

EFFECTS OF HIGH COST OF LENDING ON THE PERFORMANCE OF THE ZAMBIAN ECONOMY

(Conference ID: CFP/403/2017)

Chishimba Karen Chilufya

Department of Economics,
Information and Communications University
Lusaka Zambia
karenchilufya@gmail.com

Mukonda Fred

Department of Economics,
Information & Communications University
Lusaka, Zambia
mukondafred@gmail.com

ABSTRACT

Objective: *the objective of this paper is to investigate the effect of high lending rate on the performance of the Zambian economy. When the Bank of Zambia Monetary Policy Committee (MPC) changes its official interest rate known as Bank Rate, it is attempting to influence the overall level of activity in the economy in order to keep the demand for, and supply of, goods and services roughly in balance. Doing so results in a rate of inflation in the economy consistent with the Bank's inflation target (Bank of England: 2015) Borrowers tend to spend more of any extra money they have than lenders, so the net effect of lower interest rates through this cash-flow channel is to encourage higher spending in aggregate. The opposite occurs when interest rates are increased. Changes in Bank Rate also affect the price of financial assets and the exchange rate, which affect consumer and business demand in a variety of ways. As indicated earlier this paper endeavors to establish the effect of high cost of lending on the performance of the economy.*

Methodology: *Data from central statistics CSO, Bank of Zambia BOZ and World Bank was collected in order to demonstrate the effect of high lending rates on economic growth. The method used in the study was regression analysis.*

Findings: *The results of the study revealed that high cost lending was negatively affecting economic growth.*

Policy implication: *Given such a relationship it is important that lending rates must be revised.*

INTRODUCTION AND BACK GROUND

Interest rate represents the cost of borrowing capital for a given period of time. Due to the fact that borrowing is a significant source of finance for many firms, prevailing interest rate are of much concern to the firms due to the indexing of interest rate on borrowing arrangements of the firms ultimately affecting growth. Changes in interest rate have profound impact in saving and consumption behaviors' of households, capital accumulation decisions of firms and on the portfolio allocation of domestic and foreign traders in the financial and exchange rate markets. It is generally agreed that these changes affect the aggregate demand and aggregate supply positions in an economy that may occur immediately or for a lag of up of years. These changes also influence the expectations and plans of economic agents about their own future and the perception about welfare and redistribution of income and about the prospects of the economy (Keynes, 1936).

STATEMENT OF THE PROBLEM

Interest rate is the price a lender charges on borrowed funds, further contended that the forces of demand and supply in the market would attain the market equilibrium interest rate Mishikin (1986). This position is in conformity with the classical economic theory. Interest rates are basically determined by the money supply, the rate of inflation, the time

period of credit and the central Bank monetary policy (International monetary fund, 2012). If real interest rate is low then the cost of doing business, and living and investing is low. This stimulates the economy because home loans and car loans are more affordable. Therefore there is the tendency to borrow more and spend more also. Interest rate also affects the inflation level. Interest rate influence financial inflows in the economy. The determination of Positive interest rate (lending in excess of inflation rate) is viewed as prerequisite for successful and sustainable finance (Buckler, 1999).

On the contrary the above statement is the exactly opposite of the reality in the Zambian financial institution. This is observed by the number of concerns raised by financial institutions and other related organizations.

There is need to encourage domestic savings in the economy for the country to bring down the borrowing rates which are too high. Rate and level of savings within an economy helps to bring down high interest rates (Bank of Zambia, 2015). Ministry of finance raised concerns about the high cost of borrowing money in the country. It also” admitted that the cost of borrowing is high and against the spirit of empowering citizens of this country”. In the quest to add more salt to the tabled meat, Bankers Association of Zambia (BAZ) confirms the concern by the ministry of finance and that the situation should be addressed urgently. The Bankers Association of Zambia (BAZ) adds on that the cost of borrowing money did not inspire citizens to participate in the Economy. Therefore this research intends to establish effects of high cost of borrowing on the performance of the Zambian economy. In summary the table below shows average commercial bank lending rates from 2009-2016. This can be done:

1. To review the trend of lending rates in Zambia
2. To review the performance of the Zambian economy

3. To analyze the effect of high lending rates on the performance of the Zambian economy

Table 1.1

Year	2009	2010	2011	2012	2013	2014	2015	2016
Lending rates	28.4%	27.7%	25.8%	19.1%	16.3%	18.7%	21.1%	29.0%

Commercial Bank lending rate (average for year), % source Bank of Zambia

RESEARCH METHODOLOGY

A number of empirical studies have been carried out in the last decades to examine the effect of cost of borrowing on economic growth using either cross section or time series data, on ground of inquiring the whether high cost of borrowing has an effect on the performance of the country’s economy.

(Econometric methodology)

Keynesian theory of money and interest rate

The Keynesian theory of interest rate states; the rate of interest is determined by intersection of the supply schedule of money (perhaps interest inelastic, if rigorously fixed by the monetary authority) and the demand schedule for the money (the liquidity –preference schedule). This analysis’s also indeterminate because the liquidity preference schedule will shift up or down with changes in the income level. Here we are concerned with total liquidity –preference schedule including both the transaction’s demand and the “assets” demand for money.

Analysing the Keynesian reasoning from the demand and supply point of view, increase in the price of interest rate reduces the demand for money which in turn will reduce the transaction and if transaction reduces, productivity reduces. Therefore reduction of productivity in an economy reduces the growth in an economy.

H0: $r = 0$ (interest rate has no impact on growth).

H1: $r \neq 0$ (interest rate has impact on growth)

Specification of the Mathematical Model

Although the theory implies a negative relationship between GDP growth and high interest rate on borrowing, it does not specify the precise form of the functional relationship between the two. Mathematically speaking the model suggests the following form of the function below.

$$Eq(1.1) \text{ GDPgrowth} = \alpha + \beta_1 r \quad 0 < \beta_1 < 1$$

Where $Y =$ GDP growth rate and $r =$ interest rate (the cost of borrowing) is and where α and β_1 , are known as the parameters of the model, they represent the intercept and slope coefficients. In Eq. (I.1) the variable appearing on the left side of the equality sign are called the **dependent variables** and the variable on the right side are called the **independent, or explanatory, variables**

Specification of the Econometric Model

The purely mathematical model in Eq. (I.1) is of limited interest to this study for it assumes that there is an *exact* or *deterministic* relationship between the dependent and independent variables, but relationships between economic variables are generally inexact. Therefore to show this inexactness the following inexact relationships between economic variables, econometric would modify the deterministic function (I.1) as follows:

$$GDP \text{ growth} = \alpha + \beta_1 r + \mu$$

Where u , known as the **disturbance, or error, term**, is a **random (stochastic) variable** that has well-defined probabilistic properties. The disturbance term u may well represent all those factors that affected GDP growth but are not taken into account explicitly. To estimate the econometric model given in (I.1), that is, to obtain the numerical values of α and β_1 .

Data presentation and Results

Secondary data was collected from Government institution which is central statistics office (CSO), Ministry of labor, Bank of Zambia and international institutions like World Bank development indicators. This was done in order to compare the statistics.

A. trend on interest on borrowing from 1990-2016

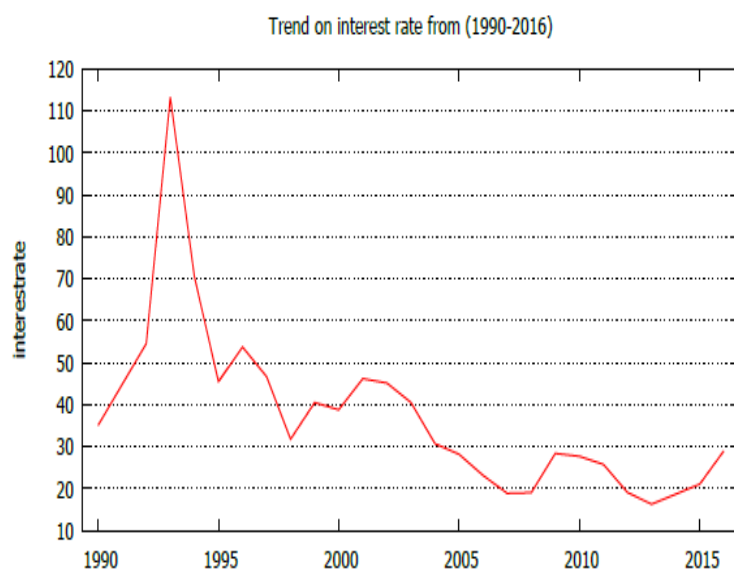


Figure 4.1: trend on GDP growth and interest on borrowing from 1990-2016

The trend on figure 4.1 shows a rising cost of borrowing from (1990-1995), the movement on the trend can be justified when we look back at history specifically looking at policies that the Zambian government embarked on in this period. In 1991 Zambia started a radical reform path that transformed it from a centrally planned to a market economy (CSO 2003). The course of Zambia's post-independence economic strategy was shaped by the 1968 Mulungushi declaration. The strategy, motivated by economic nationalism and the desire to redress political and economic inequalities, entailed state led import substituting Industrialization and extensive government controls over resource allocation. Some of the Foreign companies operating in Zambia were nationalized, a large parasternal sector was Created and

administrative controls were imposed over foreign exchange, imports, prices and interest rates (Mutukwa, Appendix, pp 1-2). Nevertheless, the government has not been very successful in diversifying the country's export base away from its heavy dependency on copper, or managing its expenditures more efficiently, whose funding still strongly rely on foreign assistance, or, and most importantly, reducing poverty. These shortcomings originate mainly from delays in the implementation of structural reforms. With information given it can be concluded the interest rate rose in 1990-1995 due to the economic reforms.

B. Trend on GDP growth rate from (1990-2016)

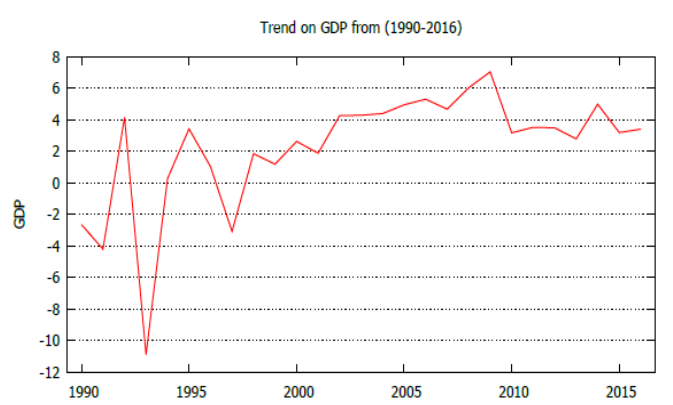


Figure 4.2 GDP growth rate from (1990-2016)

Figure 4.2 above shows a trend on economic growth rate from 1990-2013, it can be observed that from the period of 1991-1994 a negative economic growth was strongly experience this can be attributed to the number of factors that took place in these years. For instance In 1991, the movement for Multi-party democracy won government of the country's first free elections in based on a commitment to comprehensive structural adjustment and the promise of more Transparent and accountable governance (Bratton and Liatto-Katundu, 1994). However the government inherited an unstable and contracting economy with high poverty and inequality, a collapsing copper-dominated export sector, and massive foreign debt. The fourth SAP, which began immediately after the new government was elected, encompassed (i) macroeconomic stabilization; (ii) public sector

reform; (iii) external liberalization; (iv) the privatization of state assets; and (v) agricultural reforms. Although these reforms hoped to stimulate growth and diversify the economy, GDP growth remained stagnant at 0.2% throughout the 1990s.

C. THE EFFECT OF HIGH LENDING RATES ON THE PERFORMANCE OF THE ZAMBIAN ECONOMY

CI.1 THE UNIT ROOT TEST

A unit root test, test whether a time series variable is non-stationary and possess a unit root. The null hypothesis states the presence of unit root and alternative hypothesis is either stationary or trend stationary depending on the method used. Therefore this study used augmented Dickey-Fuller (ADF) test to test the level of integration of the variables.

H0: Non stationary and possesses unit root

H1: stationary and no unit root

Table 4.1 shows the statistical results on the augmented Dickey-Fuller test, it can be stated that no unit root was detected in first or second difference of the ADF test. The ADF statistic in both GDP and interest rate in First and second difference proved that the data was stationary this can be verified on the table below. Based on the results below we reject the H0 hypothesis of unit root in favor of the alternated hypothesis of stationary.

Summarized ADF Test statistics

Variable name	ADF statistic	T-level	Significant level
GDP Growth	-7.420018		1%= -3.7343
1 st difference			5% = -2.9907
			10%= -2.6348

GDP Growth 2 nd Difference	-9.224529	1% = -3.7497 5% = -2.9969 10% = -2.6381
Interest rate (borrowing) 1 st difference	-4.613751	1% = -3.7343 5% = -2.9907 10% = -2.6348
Interest rate (borrowing) 2 nd Difference	-8.017050	1% = -3.7497 5% = -2.9969 10% = -2.6381

Table C1.1

C1.2 COINTEGRATION TEST

The Johansen test was used in this to ascertain the long run relationship between variables. Johansen test is a test of the null hypothesis of no cointegration against the Alternative of cointegration.

H0: no cointegration

H1: cointegration present

The summary table on cointegration

Eigenvalue	Eigenvalue Ratio	5 Percent Critical Value
0.539882	27.90892	15.41
0.288291	8.502140	3.76

Table C1. 2

The test for cointegration shows whether increased cost cost of borrowing has a long run effect on the performance of the zambian economy. The test is run by comparing the eigenvalue and the eigen ratio, if the eigenvalue is greater than the eigen ratio then the null hypothesis of no cointegration is rejected in favor of the alternative hypothesis of cointegration. therefore, looking at the values on the table below, we reject the null hypothesis in favor of alternative hypothesis.

C1.3 TESTING FOR LEAST ORDINARY SQUARE (OLS)

With regard to testing for causal and station relationship between time series, checking for the relationship between variables is important. The ordinary least squares method (OLS) was considered fit for the study to make sure that all variables were examined through graphical inspection of their time series plot using regression analysis. The variables examined were Gross domestic product (GDP growth) and interest on borrowing (R). Below are the results obtained from the observation.

$$GDP\ growth = \alpha + \beta_1 r + \mu$$

$$\hat{GDP} = 7.519324 - 0.139801\ interest\ rate$$

The coefficient of the explanatory variable reflects both the strength and the type of relationship the explanatory variable has on the dependant. When the sign associated with coefficient is negative then the relationship is negative. The case of Zambia's economic growth, 1% increase in the cost of borrowing (interest on borrowing) reduces economic growth (GDP growth) by 0.14 %. When the cost of borrowing is 0, economic growth stands at 1.78%. In summation the equation states a negative relationship between economic growth and increased cost of borrowing.

Therefore judging Zambia's economic outlook from the 1991-1994, being a country in Africa that which was not embroidered in war or civil strife it entered into a second decade of attempting to promote economic reform. Billions of dollars of donor support were provided with no tangible evidence for sustaining the reform effort. Following its democratic reforms in 1991, Zambia received large amounts of foreign assistance more than \$7.9 billion between in these years However, from mid-1995

onwards Zambia began to reverse a number of its reforms and defer implementation of earlier commitments. Both trade and exchange rate reforms were affected. The principal outcome is that low economic growth rate, high interest rate and poverty in Zambia were intensified (Malcolm McPherson Development Discussion Paper No. 713, July 1999, p6).

Summary for OLS Results

R-Squared	Adjusted R-Squared	P-Value	Coefficient Intercept	Coefficient Interest rate
0.567063	0.549745	0.0000249	7.519324	-0.1398

Table C1.3

As shown in table 4.1 R-squares is 57%, this explains the strength interest rate has on the performance of the economy. About 57% of the performance of the Zambian economy depends on the behavior of interest on borrowing. This means that the level of interest rate in the economy is very significant indicator to the growth of the economy. The variation can be backed by the model which is 0.0000249 showing how significant the model is.

C 1.4 Normality test

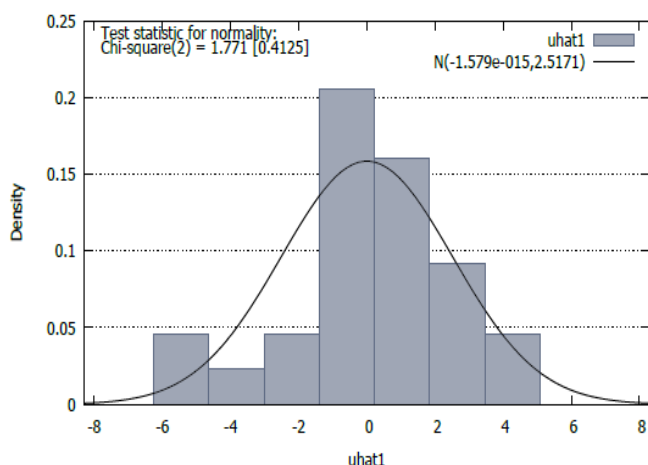


Figure C1.4

H0: normally distributed
H1: Not normally distributed

Figure above shows normality test distribution of the variables being used. The normality test of residuals was used for testing normality. From the results obtained, it indicated the normally distribution of the data. Normality test of residuals shows a significant p-value of (0.41251) which is above 5% hence we fail to reject the null hypothesis.

C1.5 Autocorrelation test

H0: no autocorrelation
H1: presence of autocorrelation

Breusch-Godfrey test for first-order autocorrelation was used to test whether the negative relationship between cost of borrowing and GDP growth was purely by accident. The result obtained in Breusch-Godfrey test for first-order autocorrelation showed a p-value of (0.9243) which is above 5%. For this reason we fail to reject the null hypothesis of no autocorrelation. Therefore interest purely influences GDP growth on its own and the effect is very strong.

C1.6 Heteroscedasticity test

H0: no heteroskedasticity
H1: presence of heteroskedasticity

White's test for heteroskedasticity is a test for null hypothesis of no heteroskedasticity and the alternative hypothesis test for heteroskedasticity. The results obtained stated the p-value of 0.116814 which is above 5% hence we fail to reject the null hypothesis of no heteroskedasticity present in the model.

CONCLUSION AND RECOMMENDATION

From the findings this study concludes that increase in lending rates negatively affect the economic growth in the country. It was also found that increased cost borrowing increases the cost of doing business, meaning that few firms will invest and this leads to low productivity. Less productivity leads to increase in the prices of goods and services hence pushing the inflation level up. For this reason the study recommends that the government should thrive on reducing the level of interest on borrowing. by doing so they will be maintain low inflation rate and furthermore see increased production.

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