DETERMINANTS OF STUDENTS' LOAN DEFAULT:
A Case Study of Higher Education Loans Board

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Economics (Economic Policy Management) Degree.

DECLARATION

1 hereby certify that this research paper, which I submit for assessment as part of the program of study leading to an M.A Economics award is my original work and has not been submitted for a degree in any other University.

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This research paper has been submitted for examination with our approval as the Supervisors.

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ABSTRACT

The financing of higher education in Kenya has been a big challenge to the Kenyan Government especially due to the ever growing student population and the impact of poverty levels in the country. The Higher Education Loans Board has been the primary vehicle for delivering direct financial assistance to university students in Kenya since its inception in 1995, a role earlier played by the Ministry of Education. In the recent past the cost of higher education has gone up and default by previous beneficiaries of the loans scheme continues to be a challenge to HELB leading to redundancy of the established revolving fund, thus affecting the running of the scheme and access to university education by qualified Kenyans who cannot afford to meet the ever increasing cost.

After the inception of HELB, recovery shot up tremendously but still default rates remained high with the loan performance in terms of repayment being 57% as at June 2010. Given that the Board plays an important role in enhancing access to higher education it is of great important to review the mechanism and strategies of curbing the persistence of the university student loans default.

In an effort to better understand which students are likely to default, and ultimately to design programs to reduce default, this study performed an analysis of student loan beneficiaries focusing on factors identified as critical determinants of default which were financial, demographic characteristics, and institutional factors. The study, apart from beneficiaries of the loan also targeted chartered universities (public and private), whose students were/are funded through the university students' loans scheme and companies (employers whose employees include beneficiaries of the university student loans).

The study used a probit model which was expected to yield the predicted probability of default among the beneficiaries of the loan. The findings suggest that HELB will continue to find loan recovery an uphill task in the face of increasing unemployment and underemployment situation in which most the loan beneficiaries find themselves in. HELB has however done a relatively good job with regard making beneficiaries aware of their contractual obligations on the repayment of the loan.

The likelihood that a loanee will default on the university loan was indicated to be related to a complex web of factors and developing a default management program may therefore be the first step to reducing default. An effective default management program will ensure that the loanees at the point of receipt of the loan are aware of their responsibility and repayment options available even in the face of unemployment and underemployment.

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TABLE OF CONTENTS

ACRONYMS

HELB:	Higher Education Loans Board
K R A:	Kenya Revenue Authority
UNESCO:	United Nations Educational, Scientific and Cultural Organization
G.O.K:	Government of Kenya
USLS:	University Students Loan Scheme
LD & RU:	Loan Disbursement and Recovery Unit
CHE:	Commission for Higher Education
NHIF:	National Hospital Insurance Fund
NSSF:	National Social Security Fund
SPSS:	Statistical Package for Social Sciences
BED.	Bachelor of Education
BSC:	Bachelor of Science
BA:	Bachelor of Arts
HELF:	Higher Education Loans Fund
KSHS:	Kenya Shilling

DEFINITION OF TERMS

The definition of the following terms will be in the context of this proposal.

Default: Failure by a beneficiary of a loan to honor their obligation of repayment as set by the lending institution.

Higher Education: Any level of education offered by an institution above the standard of Kenya Certificate of Secondary Education or any equivalent certificate approved by the Board

Public University: Universities within Kenya owned and funded by the Kenya Government through taxpayer's money.

Chartered University: Universities that meet all the requirements of **CHE** and are registered as institutions of higher learning.

Cost sharing: Contribution of the university education costs by the government and students/parents.

Student: Any Kenyan citizen admitted and pursuing higher education with financial assistance from the Board.

Disbursement: Process of giving out loans to students, which may be in one or more in installments.

Effectiveness: Level of success of the loan recovery system in curbing default.

Recovery: Reclaiming back of the loan from former beneficiaries.

Loanee/beneficiary/graduate Any person granted an education loan either under the higher education loans fund (HELF), by the Ministry of Education from 1974 through the National Bank of Kenya, Kenya Commercial Bank from 1989 and those granted a loan upon the commencement of the HELB Act in 1995.

CHAPTER ONE

INTRODUCTION

1.1 Background

In a knowledge-based economy, investment in human capital is a key determinant of economic growth. Therefore to maintain a high standard of living, a substantial amount of collective resources should be devoted to higher education. To achieve this, most African countries are working towards facilitating access to higher education to everybody qualified for it regardless of his or her financial situation. This has led to the establishment of student loan schemes in many countries. Investment in human capital is different from other types of investments in that they cannot be backed by material collateral. Unlike investment in machinery or real estate, human capital has nothing tangible to offer to the lending institution in case of default.

University education in Kenya dates back to the colonial period when the Makerere University in Kampala, Uganda was established in 1921 to cater for Eastern African countries (Republic of Kenya, 1995). At independence the three East African countries established the University East Africa and the Royal Technical College in Nairobi which became part of the University. Since then, remarkable progress has been made in the provision of higher education opportunities. By the year 2007 the number of universities had increased to seven public universities namely University of Nairobi, Kenyatta University, Moi University, Egerton University, Jomo Kenyatta University, Maseno and Masinde Muliro University. The number has tremendously grown and by the year 2010, there were 22 public and 25 Private Universities.

University education has attracted and continues to attract private players to open up university institutions in the country. In 1963, there were just 571 students (Weidman, 1995) pursuing university education in Kenya and that grew to 3,443 in 1970. Up to 1973 the Government of Kenya met the cost of university education for qualifying Kenyans but as the numbers grew it became a challenge thus the establishment of university loans scheme in 1974. By 1996, the enrolment to universities had gone up to 42,000 doubling by 2003 (Ministry of Education, 2008) as indicated in table 1.

Table 1: Summary of I ndergraduate Student Enrollment in Kenyan Public and Private 1'nlverslties (2003-2008 Academic years)

C ategorv	2003/2004		2004/2005		2005/2006		2006/2007		2007/2008	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Public Universities										
Full time	29.288	15,697	29.005	15.981	29,555	16,080	33.581	17,981	35,811	18,726
Part Time	17.799	9.767	24.389	12.116	24.182	11.860	22.936	16,839	24.693	17.877
Subtotal	47,087	25,464	53394	28,097	53,737	27,940	56,517	34,820	60,504	36,603
Private Universities										
Accredited	3,650	4.371	3.796	4.546	4.215	4.624	8,975	6,973	9.688	10,469
Unaccredited	763	757	801	907	853	947	2.853	2,091	583	392
Subtotal	4.413	5.128	4.597	5.453	5,068	5,571	11.828	9,064	10,271	10.861
Total	51,500	30,592	57.991	33,550	58,805	33,511	68345	43,884	70,775	47,464
Grand Total	82.092		91,541		92 J16		112,229		118,239	

Source: Ministry of Education. Science and Technology, Statistics Section, 2008

The growth of the number of Kenyans seeking university education over the years has thus outstretched the loans scheme which has to also deal with the challenge of default from past beneficiaries of the loans scheme (table 2).

Academic Year	Number of Beneficiaries	Amount Awarded
1999/2000	31,844	878,591,000
2000/2001	32,039	868,869,000
2001/2002	31,548	866,240,500
2002/2003	34,776	1,093,272,500
2003/2004	38,864	1,335,970,000
2004/2005	40,113	1,458,095,000
2005/2006	39,951	1,681,885,000
2006/2007	40,065	1,710,555,000
2007/2008	42,566	1,821,550,000
2008/2009	68,498	2,573,515,000
2009/2010	69,383	2,973,320,000
2010/2011	77,141	3,304,210,000
TOTALS	**546,788**	**20,566,073,000**

Source: Higher Education Loans Board, 2010

Historically, higher education in Kenya was free with public fijnds covering both tuition and living expenses (Weidman, 1995). This provision for free higher education in Kenya was based on the rationale of the country's desire to create highly trained manpower that could replace the departing colonial administrators as well as a growing economy. Graduates from these universities were bound to work in the public sector for a minimum of three years.

Economic difficulties and the alarming increase in population, coupled with the then rising oil prices of 1973 changed this trend and resulted in the reduction of the recurrent budget allocated to higher education and eventually the introduction of user charges in higher education in Kenya (Cutter, 2001).

While government investment in primary education has increased dramatically in the last several years jumping from Kenya Shillings (Kshs.) 741 million in 2001/02 to Kshs. 3,321 million in 2002/03 and Kshs. 5,966 million in 2003/04, higher education still enjoys relatively generous funding from the government compared to other levels of education.

Ogot and Weidman (1993) indicate that while the investment the government has made in the higher education sector seems to be quite commendable, the trend may not continue because of the ever increasing pressure for structural adjustment by the World Bank and other donors. The tertiary education sector itself is being questioned internally for its limited capacity to provide access through funding to all eligible Kenyans. The performance of higher education in Kenya is contestable both on equity and efficiency grounds. Austerity in the public budget for higher education coupled with the poor performance of the sector in promoting access and equity has led the Government of Kenya to introduce a mechanism for cost sharing and user charges in education.

In 1994 the Government of Kenya decreased the education budget from 37% of it's total annual recurrent budget to 30% stating that it was not possible to allocate additional funding to higher education (Kiamba, 2004). This short fall in the public budget for higher education brought about the impetus for institutions to look for alternative income generating sources, in effect, reducing their overdependence on the government budget. Thus several strategies for revenue diversification as well as cost containment had to be adopted including introduction of cost sharing and revenue diversification programmes.

Though the issue of how much each student should contribute to their own education receives ample attention, there seems to be a gradual shift of (part of) the burden of higher education cost

from the government to students and their parents. This cost sharing takes various forms (Johnstone and Shroff-Mehta, 2000);

- Introduction or increasing tuition fees or other fees, such as administration or examination charges,
- Increasing the supply of private post secondary education institutions,
- By increased emphasis on student loans which have to be repaid by students after graduation thus reduction in grants,
- Students as well as their families to make contributions to the cost of study.

Student loans facility is an important tool in increasing participation and equity in higher education (Kipsang, 2007). Kipsang stressed the need for revenue diversification in universities in Africa and the shift from financing of university education from tax payers to parents and students who benefit directly or indirectly from receiving skills.

Kenya's higher education sector has continually faced challenges that include inadequate public funding and the consequent declining quality of educational output owing to poverty and a weak economy, thus a number of households have difficulties raising the increasing costs of university education in Kenya. The introduction of the students' loan scheme thus enables students from such poor backgrounds to have access to university education.

The loan schemes are also widely used in the United States of America, Australia, China, Japan, Chile, Singapore, and the United Kingdom as a mechanism for financing higher education

1.2 The Higher Education Loan Scheme in Kenya.

In 1952 the British colonial government in Kenya set up the higher education loans fund (HELF), to assist those who were pursuing university education outside East Africa and mainly in Britain, United States of America, India, Union of Soviet Socialist Republic and South Africa. On attaining independence, the Kenya Government suspended the scheme and opted to directly meet the cost of higher education. This was in line with the recommendation of the Kenya Education Commission to train highly skilled African personnel to take over the running of the government from the departing colonial administration (Republic of Kenya, 1964). The newly established government (governed by Kenyan leaders) felt that there was need for high and middle level manpower in order to enhance economic development within the country. Therefore the government provided free higher education in terms of direct costs (Republic of Kenya, 1965).

Poor economic performance within Kenya in the early 1970's could not allow the government to continue providing free higher education and this situation culminated in the reviving of the loan programme in 1974 as the University Students Loan Scheme (USLS). The Loan Disbursement and Recovery Unit (LDRU) was established in the Ministry of Education to manage the scheme though there were inadequate policies put in place to guide its operations.

The student loans scheme in Kenya has been undergoing various phases especially after 1974 when the policy of cost sharing was introduced and the loaning scheme for university students revised. Initially universities prepared lists of its students and submitted the list to the Ministry, which would then prepare a budget based on the student numbers. The Ministry would then disburse the students' personal allowances, "Boom" through the National Bank of Kenya while tuition, accommodation and catering costs were sent directly to the institutions by the bank. In due course the government realized that it could no longer sustain the financing of higher education solely from its own coffers without any improvisations, thus the introduction of the HELB through an Act of parliament in July 1995 as per the Kenya gazette supplement (cap 213A).

The student's loan scheme was to ensure that the beneficiaries of higher education met part of their education costs to promote equality to qualified students regardless of their background and circumstances, encourage students to make right career choices based on labour market opportunities, establish and provide a continuous source of finance through which a fund could become self perpetrating, reduce higher education drop out rates, complement the government financial commitment to university education and thereby increase the number of students pursuing higher education. This would in turn enhance national development by investment in production of manpower to meet the labour market and economic needs of the country. Kenya's education policy then had objectives of reducing government expenditure and improving access to higher education. Arising from the financial hardships the country was experiencing (Republic of Kenya, 1988), the government shifted some educational costs to consumers while ensuring equality of opportunity in access to higher education (Republic of Kenya, 1986). Following the terms of the Development Plan and Sessional Paper No. 1 of 1986, a direct fee, introduced in 1991, was charged on university students of Kshs.6,000 per year as part of the cost of their studies. A complementary bursary scheme administered by the universities was also introduced to assist students who were considered to be poor and financially unable to pay their part of the contribution of the tuition.

1.3 The Higher Education Loans Board

The recommendations laid out by the policy documents (Republic of Kenya 1988 and 1995), focused on the establishment of a semi-autonomous institution with full legal backing through an Act of Parliament to administer the loans scheme. This followed a realization by the Government that the 1974 loan scheme had not attained its objectives. The autonomy was meant to enhance quick decision making and implementation and with well organized and proper legal instruments, loan recovery be improved. Therefore through an Act of Parliament in 1995, the Higher Education Loans Board (HELB) was established. Apart from the recovery function, the Board has a mandate of soliciting for funds to promote the functions of the Board, formulating management policies for the fund, setting criteria governing granting of loans, and recovery of mature loans. In order to reduce the government budget on higher education, a revolving fund was to be established This led to a reduction in the government's annual budget (table 3) on education from 38% of the national budget to 30% (Republic of Kenya, 1986).

Table 3: Ministry's and Student Loans Recoveries Contributions towards the Total Student Loan Disbursements (1997-2010)

Year	Ministry's Contribution (KShs)	Recoveries' Contribution (KShs)	Total Loan Disbursed (KShs)
1997/1998	880.000.000	nil	830.157,514
1998/1999	600.000.000	251.655.942	851.655.942
1999/2000	600.000.000	340,263,900	940.263.900
2000/2001	609.000.000	324.017.300	933.017.300
2001/2002	600.000.000	341.423.312	941.423.312
2002/2003	609.552.000	583.185.988	1.192.737.988
2003/2004	817.902.862	599.462,538	1.417.365.400
2004/2005	817.902.862	729.358.138	1.547.261.000
2005/2006	867.903.163	912.422.537	1.780.325.700
2006/2007	867.902.861	955.874,939	1.823.777.800
2007/2008	867.902.861	1.068.487.699	1.936.390.560
2008/2009	1.367.902.862	1.205.612.138	2,573.515.000
2009/2010	1.367.902.862	1.605.417,138	2.973,320.000
2010/2011	1.370.000.000	1.934.210.000	3.304.210,000
TOTAL	**12,243,872,333**	**10,851,391,561**	**23,045,421,416**

Source: Higher Education Loans Board, 2010

At the inception of the Higher Education Loans Board, the government's budget estimate of university education was Kshs 120,000 per year per student. This was arrived at by calculating the total expenditure per academic year divided by the number of students enrolled (Commission for Higher Education, 1994). Following this the Government was to pay Kshs. 70,000 to the university while the student was to pay Kshs. 50,000. The Kshs. 6,000 fee was raised to Kshs. 8,000 and those who were not able to pay the balance of Kshs. 42,000 were eligible to the loans and bursaries from HELB.

The decision of how much a student is awarded is done through a means test introduced by the Government in 1995 as a result of the realization that students come from different socio-economic backgrounds and that the limitation of funds that could not allow for the award of maximum loan to all applicants. The Board uses information given in the application forms as the means testing instrument for determining the amount of awards to individual students. Out of this, it has developed criteria for awarding loans to students depending on the level of need. Loans awarded to undergraduate students currently attract an annual interest rate of 4% up from 2% on loans awarded before 1995. Postgraduate loans currently attract an annual interest rate of 12% up from 6%. Bursaries awarded are need tailored and they range from Kshs. 4,000 to Kshs. 8,000. The loans given cover tuition and subsistence. However the loans categories have kept on changing overtime since the inception of the Board (Table 4).

Table 4: Changes of Loan Awards between 1995 and 2010

Category	1995/1996 to 2003/2004		2004/2005		2005/2006 to 2010/2011	
	Loan Amount	Bursary	Loan Amount	Bursary	Loan Amount	Bursary
1	42.000	8.000	52.000	8.000	55,000	8.000
2	40.000	7.000	45.000	7.000	50,000	7.000
3	35.000	6.000	40.000	6.000	45,000	6.000
4	30.000	5.000	35.000	6.000	40,000	-
5	27.000	4.000	-	-	35,000	-
6	25.000	-	-	-	-	-
7	20.000	-	-	-	-	-

Source. Higher Education Loans Board, 2010.

The Board also introduced a scholarship scheme for postgraduate students in 2004 that has been able to benefit students who are awarded based on academic merit. Overtime, HELB has been

able to enhance access to higher education to those students who are needy and could otherwise have not afforded to pay their fees.

1.4 Student Loan Recoveries and Default

While investment in higher education by the Kenyan Government is commendable, the trend has not continued because of the ever increasing pressure from development partners. Limited participation in higher education is compounded by gender imbalances, socio- economic status and the regional disparities (Wiedman, 1995). In an effort to promote access and equity the Government of Kenya has intensified the mechanism of cost sharing and user charges in higher education.

The Higher Education Loans Board had originally been advancing loans to students in public universities and to undergraduate students only. Overtime the board has widened its coverage and currently it advances loans to students in private universities and also to post graduate students studying in local and private chartered universities.

The government and other members of the public with interest have been hoping that the fund will gradually operate in a revolving manner such that the money collected from past students is re-issued to finance the university students currently undertaking their programs. Currently about 50% of the total annual loans disbursed come from recoveries. The board has continuously appealed to ex-university students who received loans from the Government of Kenya during their years of studies to make efforts to repay their loans and also urged employers to support the Board in the recovery of university loans from beneficiaries in their employment.

One of the reasons why the initial student loan program. University Students Loans Schemes (USLS) failed was because of its inability to recover loans. However, with the inception of HELB, loan recovery has been improving over the years. Apart from efficient book keeping, cultivating a culture of repayment among loan recipients and networking with other Government departments, The HELB Act spells out the responsibilities and obligations of employers and loanees as follows:

- A loanee is required within one year of completion or as may be decided by the Board to inform the Board of his/her contact address and to begin repayment (section 15(1)).
- An employer is required to inform HELB within three months of employment of a loanee (Section 16(1).

r "Any loanee who fails or neglects to satisfy the requirements within the stipulated time shall, be guilty of an offence and is considered to be in default. Such a person is liable to a fine of not less than Kshs.5000.00" (HELB Act, 16(2)). "Where an employer fails, without reasonable excuse, to notify the Board of a loanee[1] s employment within the specified period shall be guilty of an offence and liable to a fine of not less than three thousand shillings for each month or part of the month that he/she fails to notify the Board of such employment" (HELB Act, 17(2)).

The latest attempt to curb default is the link deal between the Higher Education Loans Board and Metropol Credit Bureau which is expected to ensure that the repayment records of over 100,000 individuals who have received the university student loan are included in their credit histories. This implies that those who default on the loans will find it difficult borrowing from any other lender including the banking sector following the signing of an agreement between the country's main financier of university education and the credit reference bureau, under which the two will share loan repayment information. Those who do not repay their debts on time will have their names circulated to all lenders, potentially locking them out of the credit market. This complements ongoing initiatives by HELB, which has had issues with non-performing loans, to improve its collection record with defaulters totaling up to 60,000.

Chapman's (2005) work on Income Contingent loans for higher education, indicates that the student loan schemes are in operation in more than 70 countries around the world and that most of these loan schemes benefit from sizeable built-in government subsidies and thus are subject to repayment default and administrative costs that are not passed on to students borrowers. According to the author, in over 40 loan schemes, loans recovery was considerably low.

Loan recovery focuses on the scheme as a whole rather than on an individual borrower. It is concerned with how much of the total outlays of the loan scheme (total loans disbursement plus all other costs including administration) will be recovered through loan repayment. Therefore if there is default, then the result will be a drop in total repayment receipts though the individual required repayment ratio would remain unchanged. Recovery ratio is usually measured by the ratio of total (discounted) repayments to total (discounted) outlays. The recovery ratio is always lower than the repayment ratio because the latter takes no account of the probability of repayment default and does not include general administration costs. Recovery of loans in some schemes has been affected by the possibility of canceling individual repayment obligation for

such reasons as disability, student academic performance and the encouragement of the graduate to enter skills shortage occupations.

For the Kenyan scenario one of the reasons why the initial students loan programme, University Student Loans Scheme (USLS) failed was because of its inability to recover loans. HELB through efficient record keeping, obligations of employers through the use of the law to ensure repayment and by cultivating a culture of repayment among loan recipients has been able to increase recovery from Kshs. 57.5 million in 1995 to Kshs. 1.9 billion in 2010 (table 5).

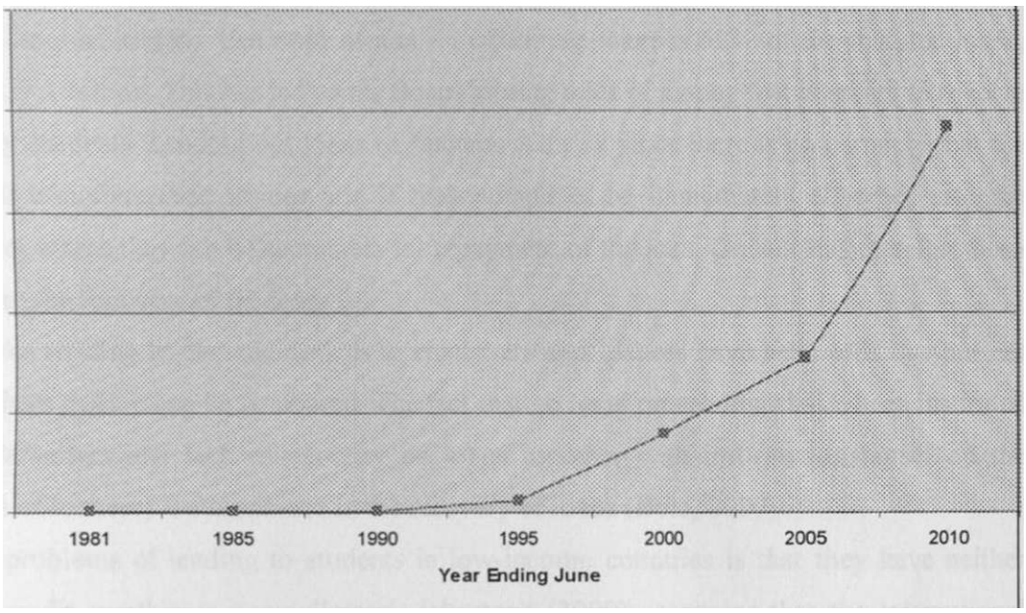
Table 5: Annual Recoveries (1981-2010)

Year ending June	Total Recoveries (Kshs)	Year ending June	Total Recoveries (Kshs)	Year ending June	Total Recoveries (Kshs)
1981	5.242.320.00	**1991**	21.312.362.55	**2001**	515.097,959.62
1982	648.560.00	**1992**	27.109.362.55	**2002**	548.723.424.19
1983	3.716.740.00	**1993**	23.172.363.00	**2003**	583.840.705.63
1984	4.060.740.00	**1994**	32.837.397.20	**2004**	674.119.582.22
1985	6.047.540.00	**1995**	57.486.980.55	**2005**	774.502.835.09
1986	6.572.580.00	**1996**	59.200.820.15	**2006**	881.145.033.82
1987	6.812.920.00	**1997**	83.677.691.35	**2007**	1,030.556.488.36
1988	8.017,940.00	**1998**	205.698.386.20	**2008**	1.340.515.917.63
1989	5.167.963.20	**1999**	281.394.613.00	**2009**	1.614.004.735.06
1990	7.477.984.25	**2000**	397.398.175.56	**2010**	1,926.877.650.13

Source. Higher Education Loans Board, 2010.

Through networking of HELB with other government institutions including Kenya Revenue Authority (KRA), National Social Security Fund (NSSF) and The National Hospital Insurance Fund (NHIF), the Board has been able to identify loan beneficiaries who are working in both private and public sector and mandating them to repay funds owed (Ngolovo, 2006). Despite unemployment and emigration being some of the major challenges to the loan recovery function, these efforts by the Board to recover the loan from former beneficiaries since its inception have proved to bear positive results as shown by the upward sloping curve in graph 1.

Graph 1: Annual Recoveries (1981-2010)



Source. Higher Education Loans Board, 2010.

Many of the beneficiaries from the loan scheme are not repaying their loans while others have completely defaulted though some of these beneficiaries are in a position of meeting their obligation. Records from HELB indicate that even after 20 years after receiving the loans, there are some beneficiaries who have not paid back their loans (table 6).

Tabic 6: Disbursements and Repayment on the Loan Awards (1975-2010)

Year Completed Studies	Total No. Of l.oanees	Total Loan Owed	No. Paying/ Paid	Amount I Icing Serviced	No. Not Paying	Not Being Sen iced
1975-1980	8.421	164.645.98700	1.898	40,188.081.00	6.523	124.457.906.00
1981-1985	10.281	360.625,65703	4.196	156.952.410.03	6.085	203.673.247.00
1986-1990	19.895	1.102.512.574 50	11,768	657.766.973.70	8.127	444.745.600.00
1991-1995	38.228	2.673.352.70060	24,167	1,700.813.369.60	14,052	972,539.331.00
1996-2000	45.428	4.818.888.489.77	26.861	3.099.925.683.22	18.567	1,718.962.806.80
2001-2005	40.246	4.986.941.074 90	19.822	2.549.215.821.30	20.424	2,437.725.253.60
2006-2010	60.843	9.832.664.698 00	24.102	3.450.885.306.00	36,741	6.381.879.392.40
TOTALS	223,342	23.939.631,181.30	88.712	11,655,747,644.85	73,778	12,283,983,536.80

Source: Higher Education Loans Board. 2010.

According to data from HELB, since 1974 to 2008, KShs.22.65 billion was disbursed to 231,380 students in the public and private universities as loans. Of this amount, Kshs. 16.3 billion has matured. By 30th June 2008, only Kshs.7.59 billion (about 48%) had been recovered as principal and accrued interest arrears. The ratio of non - performing loans is 52% of the matured loans, that is, Kshs. 9.1 billion. This has led to the Board loosing a lot of money that is meant to revolve among needy students. Lending out loans to students is a risk since there is no certainty that the students will complete their studies and if they complete, be immediately absorbed into the labour market where they can be accessible for repayment of the loan. Default has therefore been a challenge to the recovery of the loan.

Strategies like sending of demand notices to employers and loanees have been effective but not to a level where default can be combated. The fact that no legal proceedings have been instituted to follow defaulters and lack of security on loans together with information lapse (on the whereabouts of loanees) is a hindrance in the recovery of loans (Bolo, 2000).

One of the problems of lending to students in low-income countries is that they have neither established credit worthiness nor collateral. Johnstone (2000) ascertains that the international higher educational policy landscape is littered with loan programs that have either failed outright or failed to accommodate the diversely difficult balance between expanding higher educational participation and accessibility while simultaneously expanding real costs recovery from students. Increasing numbers of student admissions have led to low loan allocation for each individual thus some students have had to drop out of university. This makes it very hard for HELB to recover the loans especially when it is to deal with two groups of defaulters (those who do not repay because they are not employed and those who do not repay because they evade for such reasons as having dropped out of university prematurely).

Loans disbursement/lending and recovery are the core functions of HELB with support from other departments. Between the two core functions of the Board, the former has done commendably well. The latter has also done well over the years but default still remains a challenge yet it is expected to generate funds to finance lending to the ever growing student population undertaking various programs in institutions of higher learning. The current study therefore seeks to find out the effectiveness of the recovery function in dealing with this challenge of default.

1.5 Statement of the Problem.

The Higher Education Loans Board has been the primary vehicle for delivering direct financial assistance to university students in Kenya since its inception in 1995 It has been of great help to many Kenyans pursuing university education and thereby achieving careers while at the same time developing human capital for the economy. The Board has however been the subject of various criticisms especially on default rates and its flexibility with respect to repayment arrangement among others. In the recent past the cost of higher education has gone up yet default by previous beneficiaries of the loan scheme continues to be a challenge to HELB thus resulting in not only hardship faced by the others who are eligible and cannot access the loans but also to redundancy of the established revolving fund. Given that the Board needs funds to run all its functions and assist the needy students who qualify to join universities, defaulting of the loan atfects the running of the Board and also access to university education by qualified Kenyans who cannot afford to meet the ever-increasing cost. It will be overburdening for the government to come in and give full financial support to the Board. The mechanism put in place by the Board as regards loan recovery and how the Board counters loan default cases should therefore be of great concern to all the stakeholders of higher education. After the inception of HELB, recovery shot up tremendously but still default rates have been high and given that the board plays an important role in enhancing access to higher education it is of great importance to look at the mechanism and strategies of curbing the persistence of default rates.

Various studies have been done regarding students loan provision in many countries in Africa and beyond. These studies however did not directly investigate the effectiveness of the recovery function of HELB though it was one of the suggested areas for further studies by some authors. Information regarding the effectiveness of the function in curbing student's loan default in Kenya is therefore scanty thus this study seeks to investigate this to enable fill this knowledge S[a]P

1.6 Research Questions.

The following research questions will guide the study:

1) What are the reasons for persistence of default on the HELB loans by beneficiaries?
2) What loan recovery strategies have been put in place by HELB to reduce or curb default?
3) What challenges face HELB in trying to curb the persistence of loan default?
4) What can be done to enhance loan recovery and eradicate default cases?

1.7 Objectives of the Study

The overall objective of this study is to determine the effectiveness of the Higher Education Loans Board recovery function is in dealing with default on the university student loans.

The study therefore aims at achieving the following specific objectives:

1) To identify the reasons for the persistence of default on the University Student Loan.
2) To establish whether the strategies put in place by Higher Education Loans Board and its stakeholders to curb default are effective.
3) To identify the challenges faced by Higher Education Loans Board in the effort to curb or reduce default.
4) To make policy recommendations to enhance loan recovery and reduction of loan default among beneficiaries of the loan

1.8 Significance of the Study

The study is expected to serve as an eye opener to the loaning institution, HELB on the effectiveness of its current loan recovery strategies on the basis of the research findings. This will therefore enable the institution to evaluate its internal functioning in terms of recovery of the university student loans from past beneficiaries. The government through the Ministry of Higher Education will be able to identify the challenges faced by the semi-autonomous agency thus bringing in the necessary support.

The study is also expected to enlighten the current student beneficiaries on the importance of revolving fund and the importance of repayment of the loans. This will assist in enhancing the continuity of the revolving fund and therefore enhancement of access to university education by other needy and eligible students. It will be a knowledge base for all stakeholders, policy makers and HELB officials on the importance of the fund thus enable them appreciate and accord the necessary support to build and sustain it.

Apart from making recommendations on dealing with default, the study will identify areas for further studies in an effort to curb or reduce default on the university students' loan.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Several studies have been done on the subject of student loans and default in several parts of the world. The causes of default on the loans which is the focus of this study, as identified by different authors, range from institutional to individual characteristics of the loan beneficiaries. Proposed causes of student loan default, according to a review of the literature, seem to fall into categories of the defaulters' inability to pay, the imperfect knowledge or negative attitudes of some borrowers and the incentives for default created by the student loan program and related institutions. This section will therefore review literature relevant to the current study covering both theoretical and empirical issues considered to contribute to the default of student loans.

2.2 Theoretical Literature Review

The idea of student loans arose out of cost sharing which addresses the distribution of educational costs between governments (taxpayers) and the individual participants in (higher) education and their families. The reasons for having students participate in the costs of higher education are obvious. The Human Capital Theory states that students should invest in higher education as long as higher education graduates have relatively higher earnings and greater job opportunities and security than people with lower levels of education. Studies show that the private rate of return compared to the costs of higher education on average seems to be high (Leslie and Brinkman, 1987; Heller, 1997). Consequently, if individual students gain from higher education, it is only fair that students should pay (part of) the costs (Eurydice, 1999).

In addition, it is widely agreed that education also generates consumption benefits thus the benefit of a better enjoyment of leisure, a raised level of knowledge, personal development, an enhanced relativism, tolerance and flexibility, and an increase in practical competencies. If higher education yields these types of benefits, such benefits should be paid for by the students rather than the taxpayer (Dolton, 1997).

Regardless of the arguments for private investment in higher education, there are also a number of arguments for government involvement in education. This includes the presumed relationship between higher education and economic growth, the increased tax payments from graduates, and the non-monetary benefits of higher education to society, such as increased social participation, changes in income distribution, cultural development, and a decrease in crime.

Investment in higher education involves risks for students who are typically uncertain about their abilities and future jobs (Geske and Cohn, 1998), thus they may find difficulties in obtaining loans from private banks to meet their study costs (Oosterbeek, 1998). Coupled with the uncertainty, lenders have no influence on the future earnings of students; they are therefore reluctant in lending them money to finance their studies without risk premiums. This bias against human capital investments may result in an underinvestment in education which therefore calls for government intervention, either by guaranteeing bank loans or by offering subsidized loans themselves (Barr, 1998).

Equity concerns are another reason for government intervention in higher education. This refers to the extent to which higher education does or should redistribute income between different social classes (Barr, 1998) thus guaranteeing equal opportunities to access higher education to all with a minimum level of academic competence, regardless of their socio-economic background. This is so especially in an era when a larger part of the costs of higher education are shifted towards students and their families.

In theory, price changes on the one hand have an effect on the demand for higher education. If the prices charged to students increase, they will probably demand less education and if the subsidies increase, demand probably increases. On the other hand, as long as the private rate of return to higher education (in the long run) is positive, people are likely to invest. Underinvestment in education can be expected to be particularly severe among poorer families because they lack the ability of self-finance or to borrow against other collateral. From a sociological point of view, people from disadvantaged backgrounds are also less likely to invest in higher education because they lack an environment in which higher education attendance is encouraged. In such situations, financial incentives seem to have an increased effect on the likelihood of participating in higher education.

Students' loan program is an efficient solution to paying for higher education as borrowing money to finance higher education makes distinct economic sense if considered as a future investment to the borrower. This is especially for those who currently are not able to finance their education as they can pay from future earnings. The returns may not only be counted in monetary terms but also in the valuable contributions to all areas of the borrowers' life. However in some cases higher earnings after completion of university education may not be a reality since for some graduates earnings may not increase as anticipated and yet the debt continues growing sometimes to unmanageable levels. This is because the job market is complex and uncertain

(Schwartz, 1999) especially in developing nations where earnings may be relatively low and unstable. As the cost of education increases, therefore the need for a government subsidy in higher education costs becomes a necessity especially for students considering an investment in higher education but have financial inabilities.

Although there are varieties of student lending schemes from an organizational viewpoint, the basic principles remain the same (Chapman, 2002). They include the following.

1) Repayments are calculated as x percent of the borrower's subsequent earnings. These payments are in some countries collected alongside income tax, which eases access as the loan has built-in insurance against inability to repay. Income-contingent loans are also more equitable and satisfy more fully the ability-to-pay principle, since graduates' payments are in direct proportion to their income.
2) Students receive loans to cover the direct cost of education (tuition fees, education supplies, including computers) and, in some cases, living expenses until they complete their studies. Then, after a short grace period to find a job, usually from six to twelve months, the graduate starts repaying the loan on a monthly basis. This makes higher education free at the point of use.
3) In most countries, student loan institutions have traditionally been run by public agencies, with the exception of programs administered directly by well-endowed private universities in the United States.
4) Whenever the interest rate is lower than inflation, the loan is subsidized. Loan programs have traditionally been heavily subsidized to minimize the burden on the students, but this has meant that the student loan agencies have been losing part of their assets as long as they have given out subsidized loans. Because of the heavily subsidized interest rates, high default rates, and high administrative costs, the repayment proportion of loans has not been very significant in most cases.

2.3 Empirical Literature Review

Previous studies have provided many, though perhaps not always consistent, insights into the factors related to student loan defaults. The genesis of early studies was the need to comment on the policy of holding institutions responsible for borrower defaults. Therefore, many prior studies have concerned themselves with evaluating the relative importance of borrower and institutional characteristics. Several studies have found that institutional characteristics have little or no

association to loan repayment behavior and that borrower variables are much more important predictors of default (Knapp and Seaks, 1990; Volkwein and Szelest, 1995; Wilms, Moore and Bolus, 1987). Nevertheless, a number of the studies found the type of institution of attendance to be significantly related to repayment, even after factoring in the influence of borrower characteristics (Dynarksi, 1994; Monteverde, 1999; Meyer, 1998; Podgursky, 2000; Volkwein, 1995; Woo, 2002). Among this group of studies, only Dynarski and Monteverde claimed more than a moderate effect for institutional characteristics. Monteverde suggested researchers might have been posing the wrong question by comparing institutional and borrower characteristics.

Other researchers have also included variables that describe the borrower's experience after leaving college (Dynarksi, 1994; Volkwein and Szelest, 1995; Volkwein, 1995; Woo, 2002). The most consistent finding of past studies is that borrowers who graduate (or who earn a degree or who do not withdraw) have a much lower probability of defaulting on their loans, as compared to borrowers who do not graduate (Dynarksi, 1994; Knapp and Seaks, 1990; Meyer, 1998; Podgursky, 2000; Volkwein and Szelest, 1995; Volkwein, 1995; Wilms, Moore and Bolus, 1987; Woo, 2002). The studies found the relationship to be both statistically significant and strongly related to default behavior. In addition, for many of these studies, graduation status was the single most important variable.

Researchers have attempted to operationalize few other variables that measure the borrower's performance in college. Volkwein (1995) found that the borrower's performance in college and whether the borrower was a science or technology major produced significant but relatively small decreases in the probability of default. A related study by Volkwein and Szelest (1995) uncovered similar results with respect to college academic performance and courses undertaken. Woo (2002) found that attainment of a graduate or professional degree greatly reduces the chances of default. The author further established that borrowers who attended more than one college were also less likely to default. The area of specialization in studies did not have a significant association to default in Woo's study. Meyer (1998) however, found that as the academic level attained by a borrower increases, the probability of default decreases.

Most researchers have devoted much more attention to demographic variables than to performance factors. Thus another prominent finding of default studies has been that ethnicity/race is strongly related to default (Dynarksi, 1994; Knapp and Seaks, 1990, 1990; Podgursky, 2000; Volkwein and Szelest, 1995; Volkwein, 1995; Wilms, Moore and Bolus, 1987;

Woo, 2002). In particular, being a Black (in the United States of America) greatly increases the probability of default (Volkwein and Szelest, 1995; Volkwein, 1995 and Woo, 2002).

Previous research has also determined that other demographic characteristics have significant, though mostly smaller, associations to default. After ethnicity, parental income appears to be the most commonly-tested demographic variable, and studies have found higher income levels to be associated with decreases in the probability of default (Dynarksi, 1994; Knapp and Seaks, 1990; Volkwein, 1995; Wilms, Moore and Bolus, 1987; Woo, 2002). Gender is also routinely analyzed, and researchers usually conclude that being female is related to a substantial reduction in the likelihood of defaulting (Podgursky, 2000; Volkwein, 1995; Woo, 2002). Podgursky, Woo and Meyer examined the age of the borrower and determined it to have a significant but small effect on default behavior, with increases in age related to higher probabilities of defaulting. In contrast, Knapp and Seaks could not detect a statistically significant relationship for either the gender or age of the borrower. Volkwein and Szelest (1995) also failed to uncover any association between gender and default behavior.

Among the other demographic variables that researchers have found to have significant relationships to default are the marital status of parents (Knapp and Seaks, 1990); Wilms, Moore and Bolus, (1987), the parents' educational level (Volkwein, 1995), having dependents (Dynarksi, 1994; Volkwein and Szelest, 1995; Volkwein, 1995; Woo, 2002), the marital status of the borrower (Dynarksi, 1994; Volkwein and Szelest, 1995; Volkwein, 1995), and the borrower's income (Dynarksi, 1994; Volkwein and Szelest, 1995; Volkwein, 1995; Woo, 2002).

Several of the studies have also included loan-related variables. Some of the analyses determined that there was no statistically significant relationship between the amounts of loans borrowed and default behavior (Knapp and Seaks, 1990; Volkwein and Szelest, 1995; Volkwein, et. al., 1995; Woo, 2002). Meyer(1998), however, found that larger amounts of total debt increased the probability of default by one percentage point. And Dynarski (1994) determined that the probability of default rose with increases in the size of borrowers' monthly loan payments. Furthermore, Woo (2002) detected a small increase in the likelihood of default associated with an increase in the number of loans a borrower has

Johnstone (1986) as quoted in Belio (2000) indicates that students loan programs have been introduced to enable students receive financial support in order to meet their living expenses (travels and books) like in most Scandinavian countries, or to pay tuition fees like Japan, USA Kenya, and Zimbabwe. The author further states that the loans meet other students' expenses like

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meals, accommodation, medical care as in Greece, Portugal Spain and in majority of developing countries like Kenya and Malawi. This is a clear indication that majority of the students depend on loans for financial support while undertaking their university education.

The loaning systems in Africa have been viewed as unworkable because of the continued problems the systems have been facing. In Ghana, such a program was introduced in 1971 only to be dropped a year later though it was re-established again in 2005, and in Kenya and Nigeria, up to 1995 the loaning systems suffered from poor administration and low recovery ratios due to high rates of default and evasion. Ziderman and Albrecht (1995) indicate that such factors have made the student loan scheme in Africa more expensive to operate than if outright grants or bursaries had been provided. They argue that a fundamental problem with lending to students and especially to needy students in low-income countries is that they have neither established credit worthiness nor collateral. The certainty of repayment therefore depends neither on the reputation nor creditworthiness of the borrower. It does not depend on the pledge of recoverable assets or collateral equivalent to the value of the loan that the lender can claim in the event that the borrower does not repay.

Student loan programs are among the most complex, controversial and frequently misunderstood and yet potentially important elements in the financing of higher education. Their importance stems from the increasing prominence of cost sharing making the shift of at least some higher education costs.

The lending schemes have often been labeled 'revolving funds" which, once capitalized are expected to finance themselves through repayments from earlier loans. In developing countries, student loan programs have been used to assist with living expenses and typically cover only a smaller percent of the students' population (Ziderman and Alrecht, 1995). Woodhall (1992) indicates that student's loan programs can be expensive, inefficient and inequitable especially if they are not properly implemented. This is true of students support programs that are heavily subsidized and access is open to all students irrespective of need or ability as is the case with many student loan schemes in Africa. The element of hidden grants makes subsidized loans inefficient and inequitable since the rich who are often overrepresented in higher education are more likely to benefit from the subsidized loans than the poor. The subsidized loans are therefore considered to be anti egalitarian since they represent subsidy to the rich from the poor. They involve a transfer of income from poor tax payers to those who are going to earn higher income in the future.

Colclough (1993) indicates that if the loans were taken out to cover four years of study and to be repaid over a 20 year period, the government would not make recoveries of 50% of the initial generation of student loans until 14 years after the start of the scheme. The relatively high subsidies and long periods of repayment makes subsidized loans cheaper compared to loans secured from other financial institutions and thus prone to default.

2.4 Literature Overview

In their endeavor to find the factors related to default, researchers have evaluated many borrower characteristics that are relevant to the present study. These factors include demographic descriptors such as, gender, age and income. Apart from Meyer (1998) who determined that the probability of default declined with increases in the cost of attendance and further discovered that the likelihood of default increased substantially for borrowers with the increase in financial aid and expected family contribution, many studies have paid scant attention to financial aid-related variables (like financial need and expected family contribution).

Though some studies indicate that students who are successful in their studies tend to have lower default rates than those who are not, this may just be a hopeful finding in that loan repayment appears to hinge on factors that are at least partially under the control of the borrower, institutions, or both.

This study will therefore among other factors, seek to establish whether financial assistance mitigates the probability of default in ways that are independent of income. It will evaluate a number of characteristics that describe borrowers and stakeholders in higher education (institutions of higher learning, government, loaning institution, and the labour market) and how they relate to the probability of default of the student loan. The study will look at the characteristics of the variables in terms of combating or encouraging default.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

Conceptually, the inability of a borrower of a loan to meet contractual obligation as agreed when due, amounts to default irrespective of reasons that may be given by the loanee(s) for the default. The university students' loan is currently experiencing a high default rate especially if they are to be compared to loans in the banking sector thus making it necessary to develop a risk management model. In an effort to better understand which students are likely to default, and ultimately to design programs to reduce the number of borrowers who default, this study performed an analysis of student loan defaulters focusing on factors identified as critical determinants of default. It identified financial, demographic characteristics, and institutional factors as critical determinants of default.

The study regarded a borrower as being in default if within one year of completion of studies does not notify HELB of his/her contact address, or commence repayment of the loan (HELB Act, Section 15). This is irrespective of whether the loanee is employed or not.

3.2 Theoretical Framework

The study examined variables considered to have a significant impact on default behavior in terms of:

a) The beneficiary's preparedness/loan briefing., demographics and financial factors.
b) Institutions considered important to the success of HELB in reducing default on the student loan This category included the universities and the relevant government ministries.
c) The Higher Education Loans Board on the administration of the recovery function.

Beneficiaries' demographic characteristics described the background of the loanee. The variables in this category included age, number of dependants and marital status. These variables were considered to affect the probability of repaying student loans in different ways. Age alone was considered unlikely to be a primary factor of default though it may reflect the borrower's level of responsibility and experience. Older borrowers would be more likely to default considering that they may have accumulated more overall debt (credit card, home mortgages, etc.) and are more likely to have more dependents. On the contrary such loanees could be financially stable thus

able to service the loan. A borrower's marital status and the number of dependants may proxy for the amount of resources a loanee has available to repay his or her loan, with married loanees having more competing demands on their resources, making them more likely to default.

Though income is an important factor, it was not included as one of the variables as it was considered to be correlated to most of the variables in the model. Permanent employment reduces the risk of default while unemployment increases it. The fact that permanent employment also provides an assurance of regular incomes makes it easy for the beneficiaries repay their university loans. It was presumed that the unemployed would be more likely to default due to liquidity and wealth constraints. This is so especially since the only expected source of repayment of the student loan is through income earned from employment thus a loanee is deemed to be prepared for repayment in terms of financial ability if employed.

The loan-related variables were also tested to ascertain their relationship to default behavior of the borrower. The amount of loans awarded was expected to indicate the repayment burden that a borrower faces. The higher the burden, the greater the likelihood of default. However, past studies have shown that these variables are usually a proxy for how long the borrower was in college thus the higher the loan amount, the more education the borrower received and, therefore, the less likely the borrower is to default.

It was also possible that variables such as the student's major are correlated with the probability of default as students in certain majors may earn more than those in others, making them more likely to repay their loans successfully.

Preparedness in this study considered exit counseling to beneficiaries as important in developing positive attitude towards repaying of the student loan. This however is expected to be achieved through partnership between learning institutions and HELB by developing counseling programs for beneficiaries on loan repayment prior to leaving college upon completion of studies. If exit counseling is effective, the outcome should reflect that many of the students that the model predicts to default and in fact do not default, received exit counseling; whereas, many of those who did default left college without receiving the required exit counseling.

Other factors considered as likely to contribute to default of the loan included employers' and other stakeholders' attitude towards repayment of the loan. Proper networking between universities and HELB would enable tracking of the loan beneficiaries easier thus reduction in default. Whether an employer is aware of obligations in relation to the employment of a beneficiary of the student loan and the repayment of the loan is critical. It would be expected that

lack of knowledge will lead to an increased default rate while having the required information would reduce or combat default as HELB relies a lot on the employers to identify, commence deduction and remittance of the loan.

Support from the Ministry of Higher Education is considered crucial in terms of funding and legislature. Resources availed by the government to the lending institution for the purpose of funding the recovery function towards enhancing recoveries was also considered to have a significant relationship with default A strong legal backing from the government through the Ministry would reduce or combat default.

The system of administration of the recovery function by HELB can either increase or decrease the default rate of the loan. This includes measures put in place by the Board in terms personnel, other necessary resources and procedures. It was presumed that if these measures were not strong, the default problem would persist whereas if they are strong, then the default rate will either reduce or be combated.

The interaction of all the variables was therefore expected to indicate that beneficiaries of the loan, learning institutions, the lending institution (HELB), employers and the government through the Ministry of Higher Education would either encourage or discourage default of the student loan.

3.3 Model Specification:

In this study, the dependent variable default equals 1 if the beneficiary is in default and 0 if a beneficiary repaid or is repaying the university loans. The model in this study was therefore expected to yield the predicted probability of default in the loan repayment assuming that the variable Li is binary, that is, it can have only two possible outcomes, denoted as 1 or 0. There were also vectors of regressors X, which were assumed to influence the probability of default. The model was thus assumed to take the form:

$$\Pr(L=1/X) = \Phi(X'P) \qquad 0)$$

Where ***Pr*** denotes probability and Φ is the Cumulative Distribution Function (CDF) of the standard normal distribution. The parameters *ft* are estimated by maximum likelihood. If therefore there exists an auxiliary random variable, then:

$$L^* = X'[3 + e \qquad (2)$$

where ***e - N(0***, 1) and ***L*** can be viewed as an indicator for whether the latent variable is positive:

$$L = 1(L^*>o) = \{1 \text{ if } L^* > 0 \text{ i.e. } -s < X'p, 0 \text{ otherwise}\} \quad (3)$$

$$\text{The above can also be expressed as : } Lj = p_o + PjXj + e, \quad (4)$$

Where: L; is the dependent variable explained as; Lj = 1, if there is default,

Lj = 0, if there is no default,

Po is the intercept

Pi is the regression coefficient of the explanatory variables that explain the probability of default,

X, = independent variables (i=l, 2, 3. . . . .) which are the factors determining the probability of the student loan default. Thus:

$$L\,i = Po + p,X,i + p_2X_{2i} + p_3X_{3i} + P4X,i + p_5X_{5i} + PgX^i + p_7X_{7i} + —ei \quad (5)$$

The relationship between the dependent and the independent variables was expected to be exhibited as follows:

The coefficient (Pi of total amount of loan owed (XI) was expected to have a positive effect as the higher the amount borrowed, the higher the probability of default.

The coefficient (p_2) of number of dependants (X_2) was expected to have a positive effect as the higher number of dependants, the higher the default probability.

The coefficient (P_3) of marital status (X_3) of the loanee, which is a dummy variable (married=l,0 if otherwise) was expected to have an effect on default as a married loanee would have more financial commitments thus may not consider repayment of the loan as a priority.

The coefficient (p_4) of course studied in college (X,) was to have an effect on default assuming that some courses lead to professions that are easily accessible for repayment or are well paying thus ability by the beneficiaries to pay their loans.

The coefficient (P_5) of preparedness (X_5) was expected to have a negative effect on default as the higher the level of preparedness the lower the default probability. Whether a loanee completed studies successfully, received exit counseling on the loan repayment or not changes the attitude of the loanees towards repayment of the loan.

The coefficient (P_6) of loanee's age (X_6) was expected to have an effect on default assuming that older loanees would be more responsible thus are more unlikely to default or that they have accumulated resources to enable them repay their university loan. Younger loanees on the other

hand may have limited resources for repayment of the loan or may not have secured employment to enable them repay their university loans.

The coefficient (P7) of the operation funds **(X_7)** was expected to have a negative effect on default, as availability of sufficient funds for the recovery function would enable employment of more personnel and other necessary instruments in an effort to reduce or curb default. In this case, the source of the funds was to be from the government and recoveries. Therefore, the higher the amount of operation funds, the lower the default probability.

The above explanation of the variables and their effects on the default of the university student loans is on the condition of *ceteris paribus.*

3.4 Data Collection, Sample and Sampling Procedures

The study targeted chartered universities (public and private), whose students are funded through the university students' loans scheme and selected twenty (20) companies (employers whose employees include beneficiaries of the university student loans).

The total number of respondents was expected to be one hundred and thirty four (134) comprising:

1) Fifty (50) university loan beneficiaries currently employed but not servicing their loans.
2) Fifty (50) university loan beneficiaries currently employed and servicing their loans.
3) Human Resource Managers/ Officers from the selected companies (20).
4) University Finance Officers and Deans of Students from four selected universities (8).
5) Six (6) HELB officials three (3) from The Lending Department and three (3) from Loan Recovery Department.

Universities were stratified into public and private chartered universities. From each category, two universities were picked by use of simple random sampling. Officials from the same universities were also selected by use of purposive sampling. In this case the sample comprised of Finance Officers and Deans of Students as they are better placed to provide the information required for the purpose of this study.

Among the HELB officials drawn into the study, were disbursement and loans recovery department officers selected by use of simple random.

The Human Resource officers and loanees were drawn from at least five (5) different provinces. From each province (4) companies were selected by use of simple random sampling. The size of

the company was however considered in terms of university graduates' employment capacity. The list of employers was obtained from HELB as the Board is able to advise on which employers have a higher graduate capacity in employment thus likely to provide the required information. Human Resource Officers were drawn one from each of the companies. From the same companies, at least four (4) former beneficiaries of the student loans (two currently and two not currently servicing their student loans) were selected by use of simple random sampling. In cases where the required numbers of respondents per employer were not identified, the numbers of sampled employers were either expanded or the numbers of respondents from other employers within the sample increased.

3.5 Research Instruments

The study used questionnaires and document analysis guides.

(a) Questionnaires

The primary data was collected with the aid of a structured questionnaire, which was administered to selected respondents. This study used questionnaires because of their economy, anonymity, permit of use of standardized questions, have uniform procedures, provide time for subject to think about response, are easy to score and the target population is able to read and write.

As for beneficiaries, their questions had sections that included the demographic information, causes of student loans default, the students' perception as regards the loaning service, their readiness to service loans after completion of studies, their attitude towards HELB and what should be done to enhance recovery of loans.

The HELB officials' questions were in sections that included demographic information from respondents of the disbursement and loan recovery departments, strategies put in place at HELB or loan recovery, their input as HELB workers in enhancing loan recovery, causes of rising loan default cases, the challenges they face on the recovery of the loans and what can be done to enhance the effectiveness of the loan recovery function of HELB.

The University officials' questions were in sections of demographic information, the universities' role in loan recovery, perception towards the effectiveness of the recovery function and what can be done to enhance recovery thus curb default.

Human Resources Officers were also be required to provide information on what employers are doing to enhance recovery, challenges faced, and suggestions on how to curb or reduce default.

(b) Document analysis guide

The documents included in the review of this study were;

1) Annual reports on funds availed for the operation of recovery function both from the government and from the current recoveries of the student loan.
2) Loan recovery reports for the last five years from the higher loans board.
3) Reports by the board on default cases.

(c) Validity

To ensure validity of the mentioned instruments the researcher reviewed the instruments with peers and research specialists especially her supervisors. This assisted in examination of the content and degree to which the instruments would gather the information intended.

(d) Reliability

The questionnaire was pilot tested on 10 university students and two HELB officials by use of the test to re-test method The respondents involved in the pilot study did not participate in the main study. The researcher administered the instruments and after a period of two weeks re-administered the same instruments on the same respondents. The two sets of data were then coded and entered into the computer by use of statistical package for social sciences (SPSS) and correlated to arrive at a correlation coefficient. According to Berthoid (2000), a reliability index of 0.6 is satisfactory enough for any research instrument. The instrument was revised accordingly depending on the findings (co-efficient) from the pilot study.

3.5 Data collection procedures

Empirical data used in this study included both primary data and secondary data. The primary data as indicated was obtained through structured questionnaires, which were administered on the respondents. Secondary data was obtained from The Higher Education Loans Board database.

The researcher sought clearance from all the institutions whose input was necessary in this study to enable easy acquisition of information and also get consent to proceed with data collection. The researcher visited each institution to administer the questionnaires after confirmation that the targeted respondents were available. Document analysis was continuous depending on the accessibility and availability of the documents.

3.6 Data analysis

After data collection, it was sorted out and edited then classified according to their homogeneity. Questionnaires for beneficiaries were treated separately from those of HELB officials, human resource officers and university officials. Descriptive and inferential statistics were used in the analysis of data by use of the probit model. Descriptive statistics included frequencies, means and standard deviation to summarize findings in order to describe the population sample. Qualitative data from the questionnaire was organized in themes that emerge in the research questions. The researcher then used narratives to write an interpretive report in order to explain the actual picture on the effectiveness of the loan recovery function of the HELB.

It is important to note that not all the respondents co-operated. Some gave limited information and some declined to provide information especially the non-paying beneficiaries. As such the expected sample size reduced to one hundred and three (103) respondents.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.1 Descriptive Statistics

Data obtained from HELB (appendix I) indicates that the worst performance of the loan repayment is among beneficiaries of between 1975 and 1982. This however falls in the period when beneficiaries did not have national identity numbers thus some could have paid the loan but without national identity number updates may have been made difficult. The payments of such beneficiaries could therefore have been posted to suspense thus contributing to the low performance.

The data (appendix **II)** further indicates recovery growth between 2001 and 2006 a period when there was a consistent increase on the government grants. Though the grants remained constant thereafter, the loan recoveries continued to increase. Therefore much as the government contribution may be a necessary part of the assistance to HELB in the effort to manage default, this variable alone does not seem to determine the cause of the student loans default.

Most of the human resources officers from the sampled employers were aware of the obligation of the employers citing communication by the loaning institution on the same therefore lack of compliance in this case could have been caused by laxity to take legal action by HELB on the non compliant institutions.

The university officers from the sampled universities indicated that they were not aware of any student loan canceling programmes but would be willing to partner with HELB on the prevention of default through such programmes.

The research paper targeted one hundred and thirty four (134) respondents. However, not all the respondents cooperated. They either withheld or gave scanty information thus the number reduced to one hundred and three (103). From the respondents who volunteered information, a summary is given as follows:

Gender:

Out of the 103 respondents, 65 were male and 38 were female comprising 63 .11% and 36.89% respectively.

Marital status:

Out of the totalrespondents, 60 were married forming 58.25 % and 43 were single forming 41.75%.

Age:

The ages of the respondents were categorized into above and below forty (40) years. Respondents below the age of forty years were 32 (31.07%) and above 40 were 71 (68.93%).

Number of dependants:

The number of dependants per respondent ranged between zero (0) and five (5). Most of the respondents (36) did no have any dependant. Respondents with one (1) to three (3) dependants each were fifty three (53). Only six (6) had five dependants each.

University attended:

Out of the total respondents, 98 studied in public universities comprising 95.15% compared to 5 (4.85%) from private universities. This is a reflection of the total percentage of the number of beneficiaries of the university loans studying or who studied in the private universities compared to the public universities.

Course taken t:

The categories of courses taken by the respondents were Bachelor of Education with 24 respondents comprising 23.3%, Bachelor of Science, 48 (46.6%), Bachelor of Arts, 28 (27.18%), Bachelor of Law, 1(0.97%) and Bachelor of Commerce, 2 (1.94 %) of the total number of respondents.

Loan Awarded:

The amount of loan awarded to each respondent varied between Kshs 20,000.00 to Kshs. 168,000.00. The majority of the respondents (79) which is 76.7% got an award of between Kshs. 50,000.00 and 149,000.00 while 10.68% (11) got up to Kshs. 50,000.00 and 12.62% (13) got above Kshs. 150,000.00.

Default:

The total numbers of the respondents in default were 75 which were 72.82% of the total number of respondents while 28 were compliant forming 27.18% of the total.

Employment status:

Comparing the default status and the employment status of respondents, it can be concluded that the main cause of default among the respondents is unemployment.

The respondents comprised of 27 employed respondents forming 26.21% of the total and 76 unemployed respondents which is 73.79% of the total sample population. Despite the fact that many of the unemployed were unwilling to provide sufficient information, those who did so expressed their willingness to repay the loan as soon as they were employed. There is therefore a relationship between employment and default comparing the numbers on default and the unemployed and vice versa. The figures point to the fact that the unemployment seems to contribute a lot to default. The slight difference could be explained by the fact that some unemployed beneficiaries of the loans make repayments of their university loans.

Awareness of obligation:

The respondents were to indicate whether they are aware about their obligation on their university loan repayment. 75.73% of the respondents were aware of their obligation, while 24.27% were not aware. This therefore points to the fact that most of the loanees who default are aware about their obligation and that their reason of default is not lack of awareness.

HELB Administration:

The respondents were to indicate whether in their opinion the Higher Education Loans Board was doing enough to curb or reduce default. A majority (86.50%) of them felt that HELB was doing enough. Based on the relatively small proportion of non-paying students who are unaware of their repayment obligation, HELB appears to be making headway in its efforts to curb default through its continuous awareness campaigns with both students and employers. A relatively small proportion (3%) cited that they had all along been able and willing to pay but their efforts to contact HELB and schedule repayment did not bear fruit. The non-paying beneficiaries were equally divided between unemployment and low income as reasons for their non-compliance. The lack of follow up by HELB also played a significant (8.7%) thus calling for the assertion of HELB officers to enhance make follow-ups.

Nearly half (47%) of the loan beneficiaries interviewed were able to commence loan repayment within a span of two years with a comparable number (44%) commencing loan repayment within two to six years. It is most probable that most of the graduates who were able to commence repayment within two years were in the teaching profession given the similarity between the proportion of paying teachers and the proportion of early repayment starters.

The majority (59%) of the paying beneficiaries were between the ages of 31 and 40 years (31-40) followed by those aged between 41 and 50 years (41-50). Consequently, the majority (56%) of the non-compliant beneficiaries were found in the 20 to 30 year age bracket. This is logical given

that graduates between 20 and 30 years (20-30), are yet to find employment or even a stable source of income hence they are bound to register lower repayment levels.

Married loanees comprised the majority of paying graduates which can be attributed to income levels which generally increase with experience (age) or availability of resources accumulated overtime thus increasing the ability to repayment of the loans. The proportion of non-compliant singles is higher by dint of generally lower a age which means that to a large extent the singles are yet to secure stable income needed for the commencement of loan repayment.

Summary Statistics

Variable	*Observations*	*Mean*	*Standard Deviation*	*Minimum*	*Maximum*
, Gender	103	1.37	0.484875	1	2
1 Marital Status	103	1.58	0.4955542	1	2
1 Age	103	1.69	0.4650348	1	2
Dependants	103	1.62	1.560018		5
University attended	103	1.05	0.215963	1	2
Course taken	103	2.12	0.8436728	1	5
Amount Awarded	103	2.47	0.8496312	1	4
Default	103	0.73	0.4470859		1
Employment	103	1.74	0.4419468	1	2
1 Obligation awareness	103	1.24	0.4308227	1	2
HELB Administration	103	1.16	0.3730396	1	2

Source: Corn puled from Survey data

Gender: Under this variable, male is denoted by one (1) and female two (2). The mean of gender being 1.37 indicates that averagely the respondents in the study were male.

Marital status: one (1) denoted single while two (2) denoted married and mean being 1.58 indicates that averagely the respondents in this study were married.

Age. the ages of the respondents were categorized into two, below 40 years denoted by one (1) and above 40 years denoted by two(2). The mean of the variable from above is 1.69 thus indicating that in the study the respondents were averagely above 40years.

Dependants: The range of the dependents of the respondents was between zero (0) and five (5) and they were denoted as that. The mean of this variable was 1.62 thus averagely the number of dependants per respondent were two (2).

University attended: In this variable, one (1) denoted public university while two (2) denoted private university therefore the mean being 1.05 implies that averagely the respondents attended public universities.

Course taken: This means courses taken by the respondents at the university and the denotations were (1) for Bachelor of Education, two (2) Bachelor of Science, three (3) Bachelor of Arts, four

(4) Bachelor of Law, and five (5) Bachelor of Commerce. From the statistics indicating mean as 2.12, it can be concluded that averagely, the respondents studied Bachelor of Science at the university.

Amount of loan awarded. This means the amount awarded to the respondents by HELB during their years of study at the university. They were denoted by one (I) Kshs. 0 to 49,000.00; two (2) kshs. 50,0000.00 to 99,000.00; three (3) Kshs. 100,000.00 to 149,000.00; four (4) Kshs. 150,000.00 to 200,000.00 and five (5) over Kshs. 200,000.00. The mean is 2.47 thus averagely, the respondents received between Kshs. 50,000.00 and Kshs. 99,000.00.

Default. Default was denoted by one (1) and none default zero (0). The mean being 0.73 indicates that averagely, the respondents were defaulters.

Employment: This means the employment status of the respondents. Employed was denoted by one (1) and unemployed was denoted by two (2). Averagely the respondents were unemployed as indicated by the mean of 1.74.

Obligation awareness: This means the awareness of the obligation of the respondents on repayments of the university loans. One (1) denoted aware and two (2) unaware therefore mean being 1.24 indicates that averagely the respondents were aware of their obligation on the loan repayment.

HELB Administration: This means administration of the loan by the loaning institution in managing default. One (1) denoted enough and two (2) denoted not enough. The average was 1 16 thus averagely according to the respondents, HELB has done/is doing enough on the management of default on the university loan.

4.2 Probit Regression Analysis

The outcome variable is a binary therefore a probit model was used to calculate the predicted probability of default based on the predictors. The probit model regression used maximum likelihood, which is an iterative procedure. The first iteration is the log likelihood of the "null" or "empty" model that is, a model with no predictors. At the next iteration, the predictors were included in the model. At each iteration, the log likelihood increased thus maximizing the log likelihood. A multiple regression analysis was carried out using 5 independent variables against loan default as the dependent variable. The loan default is a dummy variable, which is 1 in instances of default and 0 in instances of loan repayment. The difference between successive

iterations is very small, thus model converged and the iterating is stopped and the results were displayed as follows:

Iteration Log:

Iteration 0:	log likelihood	-60.263751
Iteration 1:	log likelihood	-54.200305
Iteration 2:	log likelihood	-53.926824
Iteration 3:	log likelihood	-53.924885
Iteration 4.	log likelihood	-53.924884

Probit Regression	Number of observations	103
	LR chi2 (5)	12.68
	Prob > chi2	0.0266
	PseudoR2	0.1052

Log likelihood ==-53.92

Default	*Coefficient*	*Std. Err*	*Z*	*P>/7J*	*195% Conf.Interval]*	
Gender	-.21857	.2953354	-0.74	0.459	-7974168	.3602769
1 Age	-.7389033	.3435618	-2.15	0.031	-1.412272	-.0655346
Dependants	.1556435	.0970654	1.60	0.109	-.0346011	.3458882
Course taken	.3914258	.1929499	2.03	0.042	.013251	.7696007
Obligation	.4073588	.3533661	1.15	0.249	-.285226	1.099944
⌊-cons	.66531 16	.8959346	0.74	0458	-1.090688	2.421311

Source: Computed from Survey data

Log **likelihood** - This is the log likelihood of the fitted model. The log likelihood of the fitted model is -53.924884 and by itself the value has no meaning but can be used to help compare nested models. It was used in the Likelihood Ratio Chi-Square test to test whether all predictors' regression coefficients in the model are simultaneously zero.

Number of obs - This is the number of observations in the dataset for which all of the response and predictor variables are non-missing. This number may be smaller than the total number of observations in the data set if there are missing values for any of the variables used in the regression. The observations in this analysis were 103.

LR chi2 (5) - This is the likelihood ratio (LR) chi-square test that at least one of the predictors' regression coefficient is not equal to zero. The likelihood chi-square test statistic can be calculated by hand as 2*(60.263751 - 53.924884) = 12.68. This is minus two (i.e., -2) times the difference between the starting and ending log likelihood. The number in the parentheses

indicates the degrees of freedom of the Chi-Square distribution used to test the LR Chi-Square statistic and is defined by the number of predictors in the model (5).

Prob > chi2 - This is the probability of obtaining the chi-square statistic given that the null hypothesis is true. It is the probability of obtaining this chi-square statistic (12.68) if there is no effect of the independent variables, taken together, on the dependent variable. It is the p-value, which is compared to a critical value, .05 to determine if the overall model is statistically significant. In this case, the model is statistically significant because the p-value 0.0266 is less than 0.05. The small p-value from the LR test, 0.0266, also indicates that at least one of the regression coefficients in the model is not equal to zero.

Pseudo R2 - Pseudo R-squared is defined by M.C Fadden (1974) as the goodness of fit of the maximum likelihood probit estimation. It is not the same as R-squared that is found in OLS regression where it is the proportion of variance of the response variable explained by the predictors. Pseudo R-squared in probit is low when the predictors are few and increases with increase in the number of explanatory variables (predictors). Pseudo R-squared is useful in evaluating multiple models predicting the same outcome on the same dataset thus a pseudo R-squared statistic without context has little meaning unless compared to another pseudo R-squared of the same type, on the same data, predicting the same outcome in which case the higher pseudo R-squared indicates which model better predicts the outcome.

Default - This is the binary response variable predicted by the model.

Coefficients - These are the regression coefficients. The predicted probability of default can be calculated using these coefficients. The probit regression coefficients show how much change a unit change in independent variable makes in the dependent variable similar to OLS. For a given record, the predicted probability of default is:

log(p/l-p) = bO + bl*gender + b2*age+ b3*dependants +b4*course taken+ b5*obligation

Where, p is the probability of being in default Expressed in terms of the variables used the regression equation is :

log(p/l-p) = .6653116 + -21857*gender + -.7389033*age- .1556435"dependants +.3914258*course taken+ ,4073588*obligation

The estimates in the model indicate the relationship between the independent variables and the dependent variable. They give the amount of change in the dependent variable that would be predicted by a unit change in the predictor, holding all other predictors constant. For the independent variables, which are not significant, the coefficients are not significantly different from 0. The increase in probability attributed to a one-unit increase in a given predictor is dependent both on the values of the other predictors and the starting value of the given predictors. A positive coefficient means that an increase in the predictor leads to an increase in the predicted probability. A negative coefficient means that an increase in the predictor leads to a decrease in the predicted probability.

Gender - The coefficient of gender is -.21857. This indicates an inverse relationship between the dependent and the independent variable. An increase therefore in either female or male beneficiaries of the university loan is bound to have an inverse effect on default holding all other independent variables constant.

Age - The coefficient of age is -.7389033. Thus there is an inverse relationship between the dependent and the independent variable. As the ages of the beneficiaries increase therefore it is expected that the probability of default will decrease holding all other independent variables constant.

Dependants - The coefficient of dependants is .1556435. Holding all the other independent variables constant, the probability of default increases with the increase of the number of dependants a beneficiary has. The higher the number of dependants a beneficiary has, the higher the probability of default.

Course taken - The coefficient of course taken is .3914258. This indicates a positive relationship between the dependent and the independent variable. The probability of default would therefore increase or decrease depending on the numbers of beneficiaries taking certain courses holding all other independent variables constant.

Obligation - The coefficient of obligation is .4073588. The positive relationship between the independent and the dependent variable indicates that holding all other independent variables constant, for every increase in the number of beneficiaries aware of their repayment obligation of

the loan, the probability of default does not necessarily come down. This could be an indicator that there are other factors that contribute to default among those who are already aware of their repayment obligation.

Cons- The constant term is.0.6653116. This means that if all the predictors are evaluated at zero, the predicted probability of default would be 0.458.

Std. Err. - These are the standard errors associated with the coefficients. The standard error is used for testing whether the parameter is significantly different from 0 by dividing the parameter estimate by the standard error to obtain the z-value. The standard errors can also be used to form a confidence interval for the regression coefficient.

Z-This is used to test against a two sided hypothesis where the coefficient is not equal to zero

P>|z| - This is the probability of the z-statistic which tests the null hypothesis that the independent regression coefficient is zero given that the rest of the individual variables are in the model. It determines whether or not the null hypothesis can be rejected thus determining the significance level. Coefficients having p-values less than alpha are statistically significant. In this model, alpha is 0.05, therefore coefficients having a p-value of 0.05 or less are statistically significant thus the null hypothesis is rejected and concluded that the coefficient is significantly different from 0.

In this model, P>|z| for gender is 0.459 which is greater than 0.05. The null hypothesis therefore cannot be rejected. This means that the coefficient statistic for gender is not statistically different from zero (not significant) given that the other predictors are not in the model. Gender without the other variables is therefore may not be used as a predictor of default.

P>|z| for age is 0.031 which is less than 0.05. The null hypothesis therefore is rejected This means that the coefficient statistic for age is statistically different from zero (significant) given that the other predictors are not in the model. Age therefore without the other variables still contributes to default of the loan.

P> z| for dependants is 0.109 which is greater than 0.05. The null hypothesis therefore cannot be rejected. This means that the coefficient statistic for dependants is not statistically different from

zero (not significant) given that the other predictors are not in the model. Number of dependants of beneficiaries cannot predict the loan default without the other variables

P>|z| for course taken is 0.042 which is less than 0.05. The null hypothesis therefore is rejected. This means that the coefficient statistic for course taken is statistically different from zero (significant) given that the other predictors are not in the model. Therefore without the other variables in the model, course taken by the loan beneficiaries may not determine the default probability.

P>|z| for obligation is 0.249 which is greater than 0.05. The null hypothesis therefore cannot be rejected. This means that the coefficient statistic for obligation is not statistically different from zero (not significant) given that the other predictors are not in the model. Therefore without the other variables in the model, whether the loan beneficiary is aware of the loan repayment obligation may not determine their probability to default.

P>|z| for constant is 0.458 which is greater than 0.05. The null hypothesis therefore cannot be rejected. This means that the coefficient statistic for constant is not statistically different from zero (not significant) given that the other predictors are not in the model. Therefore even without all the predictors in the model, there will still be default. This means that there are other factors contributing to default apart from the ones used in the study.

[95% **Conf. Interval]** - This shows a 95% confidence interval for the individual coefficient given that the other predictors are in the model. Therefore we are 95% confident that the true coefficient lies between the lower and the upper limit of the interval. This is very useful as it helps understand how high and how low the actual population value of the parameter might be. The confidence intervals are related to the p-values such that the coefficient will not be statistically significant if the confidence interval includes zero (0).

4.3 Diagnostic Tests

To better understand the model, diagnostic tests were performed. Probit models are non linear therefore for standardization, the following test was performed:

List coeff

Probit (N=103) Unstandardized and standardized estimates

Observed SD: 0.44708587

Latent SD: 1.1491363

Default	b	z	P>|z|	bstdx	bstdy	bstdxy	SDofX
Gender	-0.21857	-0.740	0.459	-0.1060	-0.1902	-0.0922	0.484
Age	-0.73890	-2.151	0.031	-0.3436	-0.3436	-0.2990	0.465
Dependants	0.15564	1.603	0.109	0.2428	0.1354	0.2113	1.560
Course Taken	0.39143	2.029	0.042	0.3302	0.3406	0.2874	0.843
Obligation	0.40736	1.153	0.249	0.1755	0.3545	0.1527	0.430

To find the changes in Predicted Probabilities for default (Marginal effect) the mean values and the standard deviation were used.

Prchange

Probit: Predicted probabilities of positive outcome for default (marginal effect)

	min->max	0->1	-+1/2	-+sd/2	MargEfct
Gender	-0.0693	-0.0584	-0.0679	-0.0330	-0.0680
Age	-0.2049	-0.0869	-0.2273	-0.1067	-0.2299
Dependants	0.2162	0.0539	0.0484	0.0755	0.0484
Course Taken	0.3610	0.1548	0.1214	0.1055	-0.1218
Obligation	0.1168	0.1490	0.1263	0.0546	0.1268

	No Default	Default
Pr(y|x)	0.2404	0.7596

	Gender	Age	Dependants	Course Taken	Obligation
X=	1.36893	1.68932	1.62136	2.1165	1.24372
SD(X) =	0.484875	0.465035	1.56002	0.843673	0.430823

Prtab

Prtab gender

Probit. Predicted probabilities of positive outcome for default

Gender of the respondent	Prediction
i male	0.7839
female	0.7146

	Gender	Age	Dependants	Course Taken	Obligation Awareness
X=	1.368932	1.6893204	1.6213592	2.1165049	1.2427184

By use of the mean values, the probability of default by the male respondents was 78 percent while the probability of default by the female respondents was 71 percent.

Prtab age

Probit: Predicted probabilities of positive outcome for default

i Age of the respondent	Prediction
<40	0.8877
>40	0.6827

	Gender	Age	Dependants	Course Taken	Obligation Awareness
X=	1.368932	1.6893204	1.6213592	2.1165049	1.2427184

By use of the mean values, the probability of default by respondents below 40 years was 89 percent while the probability of default by respondents above 40 years was 68 percent.

Prtab dependents

Probit Predicted probabilities of positive outcome for default

i Number of Dependants	Prediction
0	0.6746
1	0.7285
2	0. 7775
3	0.8211
4	0.8588
5	0.8908

	Gender	Age	Dependants	Course Taken	Obligation Awareness
X=	1.368932	1.6893204	1.6213592	2.1165049	1.2427184

By use of the mean values, the probability of default by respondents increases with the increase in the number of dependants ranging from probability of default being 67 percent for those with no dependants to 89 percent for those with five (5) dependants.

prtab course

probit: Predicted probabilities of positive outcome for default

Course Taken	Prediction
Bachelor of Education	0.6056
Bachelor of Science	0.7451
Bachelor of Arts	0.8533
Bachelor of Law	0.9254
1 Bachelor of Commerce	0.9666

	Gender	Age			
X=	1.368932	1.6893204	1.6213592	2.1165049	1.2427184

By use of the mean values, the probability of default by respondents who studied education in college is lowest at 60 percent while those who studied commerce have the highest probability at 97 percent of default compared to respondents who studied other courses.

Prtab obligation

Probit Predicted probabilities of positive outcome for default

awareness of obligation by respondent	Prediction
Aware	0.7278
Unaware	0.8446

	Gender	Age	Dependants	Course Taken	Obligation Awareness
X=	1.368932	1.6893204	1.6213592	2.1165049	1.2427184

By use of the mean values, the probability of default by respondents who were aware of their repayment obligation of the loan was 73 percent while the probability of default by respondents who were unaware of their repayment obligation of the loan was 84 percent.

Measures of Fit for probit of default

When comparing competing models it be important see measures of how well our model fits, fitstat

Log-Lik Intercept Only:	-60.264	Log-Lik Full Model:	-53.92
D(97):	107.850	LR(5):	12.67
		Prob > LR:	0.02
McFadden's R2:	0.105	McFadden's Adj R2:	0.00
ML (Cox-Snell) R2:	0.116	Cragg-Uhler(Nagelkerke) R2:	0.16
McKelvey & Zavoina's R2:	0.243	Efron's R2:	0.11
Variance of y*:	1.321	Variance of error:	1.00
Count R2:	0748	Adj Count R2:	0.07
AIC.	1.164	AIC*n:	119.85
BIC:	-341.719	BIC:	10.49
BIC used by Stata:	135.658	AIC used by Stata:	119.85

4.4 Summary of Findings

The outcome of the analysis indicates that the probability of default by respondents who studied education in college is lowest at 60 percent while those who studied commerce had the highest probability at 97 percent of default compared to respondents who studied other courses.

Further it is evident that a sizeable number of the beneficiaries who graduate end up in the teaching profession and considering that most teachers end up being absorbed by the Teachers Service Commission, accessing them for repayment of the loan is easier, thus the probability of default among teachers is lessened. A considerable portion of the Bachelor of Education graduates as indicated by the analysis are in default. This can be attributed to both unemployment and underemployment more so in the recent years when employment has not been guaranteed by the Government for those in the profession.

For both paying and non-paying beneficiaries, the main reasons for repayment delay were unemployment and low income. Consequently, the majority of the non-compliant loanees were found in the 20 to 30 year age bracket. This may be attributed to the fact that having been recently out of university they were less likely to immediately be employed In this regard, the study also found that graduates who are single and aged below 40 were more likely to default.

The likelihood that a loanee will default on his/her loan was found to be related to a complex web of factors including the income level, total level of debt (which is related to the age of the student and the number of dependents).

Although it is counter-intuitive, total loan debt is not a good predictor of default when other loanee characteristics are considered. Students who drop out generally accrue less debt and have a higher likelihood of defaulting. Those who graduate accrue higher levels of debt and are less likely to default.

Institutional characteristics have proven to be poor predictors of default when the characteristics of the loanees are taken into consideration.

There is modest evidence that students who go through loan counseling programs or are aware of their obligation in relation to the loan repayment are less likely to default and that students who are not aware are the more likely to default.

4.5 Implications of Findings

The findings of the study suggest that HELB will continue to find loan recovery an uphill task in the face of increasing unemployment and underemployment (the low income entry level jobs) situation in which most the loan beneficiaries find themselves in. On the other hand, HELB has done a relatively good job with regard to awareness of contractual obligations on the part of the graduates and this, to some extent, is bound to curb the rate of default.

The length of time that the beneficiaries take before commencing repayment of the loan coupled with the reason of unemployment being significant contributors to the delays is a clear indicator that most loanees upon graduation do not acquire gainful employment within the first year.

In the absence of student credit rating and collateral, it will be important for HELB to explore preventive measures as most of the factors that contribute to default as per the study are inevitable on the part of the beneficiaries as most of it happens to be part of the natural growth of the individuals.

Developing a default management program may be the first step to reducing default rate. An effective default management program will ensure that the loanees at the point of receipt of the loan are aware of their responsibility. It may also among other factors require that the institution develops guarantor partnerships to manage default after graduation. Therefore proper resources, time, management and funds may have to be factors to be considered by the institution to ensure an efficient and functional program.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The likelihood that a loanee will default on the university loan is related to a complex web of factors including the income level, total level of debt (which is related to the age of the student and the number of dependents). It would therefore be difficult for the lending institution to manage default on the basis of a single factor. Developing a default management program may be the first step to reducing default rate with the main focus being to prevent the occurrence of default long before the loan beneficiary graduates. An effective default management program will ensure that the loanees at the point of receipt of the loan, are well informed on what their obligations are in relation to the loan. Sufficient information should be availed to the potential beneficiaries on the importance of the loans at the usage point while studying and at the payment point after completion of studies. This should also include the penalties of non compliance and available payment options At this point those who would wish can opt out of borrowing. Being a government institution, some loan applicants could be with the notion that the loan is a free facility thus irrespective of whether they are able to raise their own fees or not will apply for the loan. The loaning institution may later find it problematic to recover the loan from this category of applicants.

5.2 Conclusions

The student loan programs work well for many students who are able to complete their education and earn sufficient income after graduation to repay their debts within a reasonable period of time. Unfortunately, this scenario is becoming less common as borrowers do not get to be employed after graduation and thus get deeper into debt earlier in the process and do not know about available options that could help them avoid problems down the road. Once these problems begin, debt collection costs and fees accrue rapidly and aggressive collection efforts hit so hard that many borrowers take long to recover.

Policy recommendations are required to ensure that borrowers who are able to repay are encouraged to do so and given the flexibility to repay at affordable rates. The proposed policy changes will also provide more adequate relief and options for those beneficiaries who may be willing to make repayments irrespective of whether they are employed or not. While the student

loan program is here to stay, there are ways to alleviate the burden for the most vulnerable and lower income borrowers. The countryy's higher education system and economic productivity depend on how we resolve these issues.

5.3 Policy Recommendations

Given that investment in higher education involves risks emanating from uncertainty in student abilities and future jobs (Geske and Kohn, 1998), which in turn leads to a human capital bias due to the lack of credit rating mechanisms for students and collateral, the private lending sector is unlikely to alleviate the plight of higher education financing anytime soon. Thus it is necessary for HELB to find mechanisms that will mitigate against default behavior and thereby improve upon recovery efficiency.

Apart from the indicated criteria, HELB needs to develop strategies that cut across all universities and build alliances to address default prevention. This could include extensive entrance and exit counseling on the university loan issues that should be mandatory for all students receiving funding from HELB. Evaluate what works and develop effective counseling programs during registration/orientation process for new students and/or during the clearance process for completing students. Counseling however is not a substitute for strong regulation, including flexible and reasonable repayment options though effective counseling programs can complement HELB policies on default by getting information out to students in a timely way.

Students and their families do not get enough information about loan programs before they borrow. Helping prevent problems by providing up-front information about the cost of student loans is critical. Prevention will not work for everyone and it is not a panacea. It is, however, a tremendously important step that can save many borrowers from falling into the often inescapable default spiral. Many borrowers also report lacking information after they borrow. Lack of information about options could also contribute to default therefore struggling borrowers need to be well informed on the accessible, affordable and flexible repayment options to avoid default. This can include providing a window for parents and guardians to pay the loan for beneficiaries not in a position to do so.

It is hard to argue against the concept of default prevention. The problem is that the student loan system has not set up real resources and energy to focus on prevention. The financial incentive system rewards default collections rather than default prevention. This therefore might require that the lending institution focuses more on prevention of default and redirect repayment

incentives towards the same. HELB requires a comprehensive analysis of the current voluntary flexible agreements and other default avoidance programs and quantify the cost savings of preventing default.

5.4 Limitations

The study encountered resistance in sourcing information from some beneficiaries due to their compliance status and as such information disclosure by these respondents was not very accurate. The information gathered therefore may not have been exhaustive thus limiting in terms of recommendations.

5.5 Recommendations for further studies

Studies in this line of discourse could also seek to find other more efficient substitutes for student credit rating, which can be applied by both HELB and the private lenders with a view to minimizing loan default and enhancing access to higher education loan funds. There is need for more studies on this subject if the lending institution which is the only one in the country currently is to create a revolving fund to meet the needs of Kenyan students pursuing higher education.

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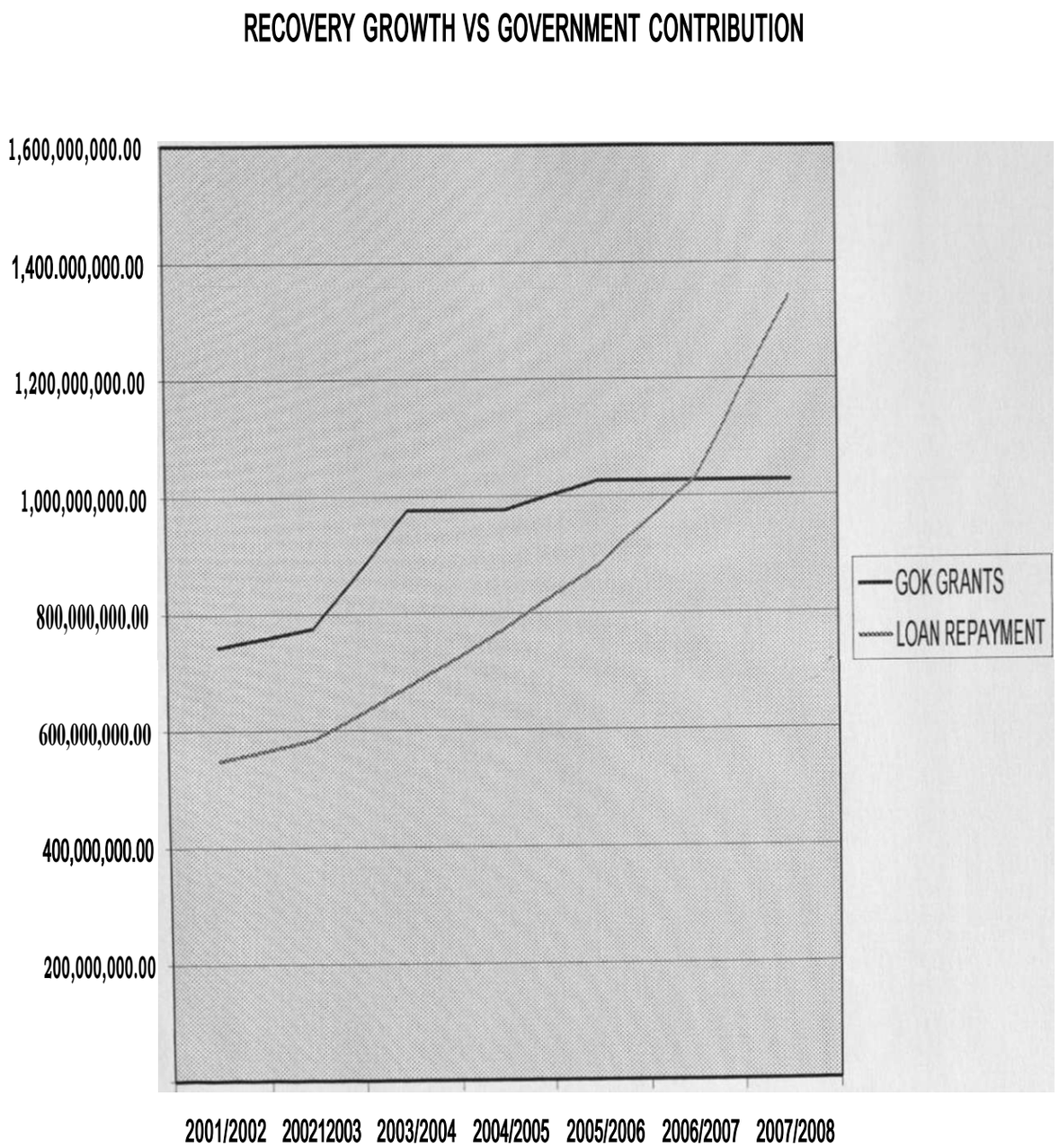
APPENDIX I: COMPARING PERFORMANCE ON THE BASIS OF YEAR OF COMPLETION

YEAR OF COMPLETION	% OF BENEFICIARIES PAID/PAYING THEIR LOANS	PERIOD
1975	9.8	PRE-HELB
1976	21.2	
1977	28 1	
1978	20	
1979	28.1	
1980	25.2	
1981	27.6	
1982	27	
1983	51.4	
1984	53.2	
1985	55.6	
1986	54.4	
1987	59.2	
1988	58.2	
1989	57.7	
1990	62.1	
1991	57.6	
1992	64.8	
1993	62.7	
1994	61.3	
1995	68.9	
1996	64.2	POST-HELB
1997	65.4	
1998	62.1	
1999	66.4	
2000	64.3	
2001	61.3	
2002	59.1	
2003	53.4	
2004	46.6	
2005	40.4	
2006	28.1	
2007	10.6	
2008	34.1	
2009	49 8	
2010	49.9	

Source: Higher Education Loans Board, 2010

APPENDIX II: COMPARING GOVERNMENT GRANTS WITH RECOVERY TRENDS



Source: Higher Education Loans Board, 2008