority of the university students in the sub-county who qualified for undergraduate studies in public universities.

In order to establish whether this enrolment was sustained in the studies by HELB, it was necessary to establish any wastage in the HELB recipients throughout the study period. This was supported by responses from the open-ended sections of the questionnaires to UARs, most of who confirmed that most of the students who deferred their studies, repeated some years or dropped out due to lack of fees were former beneficiaries of HELB. This finding was further corroborated by the assertions from some the UARs during interview schedules who stated that:

“The deferrals, repetitions or drop-outs within the cohort were caused by lack of fees yet they were HELB applicants. Some needy students do not get HELB loans at all while some of those who fully depend on them fail to sit for exams due to fees arrears.”

Therefore, the results of the wastage as established from the UARs were as shown in table 4.32.

Table 4.32 2011/12 Cohort Wastage in Public Universities for Kakamega-East Sub-County

UNIVERSITY	Year 1			Year 2			Year 3			Year 4		
	D	R	DR									
MMUST	2	0	1	1	0	1	1	0	0	0	0	0
MU	1	0	0	1	0	1	1	0	0	0	0	0
KU	1	0	1	1	0	0	1	0	0	1	0	0
MAS	1	0	0	1	0	0	0	0	0	0	0	0
EU	1	0	0	0	0	0	0	0	0	1	0	0
UoN	1	1	0	2	0	0	1	0	0	0	0	0
JKUAT	1	0	0	1	0	0	0	0	1	1	0	0
Sub-total	9	1	2	7	0	2	4	0	1	2	0	0
Total wastage	12			9			5			2		
Wastage rate	1.3 %			1.0 %			0.6 %			0.2 %		

Key: D = Deferrals, R = Repeaters, DR = Drop-outs

Table 4.32 revealed that the highest wastage was in first year of study comprising a total of 12. The wastage rate significantly reduced as the cohort progressed in years of study. It also revealed that majority of the student wastage were from those who deferred their studies in each year of study. Based on the wastage established in Table 4.32, the proportion of HELB loan recipients per year of study kept changing and the results were revised as shown in Table 4.33.

Table 4.33 Cohort Transition and HELB Recipients for Kakamega-East Sub-County

Academic Year	Total Enrolment	HELB Recipients	Percentage (%)	Total Wastage	Percentage Wastage (%)
Year 1	928	547	58.9	12	2.2
Year 2	916	555	60.6	9	1.6
Year 3	907	557	61.4	5	0.9
Year 4	902	558	61.9	2	0.4
Average	913	554	60.7	7	1.3

Table 4.33 shows that total enrolment per year of study steadily decreased as the cohort moved from one academic year to the next as a result of the wastage ascertained in Table 4.32. However, the number of HELB loan recipients slightly increased per year of study resulting in the respective increase in the percentage of recipients from 58.9% in first year of study to 61.9% in the final year of study. The increase in the number of HELB recipients was attributed to “the new beneficiaries of HELB loans resulting from successful appeals of some students who were initially not allocated” as stated by the CEO of HELB during the interview schedule.

Despite the 1.3% wastage in the cohort as shown in the table, an average of 60.7% of HELB loan recipients was established as a proportion of the total university enrolment for the cohort. This

proportion implies that more than half of the students pursuing undergraduate studies in public universities benefit from HELB loans. Compared to the 28% of beneficiaries by early 90's when funding was still through USLS, it implied that HELB had enhanced access.

This finding agrees with the findings of Woodhall (2004) who established that generally, student loan schemes that existed in developing countries especially in Sub-Saharan Africa and Asia accounted for more than half of the total enrolments in higher education. This was after carrying out empirical studies on the levels of public subsidy in higher education as well as the policies on eligibility and repayment modes. His findings were based on a comparative study between countries with and those without student loan schemes in both developed and developing nations.

The increased access in undergraduate studies by HELB was majorly attributed to increased enrolments by students from needy backgrounds, improved loan recovery from former beneficiaries and the fact that the application procedure was purely on-line hence fast. This was revealed from the interview schedule with the CEO of HELB who stated:

“The on-line application for HELB loans saves time, energy and resources both for students and the board. For students, it enables them to apply for the loans faster since many of them can access the site at the same time. This enhances a high turn-over for the loans. For the board, it gives them adequate time to receive, verify and confirm the accuracy of the information given hence punctuality is enhanced in processing the loans. This computerised system leads to most of the applicants being considered for the loans.”

The ability of the on-line process to attract as many applications as possible was confirmed by the open-ended sections of the students' questionnaires in which most of them stated that:

“The advantage of HELB as a key financier and reliable source of fees in our studies is the ability to access their loan application on-line. This enhanced fast submission of our applications hence minimising on tendencies of canvassing and unnecessary delays. It encouraged the needy students to apply for the HELB loans.”

This finding was consistent with Bray (2000) who established increased enrolment rates in higher education in both Lesotho and Thailand as a result of the student loans. Whereas in Lesotho increased enrolments were majorly attributed to the waiver of repayment of the loans for the graduates who worked in the country for a period of not less than five years, in Thailand the success of the loans in enhancing extreme high rates of enrolments was attributed to the simplified eligibility criterion to qualify for the loans as well as the high amounts of subsidy allocated to the students. The loans enhanced over 90% increased enrolments in Thailand. According to their study, the student loan schemes led to the realization of enhanced access in higher education as seen in high annual university enrolment rates, completion rates, graduation rates as well as quality output in terms of service delivery from the graduates in public sectors.

Table 4.33 also established that as the cohort progressively moved from the first to the final year of study, the percentage of HELB loan recipients steadily improved against the total university enrolment. The trend improved from the first to the final years of study as 58.9%, 60.6%, 61.4% and 61.9% respectively. This was owing to the fact that as the number of HELB loan recipients increased over the years, the total enrolment decreased due to the wastage that was ascertained in the cohort which accounted for 1.3% as seen in the table.

The number of HELB loan recipients in the cohort increased as a result of successful appeals from some of the applicants who were not initially benefitting from the loans. This was revealed by the CEO of HELB in the interview schedule in which he stated that:

“Generally, as the cohort progressed in the years of study, some students who were not initially getting loans successfully appealed with valid evidences. This included submission of death certificates, proof of withdrawal of sponsorship, loss of employment of parents/guardians and significant increase in the amount fees payable to siblings”.

In Kenya, the finding was consistent with Ringera (2014) whose study was based on the assessment of the strategies that HELB had put in place in order to actualize vision 2030 through increased enrolments in higher education. The study established that by the academic year 2006/07, HELB undergraduate loans accounted for 28.2% increasing enrolments per year in universities. However, this was before several reviews on the HELB Act took place in 2008/09 which included the incorporation of the privately-sponsored students in public universities (module II) as eligible beneficiaries of HELB loans.

The study finding was further consistent with the most recent KUCCPS finding which established an increasing annual enrolment to universities of about 9.4% between 2012/13 and 2013/14 (Republic of Kenya, 2014b). This could not, however, be wholesomely attributed to HELB funding alone since the increased enrolment was inclusive of private universities which became eligible for HELB loans as from 2008/09. This current study agrees with all these studies on the concept of increased enrolments through HELB loans after covering a wider period of study using a specific and most recent cohort with a full cycle of study, hence more effective.

However, the study finding was inconsistent with Mwiria and Wamahili (1995) who established that in both Ghana, France and Indonesia, student loan schemes failed to enhance increased enrolments in higher education since they lacked definite public policies especially in recovery of the loans making them private-banks' affairs. As such, the private institutions turned them into profit making entities of loaning which gradually caused decreased enrolments in higher education since the poor and most vulnerable students could not access higher education through the loans.

4.4 Trend in HELB Loan Allocations for the 2011/12 Cohort

The study sought to establish the trend of HELB undergraduate loan allocation to the sub-county between 2011 – 2014 for the cohort. This was done in two ways; first by establishing the trend based on the number of recipients per amount of HELB loan allocation, and secondly by establishing the trend based on the cumulative amounts of allocations over the entire period.

4.4.1 Trends in HELB Allocations based on the Number of Loan Recipients

Firstly, the changes in HELB allocation based on the number of recipients per amount was considered for each year in order to establish the trend. This is shown from Tables 4.4.1.1 to 4.4.1.4 for the four academic years respectively followed by Table 4.4.1.5 for the entire period.

Table 4.4.1.1 HELB Loan Allocation for Year 1

Amount of Loan	Frequency	Percent	Cumulative Percent
.00	6	2.1	2.1
35000.00	68	23.3	25.3
37000.00	25	8.6	33.9
40000.00	43	14.7	48.6
45000.00	20	6.8	55.5
50000.00	31	10.6	66.1
55000.00	37	12.7	78.8
60000.00	62	21.2	100.0
Total	292	100.0	

Table 4.4.1.1 shows that in first year of study, majority of the students (23.3%) were allocated the minimum amount of loan of Ksh. 35,000 followed by 21.2% of the students who were

allocated the maximum amount of Ksh. 60,000. Those who did not receive HELB loan despite applying for it comprised 2.1%.

Table 4.4.1.2 HELB Loan Allocation for Year 2

Amount of Loan	Frequency	Percent	Cumulative Percent
.00	5	1.7	1.7
35000.00	62	21.2	22.9
37000.00	24	8.3	31.2
40000.00	45	15.4	46.6
45000.00	22	7.5	54.1
50000.00	31	10.6	64.7
55000.00	35	12.0	76.7
60000.00	68	23.3	100.0
Total	292	100.0	

Table 4.4.1.2 shows that in the second year of study, majority of the students (23.3%) were allocated maximum amounts of HELB loan of Ksh. 60,000 followed by 21.2% of the students who were allocated the minimum HELB allocation of Ksh. 35,000. The first two years of study reveal that there was an interchange in the rates of allocation of the loans such that the highest proportion of beneficiaries in the second year got maximum loans as compared to the first year when the highest proportion got the minimum HELB loans.

This resulted in a sharp increase in HELB loan allocations between the first and second years of study for the cohort.

Table 4.4.1.3 HELB Loan Allocation for Year 3

Amount of Loan	Frequency	Percent	Cumulative Percent
.00	4	1.4	1.4
35000.00	61	20.9	22.3
37000.00	24	8.2	30.5
40000.00	44	15.1	45.6
45000.00	22	7.5	53.1
50000.00	32	11.0	64.1
55000.00	34	11.6	75.7
60000.00	71	24.3	100.0
Total	292	100.0	

Table 4.4.1.3 shows that in third year of study, just like in the previous year, majority of the students (24.3%) were allocated maximum HELB loans of Ksh. 60,000 each. However, the rate of these beneficiaries slightly rose from 23.3% in second year to 24.3% in third year of study.

The table further revealed that the second highest beneficiaries of the loans were those comprising 20.9% who were allocated the minimum amounts of Ksh. 35,000 each. The proportion for this allocation reduced as compared to 21.2% in their second year of study.

Owing to the slight increase in the maximum HELB loan allocation of Ksh. 60, 000 which rose from 23.3% in second year to 24.3% in third year of study, it was therefore established that there was an increase in the HELB loan allocation for the cohort between the second and third years of study.

Table 4.4.1.4 HELB Loan Allocation for Year 4

Amount of Loan	Frequency	Percent	Cumulative Percent
.00	3	1.0	1.0
35000.00	62	21.2	22.2
37000.00	18	6.2	28.4
40000.00	48	16.4	44.8
45000.00	21	7.2	52.0
50000.00	34	11.7	63.7
55000.00	33	11.3	75.0
60000.00	73	25.0	100.0
Total	292	100.0	

Table 4.4.1.4 shows that in fourth year of study, majority of the students (25.0%) were allocated the maximum HELB loans of Ksh. 60,000 followed by 21.2% of the students who were allocated the minimum HELB loans of Ksh. 35,000.

A comparison between the third and fourth years of study revealed that the proportions of students who were allocated both maximum and minimum loans slightly increased from 24.3% to 25.0% and from 20.9% to 21.2% respectively. These rates reveal that there was an increase in the HELB loan allocations for the cohort between the third and fourth years of study.

Therefore, as noted from Tables 4.4.1.1, 4.4.1.2, 4.4.1.3 and 4.4.1.4 for each of the four years of study respectively, there was generally an increasing trend in HELB loan allocation to the recipients in the sub-county for this cohort.

Table 4.4.1.5 clearly shows the combined summary for all the four years of study for the cohort.

Table 4.4.1.5 Summary Trend of HELB Loan Recipients for Entire Period of Study

Amount of Loan (x)	No. of HELB Loan Recipients			
	2011	2012	2013	2014
0	6	5	4	3
35,000	68	62	61	62
37,000	25	24	24	18
40,000	43	45	44	48
45,000	20	22	22	21
50,000	31	31	32	34
55,000	37	35	34	33
60,000	62	68	71	73

The information in Table 4.4.1.5 was used to draw the graph shown in figure 2 in order to depict the trend of HELB loan allocation over the entire study period for the cohort.

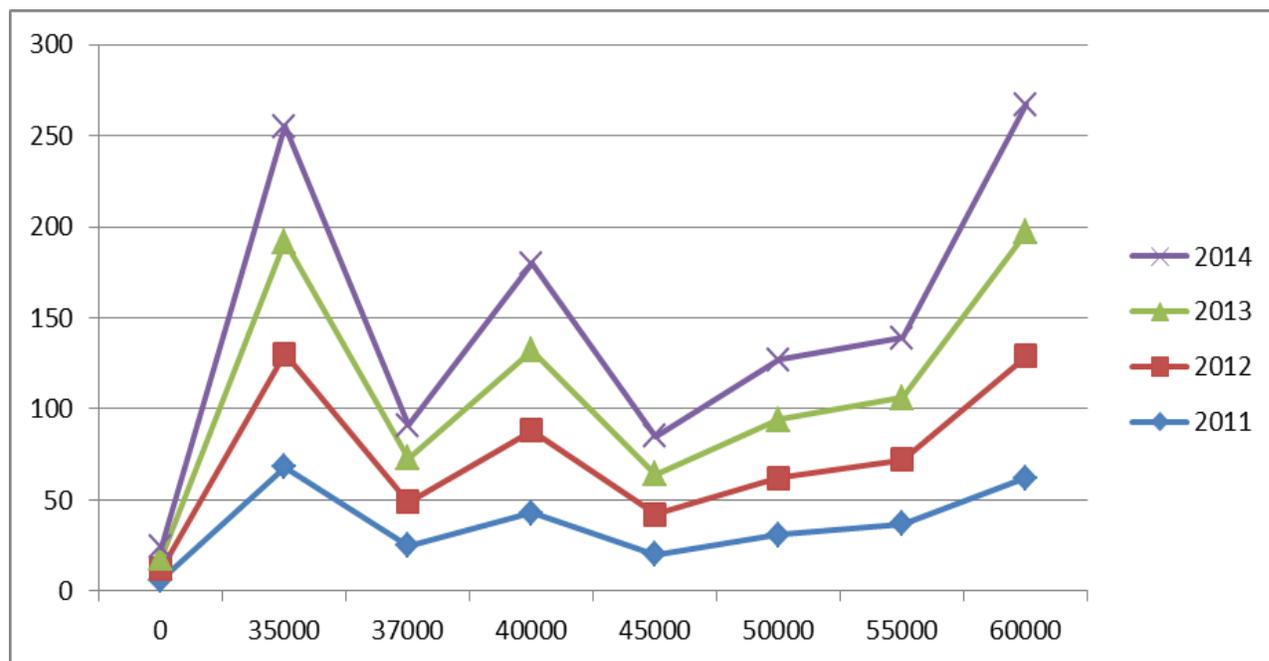


Figure 2: Grouped Line Graph for Annual HELB Loan Allocations

Figure 2 illustrates that generally, there was an increasing trend in HELB loan allocation to the sub-county for each of the four years of study respectively.

4.4.2 Trends in HELB Allocations based on the Cumulative Amounts

Secondly, the trend based on the cumulative amounts of HELB loan allocations over the entire period of study to the sub-county was considered. The trends were represented in the frequency distribution tables for determination of cumulative amounts as shown in tables 4.4.2.1, 4.4.2.2, 4.4.2.3 and 4.4.2.4 for the first to the fourth years of study respectively.

Table 4.4.2.1 Cumulative HELB Loan Allocation for Year 1

Amount of Loan	Frequency	Cumulative		Total Loan (Ksh.)		
		Frequency		fx	cum. (fx)	(%)
(x)	(f)	c.f.	(%)			
0	6	6	2.1	-	0	0.0
35,000	68	74	25.3	2,380,000.00	2,380,000.00	18.0
37,000	25	99	33.9	925,000.00	3,305,000.00	25.0
40,000	43	142	48.6	1,720,000.00	5,025,000.00	38.0
45,000	20	162	55.5	900,000.00	5,925,000.00	44.8
50,000	31	193	66.1	1,550,000.00	7,475,000.00	56.5
55,000	37	230	78.8	2,035,000.00	9,510,000.00	71.9
60,000	62	292	100.0	3,720,000.00	13,230,000.00	100.0
Total	292			13,230,000.00		

The table shows that the total HELB loan allocation for the cohort in first year of study was Ksh. 13,230,000. The highest cumulative allocation was Ksh. 3,720,000 representing recipients of the maximum loan amount of Ksh. 60,000 while the lowest was Ksh. 900,000 representing the recipients of Ksh. 45,000 in that first year of study.

For the second year of study, HELB loan allocation for the cohort was as shown in table 4.4.2.2

Table 4.4.2.2 Cumulative HELB Loan Allocation for Year 2

Amount		Cumulative				
of Loan	Frequency	Frequency		Total Loan (Ksh.)		
(x)	(f)	c.f.	(%)	fx	cum. (fx)	(%)
0	5	5	1.7	-	0	0.0
35,000	62	67	22.9	2,170,000.00	2,170,000.00	16.1
37,000	24	91	31.2	888,000.00	3,058,000.00	22.8
40,000	45	136	46.6	1,800,000.00	4,858,000.00	36.2
45,000	22	158	54.1	990,000.00	5,848,000.00	43.6
50,000	31	189	64.7	1,550,000.00	7,398,000.00	55.2
55,000	35	224	76.7	1,925,000.00	9,323,000.00	69.6
60,000	68	292	100.0	4,080,000.00	13,403,000.00	100.0
Total	292			13,403,000.00		

The total HELB loan allocation for the cohort in second year of study was Ksh. 13,403,000 as compared to Ksh. 13,230,000 in first year. Therefore, there was an increase in HELB allocation between the first and second years of study.

For the third year of study for the cohort, the HELB loan allocation was as shown in table 4.4.2.3

Table 4.4.2.3 Cumulative HELB Loan Allocation for Year 3

Amount of Loan (x)	Frequency (f)	Cumulative Frequency		Total Loan (Ksh.)		
		c.f.	(%)	fx	cum. (fx)	(%)
0	4	4	1.4	-	0	0.0
35,000	61	65	22.3	2,135,000.00	2,135,000.00	15.8
37,000	24	89	30.5	888,000.00	3,023,000.00	22.4
40,000	44	133	45.6	1,760,000.00	4,783,000.00	35.4
45,000	22	155	53.1	990,000.00	5,773,000.00	42.8
50,000	32	187	64.1	1,600,000.00	7,373,000.00	54.6
55,000	34	221	75.7	1,870,000.00	9,243,000.00	68.5
60,000	71	292	100.0	4,260,000.00	13,503,000.00	100.0
Total	292			13,503,000.00		

The cumulative HELB loan allocations for the loans in between these minimum and maximum values were higher in third year of study than in the second year, which resulted in the total HELB loan allocation increasing to Ksh. 13,503,000 for the cohort as compared to Ksh. 13,403,000 in the previous year.

For the fourth year of study, the HELB loan allocation for the cohort was as shown in table 4.4.2.4

Table 4.4.2.4 Cumulative HELB Loan Allocation for Year 4

Amount of Loan (x)	Frequency (f)	Cumulative Frequency		Total Loan (Ksh.)		
		c.f.	(%)	fx	cum. (fx)	(%)
0	3	3	1.0	-	0	0.0
35,000	62	65	22.2	2,170,000.00	2,170,000.00	16.0
37,000	18	83	28.4	666,000.00	2,836,000.00	20.9
40,000	48	131	44.8	1,920,000.00	4,756,000.00	35.0
45,000	21	152	52.0	945,000.00	5,701,000.00	41.9
50,000	34	186	63.7	1,700,000.00	7,401,000.00	54.4
55,000	33	219	75.0	1,815,000.00	9,216,000.00	67.8
60,000	73	292	100.0	4,380,000.00	13,596,000.00	100.0
Total	292			13,596,000.00		

The total HELB loan allocations to the cohort in the final year of study increased to Ksh. 13,596,000 as compared to Ksh. 13,503,000 in the third year of study.

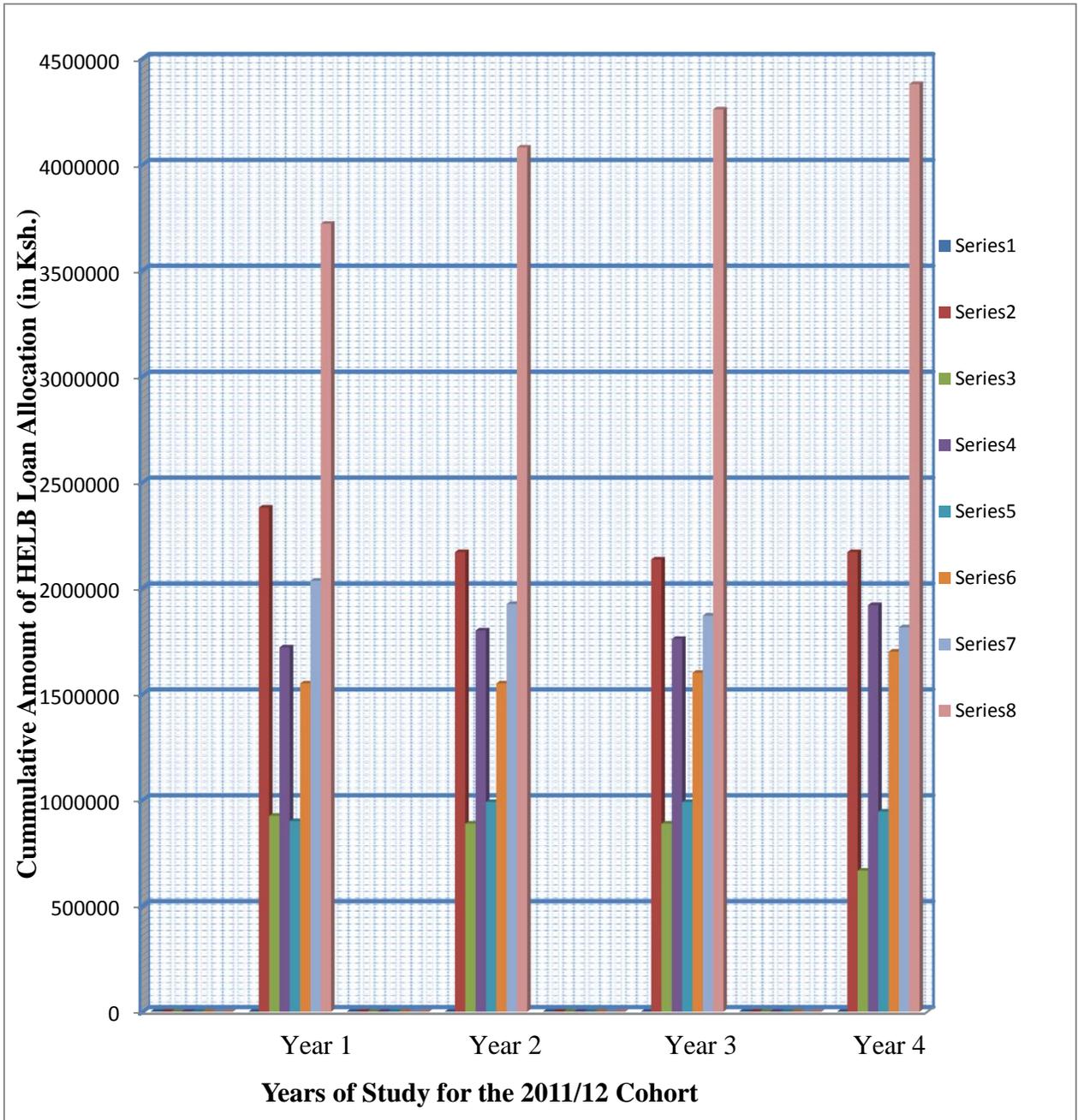
Therefore, as seen in Tables 4.4.2.1, 4.4.2.2, 4.4.2.3 and 4.4.2.4, there was an increasing trend in cumulative HELB loan allocations to the recipients for each of the four years of study respectively. In order to show a summarized trend for the entire study period, the tables were combined into one composite table of summary as shown in Table 4.4.2.5.

Table 4.4.2.5**Trend of HELB Allocation for 2011/12 Cohort for Kakamega-East Sub-County**

Amount of Loan	Year 2011		Year 2012		Year 2013		Year 2014	
	Frequency	Amount	Frequency	Amount	Frequency	Amount	Frequency	Amount
	(f)	(fx)	(f)	(fx)	(f)	(fx)	(f)	(fx)
0	6	-	5	-	4	-	3	-
35,000	68	2,380,000.00	62	2,170,000.00	61	2,135,000.00	62	2,170,000.00
37,000	25	925,000.00	24	888,000.00	24	888,000.00	18	666,000.00
40,000	43	1,720,000.00	45	1,800,000.00	44	1,760,000.00	48	1,920,000.00
45,000	20	900,000.00	22	990,000.00	22	990,000.00	21	945,000.00
50,000	31	1,550,000.00	31	1,550,000.00	32	1,600,000.00	34	1,700,000.00
55,000	37	2,035,000.00	35	1,925,000.00	34	1,870,000.00	33	1,815,000.00
60,000	62	3,720,000.00	68	4,080,000.00	71	4,260,000.00	73	4,380,000.00
TOTAL	292	13,230,000.00	292	13,403,000.00	292	13,503,000.00	292	13,596,000.00

Source: HELB Statistics from Loans Disbursement and Recovery Department, 2014.

The entire loan allocations for all the four years of undergraduate study for the cohort in Table 4.4.2.5 was further represented in a grouped bar graph as shown in figure 3 in order to illustrate the trend clearly.



Key: Series 1 = Ksh. 0
 Series 2 = Ksh. 35,000
 Series 3 = Ksh. 37,000
 Series 4 = Ksh. 40,000
 Series 5 = Ksh. 45,000
 Series 6 = Ksh. 50,000
 Series 7 = Ksh. 55,000
 Series 8 = Ksh. 60,000

Figure 3: Grouped Bar Graph of HELB Loan Allocations for the entire study period

Figure 3 shows that except for the first year of study, the other years of study had the highest number of loan recipients being the ones of maximum HELB allocation of Ksh. 60,000 followed by those with the minimum HELB allocation of Ksh. 35,000. The remaining recipients were between these two categories of HELB allocations for all the years of study.

The totals of cumulative HELB loan allocations from Tables 4.4.2.1, 4.4.2.2, 4.4.2.3 and 4.4.2.4 representing the first to fourth years of study respectively were extracted to come up with a cumulative summary trend of HELB loan allocations to the sub-county as shown in Table 4.4.2.6

Table 4.4.2.6 Summary of Cumulative HELB Loan Allocations for the entire study period

Year of Study	No. of Recipients	Amount (Ksh.)	Cumulative HELB Allocation		
			%	Cumulative %	Increment
Year 1	292	13,230,000.00	24.7	24.7	-
Year 2	292	13,403,000.00	24.9	49.6	1.31%
Year 3	292	13,503,000.00	25.1	74.7	0.75%
Year 4	292	13,596,000.00	25.3	100.0	0.69%
Total	292	53,732,000.00	100		0.92%

The table shows that the total HELB loan allocation for the 2011/12 cohort for Kakamega-East sub-county was Ksh. 53, 732,000 for all the four years of undergraduate studies in public universities. The table also clearly shows that the trend in HELB loan allocation to the sub-county was increasing at an average rate of 0.92% per year with the highest increment being realized in the second year of study.

The summary in Table 4.4.2.6 gave the overall trend in HELB loan allocation for the cohort in the sub-county as illustrated in the simple bar graph shown in Figure 4.1.

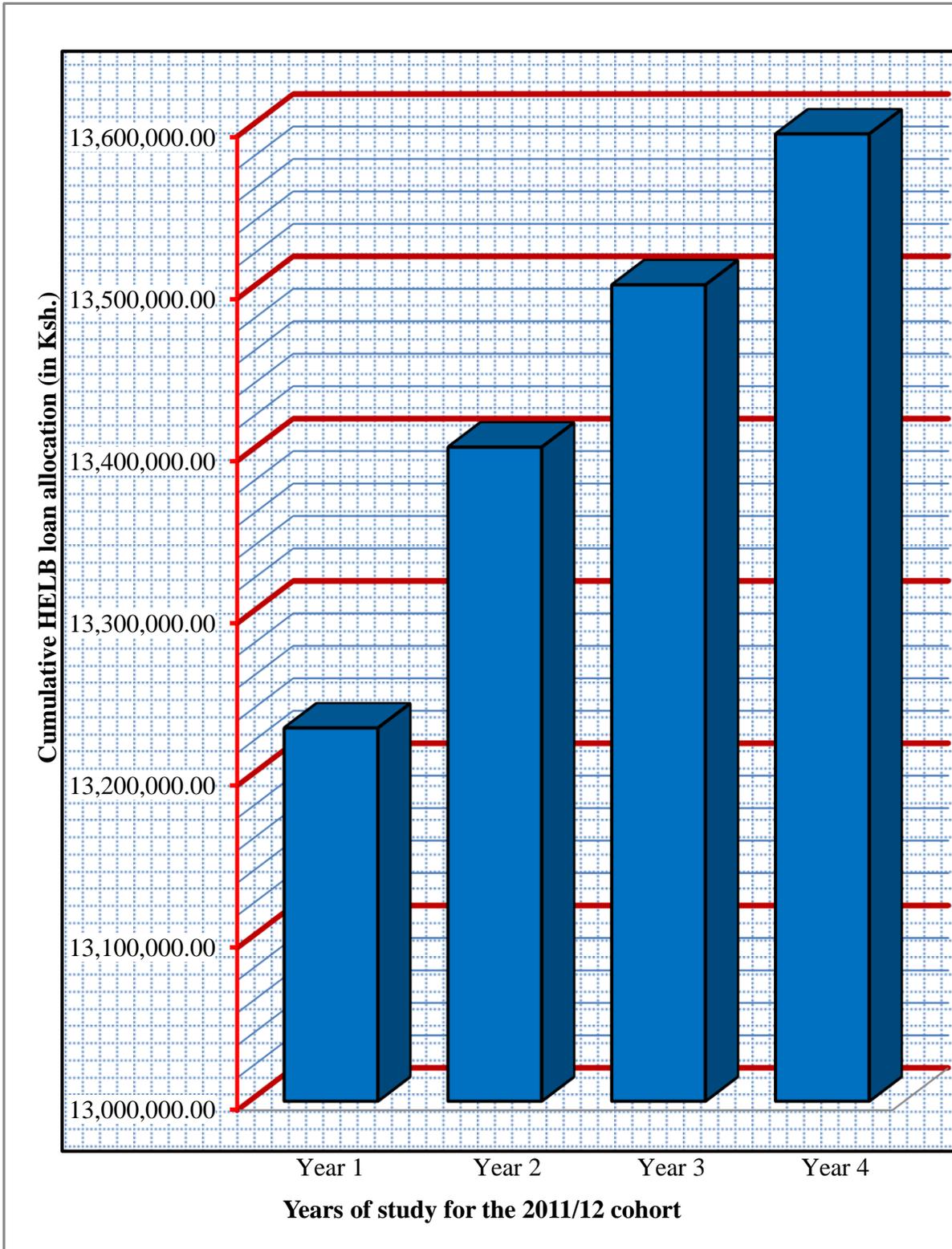


Figure 4.1: Bar Graph for Cumulative HELB Loan Allocation for Kakamega-East Sub-County

Figure 4.1 ascertained that the undergraduate HELB loan allocation to the sub-county was characterized by an increasing trend in disbursements throughout the period of study. This was highly attributed to the improved recovery of the loans from former beneficiaries as well as the increased financial allocation by the exchequer through the national budgetary allocation every year as established from the interview schedule with the CEO of HELB who stated:

“Currently, HELB has two main sources of funds for loan allocations to undergraduate students. It gets a total of Ksh. 5.64 billion annually for loan allocations out of which the exchequer contributes Ksh. 3.34 billion (59.2%) while recoveries from former beneficiaries net about Ksh. 2.3 billion (40.8%) annually. Out of this, it allocates Ksh. 5.5 billion to continuing students while Ksh. 2.4 billion more is required for new applicants every year. Compared to 2004/05 when HELB had Ksh. 1.5 billion for loan allocations out of which the exchequer gave 800 million while recoveries from former beneficiaries amounted to Ksh. 700 million, it is evident that there has been tremendous improvement. It is on this strength that HELB loan allocations have generally been characterized by increasing trends in general.”

It was also noted from figure 4.1 that there was a sharp increasing trend in loan allocation between the first and second years of study as compared to the rest of the years. This was evident from the increment of 1.31% which was the highest as ascertained in table 4.4.2.6. This means that HELB allocations to most of the students got revised upwards in their second year of study as compared to any other subsequent years. This implies that most of the successful appeals were received and processed at this level of the study.

It is therefore established that HELB loan allocations to the sub-county was characterized by increasing trends as a result of both the number of recipients as well as the amounts of allocations increasing as shown in summary Table 4.4.1.5 as well as Table 4.4.2.6 respectively. This implies that for some students, the amount of HELB loan initially received in first year of study later got raised up to a higher value in subsequent years while for others who had not been allocated anything initially, started getting after successful appeals. For example, there were

some students who began with the minimum HELB allocation of Ksh. 35,000 in first year of study but ended up with maximum loan allocations of Ksh. 60,000 in their final years of study. Cumulatively, this resulted in an increasing trend in HELB loan allocations for the entire period of study for the cohort as shown in figure 4.1.

This finding was consistent with some earlier studies conducted in Kenya by Eshiwani (1993), Weidman (1995) and Gravenir *et al* (2005) who found out that there was generally increasing trends in government funding for students' learning in higher education. Whereas studies by Eshiwani (1993) and Weidman (1995) were during loan allocations through USLS (before HELB took over from 1995) to students in higher education irrespective of their SEB status, the finding by Gravenir *et al* (2005) was when HELB solely depended on the exchequer for funding since recoveries from former beneficiaries was still insignificant. Also, it was before the incorporation of the privately-sponsored students in public universities (module II) as beneficiaries of HELB.

The finding was also consistent with the study finding of World Bank (2012) which found the funding of needy students in higher education in Kenya to be steadily increasing in trend through a number of various funding agencies. Since HELB was just one of the many funding agencies in the study, cited as one of the key financers of the education, the current study narrowed down to it. Moreover, the study by World Bank was further limited to the contribution of the exchequer in HELB funding. The current study on the other hand has taken place when the sources of HELB funding are both the exchequer as well as the recoveries realized from former beneficiaries which are both significant in the current trends of HELB loan allocations. This was due to the fact that out of the current annual allocations of Ksh. 5.64 billion of HELB, the exchequer gave Ksh. 3.34 billion (59.2%) while recoveries from former beneficiaries netted Ksh. 2.3 billion

(40.8%). Hence, the trend by World Bank (2012) was exclusive of recoveries from former beneficiaries of HELB which significantly accounted for 40.8% of the trend in the current study.

However, this study finding was inconsistent with the study findings of both Kiamba (2004) and Odundo and Njeru (2005). Whereas the former study found a decreasing trend in loan allocations, the later found a relatively uniform trend followed by a sharply decreasing trend in loan allocations. Both studies cited the introduction of module II programmes as the main causes of declining trends in HELB loan allocations during that time.

4.5 Degree of Fairness in HELB Loan Allocations

The study sought to determine the degree of fairness enhanced during allocation of HELB undergraduate loans to Kakamega-East sub-county based on the criterion used. In other words, the study wanted to establish the extent to which HELB loans were equitably allocated in respect of the levels of need of the students.

In order to achieve this, it was necessary to measure the degree of inequalities in HELB loan distributions using Gini coefficients. To find these coefficients, Lorenz curves were to be drawn first using cumulative percentages.

4.5.1 Lorenz Curves and Gini-Coefficients of HELB Loan Allocations

In order to plot the dependent and independent variables for the various Lorenz curves, Table 4.5 was prepared to obtain the respective values on the y and x -axes respectively. The values were converted in to cumulative percentages as required for construction of the Lorenz curves.

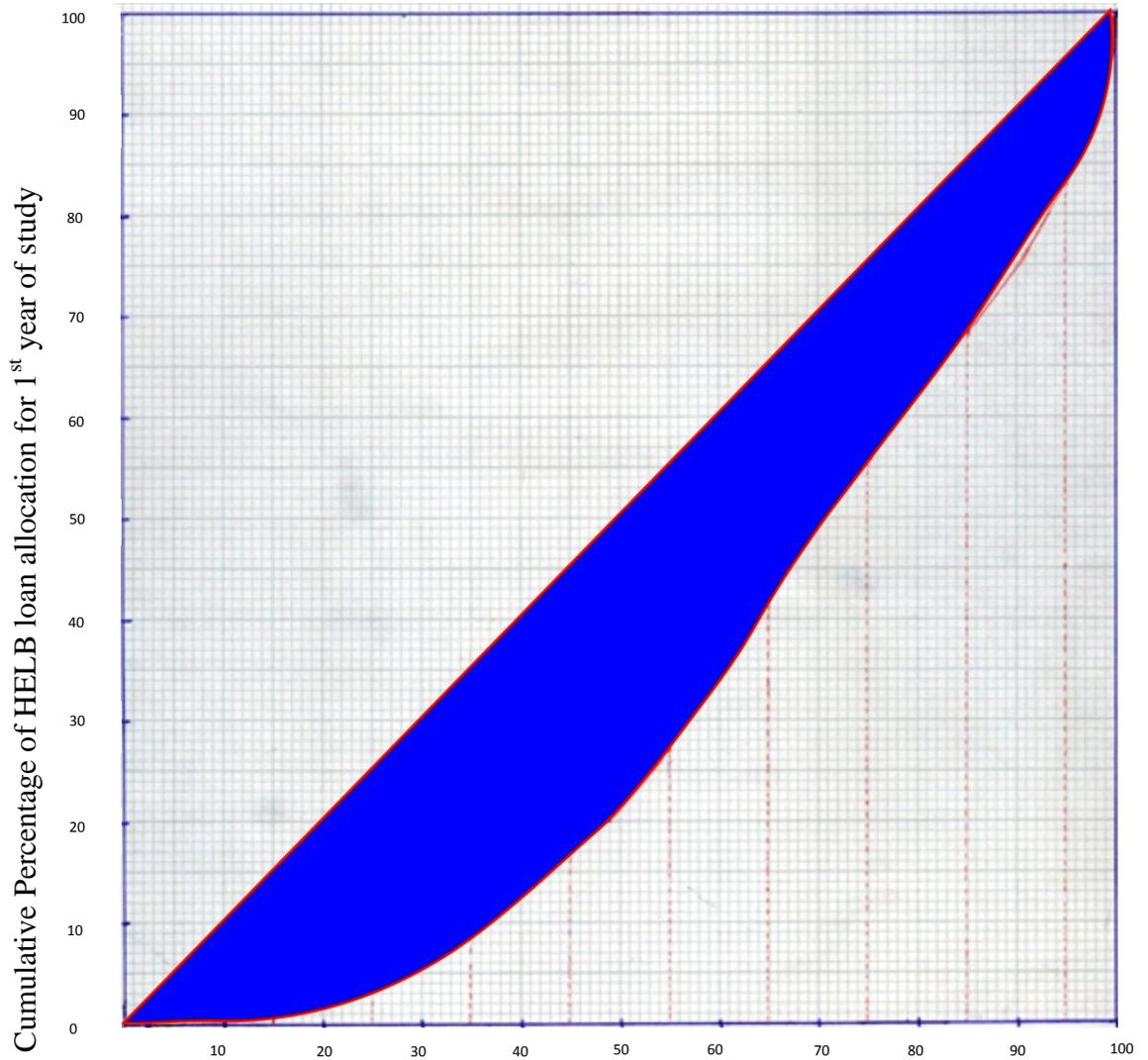
Table 4.5.1 Values of Cumulative Percentages for x and y Axes for Lorenz Curves (n= 292)

Academic Year	Type of Axis	Cumulative Percentages of Recipients against Amounts of HELB Loans							
1 st year	x-axis	2.1	25.3	33.9	48.6	55.5	66.1	78.8	100
	y-axis	0	4.5	10.7	20.1	31.2	45.2	63.0	100
2 nd year	x-axis	1.7	22.9	31.2	46.6	54.1	64.7	76.7	100
	y-axis	0	4.1	9.8	18.9	29.9	43.8	61.3	100
3 rd year	x-axis	1.4	22.3	30.5	45.6	53.1	64.1	75.7	100
	y-axis	0	4.1	9.8	18.8	29.7	43.6	61.0	100
4 th year	x-axis	1.0	22.2	28.4	44.8	52.0	63.7	75.0	100
	y-axis	0	4.1	9.8	18.8	29.7	43.6	60.9	100
Entire period	x-axis	1.5	23.2	31.0	46.4	53.7	64.6	76.5	100
	y-axis	0	4.2	10.0	19.2	30.1	44.1	61.2	100

The Values of cumulative percentages in Table 4.5 were used to plot and draw both the x and y axes of Lorenz curves as shown in Figures 4.2, 4.3, 4.4, 4.5 and 4.6 respectively.

4.5.11

Lorenz Curve and Gini Coefficient for 1st Year of Study



Cumulative Percentage of HELB loan recipients in 1st year of study

Figure 4.2: Lorenz Curve for 1st Year of Study

Determination of Gini coefficient:

$$\begin{aligned}
 \text{Area of Half-Square} &= \frac{1}{2} \times \text{base} \times \text{height} \\
 &= \frac{1}{2} \times 100 \times 100 \\
 &= 5000
 \end{aligned}$$

To find the area below Lorenz curve, the Mid-ordinate rule was used as follows:

$$\begin{aligned}
 \text{Mid-Ordinate Rule} &= (\text{width of interval}) \times (\text{sum of Mid-ordinates}) \\
 &= h \times (y_1 + y_2 + \dots + y_n) \\
 \text{Area below Lorenz curve} &= 10 \times (0.5+1.0+3.5+11.0+16.5+26.0+43.0+56.0+68.5+86.0) \\
 &= 10 \times 312.0 \\
 &= 3120 \\
 \text{Area between line of Equality \& Lorenz curve} &= 5000 - 3120 \\
 &= 1880 \\
 \text{Gini coefficient} &= \frac{1880}{5000} \\
 &= 0.376 \\
 \text{Gini coefficient} &= 0.38
 \end{aligned}$$

Since the gini coefficient was higher than 0.35 as outlined in the literature (page 14), it implies that there was relatively inequitable allocation of HELB undergraduate loans to students during the first year of study. Hence, this means that for the first year of study, HELB undergraduate loans were slightly relatively inequitably allocated to the students.

4.5.12

Lorenz Curve and Gini Coefficient for 2nd Year of Study

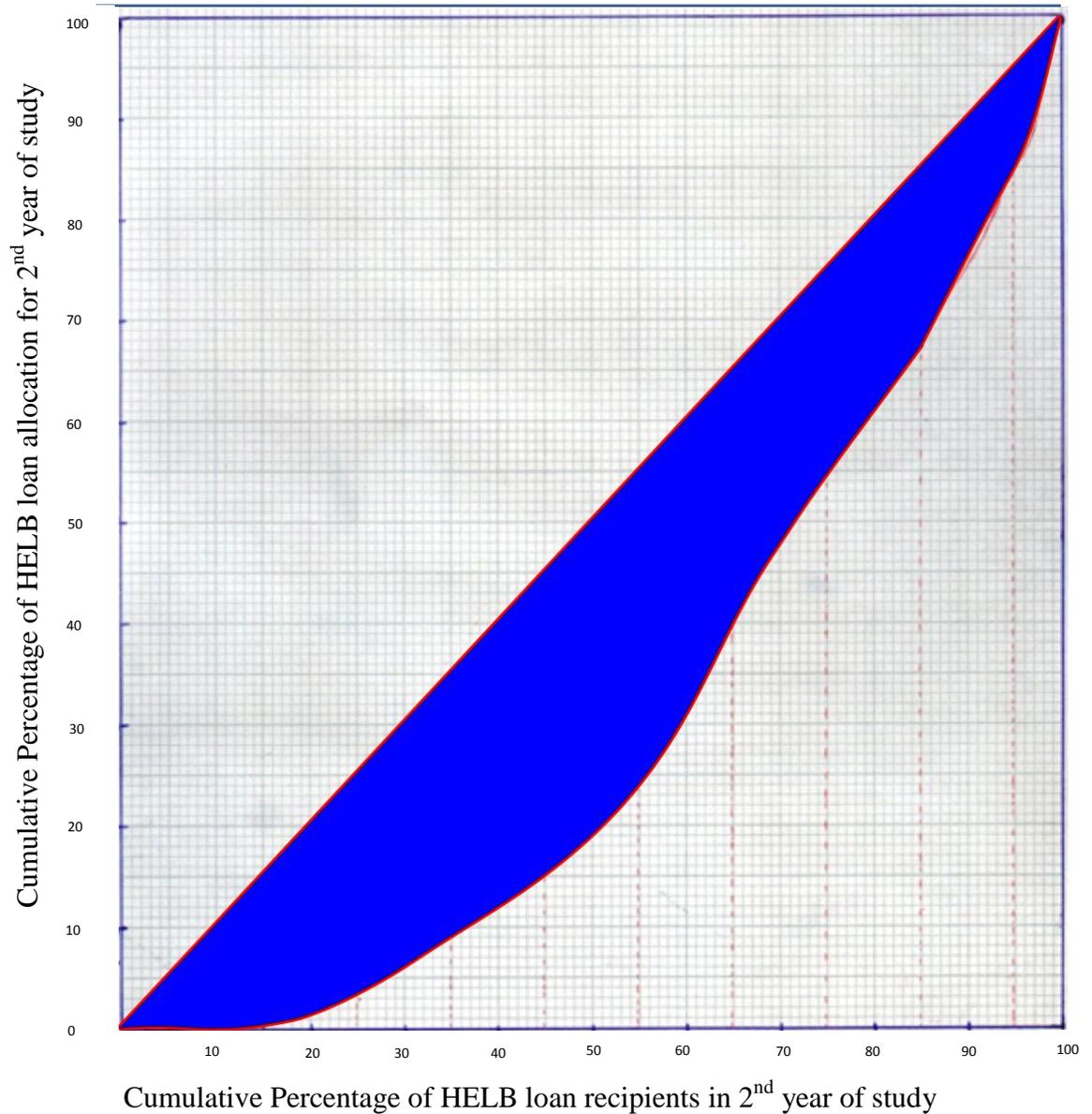


Figure 4.3: Lorenz Curve for 2nd Year of Study

Determination of Gini coefficient:

$$\begin{aligned}
 \text{Area below Lorenz curve} &= 10 \times (0.1+0.3+3.0+10.1+15.2+25.4+40.2+55.0+68.0+85.0) \\
 &= 10 \times 302.3 \\
 &= 3023
 \end{aligned}$$

$$\begin{aligned} \text{Area between line of Equality \& Lorenz curve} &= 5000 - 3023 \\ &= 1977 \end{aligned}$$

$$\begin{aligned} \text{Gini coefficient} &= \frac{1977}{5000} \\ &= 0.3954 \\ \textbf{Gini coefficient} &= \textbf{0.40} \end{aligned}$$

In the second year of study, the gini coefficient of 0.40 implies that there was still relatively inequitable allocation of HELB undergraduate loans to students. As compared to the first year of study, the rise in the gini coefficient from 0.38 to 0.40 reflects an increase in the unfairness in HELB loan allocation of about 5.3 % between the first and second years of study.

4.5.13 Lorenz Curve and Gini Coefficient for 3rd Year of Study

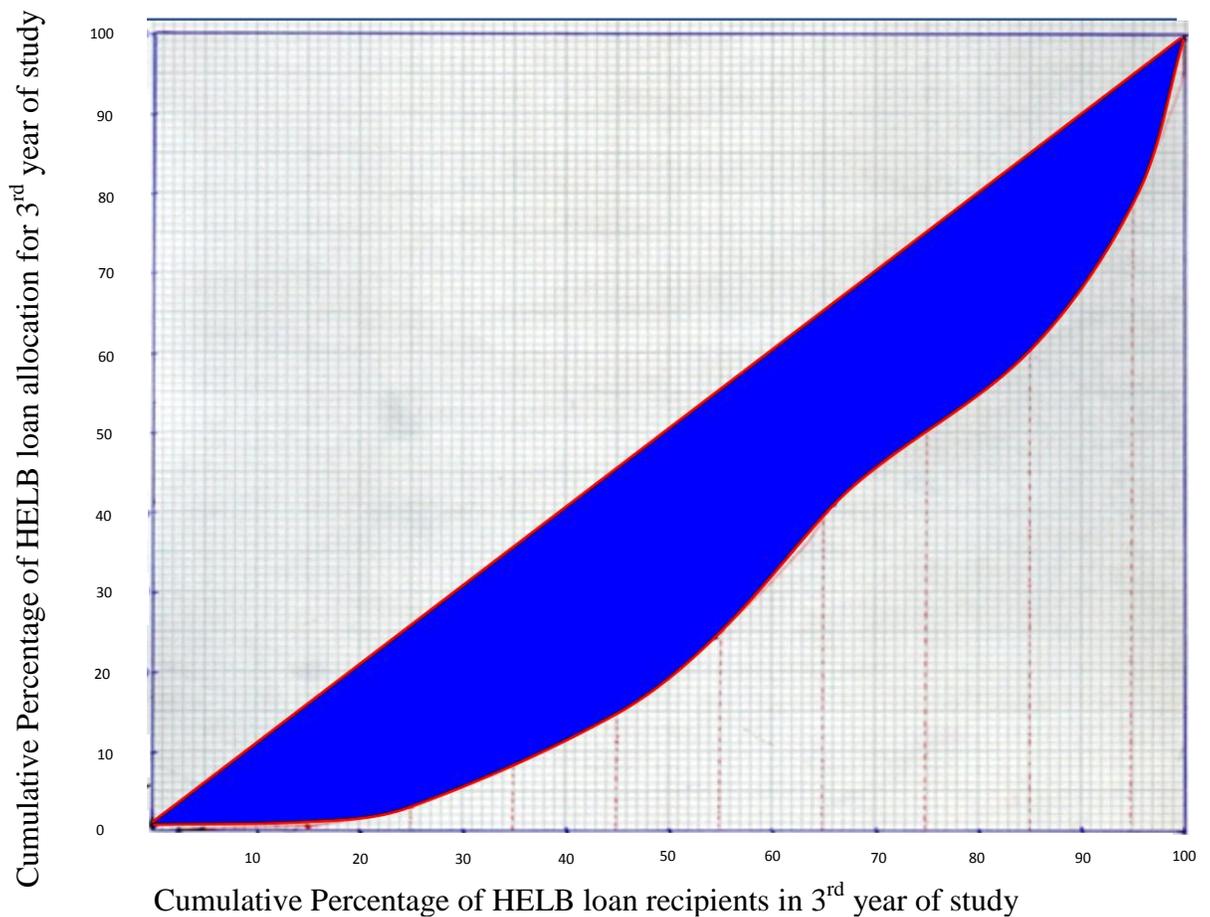


Figure 4.4: Lorenz Curve for 3rd Year of Study

Determination of Gini coefficient:

$$\begin{aligned} \text{Area below Lorenz curve} &= 10 \times (0.1+0.2+3.0+9.3+15.1+25.1+40.1+50.5+61.2+81.0) \\ &= 10 \times 285.6 \\ &= 2856 \end{aligned}$$

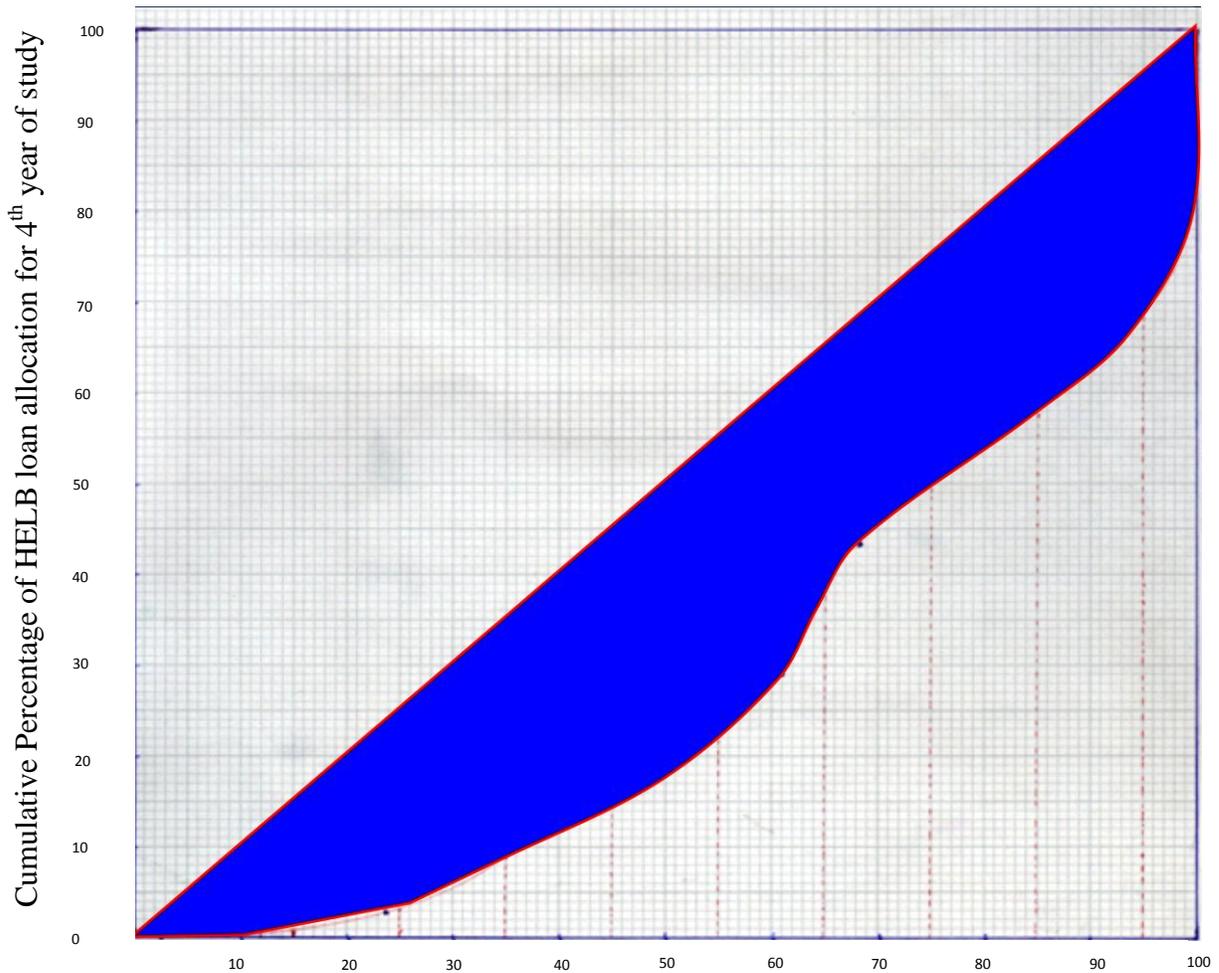
$$\begin{aligned} \text{Area between line of Equality \& Lorenz curve} &= 5000 - 2856 \\ &= 2144 \end{aligned}$$

$$\begin{aligned} \text{Gini coefficient} &= \frac{2144}{5000} \\ &= 0.4288 \end{aligned}$$

$$\text{Gini coefficient} = 0.43$$

The gini coefficient for the third year of study increased further to 0.43, still implying relatively inequitable allocation of the HELB loans to the students. This implies that the inequalities in HELB loan allocation to the students further increased by 7.5% between the second and third years of study. This shows that the level of unfairness in HELB loan allocation for the cohort further increased in the third year of study.

4.5.14 Lorenz Curve and Gini Coefficient for 4th Year of Study



Cumulative Percentage of HELB loan recipients in 4th year of study

Figure 4.5: Lorenz Curve for 4th Year of Study

Determination of Gini coefficient:

$$\begin{aligned}
 \text{Area below Lorenz curve} &= 10 \times (0.1+0.2+0.3+9.2+15.1+22.2+40.0+50.4+58.3+69.2) \\
 &= 10 \times 265.0 \\
 &= 2650
 \end{aligned}$$

$$\begin{aligned}
 \text{Area between line of Equality \& Lorenz curve} &= 5000 - 2650 \\
 &= 2350
 \end{aligned}$$

$$\text{Gini coefficient} = \frac{2350}{5000}$$

$$\text{Gini coefficient} = 0.47$$

The gini coefficient for the fourth year of study was 0.47, which implies a relatively inequitable allocation of HELB loans which was the highest as compared to the other earlier years of study. It also implies that in this final year of study, the degree of unfairness in HELB loan allocation increased to become the highest by a further 9.3%.

4.5.15 Lorenz Curve and *Gini* Coefficient for Entire Period of Study 2011-2014

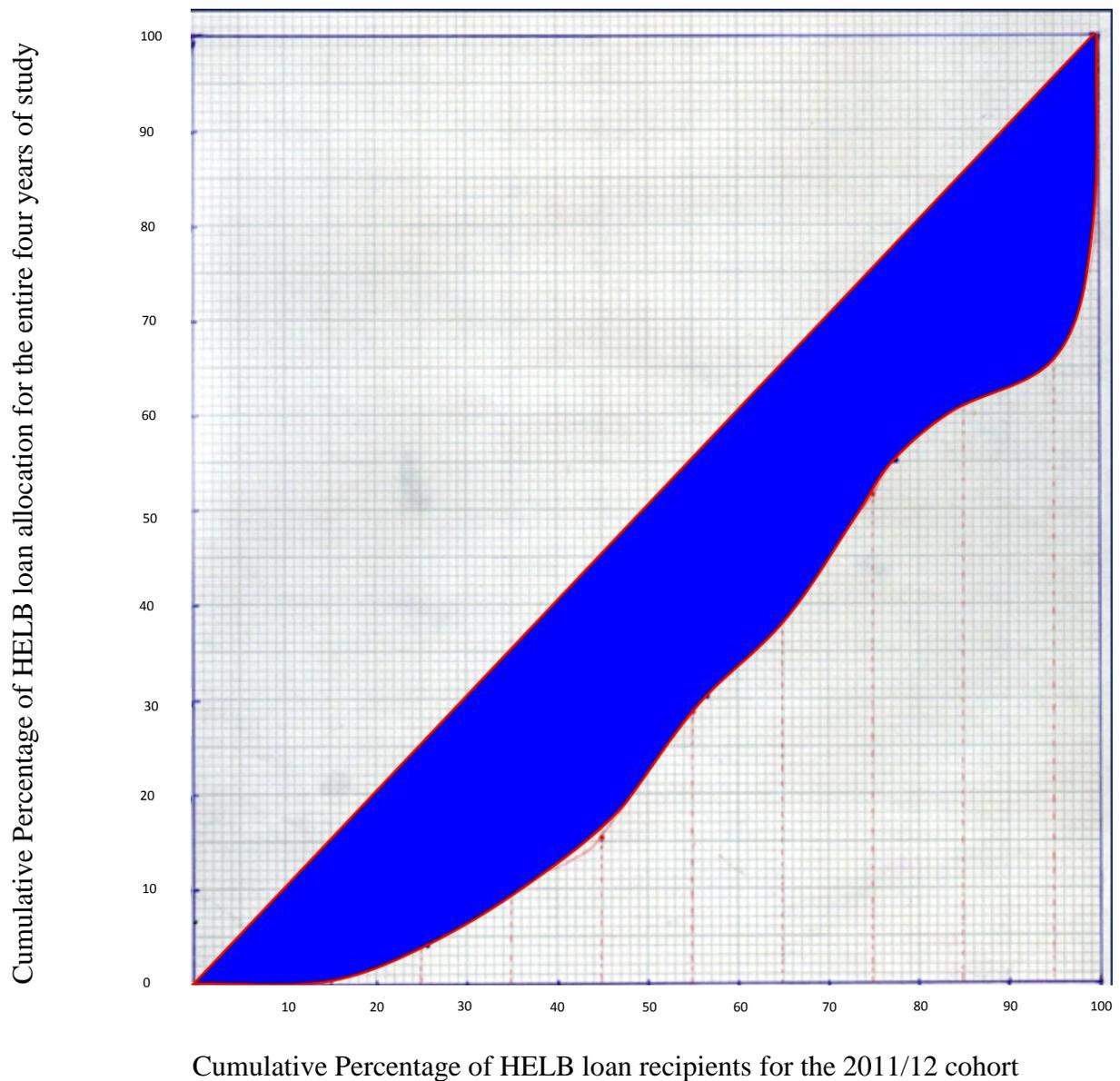


Figure 4.6: Lorenz Curve for Entire Period of Study

Determination of Gini coefficient:

$$\begin{aligned}
 \text{Area below Lorenz curve} &= 10 \times (0.1+0.2+0.4+10.1+15.0+28.8+38.8+51.6+61.1+66.6) \\
 &= 10 \times 272.7 \\
 &= 2727
 \end{aligned}$$

$$\begin{aligned}
 \text{Area between line of Equality \& Lorenz curve} &= 5000 - 2727 \\
 &= 2273
 \end{aligned}$$

$$\begin{aligned}
 \text{Gini coefficient} &= \frac{2273}{5000} \\
 &= 0.4546
 \end{aligned}$$

$$\text{Gini coefficient} = 0.45$$

The average *gini* coefficient for the entire study period was 0.45 which implies that generally, HELB undergraduate loans were relatively inequitably allocated to students during their entire study period. Based on Figures 4.2, 4.3, 4.4 and 4.5 respectively, a summary of the *gini* coefficients for the individual years of study for this cohort was established as shown below.

Table 4.5.2. Trend of Rising Degrees of Unfairness in HELB Loan Allocations

Year of Study	<i>Gini</i> Coefficient	Annual Rise in Degree of Unfairness
1 st	0.38	-
2 nd	0.40	5.3%
3 rd	0.43	7.5%
4 th	0.47	9.3%
Entire period (2011-2014)	0.45	7.4%

According to Todaro & Smith (2006), coefficients within the range of 0.36 to 0.49 imply relatively inequitable distributions. Given that in Table 4.5.2 all the *gini* coefficients for the four academic years of study were within this range, it implies that there was a relatively inequitable distribution of the HELB loans throughout the period of study. The table also clearly shows that the *gini* coefficients for each of the individual years of study progressively increased in aggregate values from the first to the final years of study respectively. This implied increasing trends of inequalities in HELB loan allocations from the first to the fourth years of study which consequentially revealed a steadily increasing degree of unfairness in HELB loan allocation at 7.4% per year of study. This shows that as the years of study increased, so did the inequalities in HELB loan allocation rise and hence so did the degree of fairness in HELB allocation decrease.

This was attributed to the failure by HELB to revise the amounts of HELB loans allocated to students in respect of their changing SEB status as years of study increased. This came out clearly especially in the open-ended sections of the students' questionnaires where the proportion of those who indicated that the loans were inequitably allocated was 74% compared to 26% who felt that the loans were equitably allocated. Most of those who got the minimum amount of loan of Ksh. 35,000 throughout the study period further stated that:

“Once HELB allocates a certain amount in first year of study like Ksh. 35,000 for minimum, the figure remained the same throughout the entire study period irrespective of any change in SEB status yet the status itself never remained the same. In fact, most of our SEB status kept changing to the worst in the course of our studies.”

This assertion was further corroborated with comments from some of the UARs who agreed with this statement during their interview schedules by stating:

“ HELB forms were adequately filled only once by students when they were joining in first year. Otherwise for the subsequent years, a provision is only given for them to update some limited sections of the form by simply indicating their current years of study. This may not have been sufficient for confirmation of any change in SEB status. Some of the students affected by change of such status had therefore to visit HELB offices in persons to convince them further for loans, which were not easily granted.”

This implied that the degree of fairness in HELB loan allocations decreased as years of study increased partly because the HELB loans remained uniform for some of the recipients with lower allocations throughout the study period despite them having adverse changes in their SEB status. This means that there were some students from low SEB status who were allocated lower HELB loans and vice versa, which was against the general expectation of enhancement of equity.

This finding agrees with the findings of studies carried out in other countries such as Bray (2000), Woodhall (2004), Jallade (2000) and Koigi (2006) which found inequitable allocations of study loans to students in higher education. In Colombia, Jallade (2000) while studying the effect of student loans on equity in financing higher education found that the impact of the loans on enhancement of equity as being insignificant. Similarly, Koigi (2006) established strikingly inequitable allocation of student loans in developing countries while Bray (2000) after comparing empirical evidences from 49 developed and developing countries concluded that the greater inequalities in educational attainment in developing countries especially in sub-Saharan Africa and Asia, which led to greater income disparities in the respective countries were caused by inequalities in loan allocations in higher education by the existing student loan schemes.

However, this finding was inconsistent with the findings in USA which established equalized educational opportunities for all through the student loans in higher education (World Bank, 2006b). The existence of two state-subsidized loan schemes enhanced competitive provision of low-interest loans to poor students which enhanced equity in financing higher education.

In Kenya, this study finding confirmed the concerns raised by Wachiye (2012) who in a case study research of Bungoma district in Kenya observed that students from richer families could be getting relatively higher loan allocations than their counterparts from poorer families. However, his study used an own developed Asset-Ownership Instrument (AOI) as a tool to compare the SEBs of families of loan-recipients with the respective amounts of loans allocated to them. His study suggested for another study based on the criterion that HELB uses to ascertain the truth. The current study has used the Means Testing Instrument (MTI) which HELB uses to identify and allocate its loans after categorizing the loan applicants in their respective SEB status.

The study moreover confirmed the fears by Muriithi *et al* (2012) who after conducting a comparative research design study to predict the amount of loans that students could qualify for if ordinal logistic regression versus multiple binary logistic regression models were to be used, suggested that HELB loans could be being inequitably allocated. Their study also recommended for an investigative empirical study on HELB using the model or criteria it uses with a view of establishing whether it disburses its loans equitably. This was after the establishment that ordinal logistic regression model was relatively fair in its allocations yet the HELB application form has many more several indicators of SEB status of students not limited to parental incomes alone.

However, the study findings were inconsistent with the study findings of both Smock (1981) and Serem (2006) in Kenya which established that the distribution of HELB loans to needy students were significantly equitable. Whereas Smock (1981) established that the allocations were equitable in relation to parental incomes of students, Serem (2006) found the allocations to be equitable in relation to the cost implications of various courses of study in higher education.

Unlike Smock (1981), this study recognized the fact that SEB status of students is a composite variable which is not determined by parental incomes of students alone. This is further illustrated by the LAFs of students (appendix VIII) which bear a number of other factors contributing to SEB status. Unlike Serem (2006), this study sought to establish equity in relation to the SEB status of students only since it is the sole criterion upon which HELB uses to allocate the loans.

4.6 Relationship between HELB Allocations and Students' Socio-Economic Backgrounds

4.6.1 Socio-Economic Background Scores of Students

The performance of each student on the SEB indicators was examined based on the information given in their questionnaires for the purpose of obtaining their respective SEB scores. The information gathered was summarized in Tables 4.6.1.1, 4.6.1.2, 4.6.1.3, 4.6.1.4, 4.6.1.5, 4.6.1.6, 4.6.1.7, 4.6.1.8, and 4.6.1.9 respectively.

Table 4.6.1.1 Type of Parenthood

Characteristic	Frequency	Percentage (%)
No parenthood	179	61.3
Single parenthood	60	20.5
Dual parenthood	53	18.2
Total	292	100.0

From the Table 4.6.1, majority of the students (61.3%) were total orphans coming from households without both parents while 20.5% were partial orphans from households headed by one parent only. Only 18.2% were from households with both parents.

Table 4.6.1.2 Level of Income (per Annum)

Characteristic	Frequency	Percentage (%)
Less than Ksh.250,000	197	67.5
Ksh. 250,001–600,000	47	16.1
Ksh. 600,001–850,000	20	6.8
Ksh. 850,001 – 1,000,000	23	7.9
More than Ksh. 1,000,000	5	1.7
Total	292	100.0

From the table, majority of the students (67.5%) were from households whose annual income was less than Ksh. 250,000.

Table 4.6.1.3 Level of Expenditure (per Annum)

Characteristic	Frequency	Percentage (%)
Less than Ksh.250,000	258	88.4
Ksh. 250,001 – 600,000	11	3.8
Ksh. 600,001 – 850,000	12	4.1
Ksh. 850,001 – 1,000,000	10	3.4
More than Ksh. 1,000,000	1	.3
Total	292	100.0

From the table, majority of the students (88.4%) were from households whose annual expenditure was less than Ksh.250,000.

Table 4.6.1.4 Payer of Fees

Characteristic	Frequency	Percentage(%)
Parent(s)	27	9.2
Guardian/Relative	20	6.8
Sponsor (if Institution e.g. Government/Church/NGO)	226	77.4
Others (if individual sponsor who not related e.g. MP/MCA)	19	6.5
Total	292	100.0

From the table, majority of the students (77.4%) were those whose fee was being paid by institutional-based sponsors like churches, NGOs and government entities like CDF.

Table 4.6.1.5 Occupation of Payer of Fees

Characteristic	Frequency	Percentage (%)
Not Employed	241	82.5
Charity work	3	1.0
Self-Employed/Business/Cash-crop farming	29	9.9
Employed	19	6.5
Total	292	100.0

From the table, majority of the students (82.5%) were those whose fee was being paid by persons who were un-employed.

The next indicator to be considered was the highest level of education attained by the parents or guardians. A consideration was made for any of the two parents, either a father or a mother with the highest level of education attained. The information was as summarized in Table 4.6.1.6.

Table 4.6.1.6 Highest Level of Education of Parents/Guardian

Characteristic	Frequency	Percentage (%)
None	187	64.0
O-Level	63	21.6
Certificate	30	10.3
Diploma	2	.7
Degree	10	3.4
Post-Graduate	0	0.0
Total	292	100.0

From the table, majority of the students (64.0%) were students whose parents/guardians were not having any education at all.

Table 4.6.1.7 Type of Secondary School Attended by Applicant

Characteristic	Frequency	Percentage (%)
Public	283	96.9
Private	9	3.1
Total	292	100.0

From the table, a very high proportion of the students (96.9%) attended public schools for their secondary education.

Table 4.6.1.8 Cumulative Fees of Siblings per Year

Characteristic	Frequency	Percentage (%)
Less than Ksh. 250,000	248	84.9
Between Ksh. 250,000-500,000	40	13.7
More than Ksh. 500,000	4	1.4
Total	292	100.0

From the table, majority of the students (84.9%) had the cumulative fees payable to their siblings in education being less than Ksh. 250,000 per year.

Table 4.6.1.9 Medical Fitness

Characteristic	Frequency	Percentage (%)
Physically impairment	2	0.7
No physical impairment	290	99.3
Total	292	100.0

From the table, a very high proportion of the students (99.3%) had no physical impairment.

It was established from the interview schedule with the CEO of HELB that HELB uses only one criterion for loan allocation called the socio-economic background status of the applicants. According to the criterion, the socio-economic indicators of students are used to calculate their SEB score which in turn places them in their respective classes using a HELB continuum scale. The scale categorises the applicants into three main classes of low, medium or high SEB status. The allocation of HELB loan is supposed to be such that those in low SEB status are to be allocated higher loan amounts while those in high status are to qualify for lower or none.

The total SEB scores of students were then calculated based on the criterion used by HELB using individual scores from each of the indicators shown in Tables 4.6.1.1, 4.6.1.2, 4.6.1.3, 4.6.1.4, 4.6.1.5, 4.6.1.6, 4.6.1.7, 4.6.1.8, and 4.6.1.9. The results of the distribution of the total scores were as shown in Appendix X.

Based on the scores in appendix X, students were then grouped into their respective SEB status or classes as shown in Table 4.6.1.10.

Table 4.6.1.10 Composition of SEB Status for HELB Loan Recipients

SEB Status	SEB Score	Frequency	Percentage (%)	Proportion of HELB Loan Beneficiaries (%)
Low	1-12	174	59.6	36.2
Medium	13-24	96	32.9	19.9
High	25-36	22	7.5	4.6
Total		292	100	60.7

Table 4.6.1.10 reveals that majority of the students in the cohort (59.6%) were from low SEB status while the remaining 40.4% of the students were from higher SEB status. If a comparison is made between each SEB status and the entire portion of HELB loan recipients that was established in Table 4.33 for the cohort, it is revealed that out of the 60.7% of HELB loan beneficiaries, 36.2% came from low SEB status while the remaining 24.5% represented HELB loan recipients from higher SEB status. Although the proportion of HELB loan beneficiaries from higher SEB status was less than that of beneficiaries from low status, the gap was comparatively so narrow contrary to the general expectation that HELB should be financing a much larger proportion from low SEB status than this. This implies that there existed some significant degrees of unfairness in HELB loan allocations to students based on their respective levels of need.

4.6.2 Pearson’s Correlations between HELB Loan Allocation and Socio-Economic Backgrounds of Students

The study carried out Pearson’s correlation between HELB loan allocations and the SEB status of the loan recipients in order to establish their relationship.

To test the null hypothesis, the HELB loan allocation for the cohort was first established as shown in Table 4.4.2.5 followed by the determination of the socio-economic background status of the students whose summary was as shown in Appendix X. The outcome of the Pearson’ correlation between the variables was as shown in Table 4.6.2.1.

Table 4.6.2.1 Pearson’s Correlation between HELB Loan Allocation and SEBs of Students

		SEBs	AMOUNTHELB
SEBs	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	292	
AMOUNTHELB	Pearson Correlation	-0.187	1
	Sig. (2-tailed)	.091	
	N	292	292

*. Correlation is significant at the 0.05 level (2-tailed)

Since the Pearson’s correlation coefficient r was -0.187 , this means that there existed a weak inverse relationship between the SEBs of students and the amount of HELB loan allocations. The negative sign implies that the relationship between the variables was inverse while the aggregate value (0.187) indicates the level of the relationship thus how strong or weak it was. In this case, it was weak since the value was closer to 0 than 1 (Frankfort & Nachmias, 2008). The inverse relationship means that the lower the SEB status a student belonged to, the more amount of

HELB loan he/she was allocated and vice versa. However, since the relationship was weak it means that not all allocations of HELB loans were done in that order implying that we had some students in high SEB status who were allocated higher HELB loans than their counterparts from low SEB status who got lower HELB loans or none at all. It therefore reveals that a few of the students from low SEB status who qualified for higher loan allocations ended up getting low HELB loan allocations and vice versa. This relationship was not significant because the calculated ρ - value was 0.091 which was greater than the set significance level of 0.05. The null hypothesis was therefore not rejected meaning that the established relationship between HELB loan allocations and SEBs of students was not significant.

The study further sought to establish the relationships between the variables in the individual years of study beginning with the first to the final. The findings were as shown in Table 4.6.2.2.

Table 4.6.2.2 Pearson's Correlations for All Years of Study

Academic year	Year 1	Year 2	Year 3	Year 4
Pearson Correlation Coefficient	-.169	-.243	-.217	-.121
Sig. (2-tailed)	.203	0.061	.142	.195
No. of Recipients (N)	292	292	292	292

*. Correlation is significant at the 0.05 level (2-tailed)

The table shows that all the four academic years had weak inverse relationships, with a slight improvement in second year of study as compared to the other years. The improvement in the second year of study was attributed to increased loan allocations by HELB as a result of the successful appeals from some of the applicants as well as the improved access to on-line

application procedure through adequate sensitization. This was established from responses of the CEO of HELB in the interview schedule in which he stated:

“Just like most of the other cohorts, this cohort had the highest number of appeals received for their second year of study. About 90% of their appeals were successful where some of them were allocated loans for the first time having missed initially while others had their initial HELB allocations revised upwards. Most of those who appealed had been properly sensitized on the on-line application procedure since they did not only have relevant and valid evidences, but their applications were also received in good time for processing.”

For all the years of study, the relationship between HELB loan allocations and SEBs of students were not significant because the calculated values of ρ were greater than the set significance level of 0.05. The coefficient of determination (R^2) was then run and the outcome was as shown in Table 4.6.3.1.

4.6.3 Simple Linear Regression for the Cohort

Table 4.6.3.1 Coefficient of Determination for HELB Loan Allocation and Students’ SEBs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843 ^a	.711	.670	1.59604

a. Predictors: (Constant), SEBs

From Table 4.6.3.1, the coefficient of determination was 0.711. This shows that 71.1% of variations in HELB loan allocations were accounted for by the SEB status of students. This means that 28.9% of variations in HELB allocations could not be accounted for by the SEB status of students. In order to establish whether this proportion was significant, the analysis of variance was done and the results were as shown in Table 4.6.3.2.

Table 4.6.3.2 Analysis of Variance for HELB Loan Allocation with Students' SEBs

	Model	Sum of Squares	df	Mean Square	f	Sig.
	Regression	597043.556	1	597043.556	3.641	.041 ^b
1	Residual	621444361860.551	290	2142911592.623		
	Total	621444958904.108	291			

a. Dependent Variable: AMOUNTHELB

b. Predictors: (Constant), SEBs

From Table 4.6.3.2, the level of significance was 0.041 which was less than the set ρ -value of 0.05. This means that SEB status of students were predictors of HELB loan allocations.

To confirm the influence of SEB status on the amount of HELB loan allocation, simple linear regression analysis was done and the results obtained were as shown in Table 4.6.3.3.

Table 4.6.3.3 Simple Linear Regression for HELB Loan Allocation with SEBs of Students

	Model	Unstandardized		Standardized		T	Sig.
		Coefficients		Coefficients			
		B	Std. Error	Beta			
	(Constant)	60149.407	9066.879		20.128	.000	
1	SEBs	-0.305	626.170	.001	.017	-.187	

a. Dependent Variable: AMOUNTHELB

From table 4.6.3.3, a simple linear regression was calculated to predict the influence of SEB status on the amount of HELB loan allocated. The results were represented linearly as;

$$‘Y’ = 60149.407 - 0.305X$$

This implies that the SEB status of students contributed to the amount of HELB loan allocated to them inversely by 0.305 as signified by the coefficient in the equation. This was a negative and lesser contribution by SEB status of students to the amount of HELB loan allocation. Table 4.6.2.1 established that there was a weak inverse correlation of 0.187 between the amount of HELB loan allocated to students and their SEBs, which was not significant because the calculated ρ - value was 0.091, greater than the set significance level of 0.05.

This establishment of a weak inverse relationship between the amount of HELB loan allocated and the SEB status of the students was inconsistent with the recommendations of HELB Review (2004) which strictly advocated for students in lower SEB status getting higher loan allocations than their counterparts in higher SEB status and vice versa, which would otherwise lead to a strong inverse relationship between the variables. The review intended to have students from low SEB status getting high loan allocations from HELB for their studies.

The finding was also slightly inconsistent with the finding of Odebero *et al* (2007) in which a correlational study between HELB loan allocation and students’ characteristics established that the difference between the loan allocations and SEBs of students were highly significant. Apart from the SEBs of students, all the other alternative student characteristics that were considered in his study including gender, type of university, location of the university and the course of study in the universities were found to be statistically not significant with respect to the amount of HELB loan allocations. That meant that HELB loan allocation and SEB status of students were

found to be strongly and closely associated by the study. However, this study established the two variables to be weakly related. The study by Odebero *et al* (2007) had however recommended for further studies that would consider the SEB status of students as a composite variable taking into account the many other indicators whose influence on SEBs cannot be ignored easily. It was moreover limited to JAB-selected students in public universities since HELB was not funding the privately-sponsored students in public universities by then. The current study was limited to the 2011/12 cohort only for effective analysis but it incorporated the privately-sponsored students in public universities (module II) since they started being eligible for the HELB loans in 2008/09. It also considered the many indicators of SEB status found on the LAFs of HELB.

Also, the findings of this study was inconsistent with the findings of studies commissioned by the Commission for Higher Education (CHE) in Ndirangu and Bosire (2004) which found an extremely strong inverse relationship between amounts of loans allocated to students and their parental incomes in five public universities that existed through individual Acts of Parliament by then. The study considered parental incomes as the determinant of the SEB status of the students in the universities. Apart from this study considering the many indicators of SEB status as found on the LAFs of HELB, the number of chartered public universities in Kenya also increased to reach 22 by the year 2014 after the enactment of the Universities Act No. 42 of 2012. Also, HELB loan allocation has moreover grown to consider the privately-sponsored students in public universities since 2008/09 which the current study took into consideration as well.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the summary of the findings by giving an overview of the outcomes of the study. It critiques and makes conclusions drawn from the study and gives respective recommendations. The chapter also gives suggestions for further research.

5.2 Summary of Research Findings

The first objective was to establish the percentage of HELB undergraduate loan recipients as a proportion of the total university enrolment for the 2011/12 cohort for Kakamega-East sub-county. It was established from Table 4.33 that 60.7% of the total university enrolment was HELB loan recipient. Out of this, 36.2% were from low SEB status while the remaining 24.5% were from higher SEB status. This means that HELB assisted most of the students who qualified for admission in public universities to enrol and pursue their undergraduate studies. Compared to the 28% that formed the proportion of beneficiaries of higher education funding through USLS in early 90's before HELB came into existence, it implies that HELB has enhanced access in public universities among students from low SEB status. However, the slight wastage of 1.3% that was established in the study for the cohort slightly reduced the proportion of HELB beneficiaries that could otherwise have been higher. This was attributed to the deferrals, repetitions and drop-outs that arose amongst the HELB loan recipients.

Regarding the second objective which was to establish the trend of HELB undergraduate loan allocation to Kakamega-East sub-county between 2011 – 2014 for the cohort, it was found that

HELB undergraduate loan allocation to the sub-county was characterised by increasing trends as reflected in Figure 4.1. This was due to the fact that both the number of recipients as well as the amounts of loan allocations to the sub-county increased at an average rate of 0.92% per year of study. Since the beneficiaries of maximum loans increased with time as compared to those of minimum loans, it further implied increasing access in the undergraduate studies. However, the increase in trend of loan allocation between the first and second years of study was the highest at 1.31% as compared to the rest of the other years due to the high number of successful appeals.

The third objective was to determine the degree of fairness in HELB undergraduate loan allocation to Kakamega-East sub-county based on the criterion used. It was established from Figure 4.6 that HELB undergraduate loans were relatively inequitably allocated to the students throughout their period of study. This was due to the *gini* coefficient of 0.45 that was established for the cohort for the entire period of study. The inequitable allocations of HELB undergraduate loans gradually increased as the cohort moved from one academic year to the next as revealed from the increasing trend of the aggregate values of *gini* coefficients for each of the individual years of study. As a result, there was an annual rise of 7.4% in degree of unfairness in HELB loan allocations, attributed to the failure of HELB to revise the amounts of loans allocated to students in respect of their ever changing SEB status in their subsequent years of study.

Regarding the fourth objective which dealt with ascertaining the relationship that exists between HELB undergraduate loan allocation and the recipients' socio-economic backgrounds, it was found that there existed a weak inverse relationship between the variables. This was due to the pearson's correlation coefficient $r = 0.187$ that was established. It was a weak relationship due to the fact that the aggregate value obtained was closer to 0 than 1 while the negative sign indicated the direction of the relationship which in this case was inverse in nature.

The inverse nature of the relationship meant that the lower the SEB status a student belonged to, the higher the amount of HELB loan he/she was likely to be allocated. However, since it was weak it meant that some HELB allocations were done contrary to that order hence implying that some students were allocated higher loans despite belonging to higher SEB status and vice versa. This implied that some of the students who qualified for certain amount of loans were not allocated those amounts. Hence, the HELB loan allocations to students were not effected as perfectly as they ought to have been.

5.3 Conclusions

From the aforementioned findings, it can be concluded that HELB loans enhanced access in public university undergraduate studies for the 2011/12 cohort for Kakamega-East sub-county due to:

- i. The increased enrolment of 60.7% in public universities for the undergraduate studies as a result of HELB funding as compared to the 28% enrolment when funding was through USLS before HELB came into being.
- ii. The increasing trends that characterised HELB undergraduate loan allocations to the sub-county at an average rate of 0.92% per year. This was due to both the number of HELB recipients as well as amounts of loan allocations increasing as years of study increased.

However, the loans failed to enhance equity in financing public university undergraduate studies for the cohort due to the fact that:

- iii. The HELB undergraduate loans were relatively inequitably allocated to the students during the entire period of study as established from the *gini* coefficient of 0.45 for the cohort.

- iv. There was a weak inverse relationship that was established between HELB undergraduate loan allocations and the SEB status of the students in the study.

This conclusion is similar to the one that was drawn in a study for Colombia by Jallade (2000) where student loans had enhanced access through improved enrolments in higher education but had failed to enhance equity in the financing of higher education.

5.4 Recommendations

Due to the aforementioned conclusions, this study wishes to recommend the following:

- (i) HELB should revise the levels of loan allocations upwards in order to further enhance access in public university undergraduate studies for the needy students. Both the minimum and the maximum amounts of loan allocations should be raised through a clearly defined criterion.
- (ii) The continuing students should be allowed to be filling all the sections of the LAFs of HELB every academic year in order to effectively capture any slight change in their SEB status which arise in the course of their studies. This will ensure that HELB does not necessarily allocate same amounts of loans to students in their subsequent years of study irrespective of changes in their SEB status.
- (iii) The Means Testing Instrument used by HELB in Kenya should be tested alongside other models used in countries like Lesotho, Thailand and USA where access and equity in financing higher education has been highly enhanced by the student loan schemes. This can be done to ensure that other factors contributing to SEB status of students apart from parental incomes hold significant influence on the SEB scores of the students. Through

this, all deserving cases of loans will be effectively determined and equitably allocated according to their respective levels of need.

- (iv) HELB should device mechanisms of ensuring that students give sincere and honest information about their SEB status so as to ensure that the socio-economic background status of the applicants are correctly captured. This can be done by HELB accrediting its own agents at smaller administrative units by devolving their services to counties and sub-counties.

5.5 Suggestions for Further Research

This study exposed the following gaps that require further research;

- (i) A research study should be carried out to establish the exact retention, wastage and completion rates of HELB loan beneficiaries in public universities. This is due to the fact that most of the students who deferred or dropped-out of their undergraduate studies in public universities due to lack of fees were all former beneficiaries of HELB loans.
- (ii) A correlational research study between the amounts of loan allocated by HELB and each of the factors that influence SEB status of students on the LAFs should be conducted independently with a view of establishing the specific contribution of each of the factors to access and equity in higher education. The relationship established for each of the factors can then be used to identify those that retrogressively hinder equity in public university education. This will in turn assist HELB in policy formulation and implementation which will enhance efficiency in the administration of the loans in higher education.

(iii) An empirical study should be carried out on the Means Testing Instrument used by HELB in determination of the amounts of loan allocations with an intention of improving it to make it more effective. This would possibly lead to the revision of both the minimum and maximum amounts allocated by HELB in order to boost access and equity in higher education in Kenya.

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APPENDIX I: QUESTIONNAIRE SET FOR THE CEO OF HELB

INSTRUCTIONS

This is an academic research item for MED in planning and economics of education in Maseno university. It aims at establishing some facts about the administration of HELB loans to undergraduate students of the 2011/2012 cohort for Kakamega-East sub-county in accredited public universities only in Kenya. You are therefore kindly requested to answer the questions below as honestly as possible. Please write the answers in the spaces provided, or tick the most appropriate bracket in case of choices. Confidentiality will be highly guaranteed since your responses will be used for the purpose of this study only.

a) Personal Information

Name (optional) _____

Name of Institution: _____

Designation: _____

Length of stay in the institution: _____

b) HELB Loan Details

1. How many students of 2011/2012 cohort from Kakamega-East sub-county pursuing undergraduate degree courses applied for HELB loans in their first year of study?

2. Please provide the names and serial numbers of the applicants in b (1) above. Specify their admission number and university of study.

3. How many of the students in b (2) above were awarded HELB loans in that academic year?

4. For the students in b (3) above, please indicate the cumulative HELB loans awarded to them for the four-year study period in the categories of HELB amounts specified below:

Year of study	Amount of HELB loan (Ksh.)	Number of recipients	Total HELB loan allocation
1 st (2011/12)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		
	55,000		
	60,000		
	TOTAL		
2 nd (2012/13)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		
	55,000		
	60,000		
	TOTAL		
3 rd (2013/14)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		

	55,000		
	60,000		
	TOTAL		
4 th (2014/15)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		
	55,000		
	60,000		
	TOTAL		

5. Could you please, provide a cumulative summary of HELB loan allocation for the 2011/2012 cohort undergraduate students from Kakamega-East sub-county as follows :

Academic year	Total number of applicants	Total number of recipients	Total loan disbursed
1 st			
2 nd			
3 rd			
4 th			
TOTAL			

6. Please, in your opinion classify the above recipients in socio-economic classes below:

Low: _____

Medium: _____

High: _____

Thank you for your co-operation.

APPENDIX II: QUESTIONNAIRE SET FOR THE UNIVERSITY ACADEMIC REGISTRARS (UARs)

INSTRUCTIONS

This is an academic research item for MED in planning and economics of education in Maseno university. It aims at establishing some facts about the administration of HELB loans to undergraduate students of the 2011/2012 cohort for Kakamega-East sub-county in accredited public universities only in Kenya. You are therefore kindly requested to answer the questions below as honestly as possible. Please write the answers in the spaces provided, or tick the most appropriate bracket in case of choices. Confidentiality will be highly guaranteed since your responses will be used for the purpose of this study only.

a) Personal Information

Name (optional) _____

Name of University: _____

Designation: _____

Length of stay in University: _____

b) University HELB Loan Allocations

1. What was the total enrolment for the 2011/2012 cohort for Kakamega-East sub-county pursuing undergraduate degree courses in this university in their first year of study?

2. How many students of the 2011/2012 cohort from Kakamega-East sub-county in b (1) above received HELB loans ? _____
3. Please provide the names and admission numbers of the HELB loan recipients in b (2) above. Specify their gender and programme of study

4. For the 2011/2012 cohort in b (3) above, please indicate the cumulative amount of HELB loan allocated to them for the four-year study period using the table below:

Year of study	Amount of HELB loan (Ksh.)	Number of recipients	Total HELB loan allocation
1 st (2011/12)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		
	55,000		
	60,000		
	TOTAL		
2 nd (2012/13)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		
	55,000		
	60,000		
	TOTAL		
3 rd (2013/14)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		
	55,000		
	60,000		
	TOTAL		

4 th (2014/15)	35,000		
	37,000		
	40,000		
	45,000		
	50,000		
	55,000		
	60,000		
	TOTAL		

c) University Fee Payment Details

1. What was the total fees payable to the university per student for the undergraduate four-year study programme in the following academic years?

2011/2012 _____
 2012/2013 _____
 2013/2014 _____
 2014/2015 _____

2. Do you think HELB loan allocations were sufficient for the fees in c (1) above ?

YES () NO ()

3. If NO in c (2) above, please give the reason(s);

4. Do you have any cases of HELB loan recipients in the university from Kakamega-East sub-county deferring, repeating or dropping out due to lack of fees?

YES () NO ()

5. If YES in c (4) above, could you please provide the data for the 2011/2012 cohort for Kakamega-East sub-county in the table below?

Academic year	Number of students who deferred studies	Number of students who repeated	Number of students who dropped-out
2011/2012			
2012/2013			
2013/2014			
2014/2015			

6. Do you have any other comment to make about the administration of HELB loan to undergraduate students ?

Thank you for your co-operation.

APPENDIX III: QUESTIONNAIRE SET FOR UNIVERSITY STUDENTS

INSTRUCTIONS

This is an academic research item for MED in planning and economics of education in Maseno university. It aims at establishing some facts about the administration of HELB loans to undergraduate students of the 2011/2012 cohort for Kakamega-East sub-county in accredited public universities only in Kenya. You are therefore kindly requested to answer the questions below as honestly as possible. Please write the answers in the spaces provided, or tick the most appropriate bracket in case of choices. Confidentiality will be highly guaranteed since your responses will be used for the purpose of this study only.

a) Personal Information

Name (optional) _____

Adm no. _____ Gender: _____

Name of University: _____ Branch/college: _____

Year of Admission: _____ Current Year of Study _____

Course of study: _____ Faculty/School _____

Home Sub-County: _____

b) Socio Economic – Background Information

1. What type of parental family background do you come from?
Dual parenthood () Single parenthood () No parenthood ()
2. Specify who pays your University fees?
Parent(s) ()
Guardian/Relative ()
Sponsor (if Institution e.g. Government/Church/NGO) ()
Others (if an individual not related in any way e.g. MP/MCA) ()
Not Applicable ()
3. Describe the work of the person who pays your University fees in b(2) above?

- Employed ()
- Self-Employed/Business/Cash-crop farming ()
- Charity work ()
- Not Employed ()
- Not Applicable ()

4. What is the highest level of education of person who pays your University fees in b (2)?

- Post-Graduate ()
- Degree ()
- Diploma ()
- Certificate ()
- O-Level ()
- Not Applicable ()

5. In which category does your household income approximately fall per year ?

- More than Ksh. 1,000,000 ()
- Ksh. 850,001 – 1,000,000 ()
- Ksh. 600,001–850,000 ()
- Ksh. 250,001–600,000 ()
- Less than Ksh.250,000 ()

6. In which category does your household expenditure approximately fall per year ?

- More than Ksh. 1,000,000 ()
- Ksh. 850,001 – 1,000,000 ()
- Ksh. 600,001–850,000 ()
- Ksh. 250,001–600,000 ()
- Less than Ksh.250,000 ()

7. Specify the type of secondary school you attended: Public () Private ()

8. In the table below, please state the number of siblings in various levels of education and the approximate amount of fees payable for them per year (siblings in university should not be HELB beneficiaries) :

Level of education	No. of siblings	Annual fee payable (Ksh.)
Primary		
Secondary		
Undergraduate university		
Post graduate university		
Others (specify).....		

9. Specify your permanent place of residence

City ()

Town/Municipality ()

Rural ()

Not Applicable ()

10. Do you suffer from any physical impairment ? YES () NO ()

11. If YES in b(5) above, specify_____

c) Information on HELB Loan Allocation:

1. How much university fees were you supposed to pay per year?_____

2. How much amount of money do you need at university for your personal upkeep per year? _____

3. Do you apply for HELB loan? YES () NO ()

4. If YES in C (3) above, indicate the amount of HELB loan you have been applying for, and subsequently receiving for the specified academic years :

Academic Year	Amount of HELB applied	Amount of HELB received
2011/2012		
2012/2013		
2013/2014		
2014/2015		
TOTAL		

5. Did you ever appeal for consideration of HELB loan during your study period? _____
6. If YES in (5) above, was your appeal successful? YES () NO ()
7. If YES in (6) above, specify the academic year and the respective amount you were allocated as a result of the appeal: Year of study _____ Amount _____
8. Do you receive financial assistance from any other source? YES () NO ()
9. If YES in (8) above, please specify the source and amount received per year?

10. Have you had any problem(s) in pursuing your studies at university because of inadequacy of the HELB loan awarded? YES () NO ()
11. If YES in (10) above, state the nature of the problem

12. Did you experience any challenge(s) in accessing application for HELB loans? _____
13. If YES in (12) above, how did you overcome them? _____
14. Do you think the student loans are awarded fairly by HELB? YES () NO ()
15. If NO in (14) above, state the reason(s)

16. What is your opinion about the way loans are administered by HELB?

17. State your proposals about how HELB should administer student loans.

Thank you for co-operating.

APPENDIX IV: INTERVIEW SCHEDULE WITH THE CEO OF HELB

Opening Remarks:

This is an academic MED research interview schedule whose purpose is to determine the extent to which HELB loans have enhanced access and equity in undergraduate university education in Kakamega-East sub-county in Kenya. You are identified as a key resource person towards the achievement of this purpose, and therefore requested to be as honest as possible in your answers. Confidentiality will be highly guaranteed since your responses will be used for the purpose of this study only.

Questions:

1. What is the role of HELB in financing university education in Kenya?
2. How do you ensure that all needy students have access to application for HELB loans
3. What are the various levels of undergraduate HELB loan allocations?
4. How does HELB determine those to be allocated various levels of undergraduate loans?
5. Where and how much money do you get for loan allocations to undergraduate students ?
6. What problems do HELB encounter while administering the student loans?
7. What steps are being undertaken by HELB to overcome the foregoing problems?

Thank you for co-operating.

APPENDIX V: INTERVIEW SCHEDULE WITH THE UARs OF UNIVERSITIES

Opening Remarks:

This is an academic MED research interview schedule whose purpose is to determine the extent to which HELB loans have enhanced access and equity in undergraduate university education in Kakamega-East sub-county in Kenya. You are identified as a key resource person towards the achievement of this purpose, and therefore requested to be as honest as possible in your answers. Confidentiality will be highly guaranteed since your responses will be used for the purpose of this study only.

Questions:

1. What are your comments about the adequacy of the HELB undergraduate loans to students in view of the amount of fees payable per year in the university?
2. What are the possible causes of deferrals, repetitions or drop-outs amongst the HELB loan recipients in the university?
3. In your opinion, what do you consider to be the successes and failures of HELB in administering undergraduate loans?
4. What proposals do you have for improved administration of HELB loans for efficiency and effectiveness in undergraduate studies?

Thank you for co-operating.

Education Background

Attach certified copies of your certificates

Level	Institution Name	Exam Yr	Index Number	School Type	Country Code
PRIMARY	ISECHENO	2006	603205007	PUBLIC SCHOOL	KE
SECONDARY	LUGALA	2010	616003002	PUBLIC SCHOOL	KE
A-LEVEL	N/A	N/A	N/A	null	null
TERTIARY	N/A	N/A	N/A	null	null

Details of Parents

Note: for salary/pension income attach copy of payslip

Father

Last Name	First Name	Middle Name	
null	null	null	
ID/No. (attach copy)	Year of birth	Highest Level of education	Income
null	null	null	Gross Salary(Monthly) .00
Pin No. (attach copy)	Mobile/Wireless Telephone no.	Employed	Business (Annual) .00
			Farming (Annual) .00
Occupation/Profession		Employer telephone no.	Pension(Monthly) .00
null		null	Income from 'other' e.g. 0
Name of employer/business or former employer if no longer employed (attach evidence if no longer working)			Support from GoK relief service 0
null			

Mother

Last Name	First Name	Middle Name	
LIKONO	NANCY	MUYOKA	
ID/No. (attach copy)	Year of birth	Highest Level of education	Income
13576201	1975	None	Gross Salary(Monthly) .00
Pin No. (attach copy)	Mobile/Wireless Telephone no.	Employed	Business (Annual) .00
N/A	null	Y	Farming (Annual) .00
Occupation/Profession		Employer telephone no.	Pension(Monthly) .00
HOUSEWIFE		N/A	Income from 'other' e.g. 500
Name of employer/business or former employer if no longer employed (attach evidence if no longer working)			Support from GoK relief service 0
N/A			

Parent's Marital Status

Parents Marital Status?
One parent deceased

Are you an orphan?.....
Yes

If parent(s) deceased provide death certificate No. or Burial Permit No and attach copy

Father	Mother
110503507	N/A

If both parents are deceased who has been paying your fees?
Sponsor

Guardian/Sponsor/Public trustee

Name(s)
APHIA II-WESTERN

Telephone
0721140263

Box No.	Postal Code	Town
71	50107	SHINYALU

** NOTE: Attach letter from School AND Sponsor

Estimated family Monthly expenses (Kshs.)

Food	Clothing	Rent	Travel/Fuel
500.00	200.00	.00	.00
Medical (attach evidence)	Mortgage/Loan repayment (attach evidence)	Other (taxes etc)	
.00	.00	.00	

DO NOT LET ANY LETTER/DIGIT CROSS THE BOX

Gross education expenses (Siblings in secondary, tertiary or University who are not beneficiaries of HELB Loan)

Name(s)	Institution	Level of study	Annual Fees
1. ALEX INGOSI	LUGALA SECONDARY	FORM 2	9000
2. CHRISTINE KHAVELE	GODOWN PRI-MATUNDA	STD 8	2000
3. BENEDICT MURILA	ISECHENO PRIMARY	STD 5	500
4. MORGAN MATE	ISECHENO PRIMARY	STD 2	200

Declarations

Applicant

I declare that the information given herein is true to the best of my knowledge. I also understand that this is a loan that must be repaid.

Name.....
Signature..... Date.....

Parent/Guardian

I declare that I have read this form/this form has been read to me and I hereby confirm that the information given herein is true to the best of my knowledge.

Name.....
Signature..... Date.....

Priest/Kadhi

I wish to confirm that the applicant appeared before me and that I interviewed him/her and hereby state that the information given herein is true to the best of my knowledge

Signature..... Date.....

Name/Address/Telephone

Official rubber stamp

Assistant Chief

I certify that the applicant is a resident of my Sub-Location and that I have checked the information given herein and confirm it to be true to the best of my knowledge

Signature..... Date.....

Name/Address/Telephone

Official rubber stamp

Commissioner of Oaths/Magistrate

The above named applicant and his/her parent/guardian appeared before me and made the solemn declaration that the information given herein is correct.

Signature..... Date.....

Name/Address/Telephone

Official rubber stamp

GUARANTORS

Guarantor 1

Last Name		First Name		Middle Name	
I MWANI		RONALD		LIVANZE	
of Id.No	21959552	Tel. No	0721333098	P.O. Box	353
Postal Code	50309	Town	TIRIKI		
Email	mwaniron@yahoo.com				
County Code	Constituency Code	Division	Location	Guarantor Year of Birth	
38	60404	TIRIKI-EAST	SHAMAKHOKHO	1980	

(also known as "the guarantor" hereby) acknowledge that I am bound to the Higher Education Loans Board in the sum of amount equivalent to what the Board shall grant to _____ as loan under the agreement together with interest thereon, which amount I shall repay to the Higher Education Loans Board in the event that the loanee fails to honour his/her obligation of repaying the same to the Board as from the prescribed time. The Board will notify me of the amount granted to the loanee after the award is made. This bound is conditioned to be void only after full repayment by the loanee is effected.

Guarantor 1 Signature and Date _____

Advocate/Magistrate Signature, Date and Official Rubber Stamp _____

Guarantor 2

Last Name		First Name		Middle Name	
I MUGABWA		WILSON		SIEMA	
of Id.No	5632052	Tel. No	0722256998	P.O. Box	550
Postal Code	50100	Town	KAKAMEGA		
Email	siemawilson@yahoo.com				
County Code	Constituency Code	Division	Location	Guarantor Year of Birth	
37	60303	SHINYALU	SHIBUYE	1960	

(also known as "the guarantor" hereby) acknowledge that I am bound to the Higher Education Loans Board in the sum of amount equivalent to what the Board shall grant to _____ as loan under the agreement together with interest thereon, which amount I shall repay to the Higher Education Loans Board in the event that the loanee fails to honour his/her obligation of repaying the same to the Board as from the prescribed time. The Board will notify me of the amount granted to the loanee after the award is made. This bound is conditioned to be void only after full repayment by the loanee is effected.

Guarantor 2 Signature and Date _____

Advocate/Magistrate Signature, Date and Official Rubber Stamp _____

Applicant's Personal Bank Details (FOR BANKS USE ONLY)

Bank name	Branch name
EQUITY	KAKAMEGA
Account number	
0500197933717	

Banks Checklist

<input type="checkbox"/> Applicant ID copy attached.	<input type="checkbox"/> Applicant passport size photo attached	<input type="checkbox"/> Copies of applicant's parents ID(s), death certificate(s)
<input type="checkbox"/> Copies of ID's for both guarantors	<input type="checkbox"/> Copy of parents payslip (if applicable)	<input type="checkbox"/> Copy of Pin Certificate

Bank Official confirmation

Official's Name	Official Stamp
Signature	Date

Applicants checklist

1. Have you attached the following:
 - a. Copies of ids for your parent(s) if applicable
 - b. Copies of ids for your guarantors
 - c. Copy of your national identity card
 - d. Copy of your KCSE result slip
 - e. Copy of retirement letter of parent(s) if applicable
 - f. Evidence of loss of employment of parent(s) if applicable
 - g. Copy of admission letter.
 - h. Copy of self/parents latest pay slips

2. Have confirm the following:

- a. Your two guarantors and the commissioner of oath/magistrate's signature and stamp
 - b. Your priest/kadhi and his/her official stamp
 - c. Self, parent and guardian signature
 - d. The sub- chief signature and stamp
 - e. The commissioner of oath/magistrate
3. Have signed the loan agreement form on page 3

4. Have captured your account number, branch name and code correctly.
5. Have declared monthly parental income and expenditure
6. Have written legibly and within the boxes.

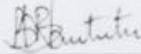
8. Make sure you have attached letter from school and sponsor if you had a sponsor or fees paid by other person/party other than parents
9. Have submitted your form on time

Agreement (To be signed by loan applicant)

TERMS AND CONDITIONS

1. The rate of interest applicable shall be 4% p.a. the Board shall have the sole discretion of varying the interest rate as circumstances shall demand.
2. The Board shall charge administrative fees of Kshs.500 per annum on all un-matured accounts. All mature loan accounts shall be subject to administrative fee as shall be determined by the Board from time to time.
3. In the event that the loanee discontinues studies for whichever reason before full disbursement is made, the Board shall not disburse the remaining allocation and shall recall the loan so far as advanced in full together with the interest thereon.
4. The Board shall electronically, through the website, send to each loanee annual statement indicating the amount disbursed per each academic year or the outstanding balance as the case may be. The sums of the amount indicated in the statements shall form the principal loan to be recovered from the loanee. The contents of the statements shall be deemed to be correct unless a written complaint to the contrary is received by the Board within three (3) months from the date of the statement whereupon the Board shall either confirm the complaint or advise as the case may be. A statement may be furnished at any time on request but at the loanee's expense.
5. Where it is discovered that the loan was granted due to false information furnished by the loanee, the Board shall withhold release of the amount yet to be disbursed if any, besides subjecting the loanee to prosecution.
6. The Board shall engage agents (Banks) who shall be responsible for the disbursement of the loans as shall be advised by the Board from time to time.
7. The loanee shall keep the guarantor apprised of the principal loan awarded and in the event that there is a conflict, the amount as held by the Board will prevail.
8. Where there is default by the loanee, the guarantor shall be bound to repay the loan, interest thereon, penalties, costs and any other charges accruing to the loan.
9. The loan shall be due for repayment one year after completion of the course studied or within such period as the Board may decide to recall the loan whichever is earlier.
10. The loan shall be repaid by monthly installments or by any other convenient mode of repayment as shall be directed by the Board but subject to the provisions of the Higher Education Loans Board Act.
11. If the loanee defaults in the repayment of the loan when the loan is due, the whole amount shall be due and payable and the loanee shall be bound to pay other charges that may arise as a result of the default including but not limited to the Advocates fees and penalties.
12. The Board shall charge a penalty of Kshs.5,000 per month on any account that is in default.
13. Non demand for loan repayment and the accruing charges shall not in any way signify waiver of any amount rightfully due under the terms and conditions of the loan.
14. The applicant hereby consents that the Board shall share information pertaining to the loan account with credit reference bureaus or any other parties as deemed necessary.
15. The Board shall effect credit protection arrangement of the loan at the expense of the loanee.
16. In the event that the applicant receives additional finance assistance from any other source and the need to refund by the university arises such refund shall be made to the Board and the same shall be utilized towards reducing or offsetting the loan.
17. No loan shall be disbursed unless this agreement form is signed.
18. The signature of the loanee shall certify the reading, understanding and being in agreement with the terms and conditions herein including certification.

Loanee's Signature _____ Date: 01/02/2012

Authorized Signature(HELB)  _____ Date: 01/02/2012

APPENDIX IX: KEY TO SCORE CODES FOR SEB INDICATORS

A). Type of parenthood

Dual parenthood	(3)
Single parenthood	(2)
No parenthood	(1)

B). Level of household annual income

More than Ksh. 1,000,000	(5)
Ksh. 850,001 – 1,000,000	(4)
Ksh. 600,001–850,000	(3)
Ksh. 250,001–600,000	(2)
Less than Ksh.250,000	(1)

C). Level of household annual expenditure

More than Ksh. 1,000,000	(5)
Ksh. 850,001 – 1,000,000	(4)
Ksh. 600,001 – 850,000	(3)
Ksh. 250,001 – 600,000	(2)
Less than Ksh.250,000	(1)

D). Payer of fees

Parent(s)	(4)
Guardian/Relative	(3)
Sponsor (Institution e.g. Government/Church/NGO)	(2)
Others (individual sponsor, not related e.g. MP/MCA)	(1)

E). Occupation of payer of fees

Employed	(4)
Self-Employed/Business/Cash-crop farming	(3)
Charity work	(2)
Not Employed	(1)

F). Level of education of parents/guardian	
Post-Graduate	(5)
Degree	(4)
Diploma	(3)
Certificate	(2)
O-Level	(1)
G). Type of secondary school attended by applicant	
Private	(2)
Public	(1)
H). Cummulative education fees payable to siblings	
More thanKsh. 500,000	(3)
Between Ksh. 250,000-500,000	(2)
Less thanKsh. 250,000	(1)
I). Place of residence	
City	(3)
Town/Municipality	(2)
Rural	(1)
J). Physical impairment	
Physically impairment	(1)
No physical impairment	(2)

APPENDIX X: TOTAL SEB SCORE DISTRIBUTION FOR THE COHORT

SEB score	Frequency	Percentage (%)	Cumulative Percentage (%)
11.	128	43.8	43.8
12.	46	15.8	59.6
13.	37	12.7	72.3
14.	15	5.1	77.4
15.	7	2.4	79.8
16.	1	0.3	80.1
17.	6	2.1	82.2
18.	6	2.1	84.2
19.	5	1.7	86.0
20.	8	2.7	88.7
21.	4	1.4	90.1
22.	5	1.7	91.8
23.	2	0.7	92.5
25.	16	5.5	97.9
26.	4	1.4	99.3
27.	2	0.7	100.0
Total	292	100.0	

APPENDIX XI: KEY TO UNIVERSITY CODES

CU =	Chuka University
DKUT =	Dedan Kimathi University of Technology
EU =	Egerton University
JKUAT =	Jomo Kenyatta university of Agriculture & technology
JoUST =	Jaramogi Oginga Odinga University of Science & Technology
KiU =	Kisii University
KU =	Kenyatta University
LU =	Laikipia University
MAS =	Maseno University
MMUK =	Multimedia University of Kenya
MMUST =	Masinde muliro university of science & technology
MU =	Moi University
PU =	Pwani University
SEKU =	South Eastern Kenya University
TUK =	Technical University of Kenya
TUM =	Technical University of Mombasa
UoE =	University of Eldoret
UoN =	University of Nairobi

APPENDIX XII: 2011/12 COHORT DISTRIBUTION IN PUBLIC UNIVERSITIES FOR THE SUB-COUNTY



DATE: 22-08-2014

**UNDERGRADUATE HELB APPLICANTS
2011/12 COHORT FOR KAKAMEGA-EAST SUB-COUNTY
IN CHARTERED PUBLIC UNIVERSITIES IN KENYA**

No.	Name of University	NO. OF APPLICANTS
1.	Masinde Muliro University of Science and Technology (MMUST)	156
2.	Moi University (MU)	126
3.	Kenyatta University (KU)	121
4.	Maseno University (MAS)	113
5.	Egerton University (EU)	81
6.	University of Nairobi (UoN)	72
7.	Jomo Kenyatta University of Agriculture and Technology (JKUAT)	50
8.	University of Eldoret	23
9.	Pwani University	10
10.	Laikipia University	07
11.	Kisii University	06
12.	Chuka University	05
13.	Technical University of Kenya	04
14.	Technical University of Mombasa	04
15.	Jaramogi Oginga Odinga University of Science and Technology	02
16.	Meru University of Science and Technology	02
17.	Multimedia University of Kenya	02
18.	Dedan Kimathi University of Technology	01
19.	Maasai Mara University	01
20.	South Eastern Kenya University	01
21.	University of Kabianga	01
22.	Karatina University	00
	TOTAL	788



Wednesday 17TH Dec2014

Re: UNDERGRADUATE HELB LOAN ALLOCATION FOR COHORT 2011/2012

Note that the cumulative HELB undergraduate loan allocation to above cohort for Kakamega-East district was;

Academic year	Total amount of allocation (KSH.)
2011/12	36,776,000.00
2012/13	36,848,000.00
2013/14	36,853,000.00
2014/15	36,853,000.00
Total	147,330,000.00

Attached, find the entire list of all applicants of HELB for the cohort in the district and their respective amounts of allocations per academic year.

**For: BOARD SECRETARY/CEO
HIGHER EDUCATION LOANS BOARD**

CC: RONALD LIVANZE MWANI- PG/MED/040/2010
MASENO UNIVERSITY



MASENO UNIVERSITY
SCHOOL OF GRADUATE STUDIES

Office of the Dean

Our Ref: PG/MED/00040/2010

Private Bag, MASENO, KENYA
Tel:(057)351 22/351008/351011
FAX: 254-057-351153/351221
Email: sgs@maseno.ac.ke

Date: 16th June, 2015

TO WHOM IT MAY CONCERN

**RE: PROPOSAL APPROVAL FOR RONALD LIVANZE MWANI—
PG/MED/00040/2010**

The above named is registered in the Master of Education of the School of Education, Maseno University. This is to confirm that his research proposal titled "The Effect of Higher Education Loans Board Funding on Access and Equity in Public University Undergraduate Studies in Kakamega East District, Kenya" has been approved for conduct of research subject to obtaining all other permissions/clearances that may be required beforehand.

17 JUN 2015


for Prof. P.O. Owuor
DEAN, SCHOOL OF GRADUATE STUDIES



