EFFECTIVENESS OF FISCAL POLICY IN ECONOMIC GROWTH:  
THE CASE OF ZIMBABWE.  

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Abstract
The study investigates the effectiveness of fiscal policy in spurring economic growth in Zimbabwe. Annual data covering 1980-2010 were utilized. Unit roots of the series were examined using the Augmented Dickey-Fuller technique after which the cointegration test was conducted using the Johansen Approach. Error-correction models were estimated to take care of short-run dynamics. The results indicate that government consumption expenditure and income tax positively impacted on economic growth during the period of coverage but capital expenditure by government has a negative effect and a long-run relationship exists between them as confirmed by the cointegration test.

Keywords: Fiscal Policy and Cointegration

Introduction
Over the last decade in Zimbabwe, interventionist macroeconomic policies have been dominant. However the growth impact of fiscal policy still remains unclear to policy makers in the economy. Most of the studies on fiscal policy effectiveness paid more attention on developed economies and the inclusion of developing countries in case of cross-country studies were mainly to generate enough degrees of freedom in the course of statistical analysis (Aregbeyen, 2007).

The intent of fiscal policy is essentially to stimulate economic and social development by pursuing a policy stance that ensures a sense of balance between taxation, expenditure and borrowing that is consistent with sustainable growth (Ocran 2009). The major question however has been has fiscal policy been used to achieve economic growth this in Zimbabwe in view of the fact that the extent to which fiscal policy affect economic growth continue to attract theoretical and empirical debate especially in developing countries. In recent years Zimbabwe has given fiscal policy the biggest role in economic stimulus given the multi- currency regime which has limited the role of monetary policy.

The purpose of the paper is to examine the effectiveness of fiscal policy instruments in Zimbabwe on economic growth as the major target variable in the period 1980-2010. The fiscal policy variables considered in the study include
government gross fixed capital formation, tax expenditure and government consumption expenditure.

The rest of the paper is structured as follows. Section two provides a brief review of the evolution of fiscal policy stance over the study period in Zimbabwe. Previous studies of relevance to the study are discussed in Section three. The methodology adopted for the estimation and data issues are considered in Section four. In chapter five we show the study findings and conclusions.

**Fiscal policy in Zimbabwe**

The Zimbabwean government in the 1980s to 1990s widely used financial budgetary support from International Monetary Fund, World Bank and other commercial lenders. The over reliance on external borrowings to finance the national budget led to the accumulation of huge debt obligations, and in 1999, the country defaulted on its payment obligations and was labelled not credit worthy. This led to the withdrawal of financial assistance by international organisation. The Zimbabwean government then resorted to domestic borrowing, resulting in domestic debt stock progressively increasing over the years (MEFMI report 2001).

Lack of macroeconomic policy implementation credibility, inconsistent policy formulation and high inflation levels, the maturity structure of domestic debt became concentrated towards the shorter end of the market (RBZ report 2002)

The first fiscal policy announcement in Zimbabwe 1980 saw the government making a commitment of fiscal soundness, targeting a reduction in the rate of growth of net current expenditure to levels below 7% in real terms or 1% below that of Gross Domestic Product (GDP) per annum. This was meant to reduce the budget deficit and allows sustainable fiscal policy management in the 1980s.

In the early 1990s the government of Zimbabwe adopted the liberalisation policies under the Economic Structural Adjustment Programme (ESAP). The ESAP policy sought to achieve fiscal deficit reduction. Budget deficit as a proportion of GDP was to reduce by 2% annually from 10% to a target of 5% by 1995. In addition, Government targeted to reduce tax ratio from 35% of GDP to about 33% by the end of the reform period, while at the same time introducing cost recovery measures to boost non-tax revenues. Measures proposed to reduce budget deficit involved postponement of
capital expenditure, reduction of civil service wage bill from 16.5% of GDP to 12.9% of GDP, removal of subsidies (which stood at 3.7% of GDP) and enhancement of revenue collection efficiency by 1995. Tax reforms targeted dispersion of tax rates, strengthening of tax administration and reduction of tax burden on export and import sectors (RBZ report 2000).

A severe economic crisis beset the country towards the end of 1997, following the suspension of balance of payments support by the IMF. The suspension of balance of payment support led to 50% depreciation of the Zimbabwe dollar in November 1997. The economic turmoil continued in Zimbabwe till 2008 before the introduction of the multicurrency regime which have relatively stabilised the economy. During the period 1997-2008 and the post 2008 era the government of Zimbabwe heavily relied on fiscal policy to achieve economic stabilisation.

Therefore in this study we want to establish whether fiscal policy was successful in Zimbabwe in achieving economic growth and stabilisation in Zimbabwe.

**Literature review**

Since the days of Keynes the father of macroeconomic interventionist policies after the great depression the body of knowledge on the effectiveness of fiscal policy have grown over time. Now the major research question has been on the conditions that improve the effectiveness of fiscal policy intervention on economic growth and recent years have seen a revival of the debate about the role of fiscal policy in stimulating economic activity.

The theoretical underpinning for this study is basically endogenous growth theory, which advocates the stimulation of level and growth rate of per capita output through within the model using policies like fiscal (e.g. government spending). More specifically, models of the growth effects of fiscal policy are usually built on the basis of Barro (1990) framework and subsequently Barro and Sala-i-Martin (1992, 1995). This study draws inspiration from these studies by employing a Cobb-Douglas production function in which government expenditure enters as input.

For the Keynesians, fiscal policy refers to the manipulation of taxes and public spending to influence aggregate demand. In Africa Sikiru et al (2010) investigated the impact of fiscal policy on economic growth in Nigeria. Annual data covering 1977 – 2009 were utilized. Unit roots of the series were examined using the
Augmented Dickey-Fuller technique after which the cointegration test was conducted using the Engle-Granger Approach. Error-correction models were estimated to take care of short-run dynamics. Over all, the results indicate that productive expenditure positively impacted on economic growth during the period of coverage and a long-run relationship exists between them as confirmed by the cointegration test. The paper recommends improvement in government expenditure on health, education and economic services, as components of productive expenditure, to boost economic growth.

Mansouri (2008) studied the relationship between fiscal policy and economic growth in Egypt, Morocco and Tunisia. The spans of data for each country are: 1970-2002 for Morocco, 1972-2002 for Tunisia and 1975-2002 for Egypt. The empirical results showed that 1 percent increase in public spending raised the real GDP by 1.26 percent in Morocco, 1.15 percent in Tunisia and 0.56 percent in Egypt. The results also indicated existence of long-run relationships for all the three countries.

Though there is vast literature on effectiveness of fiscal policy in developed countries evidence from developing countries is still limited thus we seek to extend the debate to Zimbabwe.

**Methodology**

The models we are going to use follow the leads of Sikiru et al (2010) in a similar study on Nigeria. The model specification is:

\[ \ln GDP_t = \beta_0 + \beta_1 \ln GCE_t + \beta_2 \ln DYT_t + \beta_3 GKE_t + \varepsilon_t \]

Where \( \ln GDP_t \) is Log of Real Gross Domestic Product, \( \ln GCE_t \) is the Log of Government Consumption Expenditure. \( GKE_t \) is the government consumption expenditure and \( \ln DYT_t \) is the Direct Income Tax. \( \varepsilon_t \) is a white noise error term.

Econometric techniques to be employed include unit root test and cointegration tests. Many economic and financial time series exhibit trending behaviour or non-stationary in the mean. Leading examples are asset prices, exchange rates and the levels of macroeconomic aggregates like real GDP. Unit root tests can be used to determine if trending data should be first differenced or regressed on deterministic functions of time to render the data stationary. Moreover, economic and finance theory often suggests the existence of long-run equilibrium relationships among non-stationary time series variables. Thus, we intend to adopt
Augmented Dickey-Fuller (ADF) Technique to verify the unit root property of the series. If these variables are I (1), then cointegration techniques can be used to model these long-run relations. Hence, pre-testing for unit roots is often a first step in the cointegration modelling discussed. Thus to avoid spurious regression we are going to test for cointegration using the Angle-Granger method.

Results and conclusions

Table 1 Unit Root Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF statistic</th>
<th>P-value</th>
<th>Order of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log GDP</td>
<td>-3.066</td>
<td>0.008</td>
<td>I(1)</td>
</tr>
<tr>
<td>Log GKE</td>
<td>-5.739</td>
<td>0.000</td>
<td>I(1)</td>
</tr>
<tr>
<td>Log GVTEXP</td>
<td>-3.219</td>
<td>0.000</td>
<td>I(1)</td>
</tr>
<tr>
<td>Log TAX</td>
<td>-3.348</td>
<td>0.002</td>
<td>I(1)</td>
</tr>
</tbody>
</table>

Note: all variables are significant at 5%
Source: Author’s computer calculations.

Table 1 above shows that the variables are stationary after first difference hence are intergrated of order 1

Table 2 Johansen Cointegration Results

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>Likelihood Ratio</th>
<th>5% critical value</th>
<th>Hypothesized No. of CE(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.818191</td>
<td>76.20648</td>
<td>47.21</td>
<td>None</td>
</tr>
<tr>
<td>0.495561</td>
<td>28.47210</td>
<td>29.68</td>
<td>At most 1</td>
</tr>
<tr>
<td>0.246167</td>
<td>9.311475</td>
<td>15.41</td>
<td>At most 2</td>
</tr>
<tr>
<td>0.048740</td>
<td>1.399097</td>
<td>3.76</td>
<td>At most 3</td>
</tr>
</tbody>
</table>

*(**) denote rejection of hypothesis at 5% (1%) significance level
Source: Author’s computer calculations.

Table 2 above shows the cointegration regression results. Using the Johansen procedure we find out that there is on cointegrating equation shown below:

\[
\text{LogGDP} = -9.359 - 0.214 \log GKE + 0.159 \log GVTEXP + 0.066 \log TAX
\]
The equation shows that government capital expenditure is negatively related to Gross Domestic Product which shows inefficiencies in government investments in Zimbabwe. Government expenditure positively affects GDP thus fiscal stimulus increase growth. Also taxation positively affects GDP. The results show that a one percent increase in government consumption expenditure increases economic growth by 15.9 percent.

**Table 3 Error Correction Model Estimated Using VAR**

**Dependent Variable Log GDP**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>t-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-7.06***</td>
<td>0.12256</td>
<td>-1.9567</td>
</tr>
<tr>
<td>Log GKE</td>
<td>-5.18***</td>
<td>0.20139</td>
<td>-2.57183</td>
</tr>
<tr>
<td>Log GVTEXP</td>
<td>0.608**</td>
<td>0.38165</td>
<td>1.59188</td>
</tr>
<tr>
<td>Log TAX</td>
<td>0.05**</td>
<td>0.19283</td>
<td>0.25789</td>
</tr>
<tr>
<td>ECT</td>
<td>0.179***</td>
<td>0.0728</td>
<td>2.46673</td>
</tr>
</tbody>
</table>

**(*** shows 5%(1%) level of significance

S.D dependent variable 0.1304
Adjusted R-squared 0.896
Log-likelihood 24.13

Table 3 shows error correction which is the short run speed of adjustment an error correction value of 0.179 shows a fast short-run speed of adjustment back to the long run equilibrium in the variables.

**References**


8. Reserve Bank of Zimbabwe, “Annual reports, Quarterly Economic and Statistical Review”, various issues