Economic Growth in the Horn of Africa: Identifying Principal Drivers and Determinants

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Abstract

The Horn of Africa countries had poor economic growth for many decades before the 2000's. Various studies were conducted to uncover the factors responsible for the poor economic performance and divergence from the developing regions. Opinions varied, however, on why the countries in the Horn sub-region have been some of the poorest in the world. In identifying growth determinants in the sub-region, a diagnostics approach is applied, which reveals that limited access to finance (from both domestic and external sources), low domestic savings, weak infrastructure, and inadequate human capital are the most significant constraints on economic growth in the sub-region. Removing these constraints can lead to higher economic growth, as the adopted approach assumes stronger multiplier impact of removing the binding constraints. Specifically, the sub-region should work to reform the financial sector so as to mobilize the required finance for both private and public investment projects. Infrastructure development should be another priority for governments. Moreover, the level of human capital in the sub-region is very low, suggesting a need for strong commitment to improve access to quality education at all levels. International development partners would be well advised to channel their technical and financial assistance to address the most binding constraints of growth.

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I. Introduction and Background

The Horn of Africa sub-region constitutes seven countries in the North-Eastern tip of the continent. Of its more than 213 million people nearly three in four reside in rural areas, and rely on subsistence production. Economic growth in the region averaged about 3 percent between 1965 and 1995, with a 3 percent population growth that led to a stagnation of per capita income at US$ 223 at the end of the period compared to US$ 491 in the rest of sub-Saharan Africa. Since the second half of 1990's, most countries in the region experienced strong growth. The sub-region grew by 4.4 percent between 1996 and 2000, and at 5.3 percent and 7.9 percent in the first and second half of the 2000's, respectively. However, only three of the countries in the sub-region (Ethiopia, Sudan and Uganda) registered a sustained growth of 7 percent since 2000 to achieve substantial reduction in poverty and progress towards the Millennium Development Goals (MDGs).[2] Due to this renewed growth performance, poverty in the sub-region declined by 18 percentage points to 35 percent from 2000 to 2009, showing a growth elasticity of poverty of about -0.45. The average per-capita income in the region was at US$ 341 in 2008, compared to per-capita income of US$ 648 for the whole of sub-Saharan Africa.

Despite the improving regional trend in growth performance, there is a marked difference in growth experience within the sub-region: some countries experienced growth, while others experienced a slowdown in growth in 1996-2000. Among the member countries of the Horn of Africa growth decelerated in Kenya and Eritrea between 2006-09. Oil extraction contributed to the high growth performance in the Sudan, which markedly exceeded the average of the sub-region.

The overall disappointing growth performance in the Horn of Africa has led to poor socio-economic indicators in the member countries. Per capita income in the sub-region in 2010 was only 14 percent of that of Eastern and South-Eastern Asia (excluding China); and it was around 56 percent of sub-Saharan African average (Table 1.1). On the other hand, the poverty head count ratio is on average 32 percent in the Horn of Africa as compared to an average of 17 percent in developing East Asia and the Pacific; and 51 percent in sub-Saharan Africa. The high level of poverty in sub-Saharan Africa despite better per capita income than in the Horn of Africa indicates huge inequality in the sub-Saharan Africa. Of the Horn of African countries for which we have data Uganda had the highest proportion of poor people at 51.5 percent in 2005 while Ethiopia had 39 percent.

The member countries of the Horn sub-region underwent gradual change in their economic makeup. The share of the agricultural sector in total regional value added declined from 40.2 percent in 1995 to 31.8 percent in 2009, and service sector becomes a dominant economic activity in the sub-region. Industry also increased its contribution to GDP in most countries of the sub-region, its share growing by 6 percentage points. However, the sector still contributes to less than 19 percent of total GDP of the sub-region. During the same period, the share of industry in total production increased from 20.9, 21.0, and 19.7 percent to 26.7, 28.0, and 24.7 percent in a group of heavily indebted poor countries, least developed countries and low income countries, respectively.

[2] See ECA, 2003; and Emerta, 2009.

Table 1.1: Comparison of income and poverty indicators

Country /Region	2010 Per capita income in $US (at current prices and exchange rates)	2005 Poverty Head Count Ratio at $1.25 a day
Djibouti	1,283	...
Eritrea	429	...
Ethiopia	325	39.0
Kenya	802	19.7
Somalia	...	...
Sudan	1,825	...
Uganda	509	51.5
The Horn of Africa (IGAD)	743	31.8
Sub-Saharan Africa	1,319	50.9
Eastern and South-Eastern Asia (excluding China)	5,116	16.8

Source: UNCTAD Stat (2012)

The overall poor growth performance has made the Horn of Africa the least developed sub-region in the world. Stimulating and sustaining high economic growth is therefore the most pressing challenge of political leaders, development agents, and policy makers in the sub-region. Various studies were conducted to identify the sources and determinants of growth on individual countries of the Horn of Africa, and many other developing countries elsewhere in the world. The classical methods adopted to discover covariates of growth have not provided a permanent solution to the problem of low economic growth and underdevelopment in the Horn of Africa sub-region[3]. In this context, following the recent growth literature, and in an effort to enhance growth and poverty reduction in the sub-region, this study aims at identifying the binding constraints to economic growth and recommends how growth can be accelerated at sustained levels.

The rest of the paper is organized as follows: section II summarizes development in growth models and the growth diagnostics approach adopted by this study; while section III revisits how growth and investment have behaved overtime in the Horn of Africa. In section IV, the growth diagnostics approach is applied to the Horn of Africa countries and in section V principal conclusions and recommendations are provided.

[3] Rodrik, 2004

II. Identifying Determinants of Economic Growth

1. Development of Growth Models

Economic growth has been the concern of all societies at all times particularly since the days of the classical economists.[4] After a period of relative neglect in mainstream economics, in the past four decades economists have paid increasing attention to developing models to identify the determinants of economic growth. The notion of long-term economic growth and the analysis of its determinants date back to the contributions of Solow (1956) and Swan (1956) as documented by Villa,[5] Aghion and Howitt[6]. Solow and Swan, in their independent prominent works, examined economic growth in the U.S. and developed the "neoclassical growth theory". Growth economics has registered a rapid development since then and experienced different phases of evolution to reach its current state.

One of the strongest propositions in the evolution of growth economics is that technological innovation is crucial to sustain a positive growth rate of output per capita. This proposition has been repeatedly tested using the Solow-Swan growth model. The main assumptions of this model are constant returns to scale production function, and labor and capital as the basic factors of production. From these assumptions it follows that an increase in capital, provided the amount of labor employed stays the same, will result in a less than proportionate increase in output.

In the Slow-Swan model, growth of output is related to the amount and quality of the basic factors of production. The amount of output growth that cannot be attributed to the change in the basic factors of production is often referred to as Solow residual, total factor productivity or measure of ignorance. The model also assumes that the labor force is growing at the rate of change of the population, and is augmented by exogenously growing technology. Accordingly, the policy recommendations based on the model revolve around the quality and quantity of the factors of production. Most of the assumptions of this model have been criticized as limitations of the model and led to the development of what is called the endogenous growth model.

The endogenous growth model theories emphasize the determination of long-run (or steady state) growth rate, which is determined within the model, and therefore can be affected also by economic policies, instead of being driven exogenously. This model assumes that permanent changes in economic parameters can alter the long-run rate of growth.[7] The improvement of the endogenous growth models over the standard neoclassical growth models is that the rate of technical progress (which is exogenous in the neoclassical growth model) has permanent growth effects. Although endogenous growth theory is still young in comparison to the neoclassical theory, it is more

[4] Vaish, 2002. Adam Smith. David Ricardo, John Stuart Mills, Thomas Robert Malthus, Karl Marx, Alfred Marshal, Joseph A. Schumpeter, John Maynard Keynes and others either made economic growth the central theme of their work or related their works to it.
[5] Villa, 2005
[6] Aghion and Howitt, 1998
[7] Rao et al extended the neoclassical growth model to capture the level and growth effects of the shift variables in "An Extension to the Neoclassical Growth Model to Estimate Growth and Level Effects, 2006".

suitable for addressing the problems of sustainable development than is the neoclassical growth theory.[8]

Since the inception of economic growth models, many time-series and cross-section specifications have been estimated. Some of these studies tried to uncover the correlates of growth in the Horn of Africa countries, and found a long shopping list of factors that have contributed to the poor economic performance in these countries. For example, Geda et al[9] found that growth in Ethiopia, to a large extent, depends on structural factors such as initial conditions, vagaries of nature, external shocks and peace and stability in the country and in the sub-region. Easterly[10] found the quality of institutions, the literacy rate, openness to trade, and the structural transformation to be important variables for long-run growth. Studies in the case of Kenya identified various factors: Odhiambo et al[11] established that Kenya's trade policy, climate, and government expenditure on agriculture are important determinants of agricultural total factor productivity growth. On the other hand, Kumar and Pacheco[12] found that overseas development aid, foreign direct investment, the progress of financial sector, and trade openness are the key determinants of Kenya's growth. In the case of Uganda, Kasekende, Ego and Sebudde[13] suggested that the growth is heavily influenced by three major factors: governance and political economy (including political instability and conflict), the policy environment, and external factors. According to Nassanga[14], the determinants of growth in Uganda during the 1990s have been identified as improved security, the restoration of macroeconomic stability, the removal of economic distortions and an improvement in the terms of trade as a result of the mid-nineties coffee price boom.

Despite such extensive empirical works the growth studies have not provided 'reliable and unambiguous'[15] evidence on the principal reasons for the poor growth performance in the Horn of Africa. Different economists provided various reasons on the failure of previous attempts to identify growth determinants in developing countries. Cerra and Saxena attributed the limited exposition of past attempts on considerable variation in data across time, which can mask the determinants of turning points and conceal valuable information.[16]

Also the traditional approach to targeting the biggest distortion or a number of large distortions may not be feasible and may not lead to welfare improvement due to large second best effects, and financial and capacity constraints, especially in low income countries.[17] Unlike the previous attempts, the growth diagnostics approach targets the most binding constraint to growth which can increase the overall positive impact, as the most binding constraint is possibly associated with the biggest multiplier. Institutional policy recommendations failed to produce the desired outcome as

[8] Aghion and Howitt, 1998
[9] A. Geda et al, 2008
[10] Easterly, 2002
[11] Odhiambo, Nyangito, & Nzuma, 2004
[12] Kumar and Pacheco, nd
[13] Kasekende, Ego and Sebudde, 2004
[14] Nassanga, 2006
[15] As quoted from Rodrik, 2004: Growth Strategies
[16] Cerra and Saxena, 2007
[17] Ianchovichina, 2009

they were never targeted on what may have been the most important constraints blocking economic growth in developing countries.[18]

2. The Growth Diagnostics Approach

The growth diagnostics approach requires us to identify one or two most binding country specific constraints in order to uncover constraints of growth instead of laboring on a whole list of growth covariates. Efforts should focus on lifting these constraints. The growth diagnostics approach assumes that the constraints are country specific; however, building on the country case analysis and regional averages, this study will draw conclusions on the Horn of Africa sub-region.

The growth diagnostics approach has its conceptual origins in Albert Hirschman's (1958) theory of *unbalanced growth.*[19] Hirschman argued that, in the absence of sufficient resources -- especially capital, entrepreneurs, decision makers and, above all, the means and ability to bring them all into play -- policy makers should choose the *projects* that make the greatest contribution to development, relative to their costs. Building on the work of Hirschman and extending it, Hausmann et al[20] developed the growth diagnostics approach, which provides a framework for formulating hypotheses on what may be constraining a country's growth. It views economic growth as the result of an optimization process under constraints, and seeks to identify factors that are the most binding in the sense that their removal would allow a growth spurt. It also identifies the most binding constraints for the purpose of policy reforms.

The underlying idea behind the growth diagnostics approach is that the removal of a small number of key constraints (i.e., focused interventions) will have a larger impact on growth than the traditional approach based on a long list of reforms often associated with the "Washington Consensus,"[21] which emphasizes the need to remove all distortions at once. Hence, the growth diagnostics methodology can be a useful tool for policymakers to formulate a focused growth strategy for developing countries in the presence of limited resources.

Within the framework of growth diagnostics approach, investment and growth can be constrained by:

a) Poor access to finance in the form of high cost of capital, poor financial intermediation, weak access to finance, and low domestic saving;

b) Low social returns related to geography, infrastructure, and education; and

c) Poor appropriability through macroeconomic risk, market failure, high transaction cost and poor business environment.

[18] Rodrik, 2004
[19] Felipe and Usui, 2008
[20] Hausmann eta al, 2005
[21] Williamson, 2004

Taking the above factors into account and to put things into context, Hausmann et al[22] start with a simple endogenous growth model comprising the factors that affect growth. According to the standard model, consumption and capital grow, along a balanced growth path, in the following manner:

$$\frac{\overset{*}{c}_t}{c_t} = \frac{\overset{*}{k}_t}{k_t} = \sigma[r(1-\tau) - \rho] \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{[2.1]}$$

Where c=consumption,

k=capital

r =the rate of return on capital

τ =the tax rate on capital, actual or expected

ρ =the world rate of interest

σ =inter temporal elasticity of consumption

The dot over a variable implies the rate of change of the variable over time.

On the other hand, the private rate of return on capital (r) depends on total factor productivity (α), availability of complementary factors of production (θ) such as infrastructure and human capital, and index of externality or distortions (χ). It can be represented by

$$r = r(\alpha, \theta, \chi) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{[2.2]}$$

The two equations [2.1] and [2.2] incorporate the most important factors affecting economic growth in the short-run. Two qualifications have to be mentioned. First the identification of the binding constraint is meant to help the government in *prioritization* of reforms rather than to deny existence of other distortions in the economy[23]. Second, the binding constraint does not necessarily coincide with what is *perceived* as the biggest distortion in the economy by economic agents; rather, it is the magnitude of the distortion's direct impact on growth that is decisive.

The growth diagnostics approach is not without limitations, although it indeed provides a well-structured methodology to think about why some countries do not appear to develop or attain sustainable high growth. The limitations of the diagnostic approach are that it: (i) focuses exclusively on economic growth vis-a-vis development; (ii) assumes that investment is the main source of growth; and (iii) is static and focuses on constraints that are binding today, but not necessarily in the future[24].

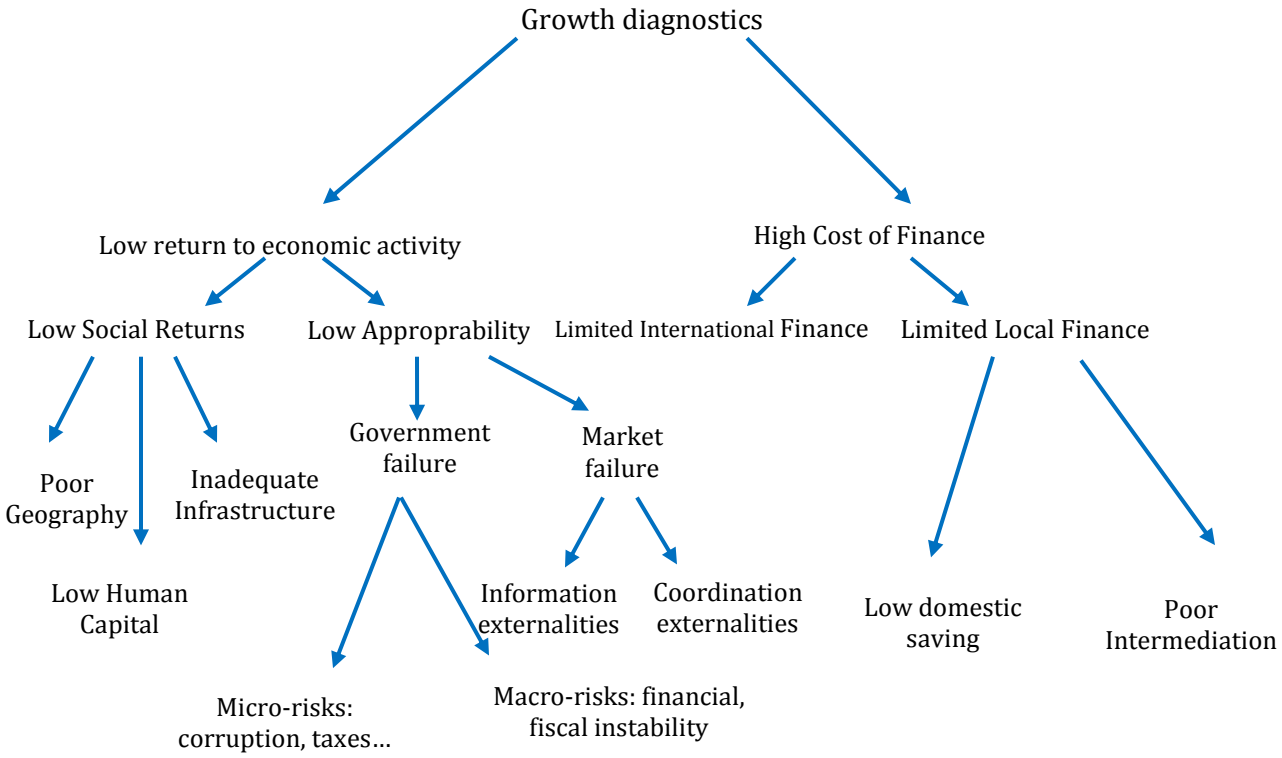
Although the growth diagnostics approach is just emerging, it has been widely used by various researchers on Brazil, Bolivia, Dominican Republic, Egypt, El Salvador, Malawi, and Pakistan. The growth diagnostics approach has been adopted to trade expansion in developing countries, and that

[22] Hausman et al, 2005
[23] Dobronogov & Iqbal, 2005
[24] Felipe and Usui, 2008

indicates that it is becoming a useful method not only for identifying the most binding constraints to growth but also for sequencing reform priorities which should focus on the most binding ones[25].

The descriptive presentation of the growth diagnostics approach can be represented by the decision tree in Figure 1.1.

Figure 1.1: Schematic representation of growth diagnostics approach



Source: Hausmann et al (2005)

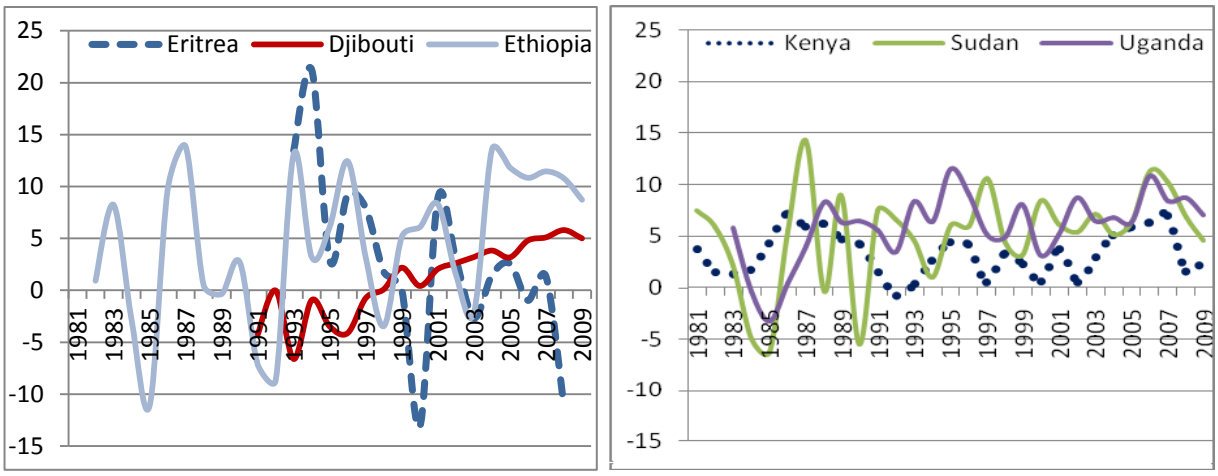
[25] Hallaert and Munro, 2009

III. Growth and Investment in the Horn of Africa

Growth in the Horn of Africa was very low in the three decades to mid-1990s. Only recently is the sub-region showing improvement in economic growth, most of which is coming from the service sector. The industrial sector in the sub-region has not been transformed and its contribution to sub-regional GDP is small. Following the growth diagnostics methodology, this study assesses which of the three "general" constraints-- financial constraint, low social returns, or low appropriability-- is likely to bind growth in the Horn of Africa. The study then proceeds to identify the specific constraints, which in the case of investment include lack of finance, cost of finance, microeconomic environment, macroeconomic environment and/or lack of complementary inputs such as infrastructure. The most binding constraints should, thus, be the immediate focus of economic policy in the region.

The growth performance in the Horn of Africa countries was not only low but also volatile (Figure 2.1). Non-fragile states of the sub-region experienced high economic growth in the last few years. Real GDP growth reached as high as 10.7 percent in Ethiopia, 8.3 percent in Uganda and 7.8 percent in Sudan in 2005-09. These three countries constitute 74 percent of the sub-region's population, and 72 percent of its GDP. Hence, the average real growth rate of GDP in the Horn of Africa reached 7.7 percent during the five years to 2009. Furthermore, growth is forecasted to average between 3.3 percent in Eritrea and 8.1 percent in Ethiopia for the years 2011-15[26], and the average growth rate for the sub-region is about 6 percent in the same period.

Figure 2.1: GDP growth rate in the Horn of Africa



Source: World Bank Development Indicators

An important step in analyzing the constraints of growth is identifying the drivers of long-term growth. Building largely on the national accounts of countries, one can identify which sector (agriculture, industry or service) is behind the growth performance of the economies. The industrial sector used to grow by 5 to 19 percent between 1996-2010, while the growth of the services sector rose from 0.8 percent in 1996-2000 to 14.1 percent in 2006-10 (Table 3.1).

[26] IMF, 2010

Also, sectoral contribution to sub-regional GDP changed gradually. Services became the dominant economic activity, contributing around 42 percent of the sub-regions GDP in 2006-10. There is a general pattern of falling share of the agricultural sector, as the industrial and services sectors expanded more. Data on trade show that exports grew by 17 percent over the past 10 years and increased to a range of 16-17 percent of GDP in 2001-10, while the growth rate of imports varied between 13-19 percent and amounted to 25-27 percent of GDP in the 10 years to 2010.

Table 3.1: Sources of GDP growth in the Horn of Africa (Average)

National account*	**1996-2000**	**2001-05**	**2006-10**
Real GDP growth	4.9	5.8	7.3
Import growth (goods and services)	-0.7	18.6	13.2
Imports as share of GDP	*23.0*	*25.2*	*26.5*
Export growth	2.0	17.0	17.0
Exports as share of GDP	*13.8*	*15.8*	*17.4*
Growth (in percent)			
O/w: Agriculture	0.1	11.3	14.3
Industry	5.7	17.1	19.1
Services	0.8	13.6	14.1
Share to GDP (in percent)			
Agriculture	36.3	32.1	31.1
Industry	14.9	17.5	20.3
Services	41.7	43.8	41.9

Sources: UNCTAD Stat (2012)

The mechanism through which all sources of economic activity can transform into growth is through investment. The global observation is that countries growing fast are those with higher rates of investment (see Figure A.1 for the global relationship). In this context, it is desirable to explore investment dynamics in the Horn of Africa. Although investment data are scanty in most of the countries of the sub-region, analysis is based on the most accurate and comparable data that is obtained from World Bank database. The data shows that the sub-region lags behind the rest of the developing world in terms of investment as a percent of GDP (Table 3.2). The thirty years average in the Horn of Africa is as low as 18 percent compared to 35 percent and 19 percent in developing East Asia and the Pacific, and sub-Saharan African countries, respectively. A key feature of the investment component in the national accounts is that it is the most volatile. The coefficient of variation in Table 3.2 shows that investment in the Horn of Africa is not only low, but among the most volatile, next to developing East Asia and the Pacific sub-region.

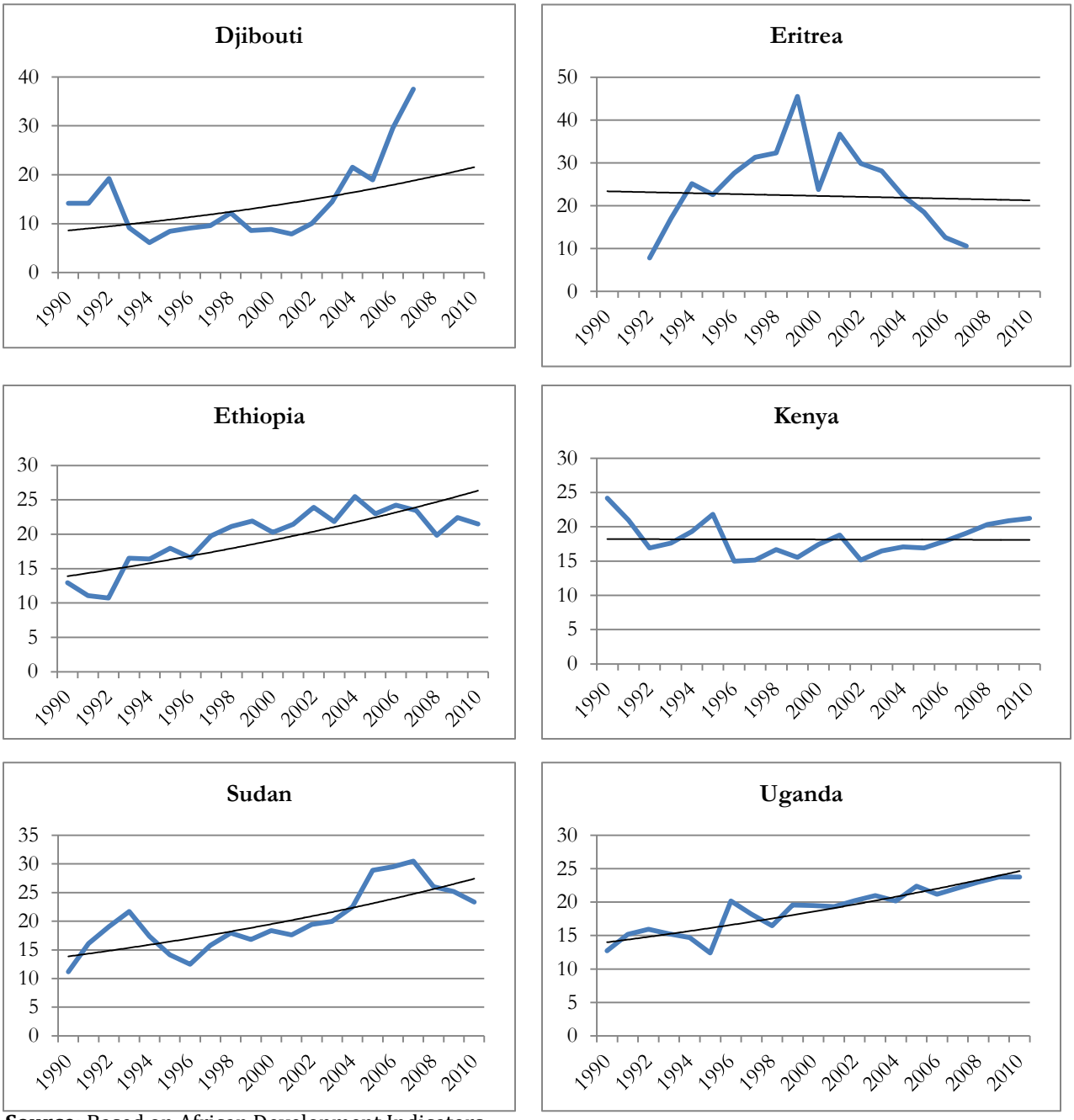
Table 3.2: Investments in the developing world (in percent of GDP)

Region	1981-1985	1986-1990	1991-1995	1996-2000	2001-2009	Average	Coef. of Variation
The Horn of Africa	***16.7***	***17.0***	***17.2***	***17.5***	***21.7***	***18.0***	***196.3***
East Asia & Pacific (developing only)	32.8	34.1	38.0	33.9	36.5	35.1	221.2
Sub-Saharan Africa (all income levels)	22.0	17.9	17.2	17.7	19.4	18.9	153.1
Sub-Saharan Africa (developing only)	22.0	17.9	17.1	17.7	19.3	18.8	154.2

Sources: Computed from World Bank Development Indicators

Despite the general features of investment at the sub-region level, it is quite variable and different across the countries (Figure 3.2). There is a general long-run upward trend in all countries except in Eritrea and Kenya, although a declining trend has been recorded in Sudan and Ethiopia since 2007. Djibouti is experiencing exceptionally high growth rate of investment, as can be seen in Figure 3.2. Investment as percent of GDP is highly variable in Djibouti, Eritrea and the Sudan, and relatively stable in Kenya.

Figure 2.2: Trends in investment in the individual countries of the Horn of Africa as % of GDP (1990-2010)



Source: Based on African Development Indicators

IV. Determinants of Investment and Growth

The preceding sections show that the Horn of Africa has been experiencing low investment and poor economic growth performance. The causes of the region's low investment and growth rates are examined below to identify the true constraints. The growth diagnostics approach assumes that if a constraint is binding then changes in that binding constraint should have some growth consequences. Conversely, a factor is defined not binding if it has changed markedly with no growth effect.

The study postulates that in the Horn of Africa, economic activities must be constrained by at least one of the following three factors: (i) financing related problems, (ii) the social return to economic activity, and/or (iii) the private appropriability of returns. The hypothesis is that these countries have not developed because of undesirable effects of either or all of the above three factors.

The most important step in providing a workable policy recommendation is to identify which of the above factors characterize the sub-region by comparing economies in the sub-region with the rest of the developing world. Finance related problems are related to high cost of finance, low saving and poor intermediation. If the sub-region is constrained by high cost of finance, that can be identified by high real interest rates, low savings, and high current account deficit, which can lead to difficulties to borrow from foreign sources. In economies which are constrained by finance, an exogenous increase in investible funds, such as foreign aid and remittances, can spur investment and other productive economic activities. Policies that are directed to encouraging savings and promoting productive investments can also help.

Low returns on investment could be attributed to low social returns or low private appropriability. The sub-region is labeled as social return constrained if there are some diagnostic signals of poor human capital, or inadequate infrastructure. If human capital is a serious constraint in the Horn of Africa, one would expect the returns to education or the skill premium to be high vis-à-vis comparable regions. Moreover, various indicators of human capital will be inferior as compared to counterpart sub-regions. If infrastructure is the problem, one would observe various bottlenecks on access to markets.

Low private returns could be as a result of low private approprability, associated with government, or market failure. The Horn of Africa sub-region is constrained by low private approprability if there are macroeconomic instabilities in the form of huge inflation, deficits, and unemployment, and the business environment is poor owing to high tax rates and corruption, among others.

Finance related issues

The development of the financial sector is crucial for investment and growth by lubricating the real sectors of the economy. Countries with advanced financial sector tend to be richer, showing the role of finance for accelerating a sustained growth. The global association between various indicators of financial sector development and economic growth is presented in Figures A.2-A.4 in Annex I.

Recognizing the role of finance for growth, policy makers in the Horn of Africa have introduced substantial reforms in the financial sector of their respective economies over the past few decades. The financial sector has been liberalized and controls eased, with foreign investors allowed to operate in the sub-region, with the exception of Ethiopia. Despite some progress over the past few decades, the financial sector has lots of unresolved problems, and in this context, the financial sector contributed to the divergence of the Horn of Africa from the rest of the world. This can be established by examining how well the financial sector is doing in the region relative to others in terms of access to finance, cost of finance, and size of savings.

Access to finance as a constraint

Various growth analysis have underlined that countries that achieved strong growth are those with better access to financial services. Following such theoretical and empirical studies, access to finance as a constraint for growth in the Horn of Africa is examined by assessing the adequacy of domestic and external finance.

Access to domestic finance: Countries in the Horn of Africa have one of the least developed local financial systems, and access to domestic finance is constrained. Access to domestic finance can be examined in terms of the size of domestic credit provided to the private sector. In this regard, the Horn of African countries are marginally inferior as compared to developing East Asia and the Pacific, and sub-Saharan Africa countries, with private sector credit to GDP ratio of only 17 percent (Table 4.1). Despite the low regional average, Djibouti, Eritrea and Kenya are in a better position.

Another indicator for the domestic access to finance is domestic credit provided by the banking sector. With respect to this, the sub-region has an unsatisfactory level of credit from the banking sector. Domestic credit from banks in the Horn of Africa is just 29 percent over the last ten years for which data are available, as compared to 124 percent and 86 percent in the developing East Asia and the Pacific, and sub-Saharan African countries, respectively. At country level bank credit to the private sector performed at relatively better levels in Eritrea, Ethiopia and Kenya.

Table 4.1: Domestic credit to the private sector (as percent of GDP)

	Domestic Credit to the Private Sector (percent of GDP)			Total Domestic Credit Provided by the Banking Sector (percent of GDP)		
Country/Region	1981-90	1991-00	2001-09	1981-90	1991-00	2001-09
Djibouti	...	*42.7*	*22.8*	...	*47.8*	*27.4*
Eritrea	...	*33.2*	*27.2*	...	*104.6*	*130.5*
Ethiopia	*11.0*	*14.6*	*20.7*	*35.8*	*40.4*	*46.1*
Kenya	*30.5*	*30.2*	*27.7*	*50.0*	*47.9*	*40.2*
Somalia	...	...	...	...	...	...
Sudan	*10.0*	*2.6*	*8.4*	*30.2*	*104.9*	*13.8*
Uganda	*1.9*	*4.6*	*9.3*	*14.5*	*8.3*	*8.8*
The Horn of Africa	**17.2**	**16.0**	**17.1**	**38.1**	**57.9**	**29.2**
East Asia & Pacific (developing only)	57.4	90.2	103.7	62.6	95.8	123.6
Sub-Saharan Africa (all income levels)	37.9	55.8	58.9	58.0	77.1	85.2
Sub-Saharan Africa (developing only)	37.9	55.9	59.6	58.0	77.1	86.3

Sources: World Bank Development Indicators

Access to external finance: Another possibility for the countries of the Horn of Africa to finance investment is by international finance. Access to external sources of finance by the sub-region is limited owing to the low incomes in these countries, fragmented financial sectors, and rudimentary domestic financial markets. The sources of external finance can be broken down to Foreign Direct Investment (FDI), Overseas Development Assistance (ODA) and workers' remittances. As shown in Table 4.2, ODA and remittances are by far the larger sources of external finance in the Horn of Africa amounting to 6.5 percent and 4.1 percent of GDP. Remittances (as percent of GDP) are in a better condition compared to other developing regions in the world. At the country level, Ethiopia and Eritrea are the lowest recipients of workers' remittances. ODA inflows as a percent of Gross National Income are much better in the Horn of Africa, owing to the low level of development and the high demand for aid in the sub-region. Unlike remittances, Ethiopia and Eritrea are the main destinations of ODA within the Horn of Africa countries.

In comparison to other sub-regions, FDI as percent of GDP is very low in the Horn of Africa, although it improved in 2001-09 (Table 4.2). The current rise of FDI is as a result of the return of peace and stability in member countries of the sub-region. Djibouti and the Sudan are emerging as growing destinations of FDI in the sub-region.

Table 4.2: FDI, ODA and workers' remittances in the Horn of Africa

	Net FDI Inflows (percent of GDP)			Net ODA Received (percent of GNI)			Worker's Remittances (percent of GDP)		
Country /Region	1981-1990	1991-2000	2001-2009	1981-1990	1991-2000	2001-2009	1981-1990	1991-2000	2001-2009
Djibouti	...	*0.5*	*9.1*	...	*19.5*	*11.5*	...	*2.6*	*3.2*
Eritrea	...	*9.5*	*0.7*	...	*18.1*	*23.7*	...	...	*0.0*
Ethiopia	...	*1.0*	*2.9*	*5.8*	*9.7*	*15.2*	*0.1*	*0.3*	*1.0*
Kenya	*0.4*	*0.6*	*0.5*	*8.7*	*7.6*	*4.2*	*1.0*	*2.5*	*4.6*
Somalia	*-0.4*	...	...	*51.3*	...	...	*0.7*	...	...
Sudan	*0.03*	*1.2*	*6.3*	*7.1*	*3.8*	*4.4*	*2.0*	*3.0*	*5.2*
Uganda	*-0.02*	*1.9*	*4.4*	*7.2*	*15.8*	*13.8*	*0.0*	*0.8*	*4.7*
The Horn of Africa	**0.1**	**1.1**	**3.8**	**5.2**	**7.9**	**6.5**	**1.0**	**1.8**	**4.1**
East Asia & Pacific (developing only)	0.9	3.5	3.3	1.0	0.8	0.3	0.5	0.7	1.4
Sub-Saharan Africa (all income levels)	0.5	1.5	3.2	4.4	5.4	5.1	0.6	1.0	1.7
Sub-Saharan Africa (developing only)	0.5	1.5	3.1	4.4	5.4	5.1	0.6	1.0	1.7

Sources: World Bank Development Indicators

The cost of capital as a constraint

Banks constitute the main financial institutions in the Horn of Africa and financial markets are not well developed. Banks dominate the financial sector in the sub-region, and short-term credit characterizes financial products in these countries. The short-term nature of the bank credit is a

function of the short-term nature of the deposits in financial institutions[27]. Capital markets are not developed, or are non-existent in most countries of the Horn of Africa. In this weak financial sector a binding constraint for growth could be the high cost of financing a project. The cost of capital is examined by looking at the level of real lending rates. As shown in Table 4.3 real lending interest rates in the sub-region are among the lowest in Africa showing that the sub-region is clearly a low cost finance area. The real lending rate ranges from -4.6 percent in Ethiopia to 13.3 percent in Uganda on average for the period 2001-09.

Table 4.3: Real interest rates

Country	1981-85	1986-90	1991-95	1996-2000	2001-09	Average
The Horn of Africa						
Djibouti	*...*	*...*	*...*	*...*	*6.0*	*6.0*
Eritrea	*...*	*...*	*...*	*...*	*...*	*...*
Ethiopia	*-10.6*	*4.7*	*-2.0*	*9.6*	*-4.6*	*-0.6*
Kenya	*0.8*	*4.8*	*2.3*	*19.1*	*4.1*	*6.2*
Somalia	*...*	*...*	*...*	*...*	*...*	*...*
Sudan	*...*	*...*	*...*	*...*	*...*	*...*
Uganda	*-58.7*	*-94.0*	*-4.2*	*16.5*	*13.3*	*-25.4*
Other African countries						
Malawi	4.9	1.5	-5.5	13.4	24.8	7.8
Nigeria	-5.8	-8.6	-25.5	7.2	6.5	-5.2
Rwanda	7.0	10.6	21.8	11.7	8.1	11.8
Senegal	2.9	14.1	17.3	...	...	...
South Africa	4.8	1.3	6.5	12.1	6.9	6.3
Tanzania	-17.8	-9.7	-4.9	12.6	8.9	-2.2

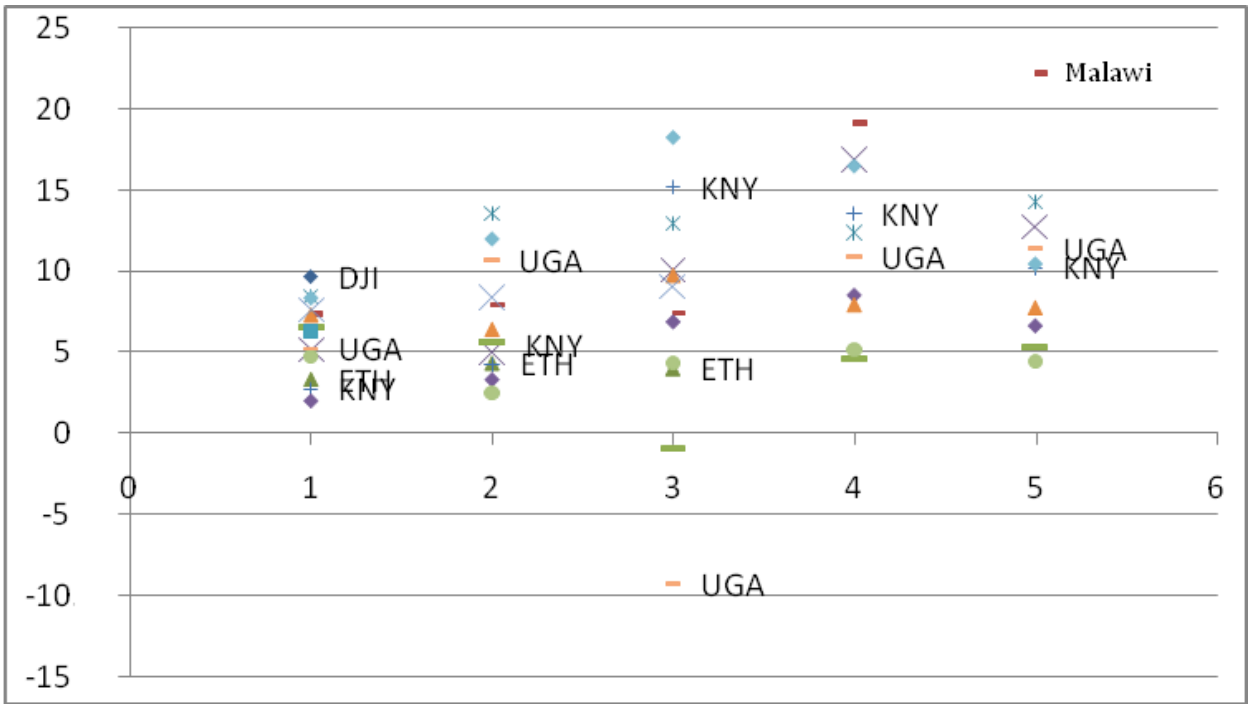
Sources: World Bank Development Indicators

We can also test for the cost of financing in the Horn of Africa sub-region by examining the size of interest rate spread.[28] Figure 4.1 shows that the nominal spread is comparable to other countries. The interest rate spread is as high as 22 percent in Malawi and 15 percent in Kenya, the country with the highest spread among Horn sub-region. The low cost of finance in the face of constrained access to financial services as reflected by other variables discussed above may indicate that interest rates are highly controlled. Hence, interest rates in the Horn of Africa are of limited help to conclude that credit scarcity is a binding constraint.

[27] A detailed presentation of the nature of loans by banks in the Horn of Africa countries is presented in HESPI (2009).

[28] Interest rate spread is the difference between average lending and deposit rates.

Figure 3.1: Interest rate spread in the Horn of Africa (in percent)



Sourced: Based on World Bank Development Indicators on 18 developing countries data
The x-axis with 1-6 corresponds to the five-year period average from 1981-2009

Low savings as a constraint

Various growth theories underline the importance of savings in the growth process. Cross-country growth studies using saving rates as one of the determinant factors for growth established that countries with low saving tend to have low investment and low growth rates (such a relationship is also observed in Figure A.3). Thus, it is imperative to build on the fact that adequate domestic saving is required to sustainably finance private and public investment projects. The gross saving as percentage of GDP for the Horn of Africa ranges from 18.8 percent in Kenya to 6 percent in Sudan (Table 4.4). The region's average of 13.5 percent is significantly less than that of developing East Asia & Pacific and sub-Saharan Africa, which are 36.5 percent and 16.3 percent, respectively. Although low in comparison with other regions, the saving rate in the Horn of Africa has improved.

Table 4.4: Gross domestic saving

Country/Region	1981-85	1986-90	1991-95	1996-2000	2001-09	Average
Djibouti	*...*	*...*	*11.8*	*9.8*	*24.7*	*15.4*
Eritrea	*...*	*...*	*46.1*	*16.5*	*...*	*...*
Ethiopia	*12.0*	*14.6*	*14.7*	*16.9*	*18.0*	*15.3*
Kenya	*17.5*	*18.7*	*25.5*	*17.0*	*15.3*	*18.8*
Somalia	*13.4*	*26.1*	*...*	*...*	*...*	*...*
Sudan	*3.3*	*3.5*	*3.0*	*6.5*	*13.4*	*6.0*
Uganda	*6.5*	*5.2*	*12.5*	*18.1*	*18.0*	*12.1*
The Horn of Africa	***10.9***	***12.1***	***15.4***	***14.0***	***15.7***	***13.6***
East Asia & Pacific (developing only)	32.1	34.1	37.7	36.5	42.2	36.5
Sub-Saharan Africa (all income levels)	18.3	17.4	14.9	15.4	15.8	16.3
Sub-Saharan Africa (developing only)	18.3	17.4	14.9	15.4	15.8	16.3

Sources: Prepared from World Bank Development Indicators database

As the low domestic saving is a potential constraint on the Horn of Africa's growth, it is important to understand the causes of low saving. Low domestic saving in developing countries could be attributed to multiple economic factors that include the low level of per capita income, limited productive employment, undeveloped financial saving instruments and high foreign debt and current account deficit. External distress factors and economic instability in general could lead to leakages of domestic financial resources and capital flight that limit domestic saving. Data from World Bank's Development Indicators database show that the Horn of Africa sub-region has a very high foreign debt ratio and current account deficit. The current account deficit as a percent of GDP reached 9.1 percent as compared to a surplus of 4.3 percent for developing East Asia and the Pacific countries in 2001-09 (Table 4.9).

Another test of whether the Horn of Africa is savings constrained is to examine the link between investment and saving. The strong correlation coefficient of 0.64 observed between investment as a percentage of GDP and national saving as percentage of GDP (Table 4.5) and the low absolute level of saving support the hypothesis that saving constitutes a binding constraint to investment and growth in the Horn of Africa.

Table 4.5: Investment and domestic saving (in percent of GDP)

Country/Region		1981-85	1986-90	1991-95	1996-2000	2001-09
Djibouti	Investment	...	14.1	11.4	9.6	20.0
	Saving	...	...	11.8	9.8	24.7
Eritrea	Investment	...	...	18.1	32.1	22.7
	Saving	...	...	46.1	16.5	...
Ethiopia	Investment	14.3	16.6	14.5	19.9	22.8
	Saving	12.0	14.6	14.7	16.9	18.0
Kenya	Investment	22.2	24.1	19.3	16.0	18.1
	Saving	17.5	18.7	25.5	17.0	15.3
Somalia	Investment	26.7	25.6	...	...	...
	Saving	13.4	26.1	...	...	...
Sudan	Investment	14.2	10.0	17.7	16.3	24.4
	Saving	3.3	3.5	3.0	6.5	13.4
Uganda	Investment	7.8	10.6	14.7	18.8	21.5
	Saving	6.5	5.2	12.5	18.1	18.0
The Horn	Investment	*16.7*	*17.0*	*17.2*	*17.5*	*21.7*
	Saving	10.9	12.1	15.4	14.0	15.7

Sources: World Bank Development Indicators

Constraints on social returns to capital

It is also assumed that the low level of investment is due to low returns to capital. It is argued in empirical literatures that low private returns could be either due to low appropriability of returns or low social returns. It may be the case that poor infrastructure and human capital cause the social returns to be low in the Horn of Africa. Below, we examined the state of infrastructural development and human capital in the sub-region, and concluded that low social return is a defining characteristic of the Horn of Africa.

Infrastructure as a constraint

The relationship between infrastructure and economic growth has been studied extensively, and poor infrastructure is identified by many as a binding constraint for doing business and for economic growth. To support this statement a global relationship between access to infrastructure and GDP per capita is shown in Figure A.4. It shows that income is correlated with access to infrastructure. Moreover, Escribano et al observed that infrastructural limitations depress productivity of African firms by around 40 percent.[29] Infrastructure provision is inherently difficult in the tropics with its disbursed population and varied topography making the Horn of Africa a structurally high-cost region for infrastructure development.

[29] Escribano et al, 2008

The World Bank Development Indicators data reveals that, in 2004, the road density per 100 square kilometer of land area was as low as 3 kilometers in Ethiopia, 11 in Uganda and 17 in Kenya, as compared to 21.8 in developing East Asia and the Pacific. The low road density in the sub-region is due partly to inadequate finances, the settlement patterns and to its geographic makeup. The same source shows that the percentage of paved roads in total roads is low in the sub-region: 45 percent for Djibouti in 2001, 21 percent for Eritrea in 2001, 12.8 percent for Ethiopia in 2007, 14 percent for Kenya in 2004, 12 percent for Somalia in 2001, 36 percent for Sudan in 2001, and 23 percent for Uganda in 2003.

Table 4.6 presents the comparison of overall access to soft infrastructures in the Horn of Africa and selected regions. According to comparative data in the World Development Indicators database, internet and telephone coverage in the Horn of Africa is lower than any other country groupings. More specifically, internet users are 2 percent of the Horn of Africa population, compared to a penetration of 9 percent and 2.7 percent for East Asia and the Pacific and sub-Saharan Africa, respectively. Telephone lines are available only to less than 1 percent of the population in the Horn sub-region compared to 18 percent for developing East Asia and the Pacific.

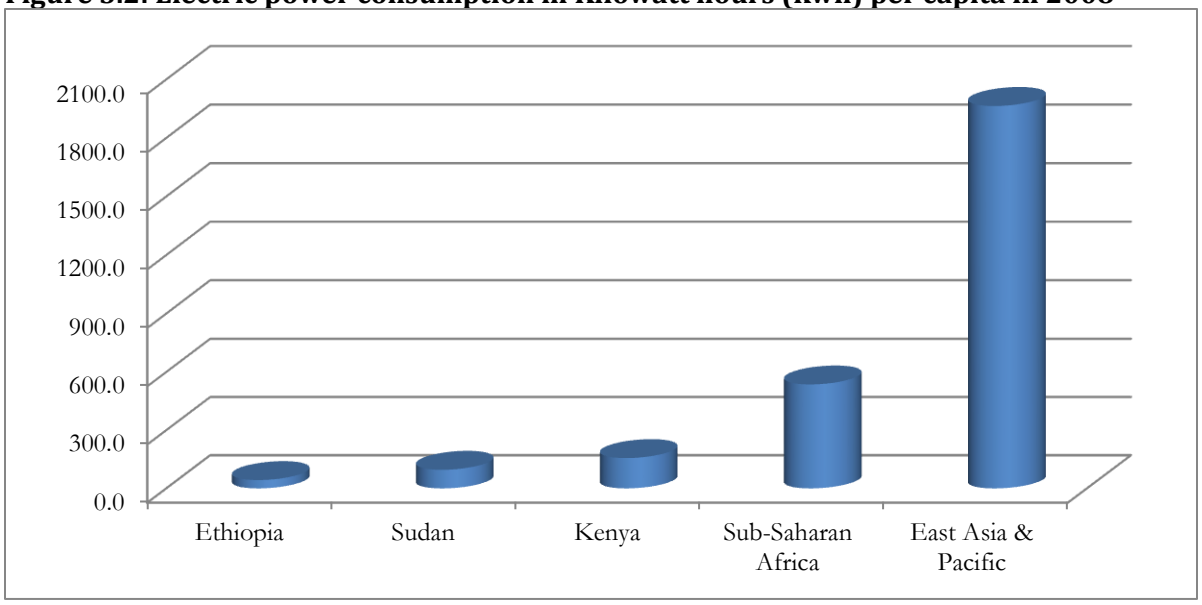
Table 4.6: Access to infrastructure in the Horn and selected regions (as percent of total population)

Country/Region	Broad band Internet	Internet Users	Mobile Users	Telephone lines
	Averages (2001-09)			
Djibouti	*0.06*	*1.05*	*5.28*	*1.44*
Eritrea	*…*	*1.60*	*0.83*	*0.85*
Ethiopia	*0.00*	*0.21*	*0.75*	*0.77*
Kenya	*0.02*	*4.38*	*15.30*	*0.84*
Somalia	*…*	*0.76*	*4.67*	*1.00*
Sudan	*0.03*	*3.76*	*8.86*	*1.60*
Uganda	*0.00*	*2.21*	*7.72*	*0.33*
The Horn Average (weighted)	***0.01***	***2.07***	***6.35***	***0.90***
East Asia & Pacific (developing only)	1.93	9.05	27.99	18.33
Sub-Saharan Africa (developing only)	0.04	2.65	13.49	1.58

Sources: World Bank Development Indicators

Access to power is also an important economic infrastructure that can adversely impact or stimulate growth. With regard to access to power, the Horn of African countries are lagging behind as compared to the rest of sub-Saharan Africa, and are much behind the rest of the developing world (Figure 3.2). Per capita electric power consumption in 2008 was 43, 96 and 156 kwh in Ethiopia, Sudan and Kenya respectively; while in developing East Asia and the Pacific and sub-Saharan Africa, it was 1964 and 536 kwh respectively.

Figure 3.2: Electric power consumption in Kilowatt hours (kwh) per capita in 2008



Sources: African Development Indicators

Human capital/education as a constraint

Conventional growth theories incorporate human capital as an important predictor of economic growth. According to the growth models, countries that attain high literacy rates achieved improved economic growth. A similar observation based on cross-country data is observed in Figure A.6 in Annex I. To assess if human capital in the form of low level of education is responsible for the poor growth performance in the Horn of Africa, the study reviews the level of education in the sub-region in comparison with other sub-regions. The comparison is in terms of school enrollment and business enterprises access to skilled workers. Education is a binding constraint in this part of the world, as school enrollment and access to skilled workers are lower than other developing regions.

Over the period 2001-09 the Horn of Africa had low levels of secondary and tertiary education, leading to one of the lowest levels of human capital in the world. Primary level education was not significantly lower than in Sub-Saharan Africa, but the gap in attainment of secondary and territory education between the Horn of Africa and the rest of the developing world is high. Secondary education coverage is 18 percent in the Horn of Africa sub-region, and tertiary level education reached only 2 percent of the appropriate age group compared to 18 percent in developing East Asia and the Pacific countries, and 5 percent in developing sub-Saharan Africa (Table 4.7).

Table 4.7: Enrollment rates for primary, secondary and territory education

Country / Region	Average of 2001-09		
	Primary	Secondary	Territory
Djibouti	*27.2*	*18.2*	*1.7*
Eritrea	*43.8*	*23.1*	*1.3*
Ethiopia	*40.4*	*18.5*	*2.7*
Kenya	*88.8*	*40.1*	*3.1*
Somalia	*…*	*…*	*…*
Sudan	*45.45*	*…*	*…*
Uganda	*56.8*	*16.6*	*3.2*
The Horn of Africa	**53.5**	**17.8**	**2.1**
East Asia & Pacific (developing only)	99.2	…	17.5
Sub-Saharan Africa (developing only)	57.90	…	5.4

Sources: World Development Indicators

The role of education in the growth process is to provide adequately trained labor force for business establishments. The relative position of the Horn of Africa countries in this regard can be compared using World Bank Enterprise Survey database. The data shown in Table 4.8 indicates that the proportion of unskilled workers is marginally higher in the sub-region. Nevertheless, a very small proportion of firms consulted for the World Bank Enterprise survey considered labor skill level as a major constraint on doing business, contradicting the higher proportion of unskilled workers. The latter could be due to the low skill intensive nature of economic activities in the Horn of Africa or the low relative weight attached by respondents to skill shortages as compared to other challenges of doing business in the sub-region.

Table 4.8: Access to skilled workers for business establishments

Region	Percent of unskilled workers	Percent of firms identifying labor skill level as a major constraint
Developing Asia and Africa	39.2	22.3
The Horn of Africa	41.8	9.4

Sources: World Bank Enterprises Survey

Constraints on appropriability of returns

Approprability is related to whether it is easy for people to benefit from the returns of their activities. The return from investment determines the rate of investment. Investment in the Horn of Africa could be restricted because investors do not expect to appropriate the high social returns that their investments generate. This could happen through a number of channels including government failures such as macroeconomic risks (external and internal deficits, and inflation), poor business environment (high tax rates, corruption and other governance indicators) and market failures such as inputs and factor market failures.

Macroeconomic risks and instability as a constraint

The macroeconomic state provides both opportunities and constraints to economic growth, as instability can deter the growth process. Instability attributable to large domestic and external imbalances caused by inappropriate fiscal and monetary policies lead to inflation, loss of international reserves, and large depreciation of the exchange rate. Such imbalances stand as constraints on investment, savings and overall economic growth in the Horn of Africa and elsewhere. Accordingly, the indicators of external imbalances (current account deficit) and domestic instability such as fiscal deficits, inflation and unemployment rate are examined. The data on these indicators show that the macroeconomic environment in the sub-region has changed significantly over the past couple of decades and has affected entrepreneurial efforts and the investment climate differently. While there is a general improvement in macroeconomic stability, the sub-region faces mixed results as compared to other countries and sub-regions.

On the basis of the above macroeconomic indicators, the sub-region experienced mixed states of macroeconomic stability and instability in 1991-2009. It recorded high levels of current account deficits as compared to developing Asia and sub-Saharan Africa countries (Table 4.9). In the Horn of Africa the external current account deficit reached 9 percent of GDP in 2000-09, and was higher by 6 and 13 percentage points than in developing Asia and sub-Saharan Africa, respectively. During the same period, inflation in the Horn of Africa was higher than in developing Asia and only marginally lower in relation to that of all sub-Saharan countries. The inflation rate gradually moderated and trended down to single digit levels in 2001-09.

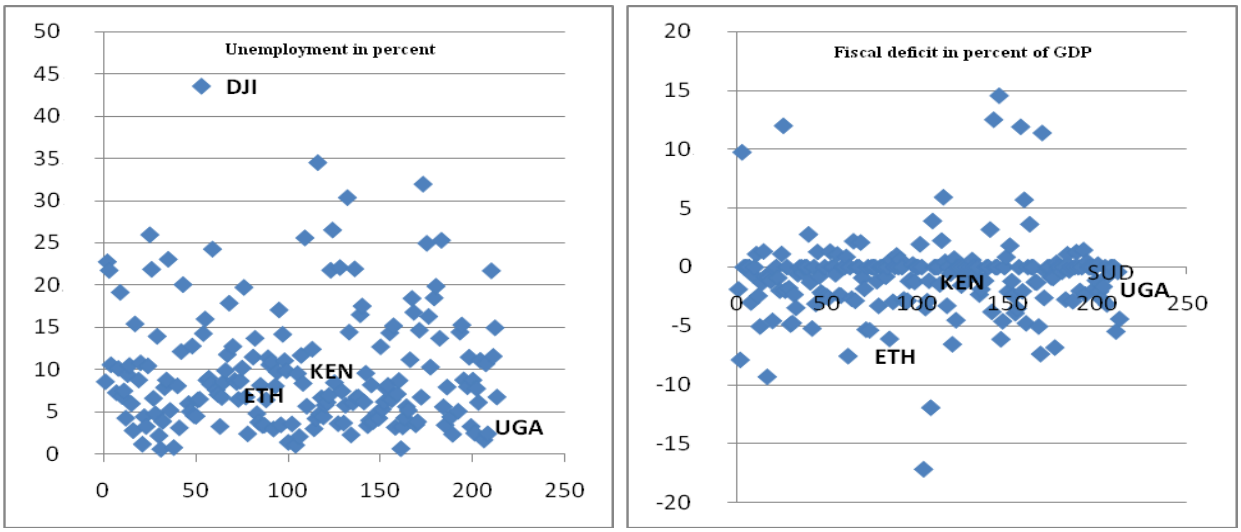
Table 4.9: Indicators of macroeconomic stability and instability

Years	Current Account Balance (percent of GDP)			Inflation Rate (percent)		
	Horn of Africa	Low Income (Developing Asia)	SSA	Horn of Africa	Low Income (Developing Asia)	SSA
1991-95	-5.8	-1.5	-2.8	39.7	11.1	40.7
1996-2000	-5.1	0.9	-2.6	14.8	5.3	18.9
2001-09	-9.1	4.3	-2.6	8.4	3.9	9.8

Sources: World Bank Development Indicators

The unemployment rate and fiscal deficits in the Horn of Africa countries are compared in Figure 4.3 with those of many countries in the world. The Horn of Africa sub-region's weighted average fiscal deficit was at 4.2 percent per year in 1991-2009, while global average fiscal deficit was 4.4 percent. The unemployment rate in the Horn sub-region was among the highest in the world.

Figure 3.3: Unemployment and fiscal deficits in the Horn of Africa (>210 countries included)



Sources: World Bank Development Indicators

Business environment and microeconomic risks as constraints[30]

The global observation is that countries that have a better environment for doing business tend to grow faster than countries which do not. The simple cross section relationship presented in Figure A.7 shows a positive relationship between doing business score and economic performance. Microeconomic risks include high tax rates, poor governance, high corruption levels and other problems that constrain doing business. High tax rates on business impact on companies' profitability and discourage business expansion and growth. The data on corporate tax rates show that profit taxes in 2006-09 were stable and not too high in the Horn of Africa as compared to a set of low income African and Asian countries (Table 4.10). The rate is lower by about 20 percentage points indicating that tax rates are not binding constraints for doing business and investment in the Horn sub-region. A low tax rate regime may not always be good, as there is a need to develop public infrastructure in order to promote long-term growth. Table 4.10 also shows the average percentile rank of governance indicators for the Horn of Africa and for developing Africa and Asian countries in 2006-09. The table shows that, in terms of governance, the sub-region is comparable to the rest of the developing world.

[30] Indicators of doing business that imply economic growth or retardation are in Annex I, Figure 8.

Table 4.10: Total tax rates and governance indicators

Year	The Horn of Africa[31]		Developing Africa and Asia[32]	
	Total tax rate (percent of profit)	Governance indicator (percentile rank)	Total tax rate (percent of profit)	Governance indicator (percentile rank)
2006	49.9	23.7	73.2	24.8
2007	49.9	27.4	75.8	25.6
2008	50.7	27.4	75.0	26.0
2009	50.0	26.3	74.8	25.6
2010	50.3	...	74.0	...
2011	50.3	...	71.5	...

Source: World Bank Enterprises Survey, and World Bank Development Indicators

Although general perceptions and global statistics, such as Transparency International rankings indicate accountability and transparency of financial management are low in the Horn of Africa, corruption does not seem to be a critical constraint of doing business in the sub-region. The average of the proportion of firms identifying corruption as a constraint for doing business, according to the World Bank Enterprise survey, is 4.8 percent in the Horn of Africa as compared to 7.3 percent in the reset of the world. The percent of firms identifying corruption as a constraint were 2.5 percent in Uganda, 2.9 percent in Ethiopia, and 9.6 percent in Kenya, while the average for the whole of Africa was 6.2 percent. Overall, the average rank for doing business for the Horn of Africa countries is 126 which is lower than the average rank of 132 for 40 developing Asian and African countries.

Market failure as a constraint

There are clear indications that the Horn of Africa is lagging behind the rest of the developing world in market development, owing to imperfect product and factor markets. Generally, markets tend to be fragmented in low income countries due to infrastructural problems. Other market development constraints include limitations on access to finance, and to land, as well as labor regulations problems. In this context the study assesses how market failure stands as a constraint for doing business and growth in the Horn sub-region.

Of the assessed market imperfection indicators, access to finance is the main obstacle for doing business in the sub-region, as indicated by the World Bank World Enterprise Survey (Table 4.11). The average size of firms in the Horn sub-region declaring access to finance as a constraint is 11.6 percent compared to 33 percent in Ghana and 28.3 percent in Senegal. Also, in comparison to other selected African countries, more firms in the Horn of Africa declared access to land as an important bottleneck in investing in the sub-region; 6.7 percent in the Horn of Africa vis-a-vis average of 5.6

[31] We include data on four Horn of Africa countries (Eritrea, Ethiopia, Kenya and Uganda) for which we get data.
[32] The data is average of 40 developing Africa and Asia counties based on the World Bank doing Business Classification.

percent in other African countries. The survey result shows that labor market regulations are not exceptionally acute in the sub-region, even though labor regulation scores in Ethiopia and Kenya are higher than the regional average.

Table 4.11: Factor market failures

Country/Region	Percentage of firms identifying the following as major obstacle		
	Access to Finance	Access to Land	Labor Regulations
The Horn of Africa	***11.6***	***6.7***	***2.9***
Eritrea	0.0	17.0	0.2
Ethiopia	18.8	16.6	4.0
Kenya	13.5	1.7	4.3
Uganda	6.7	0.8	1.2
Other Africa			
Ghana	33.1	3.8	1.7
Malawi	28.3	2.6	12.6
Senegal	12.2	11.0	4.8
Tanzania	9.8	2.6	4.8

Sources: World Enterprises Survey, the World Bank

V. Findings and Policy Implications

a. Findings

Growth has been disappointing in the Horn of Africa for many decades, leading to low levels of economic and social development. The seven countries that comprise the Horn of Africa region are at different stages of development. However, the region includes some of the least developing countries in the world and is the poorest region as a whole. Changing the growth history and improving human development levels require relaxing the binding constraints on economic growth.

The growth diagnostics approach utilized in this study provides a methodology to assess the economic performance of specific countries or regions. The approach is based on identifying the binding constraints on economic growth, and in particular, places highest priority on the most binding constraints. It focuses national reforms and the policy response as closely as possible on the source of the distortion. The growth diagnostics approach followed in this study indicates that the main binding constraints of growth in the Horn of Africa include limited access to finance, low social returns, broad instability and market failure, as follows:

Finance related issues

- Access to finance, both domestic and external, is limited in the Horn of Africa as compared to other developing regions. (binding)
- Domestic saving rates are very low in the Horn of Africa, owing to low levels of income and limited access to financial saving products. (binding)
- Cost of capital is moderate in the Horn of Africa sub-region. Real interest rates and interest rate spread are not very high in the sub-region. The low level of cost of capital in the face of limited access to finance and poor saving mobilization imply that financial markets are repressed in the sub-region. (not binding)

Social returns

- Infrastructure limitations are prevalent in the Horn of Africa sub-region. The very low access to infrastructure services generates low social returns. (binding)
- Human capital and access to education and skill development are very limited in the sub-region. The literacy rate in the Horn of Africa is very low and access to skilled workers is limited for business enterprises. (binding)

Approprability

- Government policy failures have been a significant constraint for high and sustainable economic growth in the Horn of Africa sub-region. Analysis of macroeconomic stability

shows that there are weak external accounts as demonstrated by large current account deficits and high unemployment rates in the sub-region. (binding)

- Governance issues are a factor in retarding economic progress but not a principal constraint. The business environment (the microeconomic context) is comparable with other developing countries, showing that it does not exert a peculiar challenge to growth in the sub-region. (not binding)
- Market limitations are of significant concern and credit access is a principal constraint. Also access to land is seen as an acute challenge for doing business in the Horn of Africa. (binding)

b. Policy Implications

Finance related problems and low social returns are the main binding constraints on economic growth in the Horn of Africa, implying a direct important role for government policy reforms. Countries should be committed to reform their financial sector and public services. The financial sector is extremely underdeveloped in the sub-region, making financial intermediation weak. Domestic savings mobilization is also limited due to low income levels and underdeveloped financial intermediation. This implies that there is a need to introduce vibrant domestic financial institutions: commercial banks, development banks and non-bank financial institutions. Governments should take the lead in reforming the sector and specifically in removing regulatory bottlenecks. In economies which are constrained by finance, an exogenous increase in investible funds, such as foreign aid and remittances, can significantly spur investment in productive economic activities.

On the challenges on social returns, the education sector should be built to produce a skilled labor force. Although governments have an indispensible role in this regard in terms of direct provision of education services, the private sector also has a role to play in producing a skilled labor force. Building human skills is therefore the most vital policy recommendation in order to achieve high sustainable growth.

The public sector has to invest in the provision of both hard (roads, railway and other transport services) and soft (information communications technology facilities) infrastructure. Adequate efforts should be made to mobilize the required finance for infrastructure development from both domestic and external sources. The growth elasticity/multiplier of improved access to finance and essential public services, including education and infrastructure, is paramount.

The results of this study have also implications for the involvement of external development partners of the member countries of the region. In order to break the prolonged poor growth, low income and poverty in the Horn of Africa, development partners of the sub-region need to channel their financial and technical assistance to the most binding constraints. Aid for education and infrastructure should be of higher priority for supporting the Horn of Africa sub-region. A more

targeted financial sector capacity building should also be another intervention by the international financial institutions.

This study suggests some possible areas of future work, specifically the investigation of the right sequencing of reforms and policy interventions within the most binding constraints. Given the scarcity of resources, countries in the sub-region may not find it possible to simultaneously and effectively address their financial sector, education sector and infrastructure. It is not feasible a priori to conclude that the financial sector should develop first before the infrastructural sectors grows in all countries of the sub-region. However, all indications are that the critical nature of augmented financial resources would also enable the sub-region to address economic and social infrastructure development.

Any further attempt to uncover the binding constraints of growth in the Horn of Africa should be extended to incorporate the role of governments in the growth diagnostics approach and how to make growth pro-poor. Such studies should learn from the experiences on aid for trade approach of trying to loosen constraints of trade expansion and economic growth.[33]

[33] See WTO, 2006

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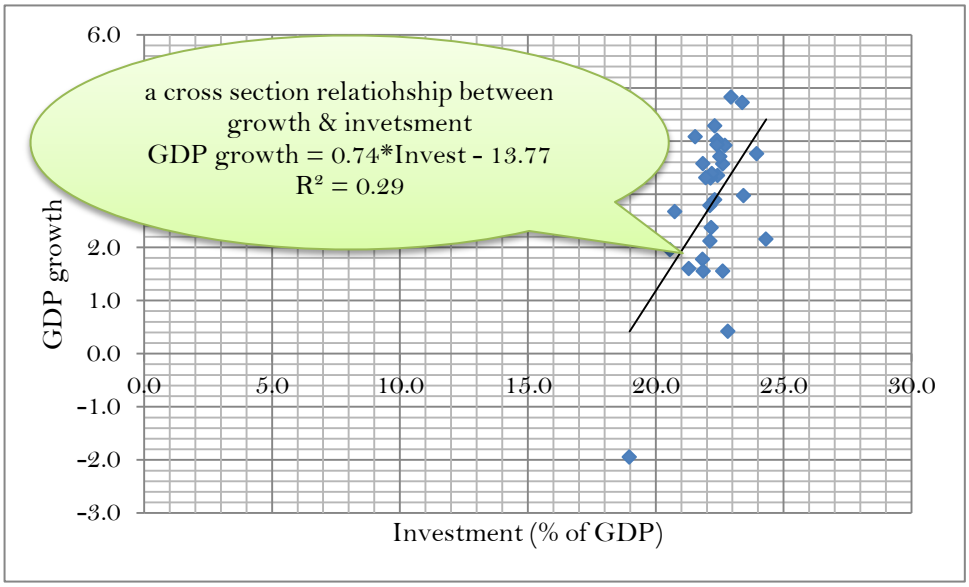
Annex I

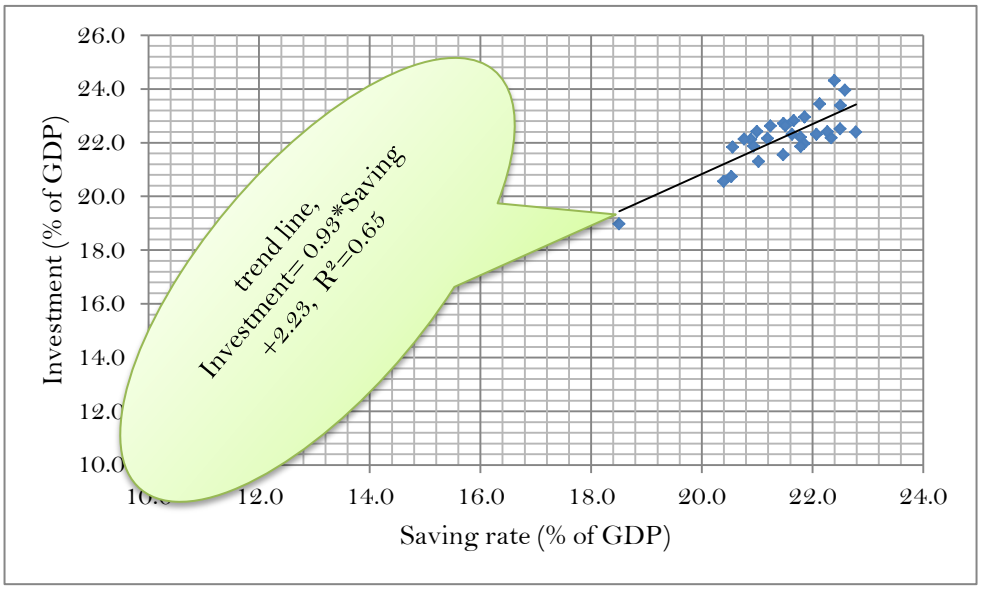
Figure A.1: Investment and GDP growth



Source: Based on World Bank Development Indicators Database

Note: A global observation in Figure A.1 shows that there is economically strong and positive relationship between investment and growth.

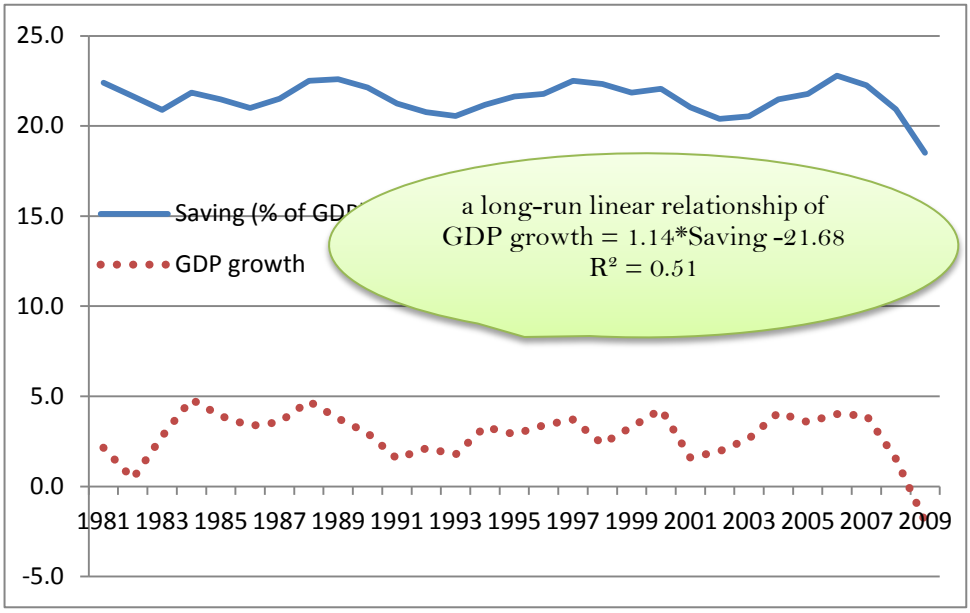
Figure A.2: A global relationship between saving and investment (as percent of GDP)



Source: Based on World Bank Development Indicators Database

Note: The global relationship showed in Figure A.2 shows a positive and strong association between saving and investment (as percent of GDP).

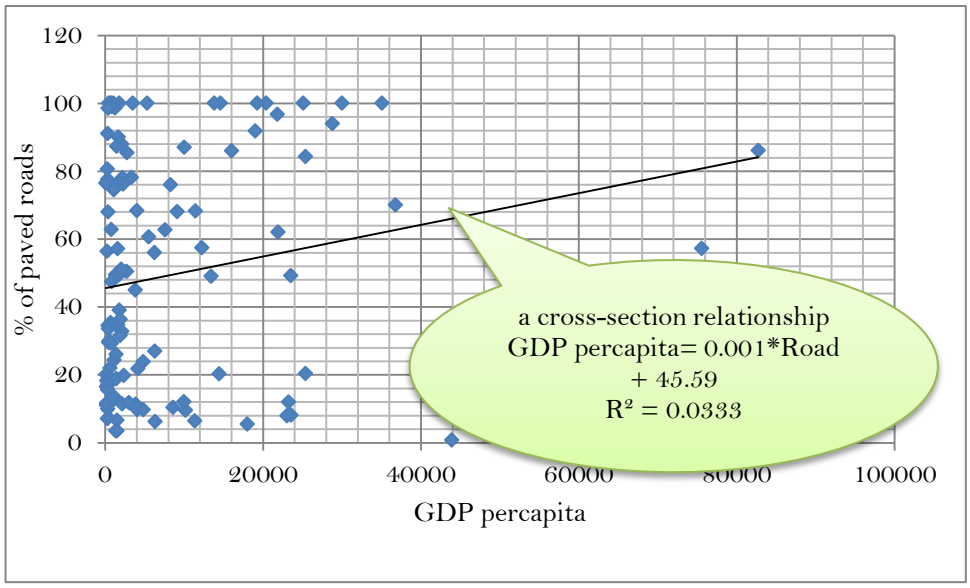
Figure A.3: Gross domestic saving and GDP growth



Source: Based on World Bank Development Indicators Database

Note: The trend lines presented in Figure A.3 witnessed that the global time series level of domestic savings (as percent of GDP) moves closer with the global average economic growth.

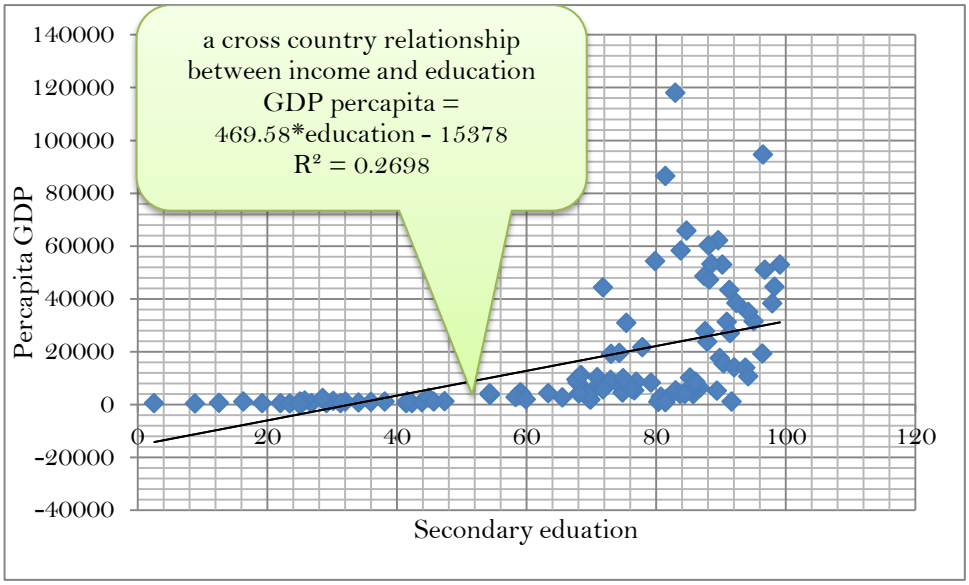
Figure A.4: Access to infrastructure and GDP per capita



Source: Based on World Bank Development Indicators Database

Note: The cross-section relationship between access to infrastructure and GDP per capita shown in Figure A.5 is statistically positive

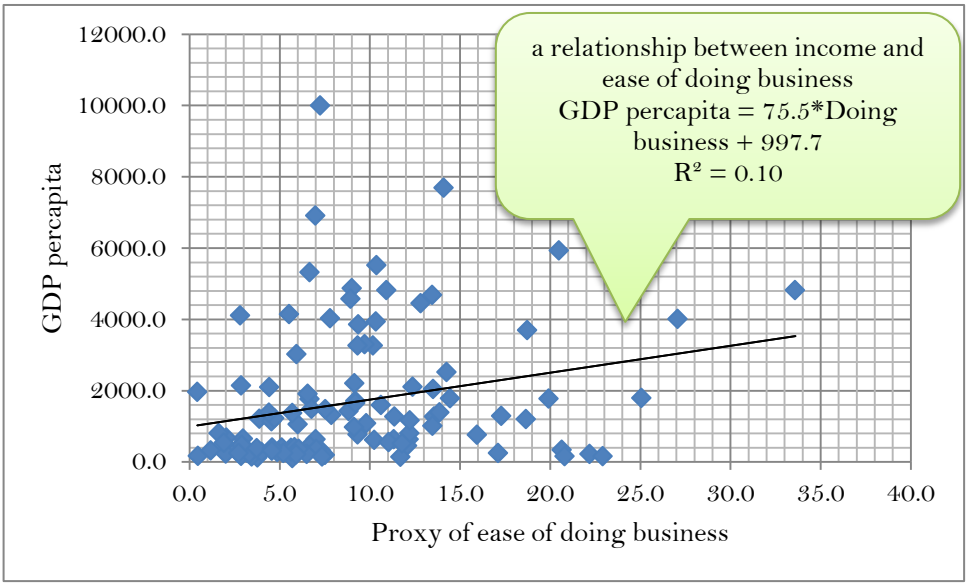
Figure A.5: Level of human resource development and per capita GDP



Source: Based on World Bank Development Indicators Database

Note: Figure A.6 supports the long-standing knowledge that countries with better level of human resource development tend to have higher per-capita income.

Figure A.6: Doing business ranking and GDP per capita



Source: Based on World Bank Development Indicators Database

Note: The global level cross-section relationship shown in Figure A.7 reflects that countries with better regulatory and policy environments for doing business tend to have higher per-capita income.