The Role of Private Investment to the Economic Growth of Ethiopia

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Abstract

Private sector development in Ethiopia is at its lower level. Public sector involvement is large. In light of this, the main objective of this study was to describe the current status of Private sector in the economy. The data used in this study was obtained from survey conducted on private investment and its challenges in Ethiopia and from National Bank of Ethiopia, MoFED, Ethiopian Statistical Agency, Ethiopian Investment Agency, IMF and the WB. To analyze the data, OLS method of estimation and descriptive statistics were used. A total of three explanatory variables were identified and included in the model out of which private and public investment were found to be statistically significant. The results, which support the endogenous-growth-type model, indicated that the impact of increases in private investment on growth is large and significant, the increase in the net public investment, have a negative impact on growth and the increase in the active labor force has a positive impact on growth (positive externalities). The findings of the study imply that public policies should be supportive to the growth of private sector i.e. growth is boosted by economic policies that foster external competitiveness and a prudent fiscal stance.

Introduction

In recent years there has been an increasing discussion in policy making and academic circles over the role of private investment in growth process of Ethiopia. For instance, private investment (both domestic and foreign) can
boost employment and productivity, transfer technology and could bring foreign exchange so that the reserve will be improved (MoFED). Therefore, for policy makers in Ethiopia, it is not only the total level of investment that matters, but also a particular focus on private investment is crucial concern.

Ethiopia is a country on a fast growth momentum. During the years 2004-2011, the GDP growth rate was 10.6% per annum. This rate is by far greater than the growth rate of the region (Africa) which was 4.9%. The most important factors contributed to the growth of Ethiopia are: agricultural modernization, the development of new export sectors, strong global commodity demand and government led development projects (World Bank Report, 2013). But, what was the role of private investment? This question is among the basic which this study set out to answer.

Private firms invest more of their size and are more responsive to change in investment opportunities than are public firms (John Asker, Joan Farre-Mensa and Alexander). This is the feature of developed countries such as USA. But in Ethiopia public sector investment is the dominant one. Even if identifying the determinants of private investment is not the primary concern of this paper, this study will try to use them as a reference the results obtained in other similar studies on determinants of private investment. For example, the incentive to invest, the means to invest (source of fund) and availability of exchange reserve are identified by Carolyn Jenkins as determinants of private investment in Africa and in Zimbabwe in particular. On the other hand, the real GDP, total public investment, real effective exchange rate, the real interest rate, the rate of initiation and unfavorable political environment were identified as factors affecting the rate of private investment in Ethiopia (Dereje, 2013). The crux here is that are these determinants observable on ground? The answer will be the outcome of the
research. In addition to this, other problem which are imposing obstacle to the sub-sector are also be identified. Generally, investigating the role, trend and main obstacles of private investment in Ethiopia becomes the basic theme of this study.

**Statement of the problem**
Empirical evidence on the relative effects of private investment on growth in Ethiopia has been limited. A number of studies have been conducted with different scope and methodology. For example, Biruk, 2001, investigated the contribution of private investment to economic growth with special reference to employment creation. Accordingly, employment was positively correlated with private investments on the other hand, Bikila and Abera, in 2006, explained private investment in Ethiopia post reform period using descriptive method of analysis. And they show that private investment in Ethiopia was on an increasing trend. In 2003, Getaneh, Seyoum and Hashim conducted a research on the performance, trend and problems of private investment independently using data from 1991 to 2002. From their descriptive analysis, investment was growing important. Finally, Simon, 2009, in his research on the impact of public spending on economic growth of Ethiopia, private investment was positively related to economic growth, but was not significant.

As we have seen from above, discussion on the relative role of private investment in economic growth in Ethiopia is on its infant stage. Further researches can make the issue to grow better in academic circles. In addition, there are also two main motivations for this research to be conducted. First, there are many researches on the determinants of private investment than its role in the economy, its trend and problems faced. Second, Ethiopia is a
public investment dominated country. For example, Ethiopians private investment is the sixth lowest in the world and its public investment is the third highest i.e., in terms of government involvement. This ‘big push’ of public investment – led development has delivered positive returns but the development of a strong and vibrant private sector is needed to sustain the high growth (World Bank Report, 2013). Along this, conducting a research on the link between economic growth and private investment is a great subtlety.

**Objectives of the Study**

**General objective**

The core objective of this study is to assess the role of private investment in economic growth of Ethiopia.

**Specific Objectives**

The specific targets to be undertaken under this study are:

- To examine the trend of private investment in Ethiopia;
- To identify opportunistic business or investment areas; and
- To examine problems facing in the sub-sector.

**Significance the Study**

The ultimate purpose of this paper can be seen from both, policy and academic perspective. A good policy making draws inputs from many sources and research is one of such inputs. In addition, this paper will add empirically verified ideas to the stock of knowledge. With this there is a proverb; “a little drop of water makes a mighty ocean.” Hence, students can also use it as a reference in their future research work.
Limitations of the Study
Given the short time provided, assessing all components could be something unattainable. Specific study for a specific component would be more important. Another limitation which is related to this study is that there is no available time series data which could serve as proxy for Ethiopian human capital. Instead, data on active labor force is used in place, which is not best proxy. The sample size used to gather primary data is also another limitation. Large sample size would have been very important under this study. But only 45 respondents are interviewed due to time and financial constraints.

Hypothesis of the Study
H₀: Private investment has no contribution to the growth of Ethiopian economy

H₁: Private investment positively and significantly contributes to the growth of Ethiopian economy.

Methodology of the Study
Data type and source
Basically, this study uses secondary data which could be found from legitimate governmental and nongovernmental organization such as Ethiopia Central Statistical Agency (CSA), Ethiopia Investment Agency, MoFED, NBE and other international organizations like the IMF and WB. On the other hand, primary data will also be used. Since the most important thing is the representativeness of the sample, the mix of both probability and non-probability technique will be used to identify the sample which provides us primary data on problems facing the private investment in Ethiopia.
Method of data analysis

Whatever a good quality of data one have, it could give no meaning unless appropriate method of analysis are used. Accordingly, with the secondary data both descriptive and econometrics method of analysis will be made to falsify the null hypothesis which states that the coefficient of private investment is zero. Here it should be noted that the primary data are only used to identify problems faced by the private investors and only descriptively analyzed. The theoretical considerations and the empirical framework or the model of this study will be as follow.

Theoretical considerations

This paper uses a Solow-swan aggregate production function, modified to account for three types of capital stocks: private and government physical capital stocks and human capital stock. The production function takes the following form:

\[ Y_t = A_t (K_{pt})^\alpha (K_{gt})^\beta (Z_t)^\gamma \] ...................................(1.1)

\[ Z_t = H_t L_t \]

Where ‘Y’ is output, ‘A’ is labor augmenting technology or knowledge, K_p & K_g are private and government physical capital stocks respectively; ‘Z’ represents labor (L) adjusted for human capital development (H) and ‘t’ is a time index.

Two main motivations for the modification of the standard frame work are: Barro’s (1990) endogenous growth model with the possibility of differential impacts of private and government capital stocks on economic growth and another standard endogenous growth models stresses that human capital
accumulation, by enhancing labor productivity can boost growth in the steady state. Most growth models assume that \( \alpha = \beta = f \) so that \( (K^p)\alpha(k^g)\beta = k^f \), where ‘K’ is total capital stock. By assuming the sum of elasticity’s of output with respect to private, government and human capital stocks as greater than or equal to unity i.e. \( \alpha + \beta + \gamma \geq 1 \), endogenous growth models can generate sustained growth form forces within changes in economic policies even in the absence of technology progress and population growth. But it is important that if \( \alpha + \beta + \gamma = 1 \), the production function given by 1 would became to be \( Y = AK \) model of endogenous growth (Rebelo, 1991) where K comprises both the physical and human capital stocks. Equation 1 is a feature of an economy with perfect completion. And one important assumption under this equation is that investment is considered as change in the capital stock.

Under conditions of perfect market competition which is characterized by constant returns to scale such that \( (\alpha + \beta) = 1 - \gamma \), each individual factors of production faces diminishing returns to scale. But when there are positive externalities to economy-emanating either from investment in human capital (education) or increased openness to international trade (Grossman, 1991) \( \alpha + \beta + \gamma \geq 1 \), elasticity of output with respect to capital \( (\alpha + \beta) \) is closer to one. So, there will be a minimal diminishing return to scale. As a result models with externalities, economic growth rate can be expressed as:

\[
y = a + \gamma k^p + \beta k^g + \gamma z \text{ } \ldots\ldots\ldots (1.2)
\]

Where a small letter for a variable denotes its growth rate (ln logarithmic notation and taking the first derivative); which represent long run economic growth relationships. Unfortunately, data are unavailable in Ethiopia for each capital stock. As a result, equation 2 can be transformed into all estimable
form by making some simplifying assumptions regarding physical capital stocks. Consider the following capital accumulation equations:

\[ y = \alpha' + \alpha' (I^p_t) + \beta' (I^g_t) + \gamma z \] .................................(1.3)

Where \( \alpha' = (a - \alpha \delta p - \beta \delta g) \), \( \alpha' = \frac{\alpha}{\sigma_p} \) and \( \beta' = \frac{\beta}{\sigma_g} \)

Equation 3 can be estimated with available data for Ethiopia. The real GDP per capita is used as a measure of output. The variable \( I^g \) can be obtained from CSA. The variable \( I^p \) can also be found from the total investment. The human capital stock is measured by mean school-years of education per working person in the economy of Ethiopia, but such data are not available, instead time series data on active labor force(10-65 age) will be used.

Finally, the empirical framework or the model takes the following form:

\[ y_t = \alpha' + \beta'1PIY_t + \beta'2GIY_t + \beta'3ALG_t + \epsilon_t \]

Where, PIy = ratio of real private investment to lagged real GDP, GIY = ratio of real government investment to lagged real GDP, ALG is Labor growth (LG) augmented by human capital stock. And ‘\( \epsilon \)’ is a stochastic error term. The strategy used for the empirical investigation is as follows: first, the time series properties of the data are discussed. And then, regression results are discussed. The base regression presents the effect of private investment on economic growth in Ethiopia.

**Econometric Analysis**

**The Model**

The model is specified with the objective of measuring the impact of private investment on the national income, GDP and to realize from this whether it
has impacted positively or negatively. GDP is modeled as being affected by different variables as would be specified. Since the desired coefficients are elasticity’s to measure sensitivity of the dependent variable to change in the independent variables, the log-log model will be used with a multiple linear analysis based on OLS estimates is employed. The study is based on time series data for 40 years (1974-2013) for all the four variables. The specification of the model takes the following form:

\[ y_t = a' + \beta'_1 PIY_t + \beta'_2 GIY_t + \beta'_3 ALG_t + \epsilon_t \]

Where, PIY = ratio of real private investment to lagged real GDP,

GIY = ratio of real government investment to lagged real GDP,

ALG = Labor growth (LG) augmented by human capital stock.

`\epsilon` = a stochastic error term.

**Expected Signs of Variables**

The gross domestic product is the dependent variable, which is likely affected by variables specified in the model. Real GDP will be used in the analysis to capture the overall effects of changes on the variables which often affect the income of the nation.

Real private investment is independent variable used to adjust the measurement to reflect changes in the value of money. An increase in the real private investment is expected to affect the GDP positively. Economic growth is measured in terms of the size of change of nation’s economy. A broad measure of an economies size is its output. This output is basically and mostly the results of private investment or capital accumulation.
Real public investment is also an independent variable. Theoretically, the effect of public investment on the GDP is ambiguous. While government investment in infrastructure is expected to be complementary to private investment, but the one which is on non-infrastructure may compete with the private investment for funds or in the product market. As a result, private investment will shrink. Hence, this results in reduced GDP. Putting it clearly, public spending on infrastructure, education, and health yields positive effects on growth (WB, 2007), whereas, other types of government spending (recurrent or non-capital spending) are negatively affect the GDP. The net effect of the two cases is condensed in the study.

Other independent variable is the active labor force in the economy. Labor force is the actual number of people available for work. It includes both the employed and the unemployed. The labor force participation rate, LFPR (or economical active rate, EAR), is the ratio between labor force and the overall size of population the same age range. It is also a key component in long-term economic growth, almost as important as productivity. Even if there are disambiguate on the sign of the role of informal and unemployed active labor force to the GDP, the formal and employed labor force have a positive yield impact on the GDP. Here, again the net effect of the two cases is considered in the study. This net effect can be positive or negative.

**Estimation Techniques**

Since this study employs a time series data, it is a mandatory that stationary of the data be tested. A stochastic process is said to be stationary if the mean and variance are constant regardless of the actual time taken. Stationary test makes sure that there will not be exist a spurious result which is often forward in non-stationary time series. If the data is non-stationary,
forecasting the result to other time period may not have any practical significance (Gujarati, 2004).

**Unit root Test**

The implications of unit roots in macroeconomic data are at least potentially, profaned. If a structural variable, such as real output is truly I(1), and then shocks to it will have permanent effects. It confirmed, and then this observation would mandate some rather serious reconsideration of the analysis of macroeconomic policy (Greene, 2006). Augmented dickey fuller (ADF) test is useful to know whether or not there exists a unit root. If the time series data is stationary at level, it is integrated of order zero or I (0), which means that it is not spurious. If the data is not stationary at level, we take first difference and second difference and so on until it becomes stationary. If a non-stationary time series data becomes stationary after taking a difference, it is a difference stationary data. A time series data is said to be stationary if the calculated ADF is greater than the critical ADF at a given level (Gujarati, 2004).

**Cointegration**

Variables will be cointegrated if they have a long term relationship between them. A test for cointegration is also used to avoid spurious regression situations. In this study, Engle-Granger (AEG) tests are employed. A cointegration tests make sure that even if individual variables are not stationary, taken separately, the linear combination of these variables might be stationary. Hence, by subjecting the stochastic error term to unit root analysis, we investigate if the variables are cointegrated (have equilibrium relationship). If the error term is stationary at level or if it is integrated of
order zero I (0) we then say that the variables are consecrated (Gujarati, 2004).

**Error Correction Model (ECM)**

This step is taken if the variables are co integrated. This mechanism of Engle and Granger corrects for disequilibrium. In the error correction mechanism, the first difference of the dependent variable is regressed on the first difference of the explanatory variables and the first lag of residual obtained from the long run model. If the equilibrium error term is statistically zero, the dependent variable adjusts to changes in the equilibrium in the same time period. However, if it is non-zero, then the model is out of equilibrium (Gujarati, 2000).

**The Regression**

Under this section of multiple regressions, the relationship between national income and the explanatory variables such as real private investment, real public investment and the active labor force are presented/studied.

\[ yt = a' + \beta'1PIYt + \beta'2GIYt + \beta'3ALGt + \epsilon t \]

The errors, \( \epsilon t \), are due to measurement error in y and errors in specification of the relationship between y and the explanatory variable.

**Analysis and Interpretation**

**Summary Statistics and Distributional Issues**
The summary statistic which includes the central tendency and dispersion measures whose value explains the nature of distribution. The measures used include mean, standard deviation, skewedness and kurtosis. From the data, we derived mean values for four variables including RGDP, PIYt, GIYt and ALGt as 67950.72, 7398.291, 2570.95, and 1016.809, respectively.

Table 1: Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>realpublic-t</td>
<td>40</td>
<td>2570.95</td>
<td>3020.965</td>
<td>173.000</td>
<td>18215.08</td>
</tr>
<tr>
<td>activelabo-e</td>
<td>40</td>
<td>1016.809</td>
<td>6212.54</td>
<td>17.225</td>
<td>39326</td>
</tr>
<tr>
<td>realprivat-t</td>
<td>40</td>
<td>7398.291</td>
<td>6030.596</td>
<td>2399.88</td>
<td>21119.27</td>
</tr>
<tr>
<td>realgdp</td>
<td>40</td>
<td>67950.72</td>
<td>35948.14</td>
<td>35240.54</td>
<td>152545.1</td>
</tr>
</tbody>
</table>

Table 2: Skewness and Kurtosis

Skeweness, which is a measure of symmetry, indicates that a symmetrical data has skewness closer to zero. A negatively skewed data means it is...
skewed to the left while a positively skewed data means it is skewed to the right. Accordingly, the real GDP and active labor force are slightly skewed to the right while the real private and public investments are normal. The other measure, which is Kurtosis and it, indicates whether distribution is peaked or flat relative to a normal distribution. The values of kurtosis for all variables show that they have low departure from normality since their kurtosis is less than 6. The normality test as indicated by $X^2$ (Chi $^2$) confirms that all variables are normally distributed.

**Test of Stationary**

Since this study employs a time series data, it is mandatory to test for stationary. Unit root test is conducted employing augmented dickey fuller (ADF) test to prove whether the variables in the model are stationary or not. Under the null hypothesis, the dependent variable (stochastic) has a unit root. The calculated values are compared with the critical values at determined level of significance. If the calculated value is greater than any of the critical values, then we reject the null hypothesis which actually means the variable is stationary; otherwise, we do not reject the null hypothesis meaning that there is a unit root implying the variable is non-stationary.

Table 3: Stationary Test for the Real GDP
From Table 3, it can be observed that the real GDP calculated value is greater than the critical value. However, after the variable is differenced once, it becomes stationary implying that it is integrated order of one I(1).

Table 4: Test for Stationary of Real Private Investment.

```
.dfuller realgdpp, lags(0)
```

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>1% Critical Value</th>
<th>5% Critical Value</th>
<th>10% Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z(t)</td>
<td>-5.764</td>
<td>-3.655</td>
<td>-2.961</td>
</tr>
</tbody>
</table>

MacKinnon approximate p-value for Z(t) = 0.0000

Similarly, the real public investment and active labor force are stationary at level. This can be seen from the following table.

```
.dfuller realprivateinvestmenttt, lags(1)
```

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>1% Critical Value</th>
<th>5% Critical Value</th>
<th>10% Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z(t)</td>
<td>-4.357</td>
<td>-3.662</td>
<td>-2.964</td>
</tr>
</tbody>
</table>

MacKinnon approximate p-value for Z(t) = 0.0004

From Table 3, it can be observed that the real GDP is stationary since the calculated value is greater than the critical value. Only the real private investment is non-stationary at level. However, after the variable is differenced once, it becomes stationary implying that it is integrated order of one I(1).
Table 5: Test of Stationary for the Real Public Investment and Active Labor force

<table>
<thead>
<tr>
<th>dfuller activelaborforce, noconstant lags(0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickey-Fuller test for unit root</td>
</tr>
<tr>
<td>Number of obs = 39</td>
</tr>
<tr>
<td>Test Statistic</td>
</tr>
<tr>
<td>Interpolated Dickey-Fuller</td>
</tr>
<tr>
<td>1% Critical Value</td>
</tr>
<tr>
<td>5% Critical Value</td>
</tr>
<tr>
<td>10% Critical Value</td>
</tr>
<tr>
<td>Z(t) -6.152</td>
</tr>
<tr>
<td>-2.638</td>
</tr>
<tr>
<td>-1.950</td>
</tr>
<tr>
<td>-1.606</td>
</tr>
</tbody>
</table>

Test of Cointegration

After testing stationary of the variables and verifying almost all are stationary, which is a vital condition for cointegration, the next step is to test for cointegration. It helps to check the existence of long run relationship between GDP growth rate and the variables. Follow the Engle Granger (1987) two step procedures by estimating the long run growth model, the residual is saved and tested for stationary as on table 6.

Table 6: Test of Stationary of the Residual

<table>
<thead>
<tr>
<th>dfuller r, lags(0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickey-Fuller test for unit root</td>
</tr>
<tr>
<td>Number of obs = 39</td>
</tr>
<tr>
<td>Test Statistic</td>
</tr>
<tr>
<td>Interpolated Dickey-Fuller</td>
</tr>
<tr>
<td>1% Critical Value</td>
</tr>
<tr>
<td>5% Critical Value</td>
</tr>
<tr>
<td>10% Critical Value</td>
</tr>
<tr>
<td>Z(t) -5.845</td>
</tr>
<tr>
<td>-3.655</td>
</tr>
<tr>
<td>-2.961</td>
</tr>
<tr>
<td>-2.613</td>
</tr>
</tbody>
</table>

MacKinnon approximate p-value for Z(t) = 0.0000.
From the above table, we can see that the residual is stationary; we reject $H_0$, the existence of unit root in the residual. Therefore, there is a meaningful long run relationship between the national income rate and the employed variables.

**Long Run Analysis**

The model specified for estimation was the following:

$$yt = \alpha + \beta'1PIYt + \beta'2GIYt + \beta'3ALGt + \varepsilon_t$$

Where $\alpha$ is constant

$\varepsilon_t$ is the error term

The estimation result based on the above model is illustrated in the following table.

**Table 7: Regression Result**

```
. *(5 variables, 40 observations pasted into data editor)
. reg realgdpp realprivateinvestment realpublicinve active laborforce

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4.7123e+10</td>
<td>3</td>
<td>1.5708e+10</td>
<td>$F(3, 36) = 172.64$</td>
</tr>
<tr>
<td>Residual</td>
<td>3.2754e+09</td>
<td>36</td>
<td>90984237</td>
<td>Prob &gt; $F$ = 0.0000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R-squared = 0.9350</td>
<td>Adj R-squared = 0.9296</td>
</tr>
<tr>
<td>Total</td>
<td>5.0398e+10</td>
<td>39</td>
<td>1.2923e+09</td>
<td>Root MSE = 9538.6</td>
</tr>
</tbody>
</table>

| realgdpp | Coef. | Std. Err. | $t$  | $P>|t| | [95% Conf. Interval] |
|----------|-------|------------|------|---------|-----------------------|
| realprivateinvestment | 5.122965 | .4632932 | 11.06 | 0.000 | 4.183362 - 6.062567 |
| realpublicinve | -.3719395 | .1712047 | -2.17 | 0.036 | -.7191587 - .0247202 |
| activelaborforce | .0733766 | .0453756 | 1.62 | 0.115 | -.0186492 - .1653028 |
| _cons     | 41283.48 | 7643.396 | 5.40 | 0.000 | 25781.96 - 56785.01  |
```
Hence, the model is rewritten as follows;

\[ Y_t = 41283.48 + 5.12PIY_t - 0.37GIY_t + 0.073ALG_t + \epsilon_t \]

\( (7643.4) (0.4632) (0.1712) (0.0453) \quad R^2 = 0.93 \)

The OLS regression result shows that under the study period, the \( R^2 \) in the model described 93% of the long run variation in the dependent variables explained by the explanatory variables. From the F-statistic (F (3, 36) = 172.64, it can be seen that the zero coefficients of PIY and GIY significantly rejected.

As can be observed in the model and in table 7, PIY has coefficient which is statistically significant. The coefficient of PIY, which is the focus of this study, is a positive value elasticity of 5.12 implying that that real GDP is elastic to change in private investment. Hence, the PIY is in contrary to the null hypothesis i.e. that the long run growth of the RGDP is significantly explained by the PIY than the public.

On the other hand, the coefficient of GIY (-0.37) implies that a one percent increase in the real public expenditure result in reduction of the GDP by 0.37 holding other variables constant. The negative sign is also as it was expected and this could be due to government’s large expenditure in non-capital/ in current expenditure which aimed at the present consumption rather than the future or long run capital formation i.e. its negative impact on the private investment. From this one can clearly see the existence of crowding out effect of public investment on the private. The active labor force also has a positive expected sign the coefficient of 0.073. This means, a one percent growth in the ALF can result in a 7.3% growth of GDP, other things remaining constant. This also implies that, the current labor force of Ethiopia
is exerting a positive externality, which would be the result of knowledge in an economy or in the society. But one thing, i.e. the effect of ALF is insignificant to draw up confident conclusion or to reject the null hypothesis. Since the concern of this study is the private investment, observing the sign of other coefficients is enough hence in this case at least it can be zero (i.e. no effect) but cannot be negative. Generally, the long run real GDP is determined by the active involvement of the private sector in the economy.

Conclusion and Policy implication

Conclusion
The determinants of economic growth have been widely investigated by a number of recent studies using cross sectional data. This paper has contributed to the growth literature with an analysis of growth in an individual developing country – Ethiopia- using data for the period 1974-2013. Evidence is found to support the endogenous-growth-type model for Ethiopia: physical and human capital accumulation and economic policies appear to play important role in influencing economic growth. The results and their policy implications are summarized as follow.

First, private investment plays a crucial role in output expansion. The empirical analysis established a significant causal linkage between private investment and economic growth. Increase in the private investment ratio boost economic growth. This effect is large and statistically significant. One percent point increase in private investment raises economic growth by 5.12. This impact is positive and by far larger than the impact of an increase in government investment. The implication is that government investment would be more efficient and has a positive impact on growth if it focused on a higher development of the private sector. The impact of increase in private
investment is large. As a result, government should formulate and implement policies that encourage private sector investment if the sustainability of GDP growth is needed.

Second, there is evidence that economic growth is influenced by economic policies. Increases in the budget deficit are found to adversely impact economic growth. Hence, fiscal policies should aim at reducing unproductive government expenditure while safeguarding investment in infrastructure human capital development.

Third, while controlling the budget deficit would be beneficial to economic growth doing so by cutting government investment would be counterproductive. Thus, alternative ways of lowering the budget deficit would be needed. In this regard, ongoing efforts by Ethiopia to raise tax receipts by broadening the tax base and improving tax administration represent an important step in the right direction.

Fourth, the underlying production function for Ethiopia exhibits increasing returns to scale. At the aggregate level, there are positive externalities streaming from private physical and human capital development, thus supporting assumptions of endogenous growth models. An important aspect of these models is that changes in economic policies and physical and human capital stocks can affect economic growth in the steady state; in contrast, in the neoclassical growth model, growth in the steady state can occur only from exogenously given technological progress and population growth. Finally, human capital development plays an important role in output expansion. This effect is registered mainly through the positive impact of increased human capital through education.
Policy implication

Thus, the study calls for government intervention in business activities in a way that promotes private sector development, in supportive of entrepreneurial endeavor and with a bias towards expansion of business activities. On the other hand, putting all the business activities or the role of coordinating and running the productive sector of the economy on the back of infant, less experienced and capital-poor private sector that lacks the wherewithal to undertake such activities has not proven to be effective practically.

In particular, the government has roles to play at different levels of the economy to encourage the private sector and to attain sustainable development. At the international level the government has a role to play in finding markets for exports, making trade negotiations, negotiating with donors about the attached preconditions and attracting foreign capital. At the macro-level the state has to make the financial, fiscal, exchange rate and trade polices favorable and in supportive of domestic business activities. In addition, efforts have to be made by the government to build infrastructure and good governance. At the macro and micro level the government has a role to play, perhaps very important for PSD, in building institutional infrastructure such as intermediate financial institutions R & D institutions and training institutions, and in supporting the private sector for access to technology, entrepreneurship development programs, market information, etc. There is also a need to have public-private partnership forums for exchange of views and ideas on plans, policies and marketing issues. The recent document on poverty reduction and strategy paper of the government acknowledged the need for such forums. It, however, seems to limit the role of the forums to be a means to mutual understanding and trust. But, there is a
more important gain if the government considers the concerns of the private sector as critical policy components. There is nothing to be gained from giving a hearing after the government already decides on the implementation of the policies and plans.

Finally, from the private sector’s side there is a need to give emphasis on entrepreneurship development, striving for technology and reusing profits for business expansion rather than using for high-valued consumption expenditure and real estate developments. It is also important for PSD if the business community develops a business discipline i.e. complying with the fiscal, legal and regulatory requirements of commercial activity.

**Reference**


EIA, Summary of Licensed All Investment Projects by Economic Sector and Status since 1992-2013/14.


Growth and Transformation Plan (MOFED, 2010).


National Bank of Ethiopia (NBE), 2011/12, quarterly bulletin NO 4.
