PUBLIC SECTOR SIZE AND GDP GROWTH NEXUS: PANEL DATA ESTIMATION

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ABSTRACT

The rationale of this study was to examine empirically how components of public sector size relates to GDP growth in East Africa from 1985-2015. Using balanced panel fixed or random effect model, public sector expenditure was disaggregated to scrutinize its effect of growth. The research tested for panel unit root and found that only two variables, that is, real GDP growth and capital spending - are stationary at level. The finding confirms the conventional view that relative capital spending - advances economic growth while consumption expenditure retards it. Finally, human capital allocation was insignificant. This study suggests that for these countries, the policy of increasing public sector size on investment budget to promote GDP growth will be appropriate, but fewer funds should be directed towards other governmental programs.

Contribution/Originality: This study contributes in the existing literature in the field of public sector economics. This study uses panel estimation methodology. This study originates new formula of estimating public sector size.

1. INTRODUCTION

Fiscal policy plays a vital function in governmental efforts to boost growth and development in an economy, through the variation of its income and disbursement profiles. It is the main government policy that influences economic behavior by raising the revenue through taxation and control of the level of spending (Anyanwu, 1993). Public sector size was typically categorized into consumption and capital expenditures. The former, corresponded to government's acquisition of current goods and services, while the latter would ideally include not merely investments in infrastructure (roads, Education) but also all other spending that might add to GDP growth. In other words, while the consumption allocation refers to financial outlays necessary for running of government, the investment allocation refers to capital outlets that increase the assets of the state. These classifications, nonetheless, were not mutually exclusive but were indeed inter-linked. For instance, while capital spending gave rise to consumption expenditure in most cases through the operational and repairs costs of completed capital projects, the amount available for investment was a function of not only the size of revenue but also the amount that goes annually into the administration of public sector (Kalio, 2000; Gisore *et al.*, 2014).

The association between public Sector size and economic growth has continued to generate a string of controversies. Most studies conclude that the relationship between public sector on economic growth is negative and insignificant (Romer, 1990; Akpan, 2005; Gisore *et al.*, 2014) others indicate that the effect is positive and

significant (Kalio, 2000; Korman and Bratimasrene, 2007). Public expenditure on capital and productive activities is expected to contribute positively to growth, while public consumption spending is expected to be growth retarding. This instrument of fiscal policy encourages economic growth in the sense that public investment contributes to capital accumulation. Other significance of public expenditure includes the provision of those facilities that are not fully covered by the market such as health and education. That is, human capital promotes positive benefits linked with economic growth, but the monetary source for public expenditure which is taxation, reduces the benefits of the taxpayers and as such reduces the remuneration associated with GDP growth (Barro, 1990; Mitchell, 2005; Gisore et al., 2014). But due to lack of sufficient revenue, there is need to identify productive spending order to scale down the non-productive expenditure.

1.1. Growth and Components of Public Sector Size Statistics

Table-1. Components of Public Sector Size

Year	Kenya			Tanzania			Uganda		
Year	CURRENT Mln $	CAPITAL Mln $	TOTAL Mln $	Cg Mln $	Ig Mln $	TOTAL Mln $	Cg Mln $	Ig Mln $	TOTAL Mln $
2005	5135	865	6000	2066	1024	3090	1249	662	1911
2006	5837	1275	7112	2648	1066	3714	1499	460	1959
2007	7612	3075	10687	2906	1456	4362	1641	575	2216
2008	10175	2731	12906	4132	1766	5895	1706	976	2682
2009	8175	3265	11443	4479	1978	6457	2123	1244	3367
2010	8566	3719	12285	4991	1919	6910	2564	1297	3861

Mln $ – Million in US dollars. *Source*: East African Community Secretariat (EAC) (2011).

For the last ten years, other than in 2005, Kenya recorded lower annual GDP growth than the average for sub-Saharan Africa (SSA), and compared to its neighbours in the East African Community. Kenya's annual growth rate for the decade averaged 4.6 percent, compared to 6 percent for SSA, 6.9 percent for Tanzania, 7.1 percent for Uganda, and 7.2 percent for Rwanda (Government of Kenya (KNBS), 2008). The Kenyan public expanded swiftly in the 1970s and 1980s. Kenya's spending constricted thereafter to 26.1 percent of GDP in 2003. Uganda's growth acceleration started earlier than the other East African countries and has lasted more than 20 years, with per capita income growth averaging 3.4 percent a year during 1990–2010 (Government of Uganda (UBOS), 2012). From 1995, Tanzania's GDP per capita growth averaged 1.3% compared to negative rates throughout early 1990s (Government of Tanzania (NBS), 2012). Excluding South Africa, sub-Saharan Africa grew at an average of 6 percent since 2008. East Africa as a whole grew even more, at 6.5 percent, and without Kenya it would have grown at almost 7 percent (Government of Kenya (KNBS), 2008).

1.2 Significance of the Study

First, due to disaggregation of data, the study provides more understanding of the relationship between components of public sector size and GDP growth as compared to most empirical studies that used an aggregate public expenditure measures. The results of the study may help in deciding on how the funds should be shifted from the less productive to the more productive sectors of the economy so as to boost GDP growth. Finally, one of the key strength of this study was that it incorporated the most recent data and employed advanced econometric method (panel data estimation) to study the effect of spending on economic growth. Majority of the studies made use of regression analysis, unfortunately panel diagnostic tests, stationarity test, and co integration which are very crucial in modeling were glaringly missing. This could put to question reliability of the models so developed.

2. LITERATURE REVIEW

Government spending hypothesis, traditionally, received only inadequate attention till recently. Partly, this lop-sided interest in the study of public finance is explained by a universal acceptance of the philosophy of laissez-faire and belief in the efficiency of free market mechanism. However, with the introduction of welfare economics the function of the government has expanded especially in the area of infrastructural provision and theory of public spending is attracting growing attention. This trend has been reinforced by the widening interest of economists in the problems of income inequality, economic development, , planning, regional disparities and justice (Bhatia, 2002; Mitchell, 2005).

Indeed, if appropriately managed and utilized, government spending has significant positive effect on real GDP growth, especially in less developing countries where there exist poor infrastructural facilities and where private sector is not mature enough to play the expected role in the economy. The government action to the economic growth may be advantageous and at the same time be detrimental. The beneficial side of public spending includes.: The use of fiscal policies tools like income taxes and transfer payments which can lead to more equitable redistribution of income; The supply of pure public goods which may comprise a sizeable component of aggregate demand; Government often acts as catalyst in the markets with asymmetric and imperfect information (Husnain *et al.*, 2011; Gisore *et al.*, 2014).

The action of the state may also impede economic growth. This is possible as a result of rivalry between the less efficient private sector and the public sector in the credit market which may increase interest rate thereby misallocating private investment and eventually reducing economic growth. Also, taxes imposed by the government can equally distort market prices and successful resources allocation in the country. There is a popular assertion in the empirical studies that public expenditure is inversely correlated with economic growth due to inefficiency of the public sector especially in the developing countries where a large proportion of public spending is attributed to non productive expenditure like military and interest payments on debt (Kalio, 2000; Akpan, 2005; Husnain *et al.*, 2011).

2.1.1. Expenditure and Growth Models

Musgrave (1969) argues that over the development period, as total investment as a proportion of GDP increases, the relative share of government sector investment falls. This is because as the economy develops and a larger flow of savings becomes available, the capital stock in private industry and agriculture must be built up. The basic stock of social overhead capital has now been created and additions are made at a slower rate. The structure of social overhead capital, similar to public utilities, becomes a declining share of net capital formation. Wagner (1958) advanced his law of rising government expenditures. Wagner's law is interpreted as to say that increasing government spending is a consequence of a growing economy.

The most important conclusion of Solow (1956) model is that the accumulation of physical capital cannot account for either the vast growth over time or the geographic differences in output per person. The model predicted technological development typically assumed to develop at a constant 'steady state'- is what determines most output growth. This implies that poor countries with lower value of capital and output grow faster than developed ones and consequently the former tend to catch up with the latter. In the Solow neo-classical growth model, if an expansionary fiscal policy is maintained, then the long-term consequences may be a lower level of steady state GDP. This is because the government-via a budget deficit-drives a wedge between private saving and investment. The reason is that public absorbs part of private saving to finance the deficit.

Keynesian Keynes (1936) investigation leads to the conclusion that aggregate demand management policies can be used to improve economic performance. For Keynesians demand is a prerequisite for growth.

$$Y(t) = F\big(K(t), A(t)L(t)\big) \qquad (2.1)$$

Endogenous Growth models, assumes technology to be endogenous. Research and development, which leads to increases in technology, is dependent on capital. Capital, as previously mentioned, grows at the rate of technological development. Endogenous Growth hypothesis includes this 'feedback loop' of technological development affecting the growth rate of capital, which impacts technological advancements (Romer, 2001).

The Ramsey-Cass Koopmans (RCK) Model is equivalent to the Solow Model; however, savings in the RCK Model is endogenouss contrasting exogenous in the Solow Model. The RCK Model builds upon the Solow Model by incorporating public spending and household maximization through consumption and risk. Both of these models have the same implications once in the steady state: the growth rates of output, capital, savings, and consumption, all in per worker terms, grow at the rate of technological development. The growth rate of output per worker develops at the same rate as technological progress, which also grows with capital per worker. The Solow and RCK theories assume technology as exogenous. An increase in technology causes an increase in the marginal productivity of capital that leads to an expansion in investment. A higher level of investment (from this increase in the marginal productivity of capital) increases the capital stock of an economy (Romer, 2001).

2.1.2. The Empirical Literature

Torki (2016) investigated the empirical association between government spending and economic growth in Jordan between the period1980 and 2013. To attain the objective of this study, the multiple linear regression models, relating the study variables was used. The results conclude that there is a positive effect for both total and current government expenditure on economic growth. This result supports the Keynesian model.

Gisore *et al.* (2014) used a disaggregated approach to scrutinize the effect of public expenditure on economic growth in Kenya, Uganda and Tanzania for the period 1980-2010. The study had used the panel data and employed the fixed effects model to test the relationship. The findings revealed that growth in defence and health expenditure has positive effect on real GDP growth. In contrast, education and agriculture expenditure were insignificant. However, the conventional data disaggregation was not considered.

Muthui *et al.* (2013) studied the impact of public spending components on economic growth in Kenya. They conclude, from their study, that the composition of government expenditure matter for growth.

Okwu *et al.* (2102) examined the effect of public spending on economic in Nigeria for the period $1970 - 2009$. The tool of analysis was the OLS multiple regression models specified on perceived causal association between government allocation and growth. Results of the analysis showed that capital and recurrent allocation on economic services had insignificant negative effect on economic growth during the study period. Also, capital expenditure on transfers had insignificant positive effect on growth. But capital and recurrent expenditures on social and community services and recurrent expenditure on transfers had significant positive effect on GDP growth.

Maingi (2010) while conducting research on the impact of public expenditure on economic growth in Kenya reported that improved allocation on areas such as physical infrastructure development and in education enhance growth while areas such as foreign debts servicing, recurrent and expenditure on public order and security, salaries and allowances were growth retarding.

Kalio (2000) investigated the impact of aggregate expenditures on economic changes in Kenya during the period between 1970 and 1992. To achieve the objective of the study, different linear models were applied. The results showed negative effects of recurrent governmental expenditures on economic growth. Also, the research concluded that government expenditure on capital expenditure had a positive effect on GDP growth.

Kweka and Morrissey (1999) examined the effect of public spending on GDP growth using OLS method for a sample of time series data (1965-1996) on Tanzania. They found that increased productive expenditure is associated with lower growth. According to them, this negative relationship suggests the inefficiency associated with the use of public funds and public investments in Tanzania. The negative association between total expenditure and growth also seems to indicate the unproductive effect of government investment spending. Consumption expenditure

relates negatively to growth, as anticipated, but appears to be associated with increased private consumption. They also found that there is positive association between growth and allocation on human capital.

3. RESEARCH METHODOLOGIES

In spite of various theoretical advances of endogeneous growth models, their particular characteristics, especially those related to the presence of exactly constant returns to scale in the key production processes (that is, human capital and knowledge in Romer (1990) require very specific values of parameters, which makes their empirical tests rather difficult. Therefore, the use of a neoclassical Solow model augmented with some of the key variables in endogenous growth models seems to be a better option to study the determinants of real GDP growth. Thus a number of empirical studies have introduced different modifications to the neoclassical Solow model aiming at highlighting the role of a (some) factor(s) in explaining growth (Mankiw *et al.*, 1992). Mankiw emphasizes the importance of adding human capital to the Solow model. Islam (1995) examines whether or not the results of the augmented Solow model obtained by MRW using cross-section regressions change by using different techniques, namely panel data. Barro (1990) in turn, allows for the government to affect the production function. Building on Ram (1986) model, the sum public spending is disaggregated into investment expenditure, consumption expenditure and human capital expenditure. Therefore, the regression equation was specified as:

$$Yi, t = \beta Xi,t + \gamma\ Gi,t + \mu i + vt + \mathcal{E}i,t \qquad\qquad (3.1)$$

Where: Yi, t - is the dependent variable. x,t - set of explanatory variables.

$\mu i -$ country fixed effects $vt -$ time fixed effects $\mathcal{E}i,t -$ is the error term.

Finally the $Gi,t -$ is disaggregated government the expenditure variable

$$lngrgdp_{i,t} = \beta lnX_{i,t} + \gamma ln\ G_{i,t} + \mu_i + v_t + \varepsilon_{i,t}$$

$$(3.2)$$

Following recent advances in panel data estimation methods, this study therefore utilizes balanced fixed effect model of panel estimation technique which addresses the problems of omitted variable bias, endogeneity, and multicolliniality. The government spending data was collected from the World Bank (2014) Statistical abstracts, and Central Bank reports. The real GDP was used to capture the effect of inflation on economic activities.

Governments spending on capital and human capital goods were supposed to add a country's physical capital (infrastructure) and human resource which, in turn, could complement private sector productivity and increase growth in the process. The sign of the variables are therefore expected the positive. But consumption expenditure was expected to give a negative result, since most recurrent expenditure is for consumption purposes and therefore a rise in the ratio should reduce real GDP growth.

The Hausman (1978) test was applied to underpin the application of the balanced panel fixed effects model in this analysis. This statistical test was generally used for deciding between applying a fixed or random effects model. The Hausman test (H) was estimated by the following equation:

$$\mathbf{H} = (\boldsymbol{\beta_{FE}} - \boldsymbol{\beta_{RE}}) * \mathbf{INVERSE}[\mathbf{V_{FE}} - \mathbf{V_{RE}}] * (\boldsymbol{\beta_{FE}} - \boldsymbol{\beta_{RE}}) \qquad\qquad (3.3)$$

This study adopted Levin *et al.* (2002) technique to verify the presence of unit root. There are two major measures to test for the existence of co integration, namely, the Engle-Granger two step procedures and the Johansen Maximum Likelihood Estimation procedure. The cointegration analysis is employed to examine the long-run associations among the variables. Following Engel and Granger (1987) the research attempted to establish whether long-run relationship exist between the variables. Having established the existence of a long-run relationship, one may proceed to specify the short-run dynamic relation for the economic aggregates hence vector error correction models. Post-estimation panel diagnostic tests were carried out during the study. Heteroskedasticity, serial correlation and cross sectional dependence/contemporaneous correlation were tested for the above models before estimation and corrected accordingly.

4. RESULTS AND DISCUSSIONS

4.1. Panel Unit Root Test

Table-2. Panel Unit Root Test Results

Variables in Logs	Levin-Lin-Chu at Level		Order	LLC at First difference		Order
	Unadjusted t	Adjusted t		Unadjusted t	Adjusted t	
LnRGGDP	**-5.5**	**-3.3**	**I(0)**	_	_	_
LnIgY	-4.9	-2.6	I(0)	_	_	_
LnCgY	-2.1	-0.1	I(1)	-7.7	-5.1	I(0)
LnHgY	-1.1	0.8	I(1)	-9.1	-6.3	I(0)

All at 1 % level of significance (critical value:-2.5)

Levin *et al.* (2002) method was conducted at level and at first difference and the result is reported in Table 2. The results reveal that all the variables are non-stationary at level except real GDP and government investment. However, they become stationary after the first difference implying that the variables are integrated of order one, I (1). But from the results in Table 2, the dependant variable real GDP growth is already stationary I (0) while the rest of the variables are of order (1), hence they are not of the same integration. This therefore implies there was no co- integration since the variables are of different integration.

4.2. Panel Data Diagnostic Test

The Hausman (1978) test was applied to underpin the application of the balanced panel fixed effects model in this analysis. From the result, p-value is 0.04, hence the null hypothesis is rejected and the fixed effect model is selected.

The F-test statistics results show that the coefficients are simultaneously non-zero and hence the independent variables have explanatory power on the dependent variable at 1% level of significance. The joint effect of these components of public expenditure and control variables on economic growth is statistically significant as indicated by the computed F-Statistic and its probability. The adjusted coefficient of determination (adjusted R_2) test is used to show the total variation of the dependent variable that can be explained by the independent variable. The adjusted R_2 is equal to 0.4, which implies that 40% of the variations in the dependent variable (real Gross Domestic Product) are explained by the changes in explanatory variables in the model within the period under review.

The Durbin Watson statistic is used to test the presence of serial correlation between the variables. Durbin Watson is equal to 1.9; implying serial correlation is not a problem. This is because the closer the Durbin Watson value is to 2, the better the evidence of the absence of autocorrelation (Table 3).

4.3. Effect of Government Expenditure on Growth

Estimation process of the role of government expenditure starts by disaggregating it into just three levels of economic components, namely human capital, recurrent and capital expenditure. The rationale for doing so is that one strand of the economic growth literature shows that capital and human capital are the main factors in explaining growth. In contrast, consumption allocation has been considered as growth retarding (Barro, 1991) Thus, the model to be estimated was specified in logarithm form as:

$$lngrgdp_{i,t} = \beta lnX_{i,t} + \gamma ln\,G_{i,t} + \mu_i + v_t + \varepsilon_{i,t}$$

(4.0)

4.3.1. Effect of Investment Expenditure on Economic Growth

Table-3. Effect of Expenditure Components on Economic Growth

Variable	Coefficient	Standard error	t- Statistics	p –Value
Constant	4.476	1.406	3.18	0.002
lnIgY	0.494	0.175	2.816	0.0456
DlnCgY	-2.298	0.808	-2.844	0.0056
DlnHgY	0.532	0.302	1.76	0.220
Goodness of Fit Test	R2 = 0.5	Adjusted R2 = 0.4		
F = 6.067661	P-value(F) =9.34e-06	D.Watson = 1.9		
Wooldridge Test	F(1,2) = 12.991	Prob > F = 0.0691		
Modified Wald Test	χ 2 (3) = 1.38	Prob> χ 2 = 0.7099		
Breusch-Pagan Test	χ 2 (3) = 3.970	Pr = 0.2648		

Source: Author, 2017

From the results, the effect of investment expenditure on real GDP growth is positive and significant at five percent level of significance. This result is in line with the hypothesis that the capital part of government expenditure and economic growth are positively related. Hence the study rejects null hypothesis at five percent significance level. This type of expenditure could be linked with the productive government expenditure that Barro (1990); Kalio (2000) and Gemmel (2001) pointed out to be an additional input to the private production function. This public investment, as argued in growth models, is necessary to increase productivity and to gear up the economy for take-off into the middle stages of economic and social development (Romer, 2001). Public investment in critical infrastructure is an essential precondition for capital accumulation in the private sector (Barro, 1990; Gisore *et al.*, 2014). Niloy *et al.* (2003) engaged the same disaggregated analysis as followed by Josaphat and Oliver (2000). They evaluated the growth effects of public expenditure for a panel of thirty least developed countries during the 1970s and 1980. The key findings showed that the share of government capital expenditure in GDP is positively and significantly correlated with growth, but current expenditure is insignificant. In contrast (Kweka and Morrissey, 1999) found the association between investment expenditure and growth for Tanzania inverse.

4.3.2. Effect of recurrent Expenditure on Economic Growth

The above results point out that consumption expenditure has a negative and statistically significant effect on economic growth at one percent level of significance. Since the result is significant at 5 percent level of significance, null hypothesis is rejected at 5 percent level of significance. From the result, it means a 10 percent increase in consumption spending will lead to a 22.98 percent decrease in GDP growth. This finding is consistent with the research expectation and gives some credibility to the policy advice given out by various international institutions such as World Bank and IMF. They recommend a cut in consumption expenditure other than investment expenditure in order to foster long term economic growth (Mitchell, 2005). It can be said that increased government consumption expenditure is usually at the expense of investment expenditure or the private sector's investment which in most cases leads to instances of reduced economic growth. Classical and Neoclassical theories consider consumption expenditure ineffective on the grounds of well known crowding – out phenomenon, that is, when public goods are substituted for private goods, this leads to lower private spending on education, health, transportation and other goods and services. As the governments borrow heavily to fund spending, pressure in the credit market results in interest rates rise which discourages private investment. With regard to government consumption spending, the results of this study agree with the findings obtained by researchers like Barro (1991); and Kalio (2000). In contrast Josaphat and Oliver (2000) and Kweka and Morrissey (1999) found the relationship to be positive in Tanzania which they linked with increased private consumption. However, Lin (1994) while using a panel data analysis for the period 1960-1985 on 62 countries, both developing and industrialized economies,

obtained mixed results, that is, government consumption was insignificant in developed economies, but significantly positive in developing countries.

4.3.3. Effect of Human Capital Expenditure on Economic Growth

From the regression results the coefficient of human capital is positive as expected but statistically insignificant at any conventional level. While low initial levels of human capital may have delayed East Africa's economic growth, its poor performance cannot be attributed to a lack of subsequent investment in human capital. A possible explanation is the low level of public spending in investment expenditure (infrastructure) (Gisore *et al.*, 2014). Low rates of investment in physical capital have implications for the rates of return on human capital, particularly education (Appleton and Teal, 1998). This finding conforms to the findings by Loto (2011) and Knight *et al.* (1996) but contrasts those by Gemmel (2001) and Devarajan *et al.* (1996) for 140 OECD countries. According to Kweka and Morrissey (1999); Josaphat and Oliver (2000) on their study on Tanzania, allocation on human capital investment was insignificant in the regressions, probably because effects from education sector would have very long lags (Gisore *et al.*, 2014).

4.4. Post–Estimation Panel Diagnostic Tests

Heteroskedasticity occurs when the variance of the disturbance term is not constant. Hence, the t-values for the estimated coefficients cannot be trusted. A modified Wald test was applied to test for heteroskedasticity and the result presented as shown in table 3 the null is homoskedasticity (or constant variance). From above result (0.7099) the null hypothesis is accepted hence no heteroskedasticity. The p-value is above 0.05 and as such it is not significant hence revealing that heteroscedasticity is not a problem. Contemporaneous correlation was tested using Breusch-Pagan Lagrange Multiplier (B-P/LM) test of independence. B-P/LM test is used to test whether the residuals are correlated across entities. Cross-sectional dependence can lead to bias in tests results. The p-value is greater than 0.05 (0.2648) and therefore not significant at five percent level of significance. From the B-P/LM test cross-sectional dependence/ contemporaneous correlation is not a problem. The study used Wooldridge test for autocorrelation in panel data. The null is no serial correlation (0.0691). From the result, the p-value is greater than 0.05, the study fails to reject the null hypothesis and conclude that the data does not have first-order autocorrelation.

5 CONCLUSION AND POLICY RECOMMENDATIONS

5.1. Conclusion

This study has determined the effects of different components of government spending on the real GDP growth rate in a set of East African countries over the period 1985 - 2015. Government spending was disaggregated because the literature shows that some categories of it are more likely to have a significant effect on growth than others. The study then proceeded to use recent developments in econometrics by employing balanced fixed panel data estimation to analyse some of the significant variables affecting real GDP growth in East Africa. Heteroskedasticity, serial correlation, Hausman test and contemporaneous correlation were tested before estimation and corrected accordingly. The study employed (Levin *et al.*, 2002) test to test for panel unit root and found that the variables were stationary at first difference except real GDP and capital expenditure that are stationary at their level.

The conclusions reveal that public spending on investment should be a priority for a government interested in promoting economic growth. Conversely, public size on consumption spending may not translate into sustainable economic growth since they will affect mainly the demand side of the economy. However, consumption spending seems to have a strong negative effect on growth, suggesting that the composition of this expenditure allocation needs to be re-examined with a view to re-organizing it so that it contributes to economic growth. Neoclassical

theories consider consumption spending ineffective on the grounds of the crowding-out effects, that is, when public goods are substituted for private goods. With respect to public spending on human capital, this study expected to find a positive and significant effect on growth. However, the result was not significant. Perhaps one of the reasons of this finding has something to do with poor governance and high levels of corruption, features that tend to be more common in less developed countries, like the ones considered in this study, than in rich countries. Moreover, the full effect of public allocation on education is likely to take longer time periods than the time considered under this study.

5.2. Recommendations

From a policy standpoint, these findings suggest that East Africa countries should increase public sector expenditure on investment; this instrument of fiscal policy promotes growth in the sense that public investment aids capital accumulation. However, to increase spending on these sectors, governments should also reduce expenditure on other categories given the presence of a budget constraint. In addition, the government can employ better financial management and try to fight corruption. The study cautions the adoption of reduced government spending on consumption expenditure which was found to be a negative determinant of economic growth. According to the Keynesian macroeconomic thought, government expenditure can add positively to growth by injecting purchasing power into the economy. Hence, an increase in the public consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. Government allocation on human capital was found to be insignificant. The study infers that inadequate amount of resources allocated to this component, insufficient investments and inefficiencies, inadequate factor productivity growth, slow adoption of technology and corruption in these areas led to this adverse result. However, the study resorted to economic theory to recommend increased spending in this component which is key contributor to labour productivity in these economies.

5.3. Areas of Further Research

From the findings of this study, it is important to explore further disaggregation of the data into sectoral spending for deeper policy prescription.

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