RELATIONSHIP BETWEEN UNEMPLOYMENT IN KENYA AND NON PERFORMING LOANS AT HIGHER EDUCATION LOANS BOARD

PRESENTED BY

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A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

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DECLARATION

This research project is my original work and that to the best of my knowledge it has not been presented for the award of any degree in any other University.

Sign..Date...25/11/2021......

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this project to my loving sister Abigael Chemtai Koech for believing in me and

always encouraging me to become the best I can be. To all my family members and friends,

your prayers and support have brought me to this moment, thank you for all your support.

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LIST OF ABBREVIATIONS

CBK   Central Bank of Kenya

CRB   Credit Reference Bureau

GDP   Gross Domestic Product

HELB   Higher Education Loans Board

HELF   Higher Education Loans Fund

ILO   International Labor Organization

KIPPRA   Kenya Institute of Public Policy Research and Analysis

KNBS   Kenya National Bureau of Statistic

NPLS   Non-Performing Loans

SPSS   Statistical Package for the Social Sciences

UNDP   United Nation Development Programme

ABSTRACT

This study focused on the relationship between unemployment in Kenya and loans performance at HELB. A major problem of education revolving funds and students' loan schemes worldwide is low rates of loan recovery, this has made it difficult for the funds to achieve self-sustainability with rising demand for students' loans. In Kenya, 40% of students' loans at HELB are in default. The research objective was to find relationship between NPLs at HELB. The study used a descriptive correlation research design. Secondary data was collected from Higher Education loans Board and Kenya National Bureau of Statistics. Researcher used multiple linear regression model for the study. The researcher concluded that unemployment has significant positive influence on NPLs. The study indicated Inflation rate has statistically insignificant negative correlation associated with NPL. The researcher further concluded that loan growth and GDP growth have a positive correlation with NPLs at HELB, however, the influence was not statistically significant. The study recommends that the government should make structural and policy changes to reduce the rate of unemployment in Kenya. This would in turn reduce NPLs at HELB and also reduce the need for government funding of the institution through capitation. The researcher further recommend that the management of HELB should evaluate other factors that might affect loan performance. In addition, the study recommends that HELB management should carefully study the growth rate of the economy when determining the amount of students' loan disbursement.

CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

Demand for tertiary education has been increasing worldwide. To promote tertiary education most governments worldwide have established revolving student loan scheme to facilitate financing among the scholars. According to Shen and Ziderman (2008), government funded loan schemes are present in around 70 countries worldwide, however this number has been continuously increasing over the years. This student loan schemes are established by governments as an alternative means to funding higher education among the needy students. The use of revolving student loan scheme has become popular in many African countries having being adopted in Ghana, Rwanda, Tanzania, Kenya, South Africa, Namibia, Uganda and Rwanda among others. Student loan has significantly helped in reducing the economic and financial burden of students, guardians and the government (Onen, Ajuaba, Oceng & Ndaruhutse, 2015).

Woodhall (2007), the idea of governments financing student's tertiary education through student loan dates back to between 1940s and 1950s. A number of first world countries including Canada and other countries in Europe started establishing the student loan programs in 1960s. The first developing country to institute student loan scheme was Columbia in 1953 through operationalization of Instituto Colombiano de Credito Educativo y Estudios Technicas en el Exterior (ICETEX). Many other Latin American countries followed suit between 1950 and 1960s. By beginning of 1980s, the students' loan

schemes had been rolled out in Latin America, Europe, Caribbean, North America, a few countries in Asia and Africa (World Bank, 2008).

Student loan provide a grace period after graduating before starting to make loan repayments, therefore students and guardians utilize the available resources to finance other socio-economic needs (Johnstone, 2005). Students' loan schemes target the disadvantaged members of the society to promote more enrolment to tertiary learning institutions by the underprivileged and minority members of the society, thus promoting social equity. Increased number of students undertaking tertiary education ensures that there is sustainable increase in the skilled manpower which drives the social economic and industrial development (Ziderman, 2003).

There is considerable differences in the student loan schemes across various countries worldwide. Such differences are evident in a number of parameters such as but not limited to: the specific and general objectives that are being pursued by the government, organizational and governance structure of the lending institution, procedure for allocation and collections of the student loans (Shen & Ziderman, 2008). Despite the various differences in the loan schemes the underlying common factor is that government funded loan programs are immensely subsidized compared to loans which are issued by private banks at market interest rate and conditions (Ziderman, 2004). The variance between the total amount of loan disbursed and overall loan recovered is usually accounted for in two parts. First, the inefficiencies associated with managing the loan program in terms of administration cost, considerable default in repayment and the subsidized interest rates incorporated in the loan scheme (Shen & Ziderman, 2008).

Students financing in higher learning institutions in Kenya depends on funding by the government which is mainly extended to the students in terms of student loans through HELB. Due to increase in tertiary education enrollment, the number of students anticipated to receive student loan financing has been on the rise. The amounts of revolving fund available at the disposal of HELB is insufficient to serve the increasing demand (Naliaka, 2018).

The theories adopted in the study include Double trigger hypothesis, Monetarist theory, Financial fragility theory and Debt deflation theory. Double trigger hypothesis opines that joint occurrence of negative equity and unemployment as necessary conditions for loan default (Goldberg & Capone, 2002). Monetarist theory notes that increase in money supply leads to higher prices. The theory further indicates a significant impact of inflation rates on loan defaults (Rizvi & Khan, 2015). Financial fragility theory highlights that with growth in loan portfolio, the quality of the loan portfolio declines hence increase in non-performing loans Amri, Prabha & Wihlborg (2012). Debt deflation theory describes the mechanisms between lending market and economic performance. It provides the connection between NPLs and the level of economic growth (Wolfson, 1996).

1.1.1. Unemployment

Unemployment refers to a situation where active labor pool are not working and are actively seeking for job (ILO, 2010). The unemployment rate is a statistical estimation of the level of prevalence of the people who have not gotten employment and is derived by dividing the total number of active labor force without job and the entire population of labor force in the specified region (O'Higgins, 1997). Pollin and Heintz (2007), individuals

working could be classified as working poor by reason of their labor income being below poverty line. Sub-Sahara Africa leads in terms of growing population of the youth in the world (World Bank, 2017). Over 20 percent of Sub-Sahara Africa population ranges between 15 to 24 years. 36 percent of total labor pool population are youths and that out of five unemployed people in the labor force in Africa, three of them are youths (ILO, 2010).

Based on observation from studies done on countries that have experienced economic downfall, unemployment level is usually higher during periods of economic recessions. Murumba (2013), postulates that the level of unemployment in Greece conspicuously increased between April 2011 and April 2013 as the country was facing an economic recession. During the same period the level of NPLs increased drastically. High unemployment levels is one of the pronounced challenges to development in Africa (ILO, 2008). The report further indicated that unemployment is one of the major concerns to policy makers and other stakeholders in Africa. KIPPRA (2009), indicated that unemployment is a key macroeconomic indicator of economic performance and that low unemployment level depicts a healthy economy. The report further noted that unemployment indicated wasted resources as the unused labor could be used to increase output and productivity.

1.1.2. Non-performing Student Loans

NPLs generally refers to a loan that upon maturity, 90 days or more has elapsed without the borrower making payment of the agreed installment or interest due (Caprio & Klingebiel, 1999). Loan defaults negatively affect liquidity and the lenders expansion of credit portfolio. According to finance theory, there are various risks that financial lending

institutions face. They include operating, legal, liquidity, market, and reputational and credit risks. The risks affect level of operational efficiency of the institutions. Consequence of high non-performing loans in the higher education lending institution is credit squeeze and increased government funding requirements through capitation grants (Kimani, 2011).

In the private sector many commercial banks have gone under receivership and liquidation due to substantial NPLs. This indicates severity of the consequences that result from non-performing loans in lending institution. High levels of NPLs largely contributed to bank failures which further affects the lending abilities of the institution (Nwankwo, 1990)

The level of default of the student loan has become an important aspect that is of concern to the institution and government policy makers. Darolia (2013), increased rate of defaults on the student loan has led to a major concern within the public and the government policy makers about financial risks that are associated with NPLs and the financial challenges that students encounter when repaying the debt. The structure of student loan scheme and its risk of the borrowers defaulting is unique compared to private sector which are based on credit rating, collateral asset available or ability to repay the loan (Dynarski, 2014).

1.1.3. Unemployment and Non-performing Student Loans

Chatterjee and Ionescu (2012), fairly large proportion of tertiary institution students do not graduate. Allmendinger (1989), emphasized that even successful graduates faced a great dispersion in the labor market outcome with some being engaged in jobs that are not related to their professional education and training. Although investment in college or university degree might increase the quality of the labor force opportunities, such investment is risky due to the cost tuition fee, foregone earnings and possibility of lack of employment. The

study further indicated that failure to secure a job may also make repayment of student loan difficult.

Nkusu (2011), indicates that unemployment lower income of individual in the economy, this reduces their purchasing power. The study further indicate that, to boost income levels to finance socio-economic needs, individual increase their debt burden to support their finances. Unemployment has a positive correlation on loans default as it hinders cash inflows for people thus reducing their ability to honor their loan obligation (Lu,Thangavelu & Hu, 2005).

A survey conducted by Associated Press suggests that recent college graduates are either unemployed or underemployed (Peralta, 2012). A critical factor affecting repayment and high non-performing student loan is unemployment. Unemployment substantially reduces disposable income of individuals thus making any payment a considerable burden to the individual. Moreover, a large percentage of the unemployed borrowers defaulted in repayment of their student loans. The study also found significant higher student loan default rate among the lowest level income earners (Woo, 2002)

1.1.4. Unemployment in Kenya and Higher Education Loans Board

HELB loans are issued by the government to individuals who are considered to be financially disadvantaged in the society. Subsidized loan programs targeted at poor members of the society enhances gain to higher education for minority and poor who would likely lack the resources to finance their tertiary education (Woodhall, 2004). Students loan scheme are offered with specified terms, usually fixed monthly or quarterly repayments. The interest rates are usually specified, however the rate is highly subsidized and is way

much below the market interest rate offered by private commercial banks. The repayment maximum period offered varies across various countries, for instance Latvia offers the five years while Egypt provides for Forty years to repay the loan (Shen & Ziderman, 2008).

The main issue with students' loan is repaying back the loans. Some countries have managed to operationalize highly successful students' loan schemes while others are facing substantial amount of difficulties. A few countries have abandoned the loan programs (Woodhall, 2004). The common element in all government education loan schemes are that the interest rates are highly subsidized, and that the operation of the institution is highly featured with inefficiencies due to high NPLs and high administration cost. As such, lending institutions continuously rely on government funding through capitations grants to cover the gap between disbursements, administration costs and recoveries (Njenga, 2007).

Due to increasing demand and cost for tertiary education, educational financing through loans has become a very important tool for financing higher learning across various levels of income earners, although the facility was initially targeted for middle income earners (Bertola & Hochguertel, 2005). HELB was established through parliamentary act in July 1995 to manage the students' loan scheme. Prior to establishment of HELB, students' loan was being managed by Higher Education Loans Fund. HELF was commissioned by Higher Education Loans Fund act (cap 213). Upon establishment of HELB, the Board took over the functions and responsibilities of HELF which was mandated to award university students' loan but did not have the legal mandate to recover overdue loans. HELB Installed mechanisms to facilitate collection of all prior outstanding loans. This was a challenging tasks as the records that were available from the previous loan schemes were incomplete in terms of amount if loan disbursement and the number of beneficiaries who were repaying

and the repayment rate, how many were still outstanding and how many had cleared their loans (Otieno, 2004).

The main challenge faced with students loan is that beneficiaries do not make repayments when due. The performance of students' loan at HELB regarding collection is not an exception, the amounts of NPLs as at June 2018 stood at 30 percent. Since the Kenyan government implemented of free primary and secondary education in Kenya, students enrolling to tertiary learning institutions has been increasing rapidly to the extent that the resources available for lending to students has continuously been constrained. The achievement of self-sustenance is difficult since there is a decrease in proportion of government funding through capitations, increase in demand for funding and the high levels of unemployment (Otieno, 2004).

KIPPRA (2009), the main problem in Kenya is that millions of workers are engaged in some activities but the level of their earnings received are not adequate to support their livelihood above the poverty line. Due to high unemployment rate in Kenya, there is a large number of individuals relying on the institution to finance their education. This leads to a surge in the amount of disbursement issued by HELB in terms of loan. However, as a result of the unemployment and under employment, many borrowers who have completed their studies are not able to service their student loans due to low income levels thus the increasing the student non-performing loan rate (Ngali, 2018).

Luciano and Gori (2010), continuous increase in student loan beneficiaries and general high unemployment rate in the country has highly contributed to high rate of default at HELB. Most of the unemployed are youth who are mostly in their early twenties and who commonly hold student loan debt.

1.2. Research Problem

During unemployment, borrowers are not able to service their loan obligation as a result of losing jobs. Without salary, borrowers not able to service their debt. As such, increased unemployment result to rise in NPLs (Fernandex, Martinez & Saurina, 2009). Unemployment also has negative impact on individuals' income level in the economy. With low income individuals take more loans to support their socio economic financial needs. Due to the reduced cash inflows, there is a reduced ability of individuals to honor the debt obligation thus leading to increase in NPLs (Lu, Thangavelu & Hu, 2005).

In Kenya, despite various steps adopted by HELB to improve the level of loan recovery, there are still many borrowers not honoring their debt obligation thereby continuously increasing the level of NPLs (Engede, 2015). HELB (2018), loan book performance stood at 70 percent as at June 2018. Financing of HELB by the government through capitations has continuously been a challenge due to revenue constraints in its annual budget (Njenga, 2007). This has also been doubled by the continuous increase in dependency and requirement for financial assistance due to the high level of unemployment and other macro and micro economic factors affecting poverty level in the country (Ngali, 2018). The increase in non-performing student loans has subjected the Board to various criticism especially on default rate and it's flexibility on repayment arrangement among others (Kipkech, 2011).

Mazreku, Morina, Misiri, Spiteri and Grima (2018), established that higher unemployment rates are linked with higher loan defaults. The study indicated that inflation and NPLs are negatively correlated. High level of unemployment and low income levels in Africa among graduates is regarded as the main leading factor affection loan performance (Kossey &

Masumbuko, 2015). The rate of student loan default increases with increase in unemployment levels. However, change in default rate is not proportional to the changes in unemployment rate (Lundgren, 2013).

Onchomba (2014), indicated that high rate of unemployment led to increase in NPLs. The study also indicated that GDP and unemployment are negatively correlated. Ng'ang'a, (2016) revealed that borrowers inability to repay loan was because of unemployment and other anticipated financial factors is the major cause of NPLs. Ngali (2018), established that economic dynamics possess a positive effect on performance of loan. The researcher further established that unemployment negatively impact loan performance, the influence is however statistically insignificant.

Various researchers have conducted studies to examine student loan performance and recoveries in various countries. The studies however did not directly analyze the relationship between unemployment in Kenya and NPLs at HELB. Thus the study explore to fill knowledge gap by addressing below research question: Is there a relationship between unemployment in Kenya and the level of NPLs at HELB?

1.3. Objective of the Study

Research objective was to establish the relationship between unemployment in Kenya and non-performing loan at Higher Education Loans Board.

1.4. Value of the Study

HELB management will gain better understanding of the relation between unemployment and NPLs and make objective adjustment of implementation of their lending and recovery

strategies. The study will influence the management whether to incorporate aspect of possibility of unemployment to the loan application review procedures.

This study will be informative to the beneficiaries of the students' loan scheme, parents and guardians, the study will be critical as it will provide more insight on potential impact of unemployment on ability of the repayment ability of the borrower and repercussions of default such as listing in Credit Reference Bureau which are associated with non-repayment of loans.

There is scarce literature focusing on lending educational loans as majority of the available studies mainly focused on private banking sector. Academicians and researchers will gain knowledge and ideas particularly in the field of defaulting student loans in relation to unemployment.

The study highlights the correlation between unemployment and defaulting students' loan thus providing the government with more insight for policy formulation and provide ways in which the government would reduce the budget of financing HELB through alternative employment option among the beneficiaries.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This involves a detailed analysis of available literature on the research bojective. This chapter is classified into review of theoretical framework applied, review of empirical literature on the research topic, conceptualization of the research framework and the last section provides a detailed summary of this chapter. The review establishes existing knowledge gaps in the studies that necessitate the researcher to undertake the study.

2.2. Theoretical Review

The researcher adopted four theories deemed as appropriate in achieving the research objective. Theories discussed are Double trigger hypothesis, Monetarist theory, Financial fragility theory and Debt deflation theory.

2.2.1 Double Trigger Hypothesis

Double Trigger Hypothesis emphasizes negative equity as a requisite for default, however the theory attributes loan default to negative equity combined with negative income shocks like unemployment. The theory is familiar among mortgages researchers however it is generally argued in conventional models and has not been extended as an effective stochastic model (Gerardi, Shapiro & Willen 2007), (Foote, Gerardi & Willen 2008) and (Foote, Gerardi, Goette & Willen 2009).

Double trigger theory postulates negative equity and unemployment joint occurence as the necessary conditions for loan default. The theory provides that a borrower with negative

equity has a higher risk of default. However the condition is not sufficient enough for the default to occur. The second trigger of unemployment creates an adverse shock to the income of the borrower making it difficult for the borrower to pay their loan. The risk of unemployment plays a critical role in the conceptual model of loan default through its impact in the income of the borrower (Goldberg & Capone, 2002).

Double trigger theory is important to the study since it hypothesize relationship between unemployment and NPLs. It establishes that borrower with negative equity and is unemployed has a higher risk of defaulting in repayment of the loan. The theory provides an important insight in advancing loan default model useful in policy formulation and risk analysis based on empirically accurate model.

2.2.2 Monetarist Theory

This theory postulate that with fixed total output of an economy, increasing money supply will result to direct prices increase (Friedman, 1987). Monetarists concur with quantity theory of money, changes in supply of money has a direct link to prices rise and certainly change in money incomes, real output of the economy and employment (Friedman, 1987). However, this is s a short run situation as in the long run, monetarists postulates that increase in supply of money result in higher prices and the higher inflationary rates unless there is a growth in the economy in the long-term (Friedman, 1987).

The theory is instrumental to the study as it highlights a direct connection between inflation and NPLs. This theory indicates a notable impact of inflation rates on loan defaults. There is both positive and negative correlation between inflation and NPLs in short run. However, inflation rate posits a negative correlation with NPLs in the long run (Rizvi & Khan, 2015)

2.2.3 Financial Fragility Theory

The hypothesis was developed by Hyman Minsky's in 1985. It is based on the assumption of an expanding economy. With economic expansion, there is a growth in optimism and change in the perception about the appropriate level of debt and risk appetite. The speculation is bet on the future market trend and psychology (Keynes, 1936). Amri et al., (2012), examined the financial fragility hypothesis by analyzing the relation between high loan portfolio growth and the subsequent banking crisis. Indicators of financial fragility are linked to major distortions or imbalances within the financial sector.

As households increase consumption and production increases in firms during economic surges, demand for credit increases causing sudden increase in asset prices, net worth, and positive expectations of the future (Amri et al. 2012). Ranciere, Tornell & Westermann (2006) argued that the tendency of lending institutions to carry out risky loan lending without an actual effective risk monitor is caused by financial liberalization. Also, if financial liberalization occurs through the removal of controls imposed on lending rates and credit allocation, it loosens credit limitations; therefore increase in loan growth (Amri et al. 2012). This can be done even without paying much attention to the status and quality of loan portfolio thereby increasing risk of default.

Financial fragility hypothesis is pertinent to this research for it underscore the connection between growth in loan portfolio and default. Rapid increase in loan portfolio without effective review and monitor of the potential risks lead to poor quality of loan portfolio characterized by increased rate of loan defaults. The theory suggests that loan portfolio and NPLs have a positive relationship (Amri et al. 2012).

2.2.4 Debt Deflation Theory

Debt Deflation hypothesis was advanced by Fisher to explicate the Great Depression of 1930s. It established the mechanism of response between performance of the lending market and the economy. Deflation arise when there is fall in prices which is contrary to inflation which is characterized by a general trend of increase in prices. Fall in level of price strengthens local currency thus increasing the real value of debt over time. This increases the debt liability of borrowers and put an added burden and struggle to repay their loan (Fisher, 1933).

Most commercial loans are secured with a collateral, borrowers often "distress sell" the collateralized assets to service their loans. Increased assets supply in the market leads to additional price reduction occasioning further deflation. This positive response structure is called deflation spiral. Fall in asset prices initiate and extend the process of debt deflation (Wolfson, 1996).

Debt-deflation theory highlights the connection between loan defaults and GDP of the economy. The theory suggests that debt deflation could be caused by financial crises which could sequentially impact negatively the banking system and loan defaults. This affirms the observation response advanced by Fisher (Wolfson, 1996).

2.3. Determinants of Non-performing Student Loans

Deteriorating students' loan portfolio is a major cause of concern among the policy makers. Various studies scholars have been done studies on factors that determine student loan performance in various countries. However, previous studies have not provided consistent insight into the factors that affect loan performance. Kate, Belinda, Vivienne, and John

(2003), highlighted that the factors that may have been identified in various studies in one sample may not hold true when applied against a larger and different sample. Many studies conducted evaluating institutional and borrower characteristics indicated that institutional characteristics pose little or no relation on repayment pattern (Knapp & Seaks, 1990).

2.3.1 Unemployment Rate

Unemployment substantially reduces income of an individual and thus making any payment to be a considerable for most. According to Woo (2002), unemployment and students loan default have a positive correlation. Unemployment is a severe problem among the recent graduates (Peralta, 2012). Income level and students' loan default are negatively correlated, the study indicated that students who earn huge amount after school have low probability of defaulting in repaying their student loan (Woo, 2002).

Unemployment is closely related to loan performance in the commercial banking sector. Banks performance is negatively affected when there is an increase in unemployment. This is because there will be fewer individuals who will have steady source of income and hence few individual will seek to cooperate with the banks in servicing their debt. High level in the rate of unemployment signify that many individuals will experience difficulties repaying their loan hence increase in NPLs (Kurumi & Bushpepa, 2017).

2.3.2 Inflation Rate

This is a measure of changes in general price levels over time in an economy measured in terms of price index. Inflation signal reduction in the purchasing power of money (Brown and Matysiak, 2000). Inflation measured as an index of price changes in the economy. Inflation negatively impact on quality of loan portfolio. Inflation and NPLs are negatively

correlated. During periods of inflationary trends, the real value of repayments that the borrowers need to pay to the lending institution declines as a result of the reduced real burden of the repayments (Kurumi & Bushpepa, 2017).

Ngali (2018), conducted a study on economic dynamics and students' loan recovery at HELB in Kenya. The research objective was to establish relationship between economic dynamics and students' loan recovery at HELB. Time series regression analysis was adopted and concluded that inflation and students' loan repayment rate have a strong negative relationship. This implied that rise in inflation rate results to declining student loan recovery rate.

2.3.3 Loan Growth Rate

Studies have indicated loan default are linked with rapid growth in credit portfolio. Abnormal credit growth during a prolonged period increases risk exposure solvency declines and increase in NPLs (Amador & Gomes 2013). Rapid growth in lending can cause adverse selection and may also be linked to decline in the quality of loan portfolio as risk appetite in such period increases thus negatively affecting loan performance (Erdinç & Abazi, 2014).

Almir and Ibrahim (2018), Studied the correlation between credit growth and NPLs in Turkey for years between 2007 and 2017. The researcher applied multiple regression analysis and established an inverse relationship between NPLs and growth in credit portfolio. The study further indicated rapid growth in credit portfolio was associated with increase in unsystematic risks thus affecting the quality of the loan portfolio.

2.3.4 Economic Growth Rate

This is defined as continuous development in ability to meet demand and supply for goods and services as a result of increase in productivity of factors and scales of production (Daly, 2010). UNDP (1996), economic growth is simply an improvement in total wealth of a nation. Haller (2012), highlighted that economic growth is a continuous improvement in size of the country's economy as measured by macro-economic factors especially gross domestic product per capita in an ascending but does not necessarily have to be in a linear direction. Drawing from this definition of, the research used GDP rate to measure growth of the economy. (Karim, 2016).

Koong, Law and Ibrahim (2017), highlighted that credit is critical in promotion of growth in the economy through credit channel. Growth in the economy increases income of individuals and businesses. Favorable economic performance stimulates lending as borrowers have enough reserves which are used to service debt. High growth in GDP of an economy implies that the economy is having good performance with increased income of individuals. The growth in income implies that there will be repayment of loans as individuals and households will have surplus amount which will be used to offset the loan (Karim, 2016).

2.4. Empirical Literature Review

This entails review of prior studies done by various researchers that relate NPLs and their proposal on how it can be enhanced.

Lochner and Naranjo (2004), carried out a study on government sponsored student loan schemes and default incentives in United States of America. The study established that

positive employment effect on repayment was exceptionally good in the formal employment through the implementation of deduction at source strategy. The strategy was successful because it ensured repayment in an efficient, economical and timely manner. The collection at source strategy was also considered to be very reliable to both the borrower and the collection agency.

Choy and Li (2006), conducted a research with main objective of establishing repayment of undergraduate loans. The study involved analysis repayment of undergraduate loans for the recipients of the loans for the years between 1992 and 1993. The study established that as uncertainty and unemployment increases, probability of repayment of student loan reduces. The study also indicated that rise in employment rate of the graduates led to decline in NPLs.

Oosterbeek and Broek (2009), conducted an empirical study on the higher learning institution students borrowing behavior in Netherlands. Study was to evaluate loan uptake by students in higher learning institution. The study found out that the rate of repayment of student loan among the graduates was still low due to the continuous decrease in the job market. In worse case scenarios the decrease in the job market resulted to alarming increase in NPLs due to fluctuations in the job market.

Kimani (2011), conducted a case study to establish determinants of loan repayment in HELB, the study highlighted that there are scarce literature focusing on lending education loans as majority of the available studies mainly focused on private banking sector. The study concluded that among other factors that contribute to poor loan performance by HELB include high level of unemployment among the graduates and lack of adequate cooperation by some employers within the private sector.

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Lundgren (2013), researched on effect of changing unemployment on student loan default. Research objective was to assess impact of changes in unemployment rate on student loan default. The researcher established that the rate of NPLs increased with rise in unemployment level. Default rate also decreased with decrease in unemployment, however the changes in default rate was not proportional to the changes in unemployment rate.

Naranjo (2016), the research objective was to establish optimal design of student loan scheme under the risk of fresh graduates' unemployment. The study established that fresh graduates experience more challenges servicing loan, the highly depended on existing insurance devices such as deferment and forbearance in the early ages of post college years. The study further indicated that unemployment is a critical risk factor for academic investment decision.

Ng'ang'a (2016), conducted a descriptive research on factors affecting repayment of university students loan in Kenya. The study established that the unemployment and other unanticipated financial factors are the key factors affecting loan default. The study further indicated a strong correlation between unemployment, low income earning and non-performing student loan.

Kossey and Masumbuko (2017), conducted a case study on challenges in systems of student loan financing schemes in Africa. The research objective was to review the challenges experienced by student loan schemes in Africa, The study indicated that unemployment and low income levels among the graduates were the main leading factors affecting students' loan performance.

Ngali (2018), conducted a study on economic dynamics and students' loan recovery at HELB in Kenya. The research objective was to evaluate the relationship between economic dynamics and students' loan recovery at HELB. The study established that economic dynamics have an influence in the rate of loan recovery at the HELB. According to the studies, employment positively affect loans performance although the influence is not statistically significant.

Mazreku, Morina, Misiri, Spiteri and Grima (2018), conducted a study using panel data for Hungary, Armenia, Croatia, Herzegovina, Bosnia, Albania, Bulgaria, Kosovo, Macedonia, and Romania, for years between 2006 and 2016 to analyze the macro economic factors influencing NPLs in transition economies. The study established that high level unemployment are associated with higher NPLs.

Holger and Constantine (2019), conducted a study on the rising level of defaults in student loan during period of great recession. The objective was to assess effect of declining home prices on student loan default by decreasing individuals' labor income, particularly for low income earners. The study established that declining prices impact default in student loan predominantly through labor market channel majorly for low income earners.

Rono (2020) conducted a study on macroeconomic indicators and NPLs among deposit taking MFIs in Kenya. The objective was to review impact of macroeconomic indicators of NPLs among deposit-taking MFIs in Kenya. The researcher concluded that correlation exist between macroeconomic factors and NPLs within MFIs in Kenya. The study established that inflation, interest rate, foreign exchange rate and unemployment strongly influence NPLs within MFIs.

2.5. Conceptual Framework

This is a diagrammatic representation of research variables. Dependent variable will be loan performance of HELB measured by NPLs. The independent variables will be unemployment measured by the annual unemployment rate, inflation measured by the annual rate of inflation, HELB loan growth measured by percentage change in amount of loan disbursement and GDP growth rate in Kenya.

Independent Variable   **Dependent Variable**

Unemployment
Annual unemployment rate

Control Variables

Inflation level
Annual Inflation rate

Non-performing Loans
Total Amount of loan in default

Loan Growth
Percentage change in loan disbursement

Economic growth
GDP growth rate
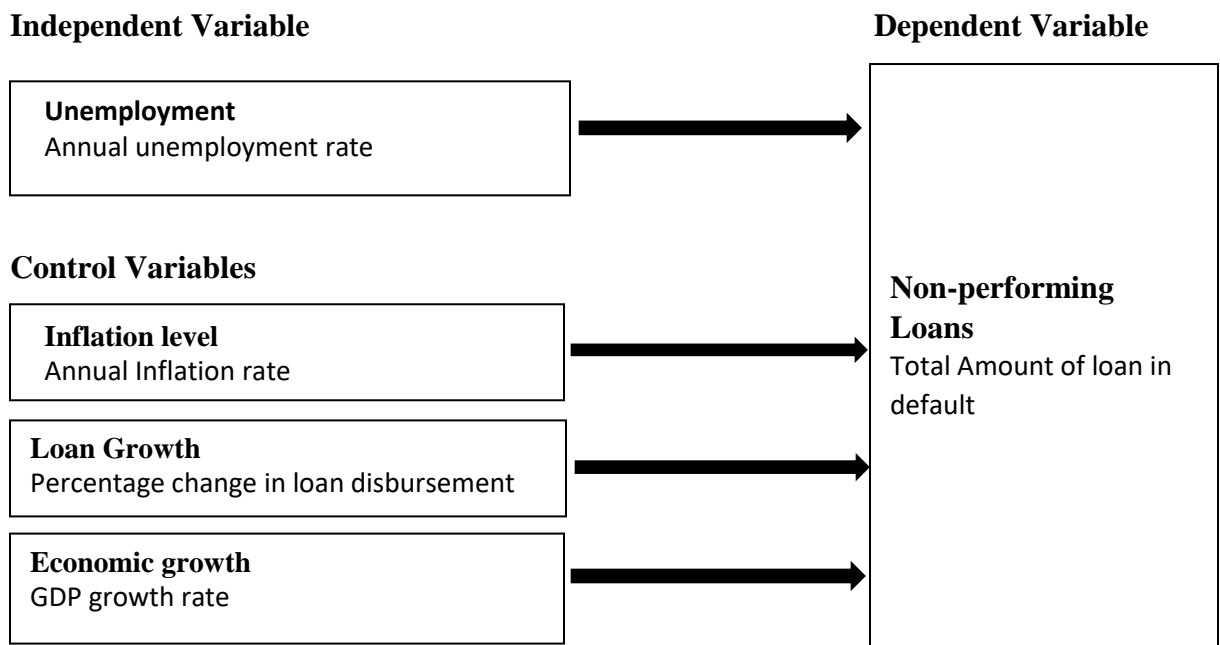
Figure 2. 1 : Conceptual frameword model

2.6. Summary of Literature Review

Various studies have been discussed and expounded to various specific objectives with review on what other studies have found on the correlation between unemployment and students loan default. Four theories; Double Trigger Hypothesis, Monetarist Theory, Modern Portfolio Theory and Debt Deflation Theory have been discussed in this theoretical

review . An in-depth analysis of the factors affecting loan performance was also looked into.

Scarce empirical studies conducted locally and internationally on determinants of students' loan performance as majority of the literature is mainly focused on commercial banks in the private sector. Existing research did not directly study the relationship between unemployment in Kenya and NPLs at HELB. Therefore the research will to contribute in filling the knowledge gap by establishing relationship between unemployment and NPLs at HELB.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

Research design and methodology applied by the researcher in this study will be presented. It focuses on research design, target population, sampling technique, sample size, instruments to be used for collecting data and data analysis procedure to be applied for the study.

3.2. Research Design

Polit and Hugler (1999), research design is a model for carrying out study in a manner that will exercise utmost control over various components that could influence validity of the study results. Burns and Grove (2001), highlighted that research designing assist researcher in planning and executing research in a manner that will assist them to obtain intended results and information that could be linked with the study.

Descriptive research design was adopted by the researcher to ascertain correlation between unemployment and NPLs at HELB. Gay (1983), descriptive research design is the step of gathering and evaluating data to test hypothesis or respond to research questions with reference to current study. This research method was adopted because the researcher is able to gather, characterize the state of affairs and respond to questions regarding the research subject. Mugenda and Mugenda (1999), descriptive research determines and records state of affairs and also assist the research to draw a fact in terms of attitude, ideals and tendency.

3.3. Target Population

Population specify all components with attribute of interest to the researcher (Mugenda & Mugenda, 2003). Population for the study is unemployment trends obtained from KNBS and annual loan performance rates obtained from HELB for the periods 1981 to 2020. The researcher intends to sample the population from the year 1981 to date. This period covers the pre and post establishment of the HELB.

3.4. Data Collection

Researcher collected secondary data for a 40 years period between 1981 and 2020, the data was collected from HELB and KNBS. Before secondary data is used, the researcher must ensure that the data is adequate, suitable and reliable from authentic sources (Kothari, 2004). Data to be collected included non-performing loans from HELB; Unemployment rate, inflation rate and GDP of Kenya obtained from KNBS. Data collection form used in the study is attached in appendix 1.

3.5. Data Analysis and Presentation

To ensure accuracy of information, the researcher conducted test of completeness, validity and reliability. Regression analysis was used to ascertain cause and effect relation between study variables of interest to the researcher. The researcher conducted the tests for Linearity, normality, homogeneity, and autocorrelation. The result of the findings has been presented in terms of charts and tables to facilitate easy comparison of the results. This helped in bringing out the trends in employment rates in Kenya and the loan performance trend in HELB.

Multiple linear regression model for the study on the relationship between unemployment in Kenya and NPLs at HELB is presented as indicated below:

NPLs = f (Annual unemployment rate, Annual Inflation rate, Percentage change in loan disbursement, GDP growth rate)

NPLs = $Y_t = \beta_0 + \beta_1 X_{t1} + \beta_2 X_{t2} + \beta_3 X_{t3} + \beta_4 X_{t4} + \varepsilon_t$

Where:

NPLs = Y_t = Total Amount of loan in default (Kshs)

X_{t1} = Annual unemployment rate

X_{t2} = Annual Inflation rate

X_{t3} = Percentage change in loan disbursement amount

X_{t4} = GDP growth rate

ε_t = the error term

β_0 = constant

β_1 = the standardized regression coefficient or the standardized estimate for the independent variable was used to test significance level.

3.6. Operationalization of Study Variables

The variables for this study includes, loan performance, unemployment, inflation and economic growth. The construct under this study was operationalized as follows: Unemployment is the independent variable while dependent variables was loan performance. Research control variables are inflation, loan growth and economic growth.

To measure independent variable (loan performance) the study used non performing student loan as a measure of loan performance. Independent variable (unemployment) was measured by the rate of unemployment. Control variables; Inflation, loan growth and economic growth was measured by inflation rate, loan growth rate and economic growth rate respectively. This has been summarized in table 3.1.

Variable	Unit of measurement
Non-performing Loans	Total Amount of loan in default (Kshs)
Unemployment Rate	Annual unemployment rate
Inflation Rate	Annual Inflation rate
Loan Growth Rate	Percentage change in loan disbursement amount
Economic Growth Rate	GDP growth rate

Table 3.1: Operationalization of research variables

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1. Introduction

Research objective was to evaluate relationship between unemployment and NPLs at the HELB. The independent variables were unemployment, inflation, HELB loan growth and GDP growth in Kenya. Dependent variable was NPLs measured by total amount of NPLs at HELB. Data analysis, presentation and study findings interpretation will be presented in this chapter.

4.2. Diagnostic Test

Shapiro Wilk test of normality, heteroscedasticity test using scatter plot diagram, multicollinearity and autocorrelation test using Durbin Watson test was conducted.

4.2.1. Normality test

Skewness and Kurtosis was used for test of normality, the test was considered appropriate because it is not affected by ties like both the Anderson-Darling and Shapiro-Wilks tests. For data to be considered as normally distributed, they should have a skewness value of between -1 and 1. Normality test output is presented in table 4.1.

Constructs	Statistic	Sig.	Skewness	SE	Kurtosis	SE
Loan growth rate	0.171	<.001	1.674	0.374	4.631	0.733
Inflation rate	0.179	<.001	2.329	0.374	7.079	0.733
Unemployment rate	0.082	0.264	0.212	0.374	-0.238	0.733
GDP Growth rate	0.121	0.073	-0.536	0.374	-0.728	0.733
Non-performing loans	0.277	<.001	0.973	0.374	-0.671	0.733
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Table 4.1: Normality test

The skewness value of unemployment rate was 0.212 (SE = 0.374), kurtosis was -0.238 and P value of 0.082. That of GDP growth rate kurtosis value is -0.536, kurtosis of -0.728 and a P value of 0.121. Non-performing loans reported a skewness of 0.973, kurtosis of -0.671, P value of less than 0.001.Theis results imply that data of the highlighted variables are have a normal distribution.

Inflation rate skewness of 2.329 with kurtosis of 7.079, P value of less than 0.001. Loan growth rate skewness was 1.674, kurtosis was 4.631 and P value for the test was less than 0.001. The finding imply that Loan growth rate and Inflation rate are skewed and the data is not well distributed.

4.2.2. Heteroscedasticity test

The researcher applied heteroscedasticity test by use of scatter plot to establish if there are variances in dispersion of the statistical data. Results have been presented in figure 4.1.
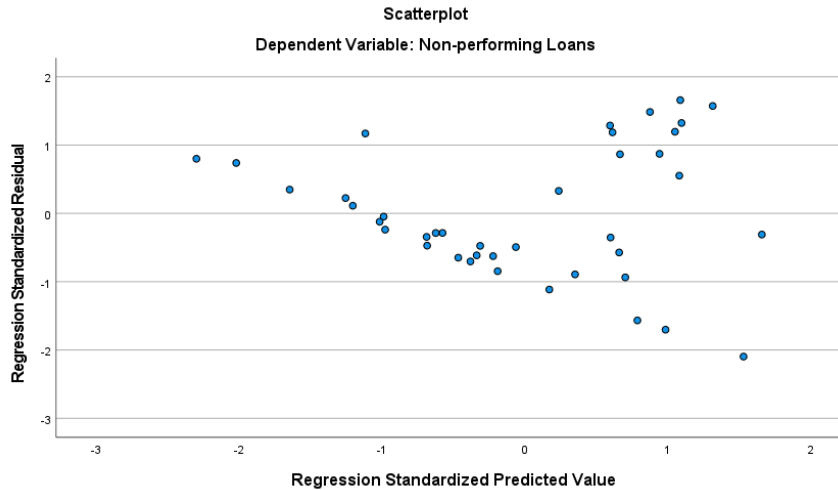
Figure 4.1: Heteroscedasticity scatter plot diagram

Scatter plot diagram indicates that the pattern is well spread within the diagram and there are no visual pattern of the residuals regression against predicted values. This imply that regression residual values variance were consistent hence, the researcher concluded that the variance of the residual values are homogeneous across all levels of predicted values. In addition, the residuals values indicated that majority of the data concerted within the center part of both axis. Visual presentation of the data depicts a pattern-less shape.

4.2.3. Multicollinearity test

Results in table 4.2 below indicates that all VIF values are between the specified scale of 1 and 5. This implies that multicollinearity was not identified in the research data set.

Variable	Tolerance	VIF
Loan growth rate	.822	1.216
Inflation rate	.641	1.561
GDP Growth rate	.654	1.530
Unemployment rate	.847	1.181

Table 4.2: Multicollinearity test

4.2.4. Autocorrelation

The researcher applied Durbin Watson test to establish if there is any similarity between the time series data at given intervals. Durbin Watson test values range from 0 to 4 where a value of 2 implies that there is no autocorrelation. Values of less than two depicts a positive correlation while values greater than two implies that there is negative (Khan, 2012). Durbin Watson test result for the study was 0.265 thus the researcher concluded that positive correlation exist between the research variables.

4.3. Descriptive Statistics

The researcher conducted various descriptive tests results tabulated in Table 4.3.

Variable	Minimum	Maximum	Mean	Std. Deviation
Percentage change in loan disbursement	-38.69%	139.59%	13.34%	32.37
Annual Inflation rate	1.55%	45.98%	11.11%	8.38
Annual unemployment rate	6.18%	8.2%	6.95%	0.47
GDP growth rate	-0.80%	8.41%	3.99%	2.14
Total Amount of loan in default (Millions, Kshs.)	39.6	4,356	1,252.11	1,465.01

Table 4.3: Descriptive statistics

Descriptive statistics results highlighted that minimum NPLs was 39.6 million and maximum NPLs of 4,356 billion. HELB recorded mean of 1,252.11 billion in terms of NPLs for period under study. Minimum loan growth for the period was -38.69 percent and the maximum growth of loan disbursement growth was 139.59 percent.

It can further be seen that the minimum rate of GDP growth for the research period was -0.8 percent, maximum GDP growth was 8.41 percent. The mean economic growth rate was 3.99 percent. The minimum inflationary rate was 1.55 percent while, maximum inflationary rate was 45.98 percent. The high inflationary rate reported in the period of 1993 was influenced by a number of factors, this includes currency devaluation, excessive rise in supply of money during 1992 and beginning of 1993, liberalization of prices and unfavorable climatic conditions (KNBS, 1994). Minimum unemployment rate was 6.18 maximum rate of unemployment was 8.2 percent. The mean unemployment rate was at 6.95%.

4.4. Correlation Statistics

Pearson correlation was used to measure level of association between independent variables and NPLs. Correlation Coefficient values was based on 95 percent statistical significance level of confidence, findings of the correlation analysis is considered to be significance value of p is less than 5 percent.

Findings of correlation analysis have been presented in Table 4.4. Loan Growth rate has a positive correlation (r = 0.076) with NPL, the correlation is insignificantly associated with p value of 0.642. Inflation rate has a statistically insignificant negative correlation associated with NPL, r value was -0.321 and p -value of finding was 0.054. This implies that, inflation rate decrease will cause NPLs at HELB to increase and vice versa. The research indicated that GDP and NPLs are positively correlated with r value of 0. .454** and p value of 0.003). In addition, unemployment rate reported a statistically significant positive association towards NPL with a beta coefficient of 0.454** and p value of less than 1 percent.

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Correlations

		Non-performing Loans	Loan growth rate	Inflation rate	GDP Growth rate	Unemployment rate
Non-performing Loans	Pearson Correlation	1				
	Sig. (2-tailed)					
Loan growth rate	Pearson Correlation	.076	1			
	Sig. (2-tailed)	.642				
Inflation rate	Pearson Correlation	-.321*	.302	1		
	Sig. (2-tailed)	.054	.058			
GDP Growth rate	Pearson Correlation	.454**	.040	-.504**	1	
	Sig. (2-tailed)	.003	.807	<.001		
Unemployment rate	Pearson Correlation	.527**	-.211	-.260	.320*	1
	Sig. (2-tailed)	<.001	.192	.105	.044	
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Table 4.4: Pearson correlation statistics

4.5. Regression Statistics

Regression analysis output is presented in three sections namely model summary, variance analysis and test of variables coefficients. Evaluation of model goodness fit was based on R squared value as presented in results model summary.

F and p values were used to interpret output of the ANOVA with 95 percent significance

level. Any hypothesis with a margin of error exceeding 5 percent is rejected. Coefficient of research variable was estimated using t tests, p values of less than 5 percent was used to measure coefficients significance of independent variables NPLs.

4.5.1. Effect of Unemployment, Inflation, Loan Growth and GDP Growth on Non-performing Loans

Research findings has been summarized in Table 4.5. Regression model correlation value of R was 0.611[a]. The analysis indicated that the R squared value for the model is 0.373. This implies that all the independent variables under study only accounts for approximately 37.3 percent of changes in the level of NPLs at HELB. This suggests that that there are other factors which influence NPLs but were not included in regression model.

Model Summary[b]									
				Std. Error of the Estimate	Change Statistics				
Model	R	R Square	Adjusted R Square		R Square Change	F Change	df1	df2	Sig. F Change
1	.611[a]	.373	.301	1224.75011	.373	5.201	4	35	.002
a. Predictors: (Constant), Unemployment rate, Loan growth rate, GDP Growth rate, Inflation rate									
b. Dependent Variable: Non-performing Loans									

Table 4. 5: Regression analysis

Results of ANOVA is presented in Table 4.6. The sum square for the regression models 31,203,799.508 and a residual sum square of 52,500,448.905 with mean square value of

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7,800,949.877 for regression and residual value of 1,500,012.826. F test statistics for the regression was 5.201, the level of significance value was less than 0.002^b, this implies that the independent variables were justifiable and fit to predict dependent variable and hence implying that predictor variables used significantly influencing NPLs at HELB. The researcher therefore rejects the null hypothesis that GDP, unemployment, inflation and loan growth does not significantly influence NPLs at HELB.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31203799.508	4	7800949.877	5.201	$.002^b$
	Residual	52500448.905	35	1500012.826		
	Total	83704248.413	39			
a. Dependent Variable: Non-performing Loans						
b. Predictors: (Constant), Unemployment rate, Loan growth rate, GDP Growth rate, Inflation rate						

Table 4.6: ANOVA Summary

Regression coefficients output is tabulated in Table 4.7. The findings indicates that keeping all variables under the study constant, NPLs would decrease by 8,591.156.

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-8591.156	3153.141		-2.725	.010
	Loan growth rate	1.162	6.681	.026	.174	.863
	Inflation rate	-13.607	29.250	-.078	-.465	.645
	GDP Growth rate	190.398	113.144	.279	1.683	.101
	Unemployment rate	1326.344	455.873	.423	2.909	.006

Table 4.7: Coefficient of regression

From the significant regression coefficients values, the regression equation will be;

$$NPLs = 1326.344 Xt_1$$

4.5.2. Discussion of Key Findings

According to the descriptive statistics for the period under study, average unemployment rate, inflation rate and GDP growth rate is 6.95%, 11.11% and 3.99% respectively. The average change in amount of loan disbursement by the Higher Education loans Board is 13.34%. The average annual amount of non-performing loans reported by HELB is Kshs. 1.252 billion. In addition, the highest inflation rate reported was 45.98% in the year 1993. The high inflationary rate reported in the period of 1993 was influenced by a number of factors, this includes currency devaluation, excessive rise in supply of money during 1992 and beginning of 1993, liberalization of prices and unfavorable climatic conditions (KNBS, 1994).

Correlation statistics conducted further revealed that Loan Growth has a positive correlation (r = 0.076) with NPL, the correlation is insignificantly associated with p value of 0.642. Inflation rate has a statistically insignificant negative correlation associated with NPLs, this implied that decrease in inflation rate will lead to an increase of NPLs at HELB with r value of -0.321 at 0.054 significance level. The study concluded that a positive correlation exist between GDP and NPL with r value of 0.454**, significance value of 0.003. The findings are contradict Radivojevic and Jovovic (2017), the researcher established that NPLs was significantly influenced by gross domestic product. The findings also controvert Wood and Skinner (2018), the researchers established that unemployment, GDP growth and interest rates significantly influence NPLs.

Multiple linear regression analysis had a correlation coefficient of 0.611[a] with R squared of 0.373. This infers that the independent variables account for around 37.3 percent of changes in NPLs. This implies that there are other variables which influence NPLs but were not considered by the researcher in this study.

The study revealed that keeping all variables constant, amount of NPLs will be 8.59 billion. At 95% confidence level, the researcher established that inflation, loan growth and economic growth had a tolerance 0.641, 0.822 and 0.654 respectively. The tolerance levels suggest that the independent research variables have affects the NPLs at HELB. However, degree of significance values; 0.645, 0.863 and 0.101 respectively indicate that the influence is not significant.

In addition, collinearity statistics for unemployment reported a statistically significant beta of 0.423 with tolerance level of 0.847 and p value of 0.006. The study revealed that

reduction in unemployment rate would decrease loan default by 1.326 billion. This may be attributed to the fact that unemployment could lead to a restraint to the amount earned by individuals. This could in turn lead to upsurge in cases of NPLs. This finding corroborate Dins (2013), the researcher established that unemployment had significant impact on NPLs. When there is an increment in the rates of unemployment reported, it tends to be accompanied by increase in NPLs. Kiprotich (2017) argued that customer behavior towards loans repayment is greatly impacted by their status of employment and level of income. Onchomba (2014) suggested that variation in NPLs has a direct proportional change to the amount of NPLs.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Introduction

Presentation of findings summary of findings, conclusions and recommendations based on the will be discussed in this chapter. The chapter further provides for suggestions for further studies.

5.2. Summary of Study Findings

Findings established in the previous chapter indicate that HELB recorded approximately 1,252.11 billion in terms of non-performing loans. The average loan growth rate was 13.34% while inflation rate, GDP growth rate and unemployment rate was 11.11%, 3.99% and 6.95% respectively. The findings have revealed that GDP and loan growth rate have positive correlation to NPLs but the relationship is insignificant with beta coefficient of 190.398 and 1.162 respectively. However the values are statistically not significant denoted by p value of 0.645 and 0.822 respectively.

The study further revealed that inflation rate insignificantly negatively affect non-performing loans with beta value of -13.607, significance p value was 0.645. The research further revealed that unemployment significantly affect NPL with coefficient value of 1,326.344 and p values of 0.006. Decrease in rate of unemployment rate by one percent can decrease the amount of loan default by 1.326 billion. This may be attributed to the fact that unemployment could lead to a restraint to the amount earned by individuals. This could in turn lead to upsurge in cases of NPLs. This finding corroborate Dins (2013), the researcher established that unemployment had significant impact on NPLs. When

unemployment rate increases, is likely to be followed by increase in NPLs. Kiprotich (2017) argued that customer behavior towards loans repayment is greatly impacted by their status of employment and level of income. Onchomba (2014) suggested that variation in NPLs has a direct proportional change to the amount of NPLs.

The study rejected null hypothesis; there is no correlation between unemployment in Kenya and NPLs at HELB. The study established a positive correlation between unemployment and NPLs at Higher Education Loans Board, the finding level of significance p value is 0.006.

5.3. Conclusion

The researcher conclude that significant positive correlation exists between unemployment and NPLs at HELB. This may be attributed to the fact that unemployment could lead to a restraint to the amount earned by individuals. This could in turn lead to upsurge in cases of NPLs. This finding corroborate Dins (2013), the researcher established that unemployment had significant impact on NPLs. When there is an increment in the rates of unemployment reported, it tends to be accompanied by increase in NPLs. Kiprotich (2017) argued that customer behavior towards loans repayment is greatly impacted by their status of employment and level of income. Onchomba (2014) suggested that variation in NPLs has a direct proportional change to the amount of NPLs.

The study further concludes that inflation rate and NPLs have a negative relationship. This suggests that decrease in inflation rate will be accompanied by increase in NPL at HELB. The study further concludes that GDP rate, loan growth rate and NPLs at the Higher

Education Loans Board have a positive correlation, however the relation is not statistically significant.

The results of multiple linear regression analysis had a correlation coefficient of 0.611[a] with R squared of 0.373. This infers that the independent variables account for around 37.3 percent of changes in NPLs. This implies that there are other variables which influence NPLs but were not considered by the researcher in this study.

5.4. Recommendations

Researcher findings established that unemployment significantly affect NPLs at the HELB. The government should therefore make structural and policy changes to reduce the rate of unemployment in Kenya. This would in turn reduce non-performing loans at Higher Education Loans Board and also reduce the need for government funding of the institution through capitation.

The study further recommends that the management of Higher education Loans Board should evaluate other factors that might affect loan performance. This is based on the finding that the study independent variable accounted for approximately 37.3 percent of changes in NPLs. The study further indicate that there exist other predictor variables which accounts for 62.7 percent not in the model which could affect loan performance at HELB.

The researcher recommends that HELB management should carefully study the growth rate of the economy when determining the amount of students' loan disbursement, this is because unstable growth rates in the economy measured by the percentage growth in GDP rate would results into poor loan quality of students' loan. Growth of GDP rate would inherently contribute to high rate of employment, increase in income per capital and

increase high rate of loan repayment which would in turn contributes towards lowering non-performing loans at HELB.

5.5. Limitation of the Study

The research objective was to establish relationship between unemployment in Kenya and NPLs at HELB, in achievement of its objective the study was limited to use of secondary data for a period of forty years. A common challenge with using secondary data, researcher does not have control over accuracy data collected. To deal with this challenge and ensure accurate data was used, the researcher resulted to getting the data from HELB and Kenya National Bureau of Statistics published annual economic survey.

Literature review majorly applied research studies done in other countries whose economic set ups are distinct in nature from those existing in Kenya, thus the research fell short inferring to local scene. This is due to limited studies done on students' loan performance at HELB. Researcher further assumed that no other significant intervening variables could have influenced loan performance.

Researcher faced challenges of time resource, this limited the amount of time available in collecting data for the study particularly in the instance where HELB management delayed in providing data used. Researcher frequently followed up with HELB management to ensure timely collection of sufficient data from the institution. The researcher also faced challenges in obtaining data from the HELB due to resistance of the management to provide the data, however researcher informed management that the data was for academic research only and will be handled with uttermost confidentiality.

5.6. Suggestion for Further Research

The researcher emphasis was establishing relation between unemployment in Kenya and non-performing loan at Higher Education Loans Board. A further study should be done to determining relationship between unemployment and NPLs in other financial organizations such banks, Deposit Taking SACCOs or MFIs in Kenya. Future research could address influence of government monetary policy on students' loan performance in Kenya.

The study further recommends that the management of Higher education Loans Board should evaluate other factors that might affect loan performance. This is based on the finding that the study independent variable accounted for approximately 37.3 percent of changes in NPLs. The study further indicated that there exist other predictor variables which accounts for 62.7 percent not in the model which could affect loan performance at HELB. The researcher therefore recommends that further studies be done to evaluate other factors not included in the study that affect non-performing loan at Higher Education Loans Board.

The researcher focused on unemployment in Kenya and NPLs at Higher Education Loans Board. Similar studies should be done to determining correlation between unemployment and NPLs in other comparable countries in Eastern and Central Africa region whose economic circumstances are comparatively similar to Kenya.

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APPENDIX

APENDIX 1: DATA COLLECTION FORM

Year	Loan Disbursement	Total amount of NPLs	Annual Unemployment Rate	Inflation Rate	GDP Growth Rate
	Kshs	Kshs	Percentage	Percentage	Percentage
1981					
1982					
1983					
1984					
1985					
1986					
1987					
1988					
1989					
1990					
1991					
1992					
1993					
1994					
1995					
1996					

Year	Loan Disbursement	Total amount of NPLs	Annual Unemployment Rate	Inflation Rate	GDP Growth Rate
	Kshs	Kshs	Percentage	Percentage	Percentage
1997					
1998					
1999					
2000					
2001					
2002					
2003					
2004					
2005					
2006					
2007					
2008					
2009					
2010					
2011					
2012					
2013					
2014					
2015					

Year	Loan Disbursement	Total amount of NPLs	Annual Unemployment Rate	Inflation Rate	GDP Growth Rate
	Kshs	Kshs	Percentage	Percentage	Percentage
2016					
2017					
2018					
2019					
2020					