Fiscal Policy, Governance and Human Development in the Common Market for Eastern and Southern Africa

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Abstract

This study set out to empirically test the impact of fiscal policies and governance on human development (HD). In the context of this objective, this paper analyses the impacts of government expenditures and various indicators of governance on three indicators of HD for 19 Common Market for Eastern and Southern Africa (COMESA) countries. Dynamic panel data analysis is employed, and random effect models, fixed effect model, and two-step generalised method of moments (GMM) estimation techniques are adopted. The results show that fiscal policy and governance play a significant role in HD among the COMESA countries. The results imply that in order to ensure HD, not only do the countries need to focus on economic conditions but also on the improvement of social conditions as well. However, to ensure effective implementation of fiscal policies, other policy interventions may also need to be integrated to achieve the necessary improvement in social indicators. In particular, strengthening governance can have a strong pay off for social indicators. Therefore, reducing corruption and increasing accountability for public spending are just as important as increasing spending.

Keywords: human development, governance, fiscal policy, COMESA, Fixed Effects model, Random Effects model, Two-step GMM approach

1 The opinions expressed in this paper are those of the authors and do not in any way represent those of the Institutions of their affiliation.

Introduction

HD, as the ultimate goal of the development process, has gained increasing influence on the development debate for over the last two decades and contributed to a renewed call on the international community and national authorities to support and achieve an adequate level of resource mobilisation for investing in the formation of human capabilities (Suescún, 2007). This is because HD focuses on the basic social outcomes such as having a healthy life, being knowledgeable and attaining a decent standard of living. These outcomes directly depend on the improvement in sanitation, healthcare, life expectancy at birth, safe water, elementary education, adequate shelter and clean environment, among others.

Based on the widely published United Nations Development Program's (UNDP) reports on HD, the attention has shifted towards the role of the government through public expenditure in improving HD, especially in developing countries. These reports have made strong policy recommendations regarding budgetary allocations on public social spending that target HD improvement. For instance, the 1991 report introduced four government spending ratios: public expenditure; social allocation; social priority; and human expenditure. These ratios were considered as indicators of government commitment to the social sector and HD. Developing countries were to devote 5% of their national income to promote HD. Based on the 1996 report, the World Summit for Social Development in 1995 adopted the proposal to have developing countries direct 20% of their domestic budgets to social basic needs. This was to be supplemented by 20% of the official development assistance (ODA) from donor countries.

Furthermore, the United Nations (UN) and the African Union (AU) have initiated both global and continental agreements that are designed to shape the HD discourse as well as country-specific policies. For example, the UN 2030 Agenda goals 3, 4, and 8 on health, education and economic empowerment respectively, are aligned to the achievement of the HD indicators. The commitment of the 2030 agenda to leave no one behind provides a framing tool to prioritise attention to HD dimensions and vulnerable groups of people, and to a transformational change in HD thinking as discussed above. The AU 2063 agenda has also directed efforts towards achieving HD. The first aspiration of having a prosperous Africa, based on inclusive growth and sustainable development, centres on improving education, health and the standard of living for all Africans as well as transforming African economies. These goals encompass all the dimensions of measuring HD.

According to the 2016 UNDP report, the levels of HD have improved all over the world. Every developing region's HD index (HDI) value increased considerably between 1990 and 2015, although progress has been slowing down since 2010. This reflects important advances not only in income, but also in health and education. Between 1990 and 2015, the aggregate HDI value of the least developed countries increased by 46%, and the aggregate HDI value for low HD countries increased by 40%. The global extreme poverty rate of USD 1.90 a day also decreased from about 35% in 1990 to less than 11% in 2013. The global under-five mortality rate was more than halved between 1990 and 2015, with Sub-Saharan Africa (SSA) recording the highest decline. Maternal mortality rates have also declined since 1990. Other indicators of HD that

have improved include: access to professional healthcare; access to basic social services (such as drinking water and primary education); environmental protection; participation in public and political life; and advancement in technology.

Despite all the impressive progress in HD over the last two-to-three decades, there were still challenges in meeting the Millennium Development Goals and the New Sustainable Development Goals in the social sector, especially in the developing countries. 766 million people (385 million of them children) still lived on less than $1.90 a day by 2013. Poor nutrition still causes 45% of the deaths among children under the age of five. Children born in developing countries in 2016 will lose nearly $177 billion in potential lifetime earnings because of stunting and other delays in physical development. About 758 million adults (including 114 million young people) still lack basic reading and writing skills (UNDP, 2016).

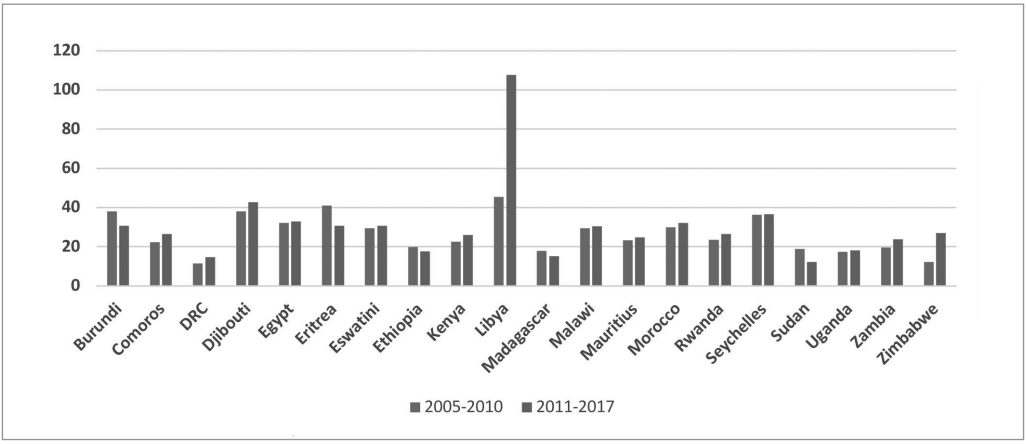
Literature regarding the question of how economic resource allocation affects HD and how the limited resources should be allocated within social sectors in Africa is limited. Against this backdrop, this study empirically investigates the effect of fiscal policy in the promotion of HD in COMESA[2] member states using a panel data econometric framework. Specifically, the study uses various HD indicators and quantitative empirical analysis based on national data to evaluate the effect of government expenditure on HD. The rest of the study is organised as follows: the trends and landscape of fiscal policy and HD in COMESA are presented in sub-sections 1.1 and 1.2 respectively; section two presents literature review; while methodology and empirical findings are presented and discussed in sections three and four respectively. Finally, section five presents the summary, conclusions and policy implications of the study.

Fiscal Policy in COMESA

Fiscal policy refers to government actions aimed at influencing the direction of the economy through changes in the level and composition of public expenditure and funding. Specifically, fiscal policy involves government expenditure, taxes and subsidies that are implemented through the national budget. Fiscal policy plays a key role in the economy by delivering on the three principal functions of government, namely efficient allocation of resources, a fair distribution of income and the stabilisation of economic activity (Chileshe & Longa, 2015). An assessment of fiscal policy of COMESA countries with regard to public social expenditure since the 1990s, when UNDP launched the reports on HD, provides interesting insights about the changing role of the government in health and education sectors achievements and in promoting HD in the region. Public social expenditure is defined as the sum of the government's total expenditure in health, education, social protection and housing (Sarangi & Bonin, 2017).

2. Common Market for Eastern and Southern Africa (COMESA) comprises 19 countries, namely: Burundi, Comoros, D.R. Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe.

Figure 1: Average Government Expenditure (Percentage of GDP)



[3] *Source: Based on WDI (2018)*

Average government expenditure as a percentage of GDP has slightly changed in most COMESA countries over the two periods, with only Libya and Zimbabwe recording some significant increase, while Eritrea's and Sudan's have evidently decreased. This could imply that growth in the countries that have not changed much could be driven mainly by fiscal factors, hence both expenditure and GDP are growing at relatively similar rates over time. Sudan and DRC recorded the lowest average government expenditure as a percentage of GDP in the region.

Table 1: Coverage of the Social Protection and Labour Programmes as a Percentage of Total Population (Varied Years)

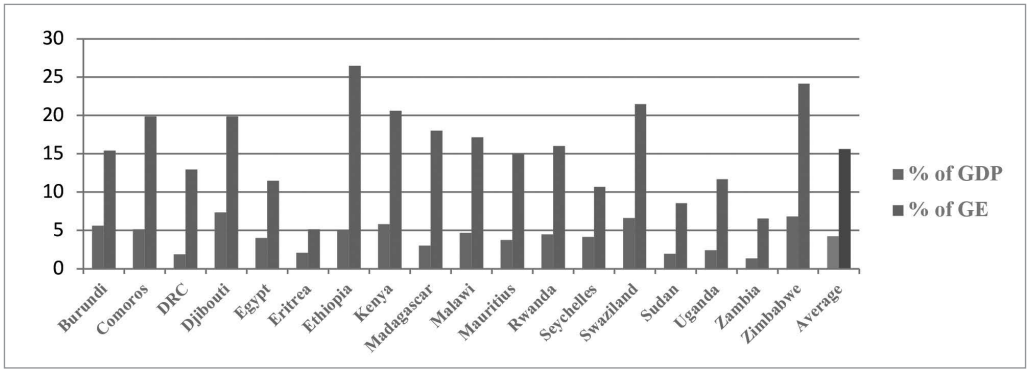
Country	Comoros	DRC	Djibouti	Egypt	Ethiopia	Kenya	Madagascar	Malawi
Percentage (Year)	1.98 (2004)	11.06 (2012)	21.85 (2012)	55.45 (2008)	13.25 (2010)	21.58 (2005)	5.90 (2010)	42.45 (2013)
Country	**Mauritius**	**Rwanda**	**Sudan**	**Swaziland**	**Uganda**	**Zambia**	**Zimbabwe**	**Average**
Percentage (Year)	46.63 (2012)	56.58 (2010)	7.45 (2009)	51.65 (2009)	60.71 (2012)	1.61 (2010)	20.90 (2007)	35.06[4] (2012)

[5] *Source: Based on WDI (2018)*

3. Data on Libya is not available; data on Ethiopia was not available for 2005-2010; Data on Djibouti was not available for 2011-2016.
4. This average for four countries (DRC, Djibouti, Mauritius and Uganda) where data is available.
5. Data on Burundi, Egypt, Eritrea, Libya and Seychelles is not available.

Even though more recent data is not available, Table 1 shows that social protection remains an important fiscal policy in the region, with more than a third of the population covered. Countries with the least coverage (less than 10%) include Zambia, Comoros, Madagascar and Sudan.

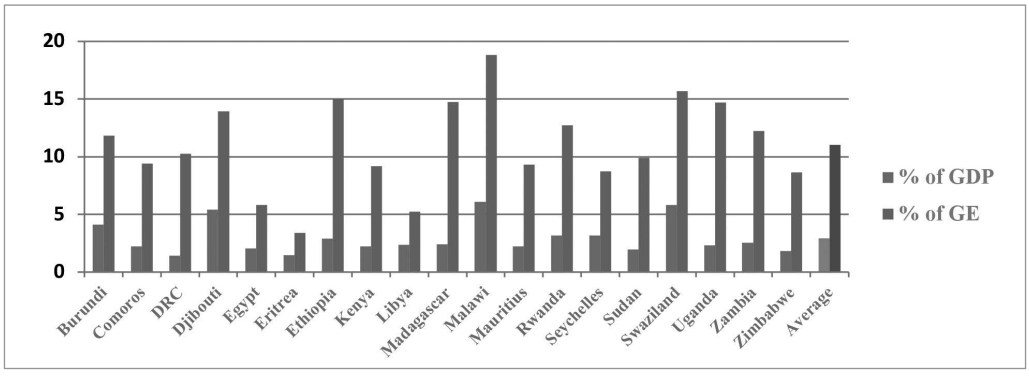
Figure 2: Government Expenditure on Education as a Percentage of the GDP and Total Government Expenditure (2005-2015).



[6]*Source: Based on WDI (2018)*

Government expenditure on education as a share of total government expenditure averages at about 16% in COMESA, and only at 4% of the GDP. The averages, however, mask the variations across the countries as a few countries spend more than 20% of their budgets on education (Ethiopia, Kenya, Swaziland and Zimbabwe).

Figure 3: Government Expenditure on Health as a Percentage of the GDP and Total Government Expenditure (2005-2014).



Source: Based on WDI (2018)

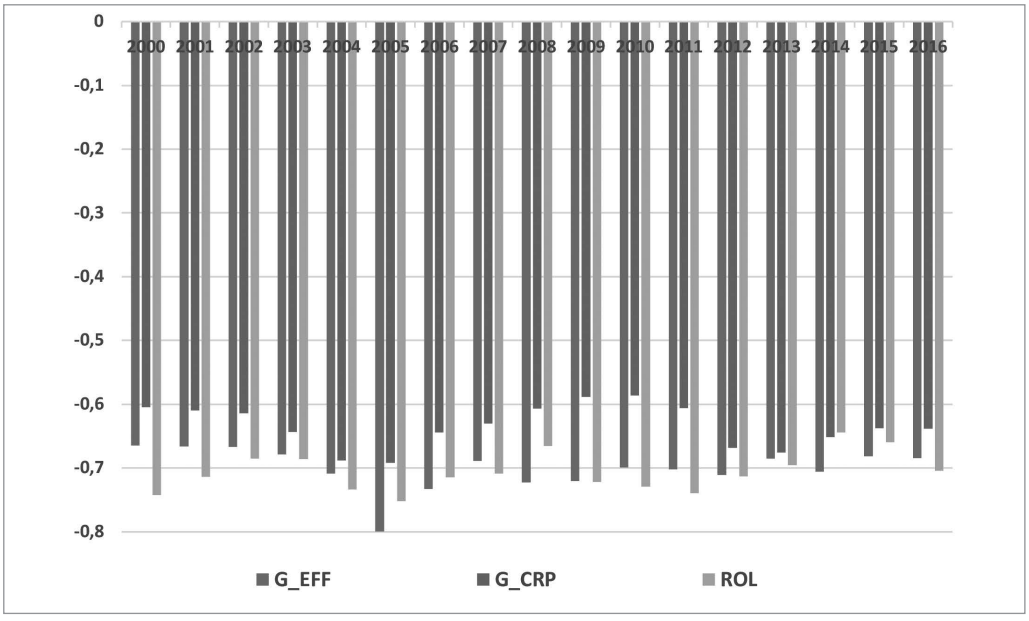
6. Data on Libya is not available.

As shown in Figure 3, the proportion of member States' budgets spent on health is on average 11%, which is below the 15% of the Abuja Declaration. Only three COMESA countries (Malawi, Swaziland and Ethiopia) spend 15% and above of their budgets on health.

Governance in COMESA

According to the African Union and United Nations Economic Commission of Africa (2013), good governance is one of the key instruments that can help empower the population and improve HD. Governance and accountability measures help ensure the rule of law, efficiency in the delivery of services, and accountability in the use of public resources. Governance is one of the main challenges that the African continent is grappling with, yet is it also one of the issues of great significance to inclusive growth and sustainable development on the continent. Effective economic governance institutions are critical in the fight against corruption and also in the drive towards structural transformation and development in Africa (UNECA, 2016). According to the Ibrahim Index of African Governance, only two out of 19 COMESA countries achieved progress in all the four components of the index. These included Mauritius and Seychelles. Figure 4 shows the scores for various governance indicators in COMESA, that is: Government effectiveness (G_EFF); Government control of corruption (G_CRP); and the Rule of law (ROL). The average scores for the region remain negative across all the indicators and over the years with no clear trend.

Figure 4: Governance Indicators: 2000-2016

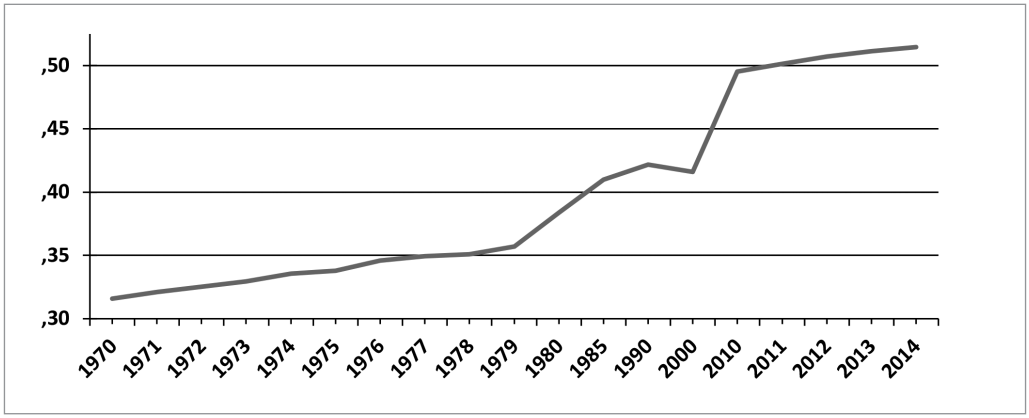


Human Development in COMESA

The definition of HD used in this paper is drawn from the HD Report produced annually by UNDP. 'HD' refers to enlarging people's freedoms to live lives they value. For the last 20 years, this has been proxied by the Human Development Index (HDI), which covers income and access to health and education services.

The HDI is the geometric mean of normalised indices for each of the three dimensions. The health dimension is assessed by life expectancy at birth; the education dimension is measured by mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school-entering age. The standard of living dimension is measured by gross national income per capita. Figure 5 gives a summary of the trend of index for the past four decades.

Figure 5: Average HDI for COMESA Countries (1970-2014)



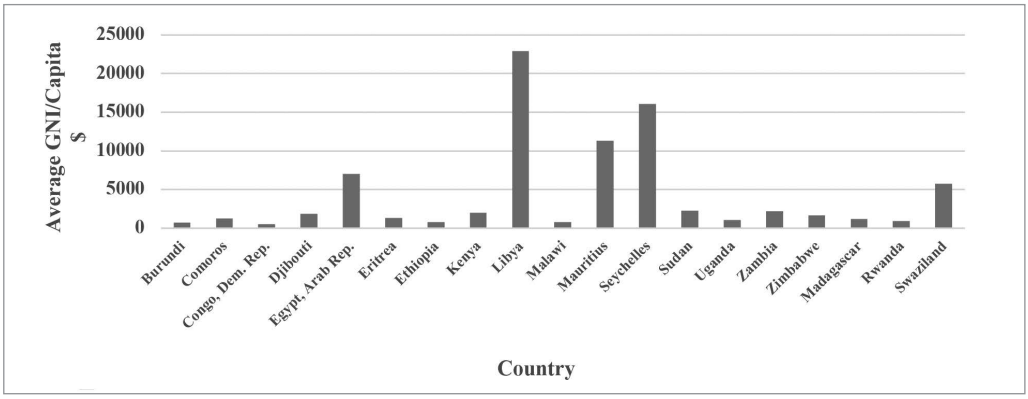
Source: Based in AfDB Database (2018)

As evidenced from Figure 5, quality of life proxied by average HDI has been increasing in Africa since the 70s, but the pace at which it increases tends to slow down after 2010.

Income levels in COMESA

Income is linked to HD as it is an important medium through which countries and individuals can expand their capabilities and opportunities. Income is used as a proxy of defining poverty as it directly relates to the levels in which countries and individuals satisfy their basic needs. In the HDI, Income is measured by Gross National Income (GNI) per capita (PPP US$). In COMESA, the trend shows that aggregate average GNI per Capita has been on an increase; however, some countries still have the lowest figures in the world. Figure 6 gives a summary of country-specific GNI per capita levels for the years 1990 to 2016.

Figure 6: Average GNI per Capita for COMESA Countries (1990-2016)



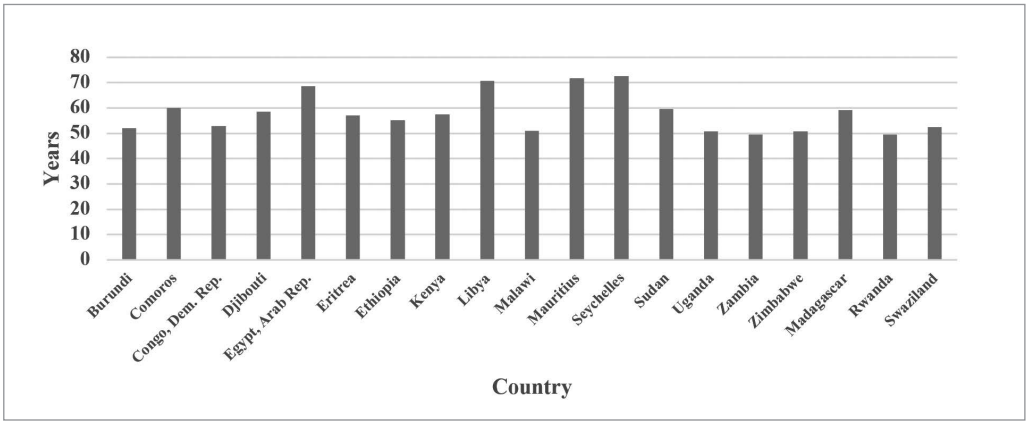
Source: Based on WDI (2018)

Figure 6 shows that Libya has the highest average GNI per capita followed by Seychelles and Mauritius. Those with the lowest GNI per capita are the Democratic Republic of Congo, Ethiopia and Malawi. The graph further reveals that the level of disparities between the high-income countries and low-income countries are high, with the highest having a GNI per capita of $22 908 and the lowest having $542.

HDI Health Indicator for COMESA Countries

In the index, health is measured by life expectancy at birth, which is defined as the number of years newborn children would live based on the current rates of mortality. It is an indicator that gauges the ability of people 'to lead a long and healthy life'. Life expectancy estimates are calculated based on data on deaths and population counts. In COMESA, the average life expectancy has been on the increase, from 53 years on average in t1990 to 64 years in 2015. Figure 7 summarises the country-specific life expectancy in the years 1990 to 2016.

Figure 7: Average Life Expectancy in Years for COMESA Countries (1990-2016)



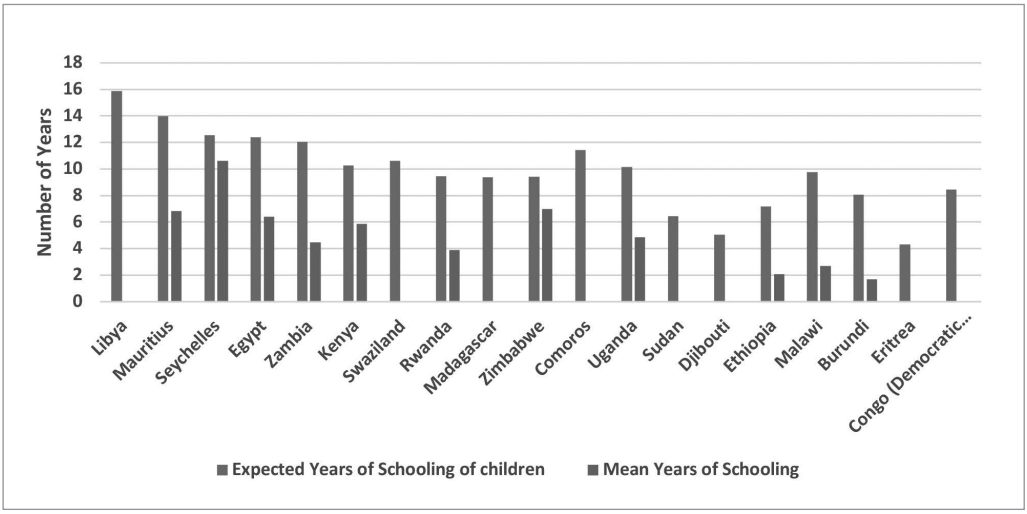
Source: Based on WDI (2018)

Five COMESA countries (Egypt, Libya, Mauritius, Comoros and Seychelles) have average life expectancy of 60 years and above, while only Rwanda and Zimbabwe have average life expectancy below 50 years. The averages, however, masks the rising trend in life expectancy across many countries in COMESA over the years.

HDI Education Indicator for COMESA Countries

Education is a primary right for every individual and a major component of well-being. It is a key factor in determining a country's development level as literacy rates directly influence a country's prosperity and economic growth. In the HDI, education is measured on two levels: expected years of schooling for school-age children and average years of schooling in the adult population. Figure 8 gives a summary of the two indicators: Seychelles, Mauritius, Zimbabwe, Egypt and Kenya tend to perform better in terms of mean years of schooling compared to other countries in the region. While Burundi and Ethiopia are the worst performers (for countries where data is available).

Figure 8: Expected Years of Schooling of Children (1990-2014)



Source: Based on UNESCO data (2018)

Literature Review

It is envisaged that public spending on HD sectors like education and health, attributing to its positive effects on the formation of human capital, can boost economic growth through increased HD. However, there are different reliable source opinions about how public spending is affecting HD in different economies.

In the mid-1980s to late 1990s, the IMF analysed the trends of government expenditures in countries with IMF-supported programmes, which are transition and developing economies. It was observed that increases in public spending on education and health in countries coincided with sizable improvements in education and health indicators. A number of indicators, including literacy levels, school enrolment, life expectancy and infant mortality rates, also improved. These increases were being accompanied by tangible improvements in social indicators. In addition, the benefits of social expenditure are distributed more fairly (Gupta, Clements, & Tiongson, 1998).

A study conducted by (Davies, 2009) examined data belonging to 154 countries for the period 1975-2002 in order to analyse the relationship between government consumption spending and HDI. He found that government consumption spending affected the HD in a positive manner – improved size is followed by improved per-capita income – which is followed by improved literacy, which is followed by improved longevity.

Prasetyo and Pudjono (2013) examined government expenditure efficiencies on HD among 82 countries in the years 2007 and 2011. Among the countries studied, six of them were COMESA member states (Egypt, Ethiopia, Kenya, Madagascar, Uganda, Zambia). Only 23 countries were registered to have made positive improvements of the government expenditure efficiencies, and all

COMESA countries obtained negative efficiency as the increase in their government expenditures was not balanced with the increase in HDI score.

Furthermore, another study conducted by IMF in 2004 by (Baldacci, Clements, Gupta, & Cui, 2004) found that both education and health spending have a positive and significant direct impact on the accumulation of education and health capital, and a positive and significant indirect impact on growth. An increase in education spending of one percentage point of GDP is associated with three more years of schooling on average and a total increase in growth of 1.4 percentage points in 15 years. Similarly, an increase in health spending of one percentage point of GDP is associated with an increase of 0.6 percentage points in the under-five child survival rate and a rise of 0.5 percentage point in annual per capita GDP growth. There is a significant time lag between increases in education spending and the realisation of their full effects on social indicators and growth. Two-thirds of the direct impact of education spending is felt within five years, but the full impact materialises with a significant time lag of 10 to 15 years. Such a lag needs to be kept in mind when designing policy interventions. The impact of health spending, however, is immediate. The positive effects are the highest in low-income countries and sub-Saharan Africa.

However, none of the previous studies investigated the effect of any measure of governance on HD. Additionally, other than Prasetyo & Pudjono (2013), which relied on the 2007-2011 data set, all the other previous studies used data sets that are more than one-and-a-half decades old. Hence, the need to investigate the effect of fiscal policy and governance on HD in COMESA using recent data sets. Furthermore, this study employs a variety of analysis techniques, resulting in findings that are more robust.

Methodology

Model Specification

Literature shows that government expenditure is likely to have a positive effect on the level and/or effectiveness of education, health and income in a country. However, the magnitude or significance of the effect varies. On one hand, a few studies have found contradicting results. Literatures also show that education and health can be inter-related. For instance, higher education can lead to improvement in health and vice versa (Schultz, 1999). This, among other factors, may lead to underestimation of the effect of government expenditure of each of the indicators of HD. Each of the three dependent variables are modeled in separate equations. Dynamic panel models were specified and estimated using the fixed effects, random effects and two-step GMM approaches. Conceptually, the level and/or effectiveness of education, health and income attained in the country at any given time are also influenced by both the previous and the current levels. This has been proven empirically for education and health (see UNDP, 2016 and Sarangi & Bonin, 2017). The variables are also affected by other independent variables, including indicators of governance. Given the dynamic nature of the indicators of education and health (they grow over time, generally), the study adopted a dynamic panel model for each of the variables. The model takes the following form:

$$Y_{it} = \phi + \alpha Y_{it-1} + \beta X_{it} + \upsilon_i + \varepsilon_{it} \quad \ldots\ldots 1$$

Where: Y – Dependent variable (education/health/Real GDP per capita)

X – Vector of independent variables, including relevant components of government expenditure and indicators of governance (both endogenous and exogenous regressors).

υ – Unobserved time-invariant country-specific effect.

ε – Observed error term.

For each of the dependent variables, the following models were specified:

i. Income Model

$$RGDPPC_{it} = \alpha_1 + \alpha_2 RGDPPC_{it-1} + \beta_1 GOVEXP_{it} + \beta_2 FDI_{it} + \beta_3 INFL_{it} + \beta_4 G\_EFF_{it} +$$

$$\beta_5 G\_CRP_{it} + \upsilon_i + \varepsilon_{it} \quad \ldots\ldots 2$$

Where:
RGDPPC – Real GDP Per Capita (proxy for income)
GOVEXP – Total Government Expenditure
FDI – Foreign Direct Investment
INFL – Inflation Rate
G_EFF – Government Effectiveness Index
G_CRP – Government Corruption Control Index

ii. Education Model

$$EDU_{it} = \alpha_1 + \alpha_2 EDU_{it-1} + \beta_1 G\_EDU_{it} + \beta_2 P\_EDU_{it} + \beta_3 G\_SS_{it} + \beta_4 GDPPC_{it} + \beta_5 G\_EFF_{it} +$$

$$\beta_6 G\_CRP_{it} + \upsilon_i + \varepsilon_{it} \quad \ldots\ldots 2$$

Where:
EDU – Mean of years of schooling
G_EDU – Government expenditure on education as share of GDP
P_EDU – Private expenditure on education as share of GDP
G_SS – Government expenditure on social sector as share of GDP
GDPPC – GDP per capita
G_EFF – Government Effectiveness Index
G_CRP – Government Corruption Control Index

iii. Health Model

$$HLT_{it} = \alpha_1 + \alpha_2 HLT_{it-1} + \beta_1 G\_HLT_{it} + \beta_2 P\_HLT_{it} + \beta_3 G\_SS_{it} + \beta_4 GDPPC_{it} + \beta_5 G\_EFF_{it} +$$

$$\beta_6 G\_CRP_{it} + DR_{it} + \upsilon_i + \varepsilon_{it} \ldots\ldots\ldots\ldots 3$$

Where:
HLT – Life expectancy years
G_HLT – Government expenditure on health as share of GDP
P_HLT – Private expenditure on health as share of GDP
G_SS – Government expenditure on social sector as share of GDP
GDPPC – GDP per capita
G_EFF – Government Effectiveness Index[7]
G_CRP – Government Corruption Control Index[8]
DR – Dependency Ratio

In specifying the above two models, the study was guided by the work of Sarangi and Bonin (2017). Governance indicators are included in the models to account for the inefficiencies in public spending such as the leakages and misdirecting of public expenditure. The Government Effectiveness Indicator is used as a proxy to capture the efficiency of public expenditure. It captures perceptions of the quality of public services and civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Additionally, income per capita and dependency ratio (children and adults over working age population) are included in the control for the level of development and demographic factors across countries. It is expected that income levels significantly affect education, family planning and health capital, through the channel of private expenditure. The reverse is also possible, which potentially can lead to endogeneity problems. This problem is taken care of by employing two-step GMM. The dependency ratio tends to be positively correlated with life expectancy.

Data

The study used data for the period 1990-2016. Data on government expenditure on education, health, the social sector, the justice system and reproductive health were obtained from the World

7. Government effectiveness reflects the perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
8. Government control of corruption reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests.

Bank's World Development Indicators (WDI) and National Economic Surveys (various issues). Data on the achievements in health, family planning and education outcomes were sourced from the UNDP's HD Reports database, while data on governance indicators were obtained from the World Bank's Worldwide Governance Indicators database.

Results and Discussion

To determine the appropriate models and estimation procedures, several diagnostic tests, including unit root tests, a test for heteroscedasticity, autocorrelation, good fit and a Hausman test were carried out. The panel root test was developed by (Im, Pesaran, & Shin, 2003). Im, Pesaran & Shin (1997; 2003) showed that all variables were non-stationary at levels, but become stationary upon first differencing. A correlation test revealed that none of the variables were highly correlated with any other.

To help in determining which between random effects (RE) model and fixed effects (FE) model is the most appropriate for the study data, the Hausman test was carried out. (Hausman, 1978) suggested a test for correlation between the unobserved effect (the country-specific effect) and the explanatory variables as a comparison between the fixed effect and random effect estimates, assuming that the idiosyncratic errors and explanatory variables are uncorrelated across all time periods. The Hausman test results show rejection of the null hypothesis of "no systematic difference in random and fixed effects coefficients" for both the income and health models, and failure to reject the null hypothesis for the education model. This implied that the RE specification was most suitable for the income and health models, while FE specification was appropriate for the education model. The two-step GMM approach was also applied on all models. The estimation results for income, health and education model are presented in tables 2, 3 and 4 respectively.

Table 2: Estimation Results for Income Model: GMM and RE Models

Variable	GMM Model	Re Model
	(Dependent Variable = Income)	(Dependent Variable = Income)
Income t-1	0.7966***	0.5551***
	[0.0728]	[0.0756]
Govt. Exp.	0.0594**	0.1349**
	[0.0298]	[0.0685]
FDI	0.0121	0.0318**
	[0.0137]	[0.0169]
Inflation	-0.0241	-0.0154
	[0.0224]	[0.0287]
Government Effectiveness	-0.0247	-0.0350
	[0.4273]	[0.6071]
Govt. Control of Corruption	1.4307**	2.2333***
	[0.6689]	[0.8280]
Constant	-2.0829**	-3.5577**
	[0.8504]	[1.4456]
	No. of observation = 210	No. of observations = 210
	No. of parameters = 7	R-sq – within = 0.6038 between = 0.8914 overall = 0.8123
	No. of instruments = 7	
	GMM weight matrix = Robust	Wald chi2(7) = 487.30 Prob > chi2 = 0.0000
	Instruments: lnlrgdppc, lngovexp, lnfdi, lninfl, lng_efft, lng_crpt, _cons	

1. ****, ** and * represent the level of significance at 1, 5 and 10% respectively.*
2. *Values in [ ] represent the standard errors.*

The results above show that all variables with significant coefficients have right expected signs. Government effectiveness and inflation are, however found to be statistically insignificant at all levels of significance. These results indicate that the level of income of individuals, as measured by GNI per capita, in COMESA countries depend positively on fiscal policy (Government expenditure), the previous year level of income in the country, government control of corruption, and the stock of foreign direct investment in the country.

Table 3: Estimation Results for Health Model: GMM and RE Models

Variable	GMM Model	Re Model
	(Dependent Variable = Health)	(Dependent Variable = Health)
Health t-1	0.7868***	0.7868***
	[0.0449]	[0.0604]
Govt. Exp. on Health	0.1110**	0.1110**
	[0.4170]	[0.5554]
Private Exp. on Health	0.0887*	0.0887
	[0.0424]	[0.0643]
GDP per Capita	1.0442	1.0442
	[2.8907]	[3.89.3]
Dependency Ratio	-0.0364*	-0.0364
	[0.0220]	[0.0670]
Government Effectiveness	0.0205	0.0205
	[9.1546]	[8.4179]
Govt. Control of Corruption	8.9448	8.9448
	[9.8820]	[12.8063]
Constant	-19.7097	-19.7097
	[30.1485]	[28.7951]
	No. of observation = 322	No. of observation = 322
	No. of parameters = 8	R-sq – within = 0.2908 between = 0.9608 overall = 0.6133
	No. of instruments = 8	Wald chi2(7) = 497.98
	GMM weight matrix = Robust	Prob > chi2 = 0.0000
	Instruments: hlt; ghlt; phlt; gdppc; dr; geff; gcrp _cons	

1. ****,** and * represent the level of significance at 1, 5 and 10% respectively.*
2. *Values in [ ] represent the standard errors.*
3. *Government expenditure on the social sector is excluded due to a lack of data.*

The coefficients of all variables in the health model have the right expected signs. However, some variables (GPD per capita, Government effectiveness and Government control of corruption) are found to be statistically insignificant at all levels of significance. These results indicate that the state of health of the populace, as measured by life expectancy, in COMESA countries depend positively on fiscal policy (Government expenditure on health), the previous year state of health in the country, private expenditure on health and negatively on the dependency ratio in the country.

Table 4: Estimation Results for Education Model: GMM and FE Models

Variable	GMM Model (Dependent Variable = Education)	Re Model (Dependent Variable = Education)
Education t-1	0.3876**	0.2938***
	[0.1828]	[0.0565]
Govt. Exp. on Education	0.0071*	0.0041
	[0.0030]	[0.0027]
GDP per Capita	0.6660***	2.1102***
	[0.2248]	[0.7490]
Dependency Ratio	-0.0080**	-0.0526***
	[0.0040]	[0.0190]
Government Effectiveness	1.6497***	0.4919
	[0.6060]	[0.4569]
Govt. Control of Corruption	-1.4904***	-0.5384
	[0.4762]	[0.3659]
Constant	-2.4042	-7.0203
	[1.7088]	[5.4188]
	No. of observation = 96	No. of observation = 96
	No. of parameters = 7	R-sq – within = 0.6985 between = 0.8280 overall = 0.7493
	No. of instruments = 7	F(6,83) = 497.98
	GMM weight matrix = Robust	Prob >F = 0.0000
	Instruments: edu; gedu; gdppc; dr; geff; gcrp _cons	

1. ****,** and * represent the level of significance at 1, 5 and 10% respectively.*
2. *Values in [ ] represent the standard errors.*
3. *Government expenditure on social sector and private expenditure on education are excluded due to lack of data.*

In the education model, the coefficients of all variables (except Government control of corruption) have the expected right signs, and all the coefficients are statistically significant at different levels of significance. The results indicate that the level of education of the populace, as measured by mean years of schooling, in COMESA countries depend positively on fiscal policy (Government expenditure on education), the previous year level of education in the country, the economic environment in the countries (Government effectiveness) and negatively on the dependency ratio and government control of corruption in the country.

The empirical results of the three models are in line with the findings of the studies conducted by different researchers, including (Baldacci, Clements, Gupta, & Cui, 2004), (Davies, 2009) where they found that government consumption spending positively affected all the three HD indicators. However, a study conducted by Prasetyo & Pudjono, (2013) on six COMESA member states (Egypt, Ethiopia, Kenya, Madagascar, Uganda, Zambia) obtained contradictory results where an increase in government expenditure had a negative effect on the HDI score.

Conclusion and Policy Implications

The goal of this study is to test the impact of fiscal policies and governance on HD empirically. In the context of this objective, this paper analyses the impacts of government expenditures and various indicators of governance on three indicators of HD for 19 COMESA countries. The results show that government expenditures have a positive impact on education, as an increase in government expenditure on education leads to increased mean schooling years. In addition, government expenditures have a positive effect on HD according to health, since an increased level of government expenditure in the health sector leads to increased life expectancy. Government ability to control corruption is also found to have significant effect on the income level in the countries.

Considering these results, it is seen that an effective fiscal policy with adequate allocation to the social sectors can significantly influence HD. Therefore, as governments are implementing fiscal policies to achieve their set targets in health and education sectors, they are recommended to make a point of investing more on the social sector to enhance per capita quality of life. Moreover, investment in the education system will contribute greatly on the development of children who form the future of country by enhancing their intellectual capabilities. Investment in health creates a healthy population who are more productive and live longer, therefore, contribute to the development of the countries.

The COMESA countries must conquer corruption and promote good leadership and governance. This requires all-inclusive development plans and policies, and strengthened institutions and regulatory environments for supporting structural transformation, and promotion of dialogue on economic governance and public sector management.

To ensure effective implementation of fiscal policies, other policy interventions may also need to be integrated to achieve the necessary improvement in social indicators. In particular, strengthening governance can have a strong payoff for social indicators. Therefore, reducing corruption and increasing accountability for public spending are as important as increasing spending.

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