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EFFECTS OF FISCAL POLICY ON THE PROFITABILITY OF COMMERCIAL BANKS IN KENYA: A CASE STUDY OF KENYA COMMERCIAL BANK

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Abstract

This paper examines the effects of fiscal policy and the profitability of commercial banks. This study is being carried out to analyze the impact of government expenditure as a fiscal policy on the on commercial banks in Kenya and in specific Kenya Commercial Banks (KCB). This follows the Keynesian economic theory that posits that the government can use fiscal policy to achieve economic objectives of price stability, full employment and economic growth which also affects the profitability of commercial banks. The work adopted a simple regression model. The target population was the Kenya Commercial Bank (KCB). The profitability of commercial banks in Kenya were regressed against the fiscal policy instrument; government expenditure over ten year period from 2006 to 2015. Data was analyzed by simple regression of the variables. The study concluded that profitability of commercial banks in Kenya is largely affected by the fiscal policies that the Economy applies to stabilize other macroeconomic factors. Macroeconomic stability should remain top policy for the government to ensure that the banking sector remains afloat in order to sustain the economy

Keywords: commercial banks, fiscal policy, macro economics, profitability

INTRODUCTION

Investment Commercial banks form part of important financial intermediaries that mainly accept deposits into accounts that are repayable on demand back to customers but also offer loans to borrowers and basic investment products. Banks also create money when they give out loans. They therefore play an important role in the financial system of a country and in the economy at large. There are 40 Licensed commercial banks in Kenya (Imperial, charterhouse, Chasebank and Dubai Bank are currently under regulatory management) with 7 representative offices of foreign banks (CBK 2015).

Fiscal policy is the use of government's revenue collection, debt and expenditures to influence the economy (Keynes, 2007). A government's main source of revenue is through tax collection while borrowings are made in addition to the revenue to meet all the government expenditure. The tax structure adopted by any government therefore has an effect on its economy mainly through varying interest rates which is an important source of profits for the banks. The relationship between a government's fiscal position and the profitability of commercial banks operating in a country is potentially of great importance to economic policy-makers.

Blinder (2006) explain that if the government runs a budget deficit then it would be forced to compete with the private sector for funds. This competition for funds in turn drives up real interest rates resulting to a decline in investment as it is an interest-sensitive component of private spending. The private sector consists of individual or group owned businesses other than government owned or operated who also obtain services and funds from financial institutions mostly commercial banks.

Fiscal policy is based on the theories of British economist John Maynard Keynes, who stated that increasing or decreasing revenue (taxes) and expenditures (spending) levels influences inflation, employment and the flow of money through the economic system. Fiscal policy is often used in combination with monetary policy, which is set to influence the direction of the economy and meet economic goals (Larch & Nogueira, 2009). During the 2007 – 2009 financial crisis the key policy question was whether tax cuts or spending increases were a better recipe for the stimulus plan in the US and other countries. This issue is very politically charged. As a result of the fiscal response to the financial crisis of 2007-2009 the US experienced the largest increases in deficits and debt accumulation in peacetime.

In Kenya, the Fiscal Policy Division (FIPOD) of the National Treasury is responsible for shortand medium-term projection of revenues, expenditures and deficit financing. It is also responsible for budget monitoring and tax policy of the government. CBK formulates and conducts monetary policy with the aim of keeping overall inflation at the Government target of 5 percent (CBK 2010).

Fiscal policy affects aggregate demand, distribution of wealth, and the economy's capacity to produce goods and services. Changes in spending in the short run, can alter both magnitude and the pattern of demand for goods and services. This aggregate demand with time, affects the

allocation of resources and the productive capacity of an economy through its influence on the returns to factors of production, the development of human capital, the allocation of capital spending, and investment in the technological innovations (Mureithi & Moyi, 2003).

RELATED WORK

Governments use fiscal policy to influence the economy by adjusting spending levels and revenue (Afonso and Sousa, 2011). Traditionally fiscal policy has been seen as an instrument of demand management. According to Mankiw and Gregory (2003), fiscal policy is used by governments to influence the level of aggregate demand in the economy, as it seeks to achieve economic objectives of full employment, price stability, and economic growth.

According to Mankiw and Gregory (2003), fiscal policy has various effects such as the economy's capacity to produce goods and services, the distribution of wealth, and on aggregate demand. The changes in spending or taxing can in the short run alter both the magnitude and the pattern of demand for goods and services. This aggregate demand with time, affects the productive capacity and the allocation of resources of an economy. This results due to its influence on the development of human capital, the returns to factors of production, the allocation of capital spending, and investment in technological innovations. Through their effects on the net returns to labor, saving, and investment, tax rates also influences both the magnitude and the allocation of productive capacity.

Blinder and Solow (1973) explain that if the government runs a budget deficit, it forms a competitor for funds against the private sector. This in turn drives up real interest rates and results to a decline in interest-sensitive components of private spending like investment. The private sector consists financial institutions mostly commercial banks.

Taxes influence the economy by determining how much money individuals have to spend and how much money the government has to spend in certain areas. If for example, the government is trying to spur spending among consumers, it can decrease taxes thereby providing families with extra money which the government hopes they will turn around and spend on other ways thus spurring the economy as a whole (Heyne *et al.*, 2002).

Research Gap

This work seeks to analyze the effects of fiscal policy on the profitability on Kenya Commercial Bank (KCB). In the past government sessional papers on economic reform as well as studies have been carried out to create a conducive environment and increase profitability for different investors (Mureithi and Moyi (2003), Kiptui, 2005, M 'Amanja and Morrissey (2005), Wawire (2006), Kosimbei, 2009, Mwakalobo (2009). Such reforms including expansion and modernization of tax, rational government expenditure and prudent public debt management have continuously been improved allowing the economy and commercial banks to thrive.

A number of studies have been done on the relationship between macroeconomic factors, fiscal and monetary policy against performance by different economic entities such as commercial banks, stock markets, mortgage sector, private investments, public investment and Kenyan economic growth. (Fama and French, 1988; Afonso and Sousa, 2011)

Similarly, there have been past studies touching on the performance and profitability of commercial banks against some of the following parameters; Bank size, non-performing loans, mortgage financing, credit risk management, non-interest income and analysis of internal factors.

None of the above mentioned studies has intensively examined the effects of fiscal policy variables on the profitability of Kenya Commercial Bank. Whereas fluctuations in government borrowing, government expenditure and government taxation affect differently the profitability of commercial banks, this has not been investigated and established for Kenya.

This paper therefore seeks to assess the fact of this relationship of fiscal policy against the profitability of Kenya Commercial Bank.

DATA RESULTS, ANALYSIS AND DISCUSSION

This section presents the findings of the study. The analyzed variables are based on the study objectives where every objective is tackled in regard to the data analysis techniques narrated in the methodology part. The data assembled regards the government spending, borrowing and taxes in Kenya and how the same affect the profitability of banks. The relationship between the variables was dealt in depth to typically bring out broad understanding of the association of the variables. The researcher singled out Kenya Commercial Bank Group to show the relationship being sought.

Summary of the KCB profits before tax and government spending, internal borrowing and taxation for the period 2006-2015

Table 1 shows the numerical values of the variables of the study. The data collected reflects the profits before tax realized by the Kenya Commercial Bank over a period of 10 years (from 2006-2015) the government spending, taxes for the respective bank and internal borrowing in each respective year. From the table below, it was deduced that there was a direct relationship between the two variables under study as the spending increased, profits before tax increased in response.

Government sp	ending Profitability	Government	internal Government	
(billion)	(billion)	borrowing(billion)	Tax(billion)	
492.4	2.45	2030116.2064	0.539	
550.1	4.2	135.3246	1.008	
693.45	6.01	171.9756	1.5626	
759.8	6.4	196.0284	1.856	
	Government sp (billion) 492.4 550.1 693.45 759.8	Government spending Profitability (billion) 492.4 2.45 550.1 4.2 693.45 6.01 759.8 6.4	Government spending Profitability (billion) Government borrowing(billion) 492.4 2.45 2030116.2064 550.1 4.2 135.3246 693.45 6.01 171.9756 759.8 6.4 196.0284	

Table 1	Government	spending,	internal	borrowing,	taxes and	profitability	of KCB
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2010	867.76	9.8	224.74984	3.136
2011	998.8	15.1	283.6592	4.379
2012	1155	17.2	346.5	4.816
2013	1459.9	20.1	452.569	4.824
2014	1773.3	23.8	461.058	5.474
2015	2100	26.5	735	6.89

Source; Kenya bankers association (KBA)

From the table 1, all the independent variables have been increasing steadily and the profits have also increased over the period under investigation 2006-2015.

Measurement of linearity

To measure linearity among variables we use the scatter plots, this helps us to determine the existence of linear relationships among variables as shown in figures 1, 2, 3, and 4.

• Figure 1 Partial regression of Government expenditure against Profits



The above figure 1 represents a partial regression analysis of Government expenditure on profitability of the KCB. From the figure profitability of the KCB increases with an increase in Government expenditure, however the profits tend to increase at faster rate than that of government expenditure hence most of the scatter points appear on the right hand side of the line of fit.



Figure 2 Partial regression of Government borrowing against Profits

The figure 2 above explains the partial regression between the government internal borrowings against the profitability of the KCB. Government borrowing will spur profitability however the growth rate of borrowing is faster than that of the profits of the bank.

Figure 3 Partial regression of Government tax against



Profit

The figure 3 above represents the regression between taxes and profitability of the KCB. As from the figure the taxes of the government increase as well as the profitability of KCB increases, this © Kipkemoi, Atambo, Mogwambo ISSN 2412-0294

however is depicted by a faster rise in profits than taxes, hence showing that the profits outdo taxes in the growth rate.

Model test

To effectively assess the effect of Government expenditure on profitability of banks, the data was analyzed to define the statistical properties of the time series variables used in the estimation. The principle is to determine whether these variables are static or not. This is because macroeconomic data often appear to posses' stochastic trend that can be removed by differencing the variables.





As per the graph, the trend between the profit and standard figure of the fiscal policies is on upward trend, suggesting that as the government spending increases the profits before tax increases too. This showcases that fiscal policies taken open an expansionary route and growth in terms of investment and borrowing from banks hence the increase on the banks' profits.



Figure 5 Frequency distribution Table

As shown in figure 5 above all the fiscal policies parameters increased over the period under investigation showing that the Economy was growing to allow for the expenditure to grow, bank profits were also growing and also borrowing. This explains why the variables are on the upward trend.

Descriptive analysis

Table 2 Frequencies

Descriptive Statistics								
Ν	Minimum	Mean	Std. Deviation					
Government spending ₁₀ (billion)	492.40	1085.0510	537.52672					
Profitability (billion) 10	2.4500	13.156000	8.5797516					
Government internal porrowing(billion)	116.2064	312.307104	192.3878042					
Government Tax(billion) 10	.5390	3.448460	2.1392112					
Valid N (listwise) 10								

Table 2 presents the descriptive analysis results of the variables of the study. The data collected on the bank's profitability (calculated before tax) and the Government expenditure was analyzed to give the mean values for the entire period under study as well as their standard deviations, variance and skewness.

Descriptive Statistics Table 3 Variances and Skewness **Descriptive Statistics**

		N	Variance	Skewness	0/1 F
		Statistic	Statistic	Statistic	Sta. Error
Government spending (bill	ion)	10	288934.972	.857	.687
Profitability (billion)		10	73.612	.293	.687
Government	internal	10	27012 067	1 229	607
borrowing(billion)		10	37013.007	1.230	.007
Government Tax(billion)		10	4.576	.072	.687
Valid N (listwise)		10			

From the table, the profitability variance for the period is 13.156 with a standard deviation of 8.5798. This illustrates that, a significant variation in the individual profits for the years studied was recorded as the standard deviation is above 1 thus the values varied significantly from the mean value for the years 2006 to 2015. The government expenditure from the table can be summarized by the mean values obtained since these values gives some standard deviation values which are all more than 1 indicating that the values for the years did vary significantly from the mean values obtained. Thus, based on this, expenditure for the period has a mean of 1085.0510 with a standard deviation 537.5267; internal borrowing for the period has a mean of 312.307 with a standard deviation 192.3878 while the tax for the period has a mean of 3.448 with a standard deviation 2.139 for the period 2006-2015.

Regression analysis

Regression analysis was conducted to show the effect of government expenditure on profitability of banks especially KCB group in Kenya. To respond to the regression model proposed in the methodology, regression analysis was conducted to establish the relationship between the dependent and the independent variable. The regression analysis results are as presented in tables 2, 3, 4 and 5 which gives the model summary, ANOVA coefficient, the coefficients and the residuals statistics respectively.

Model summary

The summary of the regression model is as presented in table 4 below. It gives the coefficient of determination (R square) which measures the influence of the independent variables to the dependent variable as well as the adjusted R square which measures the reliability of the results.

-						
Μ	odel	Summa	ry			
Μ	odel	R	R Square	Adjusted	RStd. Error of	the Estimate
				Square		
1		.996 ^a	.992	.988	.9394161	
a.	Pre	dictors:	(Constant),	Government	Tax(billion),	Government
int	ernal	l borrow	ing(billion), (Government sp	pending (billion))
b.	Depe	endent V	ariable: Profi	tability (billio	n)	

Table 4 Regression Model Summary

ANOVA

The findings in the table shows that, holding other factors constant, the independent variables in this study would explain 99.6% of the variability in profitability of banks at 95% significant level as given by the coefficient of determination value (0.996). Hence, based on the results, other determinants of profitability accounts for 0.4% of variability of the profits. The table also indicates that, the results are 98.8% reliable as the adjusted R square illustrates and therefore significant results were obtained.

To assess the significance of the model developed, analysis of variance was engaged in this study. This gives the reliability of the model in presenting the relation in which the predictor variables influences profitability. Table 5 presents the results for the ANOVA statistics.

Model		Sum Squares	ofdf	Mean Square	F	Sig.
	Regression	657.214	3	219.071	248.239	.000 ^b
1	Residual	5.295	6	.883		
	Total	662.509	9			

Table 5 ANOVA ANOVA

a. Dependent Variable: Profitability (billion)

b. Predictors: (Constant), Government Tax(billion), Government internal borrowing(billion), Government spending (billion)

Source researcher 2016

From the table above, the significance value is .000 which is less than 0.025 (the critical value at 5% level). Therefore this approves that the model is statistically significant in predicting profitability as determined by the independent variables of the study. The F critical at 5% level of significance is 3.23. Since F calculated is greater than the F critical (value = 248.239), this shows that the overall model was significant.

Model of coefficients

The model relating the dependent and the independent variables of the study is developed with the use of the regression model coefficients presented in table 6 below.

Coefficients							
Model	Unstan	dardized	Standardized	t	Sig.	Collinearit	y tests
	Coeffic	ients	Coefficients				
	В	Std.	Beta			Tolerance	VIF
		Error					
(Constant)	-3.116	0.917		-	0.055	0.0759	13.175
				3.399			
Government	0.011	0.003	0.699	3.478	0.073	0.0624	16.027
spending (billion)							
Government	-0.014	0.008	-0.311	-	0.138	0.0784	12.755
internal				1.713			
borrowing(billion)							
Government	2.461	0.447	0.614	5.51	0.082	0.0568	17.606
Tax(billion)							
a. Dependent Variable: Prof	ïtability (billion)					

Table 6 Coefficients

a. Dependent Variable: Profitability (billion) Source researcher 2016

As shown from table 6 the tolerance level and the variance inflation factor show that the variables do not have multicolinearity. Tolerance measures the effect of one independent variable on all other independent variables. The variable inflation factor (VIF) also measures multicolinearity. The value of tolerance is less than 0.1, this shows that multicolinearity does not exist.

The VIF value of > 10 shows that that the variables under investigation that is; Government expenditure, Government internal borrowing and taxation do not have multicolinearity among them. To test for the existence of heteroscedasticity, the significant p value

The result of the Ordinary Least Square (OLS) shows that the previous profit value has no significant positive impact on current profit. Expenditure by government also has positive and significant impact on profits of the KCB.

Based on these findings, the regression model therefore becomes;

 $Y = \beta 0 + \beta 1 X 1 - \beta 2 X 2 - + \beta 3 X 3$

Where; β 0- Constant variable or Y intercepts, β 2- coefficient of government expenditure, β 3 coefficient of government borrowing, β 3-coeffient of taxation.

Y= -3.116 +0.011X1-0.14X2+2.461X3

Correlation analysis

Correlations

To fully appreciate the association between government spending and bank profits, a study on correlational relationship was conducted and tested at 5% significance level with a two-tailed test. Correlation coefficient of Pearson was used under this study to test the strength of the relationship between variables. The outcomes were therefore presented in the table below. **Table 7 Correlation between study variables**

		Government spending (billion)	t Profitability (billion)	Government internal borrowing(billion	Government Tax(billion))
Government spending	Pearson gCorrelation	1	.975**	.979**	.944**
(billion)	Sig. (2-tailed)		.000	.000	.000
	Ν	10	10	10	10
-	Pearson Correlation	.975**	1	.946**	.985**
Profitability (billion)	Sig. (2-tailed)	.000		.000	.000
	N	10	10	10	10
Government interna	Pearson ICorrelation	.979**	.946**	1	.931**
borrowing(billion)	Sig. (2-tailed)	.000	.000		.000
	N	10	10	10	10
Government	Pearson Correlation	.944**	.985**	.931**	1
Tax(billion)	Sig. (2-tailed)	.000	.000	.000	
	Ν	10	10	10	10

**. Correlation is significant at the 0.01 level (2-tailed). *Source researcher 2016*

The associations between the variables under study are as tabled above. The strength of the association is founded on the Pearson correlation scale where values between 0.0- 0.3 indicate a no correlation state, 0.31-0.5 weak correlation, 0.51 - 0.7 a moderate correlation and a correlation value in the interval 0.71-1 indicates the presence of a strong correlation between the variables. From the results given in the table above, profitability has a significant strong relationship (correlation) with the independent variable, government spending 0.975, internal borrowing at 0.946 and taxes 0.985. This shows that all the three fiscal policy variables have a very strong correlation on profitability of the KCB bank. Testing at 5% significance level, the association was found to be statistically significant as their significance values were all values less than 0.025 which is the critical value at 5% level with a 2-tailed test beyond which the results are statistically insignificant and the reverse is true.

Discussion of the results

The study results indicated that there is a strong and positive correlation between the study variables. This therefore indicates that, the government expenditure by the state is positively and strongly associated with growth of banks. Thus, a positive change (increase) in these expenditures will result to positive impacts on economic performance and its development. The findings also illustrated that, holding other factors constant; the government expenditure on profitability which is a dependent variable in this study would explain 95% of the variability in growth of banks. This indicates that, other factors that are not covered in this study, (determinants of profitability of banks) account for 5% of its variability. From the regression analysis, the outcome shows that, expenditure by government has positive and significant impact on economic growth and expansion of banks. Generally, government spending is positive and significantly related with growth since these are direct investments which facilitate economic activities directly.

CONCLUSION AND RECOMMENDATIONS

A partial regression analysis on all the variables was to determine the profitability of banks. The bank's profitability (ROA) revealed a very positive relationship to government spending and government taxation while there was an inverse relationship between the government borrowing and profitability of the KCB. The study established a linear regression model of the form;

 $Y = \beta 0 + \beta 1 X 1 - \beta 2 X 2 + \beta 3 X 3$

Y= -3.116 +0.011X1-0.14X2+2.461X3

Where Y represent the dependent (predictor) variable i.e. Profitability, $\beta 0$ represent the constant value, $\beta 1$ represent the coefficient of X1 and X1 is the independent variable; government spending , $\beta 2$ coefficient of X2 government taxation and $\beta 3$ the coefficient of X3 the taxes. This means that for every unit of Government expenditure, profitability of the bank rises by 0.011 units. The Y intercept -3.116 explains the fact that at zero fiscal policy, the KCB bank makes a loss of 3.116 units.

In establishing the strength and the direction of the relationship, the findings revealed that there is a strong positive linear relationship between fiscal policies and Kenya Commercial Banking profitability. This was demonstrated by coefficients of determination of 0.975 for expenditure, 0.946 for borrowing and 0.986 for taxation.

Based on the summary of the findings the study concluded that profitability of commercial banks in Kenya is largely affected by the fiscal policies that the Economy applies to stabilize other macroeconomic factors.

The paper has shed light on the effect of fiscal policies which influence the amassing of profits within banks especially Kenya Commercial bank. However, other factors such as monetary policies have a say in the performance of the bank and therefore should also be surveyed to

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appraise the current contributions and changes they offer to the profitability of banks. The researcher also recommends further research on the profitability of commercial to be done on all the banks as well as the scope be expanded to accommodate regional banks. Future research would also be done on the facets of other factors that affect the profitability of banks including the diverse strategies that each bank uses to gain profit.

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