

**BANK FINANCIAL INTERMEDIATION AND ECONOMIC GROWTH  
IN KENYA**

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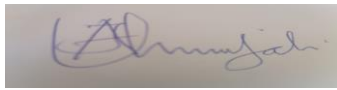
**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN  
BUSINESS ADMINISTRATION AT THE UNIVERSITY OF NAIROBI**

**NOVEMBER 2022**

## DECLARATION

I hereby declare that this research project is my own work and has not been presented for any academic award to any University or learning institution in Kenya.

Signature...



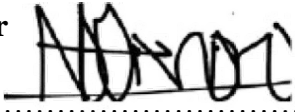
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## **DEDICATION**

I dedicate this work to my dad Mr. Karilus B.N Umijah for encouraging me to do this course. To my siblings Noela, Molly, Belinda, Yvonne and Raphael, this is an encouragement to all of you to undertake a Master's degree. I also dedicate this to all my friends who supported me to complete this course.

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## **ABBREVIATIONS AND ACRONYMS**

**GDP:** Gross Domestic Product

**CBK:** Central Bank of Kenya

**SACCO:** Savings and Credit Cooperative Society

**EAC:** East African Community

**OLS:** Ordinary Least Squares

**ANOVA:** Analysis of Variance

**GMM:** General Method of Moments

**NIC:** National Industrial Credit Bank

**CBA:** Commercial Bank of Africa

**PLC:** Public Limited Company

## **ABSTRACT**

Financial intermediation of commercial banks promotes economic growth in Kenya by mobilizing funds from areas with surplus and distributes them to areas with less funds thus economic growth is achieved following an efficient financial system of commercial banks. The objectives of the study were to find the effect of commercial bank loans, deposits and assets on the Gross Domestic Product of Kenya. Data was collected from 29 licensed commercial banks from 2011 to 2021. Gross Domestic Product was used to measure economic growth while bank assets, loan value and deposits were used to measure financial intermediation. Data was analyzed using EVIEW 11 SPSS software and a single regression analysis was used in each of the independent variables to determine their effect on the dependent variable. Correlation analysis with p-value < 0.05 showed no significant relationship between Bank loans, assets and deposits with the GDP. The study recommends that CBK to ensure publicity of financial statement of banks on their websites to allow easy access to stakeholders, broad money supply to be taught as a sub-unit in universities since it is a major indicator of financial intermediation, management of commercial banks to ensure that information on number of outstanding loans and active borrowers to be included in financial statements and students to be taught on more tests and methods to analyze data in similar studies as this one.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Financial intermediation from commercial banks' perspective promotes economic growth by distributing mobilized funds from economic units with surplus to those with deficits. This means that the process could speed up economic growth and development. Financial intermediation of an institution begins with mobilization of funds and investment processes, (Ezirim, 2006) thus, as economies grow, banks direct financial resources to areas with the most production (Albert & Kaja, 1999). (Molyneux et.al, 2006) explains that financial intermediation takes into account the different needs of savers and borrowers by converting highly liquid savings into large amounts of loan size. Every economic puts into consideration economic progress as one of its macroeconomic goals whereas all economies evaluate their economic progress by factoring in the real GDP as the annual growth rate. That is, the accessibility for investment funds is a crucial factor in accelerating growth in a country (Sanusi, 2002). Therefore, the willingness to progress economically is rooted on the finance system. This system assists in increasing the manufacturing capacity of an economy. Consequently, efficiency in accessing loans and funds mobilization are basic requirements in the economic progress of a country. The main proposition attributed to this argument is grounded on the theory that businesses and the private ownerships are in shortage of capital required for real production of resources which can aggravate and shift the production probability curves of an economy outmost. Schumpeter (2011), directly connected economic progress to the efficiency and effectiveness of banks which means that economic acceleration is a consequence of having a vital finance structure filled with more givers of loans. Schumpeter argues that this leads to the proper use of state of the art techniques that always increase the production process. In addition, he suggested that increased production and inventive works of traders is as a result of readily available issuance of loans in the financial system (Tapen, 2001).

The theories used in this study are the theory of financial intermediation and Structural theory. The financial intermediation theory was advocated by Shaw & McKinnon (1973) and Goldsmith (1969), who concluded that capital markets steered economic growth and development in countries whose financial institutions received excellent provision of services.

Goldsmith (1969), explained uninterrupted relationship between the proportion of Gross National Product and financial development which provide positive effects on capital stock whilst McKinnon (1973) asserted that there is an uninterrupted correlation between financial intermediaries and stock markets. He concluded that as financial intermediaries develop in emerging economies, there is a positive development in the financial markets. The Structural school of thought explains the structural difficulties faced by emerging economies such as market inefficiencies which cause most developing countries to regress in economic development. They criticized the hypothesis that increase in rates of interest increases saved funds into the formal sectors that are financially oriented (Van Wijnbergen, 1982).

Commercial banks are regarded as financial intermediaries thus carry out financial intermediation function within an economy. Sulaiman, et. al (2015) explains the functions of financial intermediaries within an economy's financial system which includes distributing mobilized funds from economic units with surplus to those with deficits. In emerging countries, financial intermediation is greatly influenced by commercial banks because the set-up of the financial system favors banks a lot. The efficiency of commercial banks contributes a lot to economic growth in the process of financial intermediation. This efficiency is attributed by ability of commercial banks to create and increase deposits and distribute them in form of loans for purposes of investment. Scholtens and Van Wensveen, (2003) explains that an imperfect market creates an environment in which banks carry out financial intermediation perfectly. They further suggest that banks become relevant if they operate in an imperfect market so as to make use of perfect information which is often neglected by investors and lenders in working together.

### **1.1.1 Financial Intermediation**

Gorton and Winton, (2002) define financial intermediation as a process whereby banks mobilize funds in form of customer deposits and lend them to borrowers. It is the initial stage where savings and investment begins. It provides a route for funds to be distributed from savers to borrowers.

From his study, Aziakpono (2005) summarizes the roles that financial intermediation of commercial banks play in promoting growth activities in an economy; first by mobilizing resources and channeling them from more to less economics units and maximizing the

distribution of these resources into the most productive units of a country. Also, it provides more liquidity to the banking system whenever a need arises. This occurs when there is a change in the maturity of lenders' and borrowers' portfolio. Lastly, it reduces the risk of the system by providing diversification and risk sharing methods in order to prevent losses, (Nissanke and Stein, 2003).

Sulaiman, et.al, (2015) measures financial intermediation through deposits, number and cost of investments, cost of financial intermediation, size of the banking sector, and ease of accessing financial intermediaries. In addition, loan-to-deposit ratio is used by banks to compute the amount of funds saved and issued on credit, (European Banking Authority 2017). Other common measures include interest rates, broad money, loans to private sector, savings etc. (Yakubu, et.al, 2021)

### **1.1.2 Economic Growth**

Economic growth is the percentage at which the total value of goods and services produced changes with the adjusted price of inflation, (Baye & Jansen 2006). It is expressed as the degree of change per annum. Economic progress of a nation represents the total production and sales of goods and services of its natives and non-natives living in a particular state (Ibrahim, 2017). This means that it outlines state activities involved in creating value in a particular year under evaluation.

GDP has been used as the most ordinary measure of economic performance all over the globe which represents an annual slope of a country's economic activities compared to the previous year. Changes in GDP are the most popular indicator of the nation's overall economic health. Other measures commonly used by a nation to measure economic growth include GNP or Gross National Product (Levine, 1997). It is used to measure the production of goods and services by a nation and income from investments outside the country. When economic growth increases, it means that there's an increase in the total output within a given year.

### **1.1.3 Commercial Banks in Kenya**

A Commercial bank is an institution which provides financial services by accepting money from depositors and makes loans there from. By so doing, banks serve three main functions; pooling savings and converting the savings into financing and investments, managing risks inherent in searching, selection and monitoring of borrowers and provision of effective and efficient banking systems (Marangu, 2007)

Commercial Banks in Kenya are registered under the Banking Act and regulated by the CBK which is the main regulatory body in this sector. These banks represent a vital sector of business across the world by formulating monetary policies and providing ways of facilitating payments for goods and services in both domestic and international trade. According to CBK's annual reports, 15 commercial banks were acquired between the years 2000 and 2021 while several banks merged between 1989 and 2019 with the recent one being NIC Group PLC and CBA Banks to form NCBA Bank Kenya PLC which merged in 2019. The recent acquisition was Uwezo Microfinance Bank Limited which was acquired by Salaam African Bank in 2021. Currently, 39 licensed commercial banks are operating in Kenya. This is in relation to CBK's report published in 2021.

These commercial banks, compared to other financial intermediaries have a wider asset base in terms of loan portfolio, more advanced technological systems which offers adequate security to customers' deposits and bank assets, lower interest rates, more reserve requirements and lower credit risk. (Wambua and Were 2014). These are financial intermediation indicators which promote economic growth.

### **1.2 Research Problem**

Financial intermediation function of commercial banks is often linked with economic progression which provides both temporary and elongated effects thus the connection between the functions of financial intermediation and economic development relies on the profundity of services accessible in the finance structure (Goldsmith, 1959). Goldsmith further explained that maximum use of the finance system causes a lower the resistance in the market (i.e. transaction cost) and accessibility of inexpensive capital by traders help accelerate the growth of an economy. Study by McKinnon & Shaw (1973) reveals that the act of savings mobilization

and roles of lending makes commercial banks to restore economic development by helping venture capitalists to make capital out of investment opportunities. However, Ekpenyong & Acha (2011), disagree that financial intermediation accelerates economic growth as a result of inadequate bank lending to private sector, especially small and medium enterprises, mostly regarded as key drivers of growth. High lending rates and broad money supply also provided a negative relationship with economic growth. (Zaghdoudi, et. al 2013)

There are several challenges facing Kenyan commercial banks in the process of financial intermediation. These include the use of informal, cash-based economy, the continued low public confidence in the banking system which includes ; poor financial health of the banks, lack of publicly available and reliable information on the soundness of financial institutions; high fees and stringent conditions for the opening of bank accounts, in particular a requirement to maintain high minimum balances, strict policies that discourage bank transactions, corruption and inefficient leadership (Ambutsi,2005). These challenges have made some commercial banks to merge as well as being put under receivership due to bankruptcy.

Several studies done on Financial Intermediation and economic growth focuses on financial intermediaries as a whole which includes banks, Microfinance institutions, SACCO's and Mortgage Finance Companies, (Agbada and Osuji, 2013) and Adeyinka et. al, (2018). However, very little has been done to discuss financial intermediation from the commercial banks' perspective and how it impacts economic growth in Kenya. Kenyan researchers who include Muli, (2008), investigated the correlation between financial deepening of intermediaries on Kenya's economic growth. He used Error Correction Model with data between 1967 and 2006 and found out that Kenya could improve the economic growth by improving the financial sector. Muhoza, (2019) found out that financial intermediation positively impacted economic performance in the EAC by using data between 1985 and 2017. Since there is still a mixed reaction on the findings of how financial intermediation impacts economic growth, there's need to research on financial intermediation roles of commercial banks that affect economic progress of Kenya which will seek to answer the following question; does financial intermediation roles of Commercial banks arouse economic growth in Kenya?



### **1.3 Research Objectives**

Research objectives of this study were as follows;

- i. To analyze the effect of all commercial bank loanable funds on economic growth of Kenya.
- ii. To analyze the effect of all commercial bank deposits on economic growth of Kenya.
- iii. To analyze the effect of all commercial banks assets on economic growth of Kenya.

### **1.4 Value of Study**

This research work will contribute knowledge and research ability at the University as it would provide reference and theory building by students and other researchers in the department of Finance and Accounting. It will also be important in management practice since the ever changing environment requires managers to familiarize themselves with the increasing change in financial intermediation functions of banks due to changes in technology.

Policy makers such as the CBK, Capital Markets Authority will use this study to formulate policies that will enhance excellent performance of banks in Kenya. It will also be of relevance to the amendment of current rules and regulations governing commercial banks which include calculation of interest rates, inflation rates etc.

The findings of this study will also be important to investors in the process of making investment decisions in the commercial banks on how best to buy and sell in securities. Moreover, it will have significance to a number of shareholders in understanding the importance of Financial Intermediation of commercial banks and how they affect investments.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter is pegged on the previous researches as discussed by scholars. The chapter discusses the theories that configure the base of this research which includes theoretical literature, summary of theoretical literature reviewed and conceptual framework.

#### **2.2 Theoretical Framework**

The section is concerned with the theories on that support this study. It explains Financial Intermediation theory and the Structural Approach. The theories have been aligned with the independent variable which is financial intermediation and the dependent variable which is economic growth.

##### **2.2.1 Theory of Financial intermediation**

Shaw & McKinnon (1973) and Goldsmith (1969) advocated for this theory by explaining the role of money and capital markets as being critical in economic development across countries. They concluded that the efficiency in quality and quantity of services in financial institutions comes about when money and capital markets efficiently play their roles. Robinson, however, contrasts this theory. He argues that markets negatively respond to other indicators that produce different growth results across the country, however, the negative response moves along with the supply of Finance. This theory believes that economic growth will expand finance sector. The relationship between Gross National Product and development in the financial sector is explained by Goldsmith (1969) who concludes that the positive result in the relationship is brought about by more use of capital for financial development. McKinnon (1973) linked demand for money and physical capital and argues that there is a complimentary relationship because investment and saving decisions are influenced by conditions of money supply. Shaw (1973) proposed the debt intermediary proposition in which he argued that as savers and investors experience increased financial intermediation as a result of financial freedom, there is an increased incentive to save and invest, which increases supply of credit thus raising investment levels. He stresses that for a successful financial intermediation,

institutions must be allowed to enter freely and compete within the financial markets. Therefore, they listed the factors contributing to economic depression as; barriers to entry into the banking industry, deposits requiring high reserves, high loaning rate, direct credit and restriction on foreign currency exchanges.

Few studies that have used this theory include (Adeyinka et. al. 2018). It is therefore significant to this research due to the financial sector reforms seen recently which have majorly contributed to the increasing performance of commercial banks especially by offering credit for investment to the public, other financial intermediaries and the government which affects economic growth. It stresses the freedom of entrance into and level of competitiveness within financial markets which is a key driver to successful financial intermediation. It also touches on the restriction of entry into banking activities, a regulation of CBK to all the new banks.

### **2.2.2 Structural Theory**

Structural proposition explains inefficiencies causing economic backwardness in developing countries. These are due to the difficulties that market structures have. Van Wijnbergen, (1982), criticized the theory that increase in the rates of interest increases savings into the official sectors that are financially oriented. He supported the existence of informal sector and argued that they could increase financial intermediation since the institutions involved do not need to have high reserve requirements like the ones in the stately recognized sector. In addition, he asserted that representatives in this section would prefer to trade in the non-state recognized sector than the formal due to high rates of interest in the stately section. Thus, this causes an unexpected outcome with an immense impact on how economic growth is influenced by financial intermediation (Dabwor, 2010).

Studies that have used this theory include Miba'Am (2018). This theory presupposes that besides commercial banks being affected by market inefficiencies like information asymmetries, transaction costs, market psychology etc. provide space for non-financial institutions such as online lenders to provide financial intermediation. When interest rates go up in commercial banks, lenders deposit their money in other non-regulated financial intermediaries thus decreasing economic growth.

### **2.3 Empirical Literature Review**

Several studies have been conducted on financial intermediation across the globe to find out the relationship it has with economic growth as shown below.

Beck, Levine and Loayza (2000) used General Methods of Moments and scrutinized the magnitude of financial intermediation on economic growth. They used the dependent variables of financial intermediation and concluded that a positive relationship exists with economic growth. They, however proposed strong lenders' protection and strict and lawful accounting standards for improved financial intermediation.

McCaig & Stengos (2005) analyzed 71 states between the period of 1960 to 1995 and deduced a positive existence between economic growth and financial intermediation. They estimated using the GMM on a linear regression model. However, they compared private credit and liquid liabilities with the measure by Commercial-Central Bank ratio and found out that the former was the stronger one.

Hao (2006) used a linear model to analyze how mobilization for house-holds saved funds and the proxy loan for national funds forecast influences economic growth. He used 28 provinces with data between 1985 and 1999 and concluded that a positive correlation existed. However, the study found out that banks are not efficient in loan distributions making them relevant but not positively related to growth. The provincial governments' ability to self- finance also impacts negatively on the financial intermediation of banks.

A study by Rexiang and Rathanasiri (2011) used a two-step method to find out if financial intermediation impacted economic growth in a small open economy. Data used was from 1977 to 2008. Engle-Granger test result was conclusive being that the effect of financial intermediation was positive on economic growth after an elongated period though the effect is not strong. Moreover, they found that productivity as a function of financial intermediation was essential in promoting growth than capital accumulation

Agbada and Osuji (2013) used the OLS method to get the relationship between financial intermediation and economic output and fund out that there exists a linear relationship. To get the influence of financial intermediation on economic growth, Chinweoke et al. (2014) used OLS technique and posted a positive result on economic growth. A relationship existed for a

long term between financial intermediation and economic growth as tested by Ogiriki and Andabai (2014). This study used Vector Error Correction Mechanism and co-integration test to elucidate the link between financial intermediation and growth. They further explained that the long-term connection ignited the upward and downward movement in economic growth.

Yakubu & Affoi (2014) tested the level of loaned amounts which are allocated by commercial banks to the economic sector in relationship to growth. They used multivariate analysis which depicted a direct impact on the economy. They further explained that credit received by the economic sector, is a function of the intermediation process which directly affects growth. Comparably, the lending activities of banks showed a numerical existence on economic growth.

Acha & Ekpenyong (2011) used an Error Correction Approach to investigate the roles played by banks in mobilizing deposits and loan distribution to the most important sectors of the economy. They concluded that bank intermediation does not influence economic growth. Meanwhile, Acha, (2011) used GDP, total bank deposits and private sector credit allocation to calculate savings and credit ratio between 1980 and 2008. He then concluded that credit distribution and savings mobilization had no significance with economic performance. Shittu (2012), however, found a direct correlation between financial intermediation and economic growth by employing the Error Correction Model.

Muli (2008), used Granger-causality test and Error correction model to analyze the effect of financial development on economic growth in Kenya. Using data between 1967 and 2006, he concluded that there existed a correlation between financial development and economic growth eventually while Ibrahim (2017), employed ANOVA for analysis while studying the relationship between financial deepening and the economic growth of Kenya. He found a positive correlation between the two variables.

## 2.4 Summary of the Literature Review

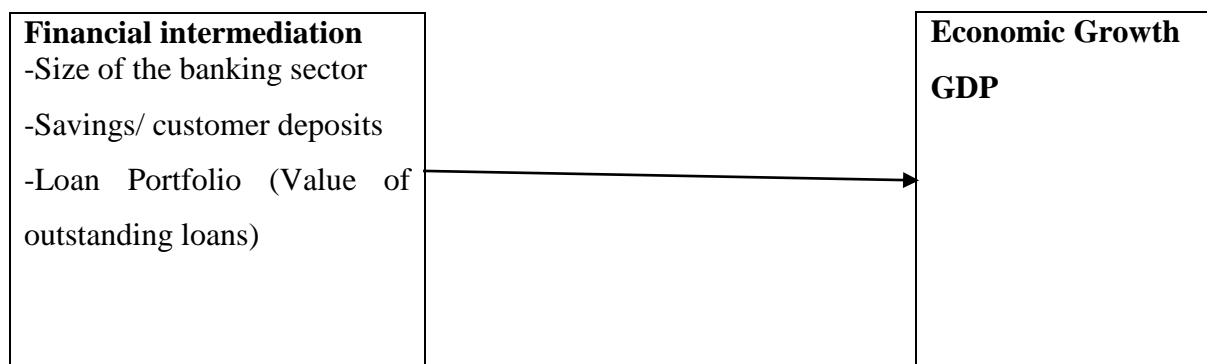
Following the work done by researchers above, many studies done depicted a positive co-existence between financial intermediation and economic growth (Beck, Loayza & Levine, 2000; Hao 2006; Rexiang and Rathanasiri 2011 etc.) Different methods were as used to carry out research which include, Generalized Method of moments, Engle Granger 2-step methodology, Ordinary Least Squares Method, Co-integration, Error Correction Approach and Regression Analysis. The researches were done in areas with varying macroeconomic set up, with most of the studies focusing their context on countries and not a case study. This posed a limitation to the application in the local context. Most of the studies done in Kenya (Ibrahim 2017; Muli 2008; Ng'ang'a 2016; Kagochi 2013 etc.) have a focus on financial deepening and financial sector development as opposed to financial intermediation. Therefore, the different results exhibited by the studies, the methods applied clearly indicate that there is still a space left to be filled hence there is need to proceed with this study.

## 2.5 Conceptual Framework

The dependent variable in this study is economic growth measured using the GDP. The independent variable is financial intermediation which has the following indicators; size of the banking sector, savings and the loan portfolio.

### Independent Variable

### Dependent variable



**Figure 2.1: Conceptual model**

**Source: Author 2022**

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter introduces the methodology to be used by a researcher. It discusses the various methods applied to collect data which aided an intense feedback to the research questions. The chapter highlights the research design applied, population of the study, data collection and analysis.

#### **3.2 Research Design**

The study adopted both longitudinal and cross-sectional research designs. The longitudinal research design cut across the years from 2011 to 2021 and the cross-sectional research design moved across all the licensed commercial banks in Kenya. The Cross-sectional research design intends to explain a situation based on the origin of the problem being researched. It tries to filter the presence and intensity of the independent variables upon a dependent variable at a given point (Veal, 2005). This research design has been used by (Gatetua, 2021).

#### **3.3 Population**

The population of the study included 39 licensed Commercial Banks in Kenya according to the Central Bank of Kenya's annual report as at June 2021. However, 10 banks were eliminated due to lack of credible data. 29 banks were therefore studied.

#### **3.4 Data Collection**

Secondary data was applied in the study with GDP being used to measure economic performance of the nation. Data was collected for the period 2011 to 2021 from CBK's annual reports. To measure financial intermediation, the independent variables used included size of the banking sector which was measured by total assets, deposits and the loan portfolio which was measured by the value of outstanding loans. Data was collected from individual banks' balance sheet. The data was gathered using a secondary data capture form.

### 3.5 Data Analysis

This study employed quantitative techniques. OLS technique was used as an instrument of evaluating the effect of financial intermediation of commercial banks on economic growth in Kenya. Tables were used to display, understand and interpret collected data. Single regression analysis was used to establish the co-existence between dependent and independent variables and EVIEWS 11 SPSS Software was used for analyzing data.

#### 3.5.1 Ordinary Least Square (OLS) Techniques

The OLS regression method has been intensely used to evaluate economic correspondence with fairly satisfying results because it is simple in techniques and does not require a lot of data (Koutsoyiannis, 1977). This technique was used to approximate the co-existence between financial intermediation and economic growth in Nigeria. The intercept and the coefficient of the error term are calculated. In addition, the OLS shows the angle of correlation between both variables, that is, the dependent and the independent variables.

#### 3.5.2 Analytical Model

An ordinary regression analysis was applied to measure the independent variables against the dependent variable. The stepwise analysis was done to achieve the individual objectives.

- i.  $Y = \alpha_0 + \beta_1 X_1 + \varepsilon \dots \dots (i)$  Where Y= is the measurement of economic growth rate,  $X_1$ = size of banking sector and  $B_1$ =beta co-efficient in relation to size of the banking sector.
- ii.  $Y = \alpha_0 + \beta_2 X_2 + \varepsilon \dots \dots (ii)$  Where Y= is the measurement of economic growth rate,  $X_2$ =savings and  $B_2$ = beta co-efficient in relation to savings.
- iii.  $Y = \alpha_0 + \beta_3 X_3 + \varepsilon \dots \dots (iii)$  Where Y= is the measurement of economic growth rate,  $X_3$ =loan portfolio and  $B_3$ = beta co-efficient in relation to loan portfolio.



## CHAPTER 4

### DATA ANALYSIS, RESULTS AND CONCLUSION

#### 4.1 Introduction

This section shows the findings of the research based on the objectives. It focuses on analysis done on the data collected from individual banks' balance sheets as well as CBK's annual reports. The data showed the amount of loans, amount of deposits, number of assets and the GDP. The researcher did descriptive statistics to show the mean, median, standard deviation, skewness and kurtosis of the data. Multivariate and correlation analyses were done which involved presenting the outcome in tabled forms to facilitate undemanding interpretation.

##### 4.1.1 Descriptive Statistics

This information shows the descriptive statistics of the variables of interest in this study. Accordingly, loans, deposits, assets and GDP descriptive is as below.

**Table 4.1 Summary of descriptive Statistics**

	<b>GDP</b>	<b>LOANS</b>	<b>DEPOSITS</b>	<b>ASSETS</b>
Mean	15.83912	9.850489	10.11879	10.29937
Median	15.84288	10.05000	10.40022	10.61361
Maximum	16.05534	13.17927	13.34467	13.68473
Minimum	15.62219	0.000000	0.000000	0.000000
Std. Dev.	0.136248	2.364936	2.462248	2.606514
Skewness	-0.046928	-2.569698	-2.683238	-2.569124
Kurtosis	1.763283	11.74769	11.95764	11.02732
Jarque-Bera	20.44627	1363.895	1444.759	1207.409
Probability	0.000036	0.000000	0.000000	0.000000
Sum	5052.681	3132.455	3217.775	3285.499
Sum Sq. Dev.	5.903230	1772.956	1921.864	2160.465
Observations	319	318	318	319

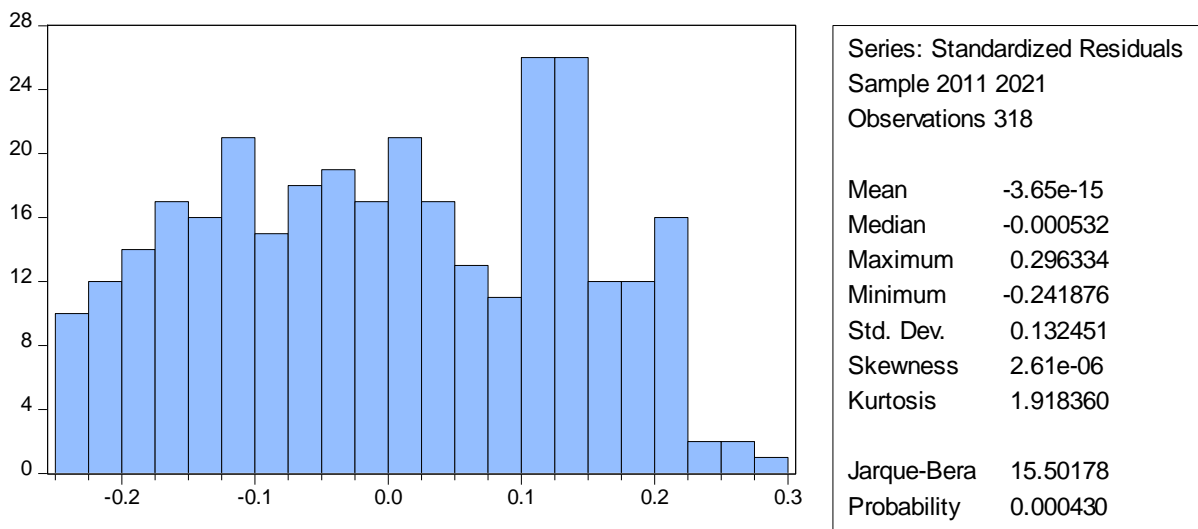
The descriptive statistics allowed the researcher to describe the data analyzed, the mean GDP for the period of 10 years was 15.83192 with a standard deviation of 0.13 at 95% confidence level, and the data is negatively skewed with a Skewness of -0.04. Similarly, the loans obtained a mean of 9.8505489 with a standard deviation of 2.36 at 95% confidence level, the data is negatively skewed at -2.56. Deposits held a fixed mean of 10.11879 with a deviation of 2.46

at 95% confidence level with a negative Skewness of -2.683. Assets had an average 10.29937 with a standard deviation of 2.606 at 95% confidence level with a negative Skewness of -2.56.

#### 4.1.2 Normality Test

Normality test was done on the data by examining the Skewness and kurtosis of the distribution. The results in Table 4.1 below shows that the variables are normally distributed. The Skewness values range between -3 to +3 which is within the acceptable range for normally distributed data. Alternatively, kurtosis values ranged from -4 to +4 which indicates that the study variables used have a normal distribution and for that reason are appropriate for more analysis.

**Figure 4. 1 Normality Test**



#### 4.1.3 Correlation Analysis

The following correlation analysis was derived, loans, deposits, assets and GDP correlation coefficient values were listed as below.

**Table 4. 2 Correlations**

Correlations		GDP	Loans	Deposits	Assets
GDP	Pearson Correlation	1			
	Sig. (2-tailed)				

	N	319			
Loans	Pearson Correlation	.193**	1		
	Sig. (2-tailed)	.001			
	N	318	318		
Deposits	Pearson Correlation	.204**	.960**	1	
	Sig. (2-tailed)	.000	.000		
	N	318	318	318	
Assets	Pearson Correlation	.229**	.932**	.964**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	319	318	318	319

\*\* Correlation is significant at the 0.01 level (2-tailed).

The results confirmed that loans and GDP were weakly and positively correlated as shown by  $r = 0.193$ , statistically significant  $p = 0.001 < 0.05$ , deposits and GDP were weakly and positively correlated as shown by  $r = 0.204$ , statistically significant  $p = 0.000 < 0.05$  and finally assets and GDP were weakly and positively correlated as shown by  $r = 0.229$ , statistically significant  $p = 0.000 < 0.05$ .

#### 4.1.4 Multivariate Regression Analysis

Dependent Variable: GDP

Method: Panel Least Squares

Date: 11/15/22 Time: 11:45

Sample: 2011 2021

Periods included: 11

Cross-sections included: 29

Total panel (unbalanced) observations: 318

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.72680	0.032150	489.1769	0.0000
LOANS	-0.003771	0.011384	-0.331289	0.7406
DEPOSITS	-0.003577	0.014848	-0.240885	0.8098
ASSETS	0.018064	0.010814	1.670468	0.0958
R-squared	0.050344	Mean dependent var		15.83981

Adjusted R-squared	0.041271	S.D. dependent var	0.135916
S.E. of regression	0.133082	Akaike info criterion	-1.183202
Sum squared resid	5.561206	Schwarz criterion	-1.135881
Log likelihood	192.1291	Hannan-Quinn criter.	-1.164302
F-statistic	5.548681	Durbin-Watson stat	0.140147
Prob(F-statistic)	0.001010		

**Table 4. 3 Coefficients**

Together, loans, deposits and assets explain 5% variation in GDP according to the R square value of 0.050344. R square which is the coefficient of determination, shows the amount of variation in the dependent variable that is explained by the independent variables. In this study, 95% of variation in GDP is explained by factors beyond the scope of the study and are accounted for in the disturbance term.

Loans, deposits and assets together do not significantly affect the GDP ( $p < 0.05$ ).

## 4.2 Findings

The research was meant to prove the co-existence between financial intermediation and economic growth of Kenya. Three independent variables were used to measure financial intermediation which included loans, deposits and assets. The dependent variable GDP was used to evaluate economic growth.

The objectives of the research were to establish the effect of the independent variables in relation to the dependent variable.  $P < 0.05$ . In the first objective the findings from the regression analysis established that loans were not significant to the GDP since the p value = 0.7406 which is more than 0.05. The same applied to the second objective which was to find out the effect of deposits had on GDP. Findings established that p value = 0.8098 is more than the p value of 0.05 meaning that deposits were not significant to GDP. The third objective meant to establish the effect of assets on GDP and findings clearly stated that assets were insignificant to the GDP since the  $p = 0.0958$  which is more than the p value of 0.05. From the study, the three independent variables are not significant to the GDP which insinuated that there was no relationship between loans, assets and deposits on GDP.

From the empirical literature in chapter 2, there are several studies which showed no relationship between financial intermediation and economic growth. Among them included Hao (2006) used a linear regression model to analyze how house-holds saved funds and the proxy loan for national funds budget influenced economic growth. He used 28 provinces with data between 1985 and 1999 and concluded that a positive correlation existed. However, the study found out that banks were not efficient in loan distributions making them relevant but not positively related to growth. The provincial governments' ability to self- finance also impacted negatively on the financial intermediation of banks. This result also applied to the study by Acha & Ekpenyong (2011) who used an Error Correction Approach to investigate the roles played by banks in mobilizing deposits and loan distribution to sectors of the economy. They concluded that bank intermediation did not influence economic growth. Acha, (2011) used GDP, total bank deposits and private sector credit allocation to calculate savings and credit ratio between 1980 and 2008. He then concluded that credit distribution and savings mobilization had no relationship with economic growth.

The independent variables applied in studies by Hao (2006), Acha & Ekpenyong (2011) and Acha, (2011) in chapter 2 to find out relationship between financial intermediation and economic growth included deposits, loans which are similar to this study. Private sector credit allocation was also used as an independent variable. Regression analysis was used to establish the relationship between the variables but still the results were insignificant.

## **CHAPTER 5**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The segment elucidates the summarized findings from chapter four, the conclusions to be drawn inclusive of the factors that might have limited the study. This section also explains recommendations from the researcher that can assist students, other researchers, policy makers and management in implementing this study. It also includes suggests information for further research which can be helpful to the users of this study.

#### **5. 2 Summary of Findings**

This research sought to investigate the effect of financial intermediation of commercial banks on the economic growth of Kenya using 29 licensed commercial banks in Kenya and the GDP for a period of 10 years. The regression analysis was used to measure the strength of the independent variables against the dependent variable. The study found that loans, assets and deposits each did not significantly affect the GDP. The probability values were 0.7406, 0.8098 and 0.0958 which were way above the statistical value of  $p < 0.05$  which insinuates that no single increase or decrease in loans, assets or deposits would increase the economic growth which is the GDP.

Previous studies that had similar results included Hao, (2006), Acha & Ekpenyong (2011) and (Acha 2011). These studies used loan distribution, customer and other banks' deposits and loans to the independent entities as variables independent to the GDP. They used GDP to evaluate economic growth and found out that there was no relationship between financial intermediation and economic growth.

The findings in this research finalized that the variables used in measuring financial intermediation, that is, loans, assets and deposits were not related to economic growth of Kenya as a nation.

### **5.3 Conclusion**

From the outcomes of this research, it can be deduced that the process of financial intermediation of commercial banks in Kenya is not associated with GDP. Financial intermediation was noted have a statistically insignificant association with GDP among 29 banks that were studied. Having done correlation analysis, findings showed that loans and GDP were weakly and positively correlated as shown by  $r= 0.193$ , statistically significant  $p=0.001<0.05$ , deposits and GDP were weakly and positively correlated as shown by  $r= 0.204$ , statistically significant  $p=0.000<0.05$  and finally assets and GDP were weakly and positively correlated as shown by  $r= 0.229$ , statistically significant  $p=0.000<0.05$ . Even though the correlation between the independent variables was positive related to the GDP, this did not show the strength of the variables so it means that a correlation analysis cannot be used to evaluate the strength among independent variables and the GDP. The regression analysis which showed the strength between loans, deposits and assets in relation to the GDP clearly indicated that no amount of increase in loans, assets or deposits would change the GDP that means that the three variables were insignificant to the GDP. This study therefore finalizes that independent variables used in this research are not relevant to determine the effect of financial intermediation with GDP among commercial banks in Kenya.

### **5.4 Recommendations**

First, the commercial bank managers in Kenya should be able to provide more information on loans especially on the number of active borrowers and the number of outstanding loans in their financial statements so as to enable students and other researchers to access the information easily. This applies to deposits which should include the number of customer deposits per month or the frequency of deposits per day.

CBK should ensure that financial statements of all commercial banks are published in their websites to allow students, researchers and shareholders to access all the information required. This is due to some banks missing information especially between 2011 and 2015. Some few banks had information missing between 2018 and 2019. The CBK should also ensure that banks which merged like NIC and CBA to have their previous individual financial statements

stored in archives for easy access. This will allow researchers who wish to study banks as individuals in their previous years to do so. I also recommend that banks should provide separate financial statements especially those with subsidiaries like Kenya Commercial Bank. Such information will be important in studying banks as individuals and not as a group.

Broad money supply is one of the most important indicators of financial intermediation. From the studies reviewed in chapter 2, most of the researchers used broad money supply to establish the effect of financial intermediation on economic growth. I therefore recommend that broad money supply should be taught as a sub-unit in Finance at Masters' level to allow students to have an in depth knowledge on the topic and how it affects the Kenyan economy. The CBK as the regulator of banks should also provide information on broad money supply in their annual reports to allow researchers access such information while doing similar studies like this.

Various tests and methods were used by researchers in chapter 2 to analyze the effect of financial intermediation on economic growth. The methods included Engle Granger test, GMM and Vector Error Correction Approach. These methods provided different results on similar studies as this one. I therefore recommend that students be taught these tests as part of their course work to allow them explore such methods during research which may provide different results in a study like this one.

### **5.5 Limitations of the Study**

Some part of secondary was difficult to retrieve. This was due to some data lacking in the financial statements published between 2011 and 2021. Some banks, for example, Bank of India and SBM Banks lacked data in totality. The study was to cover all the 39 licensed commercial banks in Kenya but it only covered 29 banks. Some websites e.g. The banker's association could not be accessed easily since a password was required get information yet the website contained information for Guaranty Trust Bank could not be retrieved from the bank's website in Kenya.

Another limitation was data quality which means that it is impractical to conclude the study's findings since legitimate situations cannot be obtained. This is because secondary data is assumed to be correct and that it may keep fluctuating from one period to the other depending



on the situations at hand.

Finally, the period used for the research was ten years which is still inconclusive of whether a relationship existed between financial intermediation factors and economic growth. The study was also limited to specific variables and methods and cannot be generalized to other elements in finding out the effect of financial intermediation of commercial banks and economic growth in Kenya.

### **5.6 Suggestions for Future Research**

This research did not include all the independent factors impacting GDP among banks in Kenya. It therefore recommends more indicators to include revenues, broad money supply and supply of credit to private firms. Establishing the effect of each variable on GDP among commercial banks in Kenya will enable regulators and policy formulators know which methods to use when maximizing GDP growth.

The study particularly focussed on the commercial banks in Kenya. Further research to be inclusive of all financial firms licenced and are operating in Kenya. There is need to extend the study to cover other Financial Institutions such as Mortgage Companies, SACCO's, Microfinance Institutions, Insurance Companies etc. to evaluate the effect of financial intermediation on the GDP of Kenya.

More methods of data analysis were employed in this study to find out the co-existence among assets, loans and deposits with the GDP. GMM, Engle Granger test, Error Correction Approach. Therefore, it is practical to read more on these methods since it will assist future researchers to use them in data analysis not only in a similar study but also other studies too.

The study used data for 10 years, that is, from 2011 to 2021 since it was the current one. Similar studies in the future may require a range of many years for example, 20 to 30 years which can be helpful in confirming or disregarding the outcome of this study.

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**APPENDIX 1**

**SECONDARY DATA COLLECTION CAPTURE FORM**

	<b>BANK</b>	<b>ASSETS</b>	<b>DEPOSITS</b>	<b>LOANS</b>	<b>GDP</b>
1.	Bank of Baroda (K) Ltd				
2.	Gulf African Bank (K) Ltd				
3.	Credit bank Ltd (K) Ltd				
4.	Sidian Bank Ltd (K) Ltd				
5.	UBA bank (K) Ltd				
6.	Guardian Bank (K) Ltd				
7.	Eco Bank (K) Ltd				
8.	Equity Bank (K) Ltd				
9.	Co-op Bank (K) Ltd				
10.	Family Bank (K) Ltd				
11.	I&M Bank (K) Ltd				
12.	Victoria Comm. Bank (K) Ltd				
13.	Prime Bank (K) Ltd				
14.	DTB Bank (K) Ltd				
15.	Standard Chart. Bank (K) Ltd				
16.	Consolidated Bank (K) Ltd				
17.	Citibank Bank (K) Ltd				
18.	Access Bank(K) Ltd				
19.	Spire Bank (K) Ltd (K) Ltd				
20.	First community Bank (K) Ltd				
21.	Paramount Bank (K) Ltd				
22.	M-Oriental Bank (K) Ltd				
23.	Absa Bank (k) ltd (K) Ltd				
24.	ABC Bank (K) Ltd				
25.	Stanbic Bank (K) Ltd				
26.	National Bank (K) Ltd				
27.	Housing Finance Corp. ltd				
28.	Kenya Commercial Bank Ltd				
29.	Bank of Africa (K) ltd				