United Nations Development Programme
Regional Bureau for Africa (RBA)
Inequality Project

Empowered lives.
Resilient nations.

Working Paper Series

Growth, Poverty and Inequality Interactions in Africa: An Overview of Key Issues

Haroon Bhorat
Karmen Naidoo
Kavisha Pillay

30
June
2016

UNDP-RBA/WPS 1/2016

UNDP's Project on "Inequality in Sub-Saharan Africa"

This is one of the background papers on the UNDP Regional Bureau for Africa's (RBA) comprehensive inequality study in Sub-Saharan Africa. The study intends to contribute to the growing debates on inequality in the continent. Essentially, it aims to understand what factors explain trends in inequality and their positive and negative outcomes and to draw relevant policy lessons that could help the design and formulation of public policies and programs to address inequality in the continent.

Objectives of the study

The specific objectives of the research project are to:

(i) Provide a comparative analysis of inequality and examine several forms of elasticity of poverty and inequality across African countries and sub-regions;

(ii) Identify key factors responsible for the inequality and poverty changes observed in Sub-Saharan Africa during the last twenty years, so as to orient future policies towards inclusive growth. An important objective is to identify best practice policies and programs in countries that have experienced favourable progress on inequality trends over the past decade;

(iii) Examine empirically whether the countries which experienced a transition to democracy and the election of more accountable governments experienced improvements in growth and or inequality, and assess whether trade-offs (if any) between these two are unavoidable or can lead to win-win situations;

(iv) Analyze the relative importance of various economic, social and political factors in the observed changes in inequality and poverty in different clusters of economies; and

(v) Identify existing bottlenecks still impeding rapid progress such as dependence on commodity exports, weak industrial policy, reliance on volatile foreign savings, as well as other impediments that could hinder progress in sustaining an inclusive pro-poor growth in the future.

Project Management

The Project is coordinated by Ayodele Odusola, Chief Economist and Head of Strategy and Analysis Team, RBA, under the strategic guidance of Abdoulaye Mar Dieye, RBA Director and Assistant Administrator.

Growth, Poverty and Inequality Interactions In Africa: An Overview of Key Issues

Table of Contents

Authors: Haroon Bhorat, Karmen Naidoo and Kavisha Pillay.
All comments can be directed to haroon.bhorat@uct.ac.za

Views expressed in this paper do not necessarily represent those of UNDP, but those of the authors.

UNDP RBA Working Paper Series Vol 1, #1

I: Introduction

Africa's poverty challenge is well-known and widely researched. Approximately a third of the world's poor live in Africa. More recently, evidence shows that inequality may indeed be a more significant challenge in Africa than in other regions of the developing world. High levels of poverty and inequality persist in Africa in spite of it being one of the fastest growing regions in the last decade. In particular, six of the world's ten fastest growing economies during 2001-2010 were in sub-Saharan Africa (SSA) (The Economist and IMF, 2011). Specifically, the fastest growing economy in the world in this decade was Angola, followed by Nigeria, Ethiopia, Chad, Mozambique, Rwanda and Equatorial Guinea.

For Africa, the period from the 1970s through to the late 1990s can in general be considered lost decades since independence. This period has been characterized by: a combination of serious governance failures; low and sub-optimal investment in health, education and other social services; significant macroeconomic imbalances; poor infrastructure; and structural trade deficits. The post-2000 African economic boom, in contrast, has been built on a composite of factors, including technology (mobile in particular), demographic growth, urbanization and the rise of new dynamic African cities, improved macro-economic policy, enhanced regional cooperation and integration, better targeted social policy, and significant increases in the quality of governance and institutions. In turn, these factors have enabled the growth momentum on the continent to be maintained. Africa's socio-economic variables have not, however, matched this impressive economic performance; poverty and higher levels of inequality remain a feature of many African economies. Within this context, this paper aims to look more closely at the evolution of inequality on the continent over time, as well as some of its key drivers.

There are three stylized facts about the growth-poverty-inequality linkages that have emerged out of studies on developing economies, summarized well by Ferriera and Ravallion (2008). First, growth rates among developing countries are virtually uncorrelated with changes in inequality. Second, in the absence of the above relationship, there must be a strong relationship between growth and changes in poverty. Empirical evidence has strongly shown that faster growing economics reduce poverty more rapidly. Finally, high initial inequality reduces the poverty-reducing power of growth, and more so if inequality rises through the growth process. This paper will build on these stylized facts to shed light on the nature and size of, the changes in, and the drivers of inequality in the African context.

The structure of the paper consists of the following: Section I, which provides the introduction; Section II, which provides a brief review of the international literature on growth, poverty and inequality interactions; Section III, which explores the growth-poverty-inequality interactions in the African context and focuses on describing the shape and size of inequality in Africa; Section IV, which investigates in more detail the potential drivers of inequality in Africa; and Section V concludes.

II: Growth, Poverty and Inequality Interactions: A Brief Literature Review

There is very little debate, if any, among economists around the notion that a high level of economic growth is essential for poverty reduction. Indeed, increased growth rates, effectively measured by rising per capita mean incomes, would appear to make this link clear: rising growth rates will yield lower poverty levels in the society. Cross-country results indicate that the absolute value of the elasticity of poverty with respect to economic growth (as measured by the survey mean income or consumption) ranges from 1 to 5, with an average of 3 (Ravallion and Chen, 1997). Hence, there is strong evidence that economic growth is a necessary condition for poverty reduction. The range of values, however, suggests that some economies are more able to achieve pro-poor growth than others, indicating that economic growth is a necessary but not sufficient condition for poverty reduction.

One overriding factor in understanding the growth-poverty linkage is how it is intermediated through distribution of income. Once inequality is allowed to change in the modelling of the welfare consequences of economic growth, the impact on poverty is unclear (Kanbur, 2004; Kanbur and Squire, 1999). Indeed, arguably the most important welfare consequence from growth, in terms of its impact on poverty, is how this growth process impacts on the distribution of income. The consequent literature, driven by the work for example of Kakwani (1993); Datt and Ravallion (1992); Ravallion (2001; 1997); Ravallion and Datt (2002); Bourguignon (2002); and Kanbur (2005), have attempted, in different ways, to provide a more accurate and careful representation of the interaction between economic growth, poverty and inequality. The evidence thus far, while far from establishing a consensus view, arrives at the following key deductions on the basis of empirical, largely cross-country-based evidence. First, growth that is accompanied by a rise in income inequality will dissipate the impact of the former on poverty reduction. Indeed, this is more easily shown through simple theoretical cases, but it is true that the impact of economic growth on poverty depends on the extent to which inequality has increased. As Ravallion (2001) has indicated, spells of growth during the 1980s in a sample of economies including Bangladesh, China, Colombia, India, Philippines and Viet Nam, witnessed the dilution of the impact on household poverty through rising income inequality. The often apparently minor changes in the relevant inequality measure – usually the Gini coefficient – belie the dramatic impact that these shifts can have on poverty reduction outcomes from growth.

Second, evidence seems to suggest that the initial level of income inequality within an economy is important in predicting the magnitude of the impact of growth on poverty (Ravallion, 1997; Clarke, 1999; Ravallion, 2001; Adams, 2004). Specifically, higher levels of initial income inequality are likely to be associated with a lower impact on poverty from growth, all things being equal. This is to be expected, given that an initial maldistribution of physical, human and financial resources should make it much harder for the poor to participate in, and therefore gain from, the process of economic growth. Ravallion (2004), for example, illustrates through cross-country evidence how, at very high levels of initial income inequality within his sample, growth-poverty elasticities are not significantly different from zero. Indeed, this relationship is particularly important in our context here, given, as elucidated in greater detail below, the high Gini coefficients observed for sub-Saharan Africa (SSA) relative to many other regions of the world.

A final thread of the evidence linking poverty, economic growth and inequality revolves around the sensitivity of measures of income inequality to changes in economic growth. Hence, much of the international evidence here suggests that measures of income inequality do not alter significantly with economic growth (Li, Squire and Zou, 1998). The growth-inequality relationship therefore tends to be relatively inelastic, since large changes in growth rates are required for significant distributional shifts in a society (Kanbur and Squire, 1999; Kakwani, 1993). Notably, there is little if any consistent evidence of large and significant declines in inequality accompanying episodes of economic growth. In many cases, then, societies on a path of successive years of growth should expect more inelastic growth inequality outcomes than possibly that of growth and poverty.

The Africa-specific literature on the growth-poverty-inequality linkages is sparse. Fosu (2009) finds that, consistent with previous work, initial inequality differences can lead to substantial differences in the growth-poverty elasticity, not only between SSA and other regions, but also between countries within SSA. Recent work by Fosu (2014), which decomposes poverty changes during the early-1990s and the late 2000s for 23 African countries, shows that economic growth explains the majority of the changes in poverty for the group of countries experiencing poverty reduction. However, where poverty increased, inequality was more important in explaining the change. Importantly, even among those countries that experience declining poverty, for a few of them, declining inequality was the dominant factor. This heterogeneity points to the importance of country-specific studies. Each country's growth-poverty-inequality relationship is no doubt influenced by issues relating to natural resource dependence, conflict and fragility, and governance issues. However, currently, there is little systematic evidence of the evolution of growth-poverty or growth-inequality

elasticities within African economies that is influenced disproportionately by any one or combination of these factors.

III: Growth, poverty and inequality: The African context

In the last two decades, the high poverty levels in Africa and associated development issues have taken centre-stage in the African development literature. Much has been documented about changes in poverty levels, the growth-poverty elasticities and the macroeconomic drivers of poverty. Over this time, the issue of inequality has arguably been relatively neglected, possibly in part due to the lack of credible time series data on changes in the income distribution in African economies.[1]

The nature, size and pattern of inequality in Africa

More recently, it has increasingly been acknowledged that some of the most unequal economies in the world are in Africa. Using the Gini coefficient as the measure of within-country income inequality, Table 1 shows that the average Gini coefficient in Africa is 0.43, which is 1.1 times the coefficient for the rest of the developing world, at 0.39. Furthermore, the upper bound of the continent's range of Gini coefficients exceeds that of the developing world, indicating that extreme inequality is also a distinct feature on the African continent. Using another measure of income inequality, shows that, on average, the top 20 per cent of earners in Africa have an income that is over 10 times that of the bottom 20 per cent. For other developing economies, this average is below 9.

Table 1: Inequality in Africa vs. other developing economies

	Africa		Other developing countries		Difference
Gini					
Average	0.43	(8.52)	0.39	(8.54)	0.04**
Median	0.41		0.38		
Min	0.31 (Egypt)		0.25 (Ukraine)		
Max	0.65 (South Africa)		0.52*** (Haiti)		
Ratio of incomes: Top 20% / bottom 20%	10.18		8.91		
Average Gini coefficient					
Low-income	0.42	(7.66)	0.39	(11.84)	0.03
Lower-middle-income	0.44	(8.31)	0.40	(8.55)	0.05*
Upper-middle income	0.46	(11.2)	0.40	(8.29)	0.06*

Source: WIDER Inequality Database, 2014; World Development Indicators, 2014.

Notes: 1. Other developing economies have been chosen according to the World Bank classification of a developing economy, which includes a range of countries from Latin America, Asia and Eastern Europe.
2. The latest available data were used for each country (after 2000).
3. Standard deviations are shown in parenthesis.
4. The small sample size of other developing countries in the low-income group makes it difficult to determine statistical significance.

[1] The lack of strong statistical systems in most African countries prevents the adequate tracking of poverty and inequality trends at the national and sub-national levels, which also hampers the ability to clearly identify the determining elements behind these trends.

*** The highest gini coefficient in the "Other developing countries" category, at 0.61, is found in the small island nation of the Federated States of Micronesia, and has been excluded here for comparability purposes.
** Significant at the 5% level.
* Significant at the 10% level.

Therefore, while the extent of measured inequality may differ according to different measurement techniques, the overall message is that inequality in Africa is high in both absolute and relative terms. The notion of a cluster of high-inequality African economies is also an important component of this comparative exercise.

The distribution of Gini coefficients as illustrated in Figure 1 shows that the African distribution lies to the right of that of the rest of the developing world, which confirms the earlier observation that Africa's average levels of inequality are higher than other developing countries. In fact, 60 per cent (30 out of 50) of the African countries in this sample fall above the median Gini coefficient of all developing economies. In addition, Kolmogorov-Smirnov tests for equality of distributions are rejected at the 5 per cent level, suggesting that the distribution of inequality in Africa is distinct from that for the rest of the developing world.

Figure 1: The distribution of Gini Coefficients: Africa and other developing economies

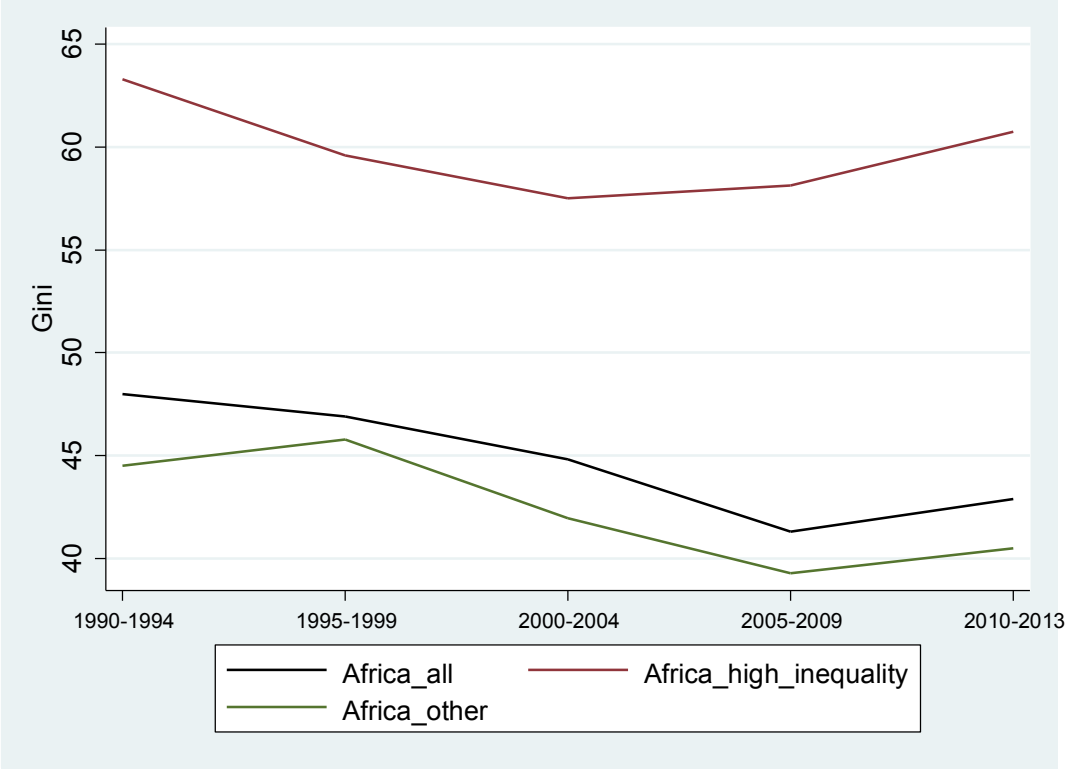
Source: *WIDER Inequality Database, 2014; World Development Indicators, 2014; own graph.*
Note: 1. The latest available data were used for each country (after 2000).
2. Kolmogorov-Smirnov tests for equality of distributions are rejected at the 5% level.

An outstanding feature of this graph is the prevalence of extreme inequality in Africa, which is not observed in other developing economies. There are 15 African countries in the fourth quartile of the entire distribution of Gini coefficients for all developing economies. Furthermore, there are seven outlier African economies that have a Gini coefficient of above 0.55: Angola, Central African Republic, Botswana, Zambia, Namibia, Comoros and South Africa. Some of these are Southern African middle-income countries (South Africa, Namibia, Botswana and Zambia), which all exhibit considerably high levels of inequality, with Gini coefficients within the 0.57-0.64 range. Notably, however, some of the fast-growing, populous countries on the continent such as Nigeria, United Republic of Tanzania and the Democratic Republic of the Congo, have significantly lower Gini coefficients of between 0.34 and 0.44.

Using the population data from the World Development Indicators (WDI 2014), the population weighted Gini for Africa was calculated as 0.41; around 10 per cent of the African population live in the seven most unequal economies. A further 50 per cent of the African population live in countries with a Gini coefficient in the range of 0.402 to 0.505.

Given the poor quality of historical economic data, it is difficult to assess the changes in inequality in Africa over time. However, the United Nations University World Institute for Development Economics Research (UNU-WIDER) world income inequality dataset (WIID) has compiled the best available Gini coefficients over time, which are used in Figure 2. The estimates show that for Africa, on average, there has been a slight reduction in the Gini coefficient from 0.48 during the early 1990s to the current level of 0.43 – an 11 per cent decline.

Figure 2: Movements in the Gini coefficient over time



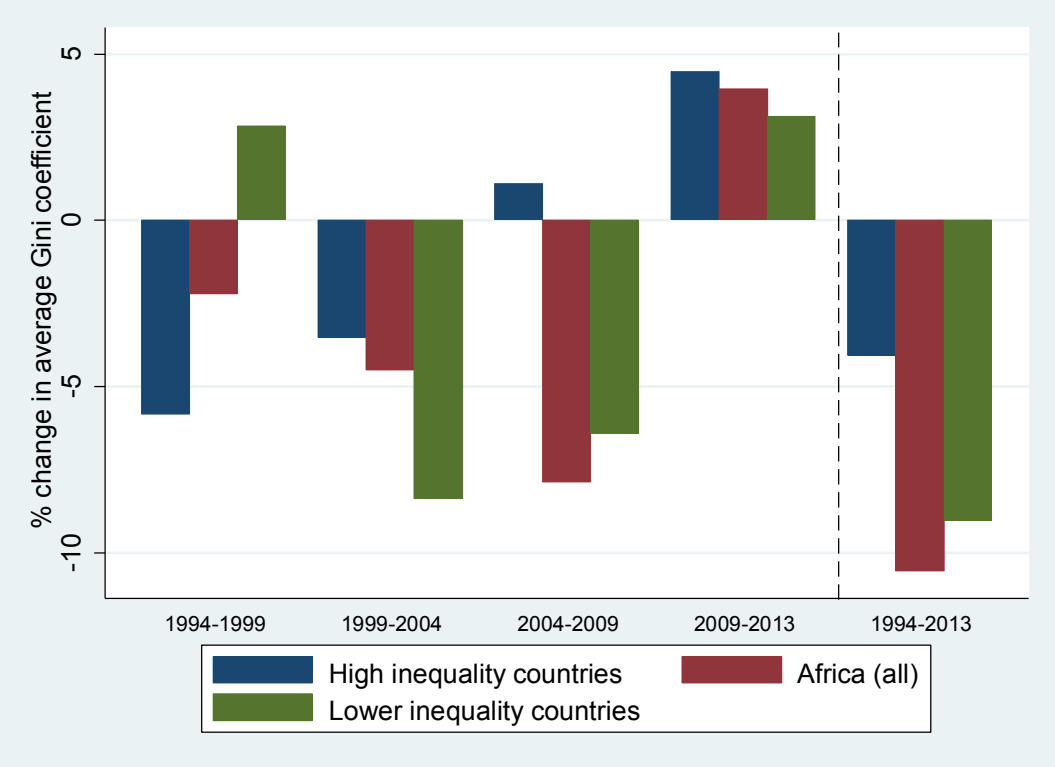
Source: WIID, 2014; World Development Indicators, 2014; own graph.

Note: 1. For the Africa average, the sample sizes per period are as follows: 27 countries (1990-1994), 24 countries (1995-1999), 38 countries (2000-2004), 28 countries (2005-2009) and 25 countries (2010-2013).

2. The high inequality countries are: Angola, Botswana, Comoros, Central African Republic, Namibia, South Africa and Zambia. The sample sizes per period are as follows: five (1990-1994), two (1995-1999), seven (2000-2004), three (2005-2009) and three (2010-2013).

When excluding the seven outlier African economies, it can be observed that the average Gini coefficient for the rest of the continent declines from 0.45 in the early 1990s to a current level of 0.40 (a 9 per cent decline). Notably, this latter average when compared with the data in Table 1 is almost equal to that of the rest of the developing world. In essence, the data here would suggest that it is the seven extremely unequal African countries, then, that are driving the results that place African inequality levels above that of other developing economies. The most recent Gini coefficients for these seven countries have an average of 0.51. Figure 3, in turn, emphasizes the fact that after 1999, the overall decline in inequality in Africa has been driven disproportionately by the decline in inequality of the 'low inequality' sub-sample of African economies. The cohort of 'high inequality' African economies have jointly served to restrict the aggregate decline in African inequality.

Figure 3: Rates of change in inequality in Africa



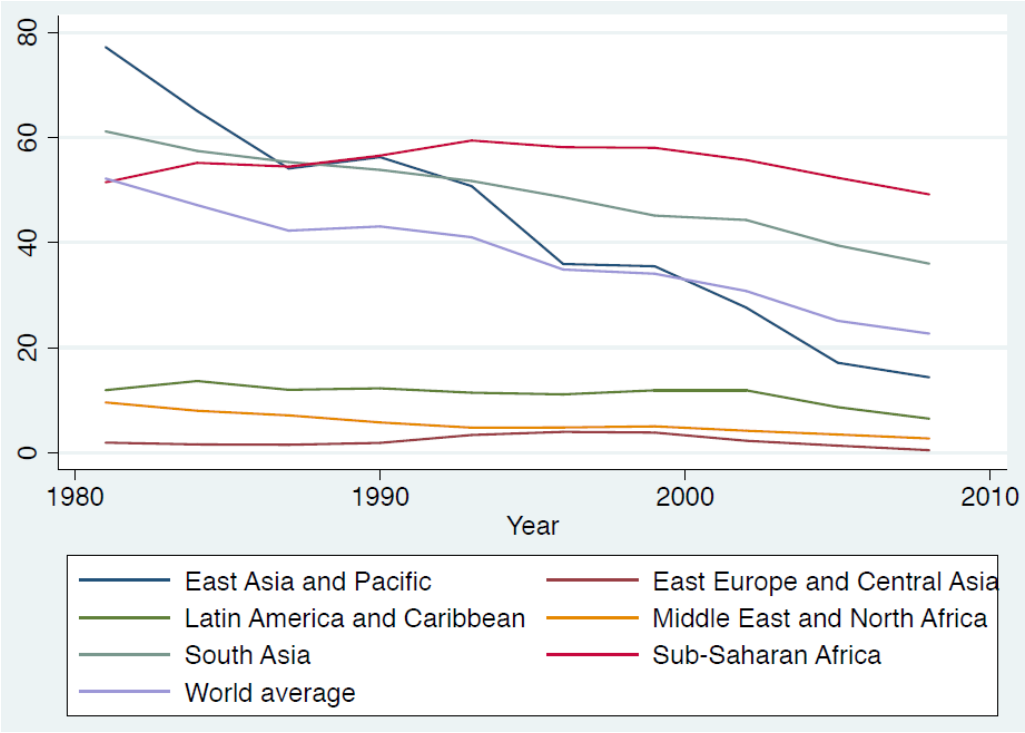
Source: *WIID, 2014; World Development Indicators, 2014; Own graph.*

Note: 1. For the Africa average, the sample sizes per period are as follows: 27 countries (1990-1994), 24 countries (1995-1999), 38 countries (2000-2004), 28 countries (2005-2009) and 25 countries (2010-2013).

2. The high inequality countries are: Angola, Botswana, Comoros, Central African Republic, Namibia, South Africa and Zambia. The sample sizes per period are as follows: five (1990-1994), two (1995-1999), seven (2000-2004), three (2005-2009) and three (2010-2013).

These averages, however, hide much of the variation observed across different countries. Figure 3 plots the Gini coefficient for a few African countries where there are sufficient data points, and it is clear that countries such as Egypt, Malawi and Madagascar have witnessed a narrowing of the income distribution over time, whereas Côte d'Ivoire, South Africa and Uganda have experienced a rise in inequality since the 1990s. According to the available data, South Africa remains the most unequal African country, and indeed, one of the most unequal in the world.

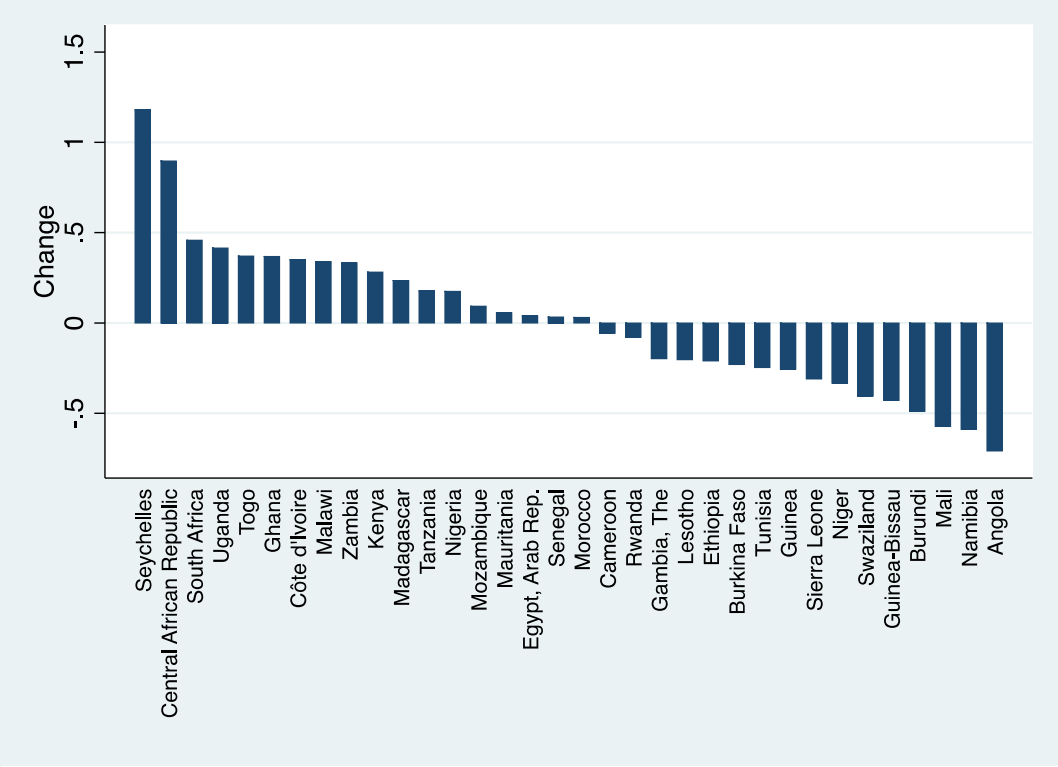
Figure 4: Trends in the Gini coefficient, selected African economies



Source: WIID, 2014; World Development Indicators, 2014; own graph.

Figure 4 shows another way to reflect on these idiosyncratic changes to inequality in Africa over time. This graph illustrates the changes in income inequality over a 20- year period (1990-2010) for 34 African countries. For 18 countries in this sample, income inequality, as measured by the ratio of income share of the top 20 per cent to the bottom 20 per cent, has been rising.

Figure 5: Change in inequality in Africa (top 20%/bottom 20%), earlier observation (1990s) vs. latest observation (2000s)

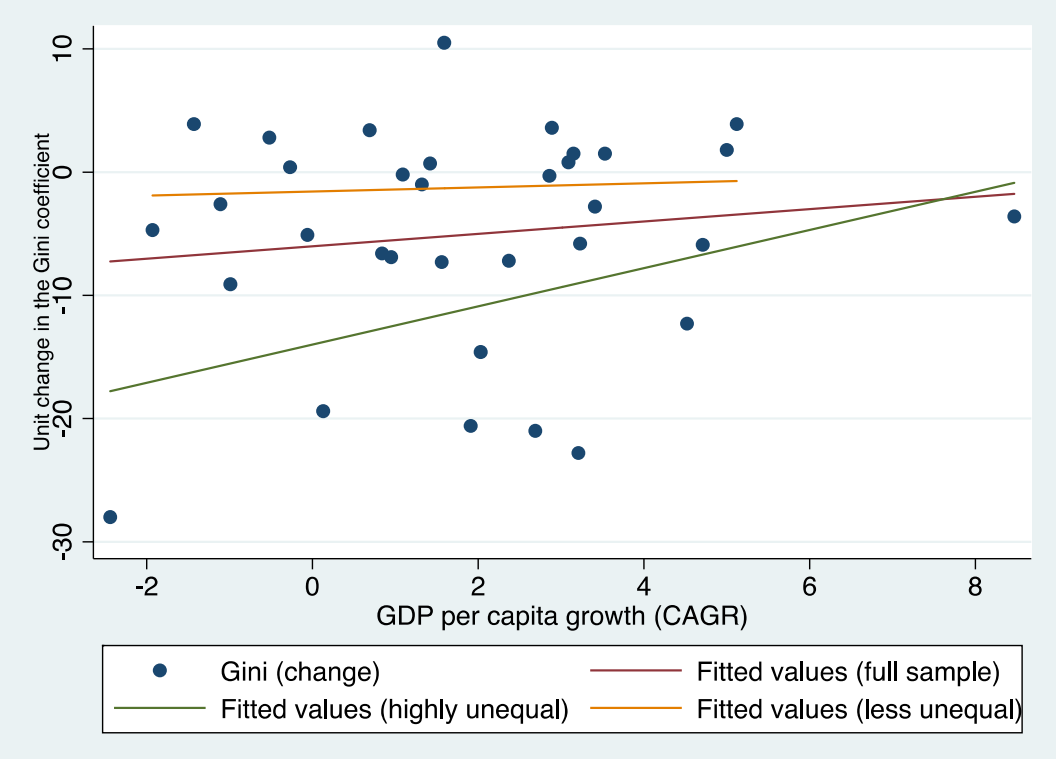


Source: World Development Indicators, 2014.
Note: Ratio is calculated as top 20%/bottom 20% over time.

In addition to Angola, Ethiopia and Sierra Leone, many of the continent's fastest growing economies have also witnessed rising inequality over time. A review of the literature confirms this heterogeneous experience of African countries regarding the changes in the Gini coefficient over time. Bigsten and Shimeles (2004) analyse trends in inequality in a many African countries, primarily over the 1990s, and find very mixed results. In nine of the 17 countries in their dataset, the Gini coefficient decreased; in six countries, it increased; and in two, it stayed almost the same. Their analysis is problematic given the variation in time periods for different countries – for example, for Kenya, changes over only two years were examined, whereas for Ethiopia, over 14-year time period. Nonetheless, individual country studies have revealed varying changes in inequality over a number of African countries such as United Republic of Tanzania (Demombynes and Hoogeveen, 2004), Nigeria (Canagarajah and Thomas, 2001), Uganda (Appleton, 1999; Ssewanyana et al. 2004) and Zambia (McCulloch et al. 2000).

Reliable time-series data for individual countries are required to fully understand whether there may be some kind of Kuznets turning point in the evolution of inequality over time in Africa. While the threshold level at which inequality is expected to decline is not known, the cross-country evidence in Table 1 shows no reversal in income inequality as African countries progress to upper-middle income status. Supporting this view, earlier work in 1990s analysing growth spells in Africa find no such Kuznets effect (see Fields, 2000 for a review of this literature), and in these studies, half of the growth spells were associated with increased inequality and in the other half, inequality decreased. To conclude, it is neither the rate of economic growth nor the stage of development, but the sources of growth that really matter in our assessment of the relationship between economic growth and inequality.

Figure 6: Change in GDP and Gini coefficient (early 1990s vs most recent), Africa



Source: *WIID, 2014; World Development Indicators, 2014.*
Note: Authors have calculated the changes in the Gini coefficient and the GDP per capita growth rates over time.

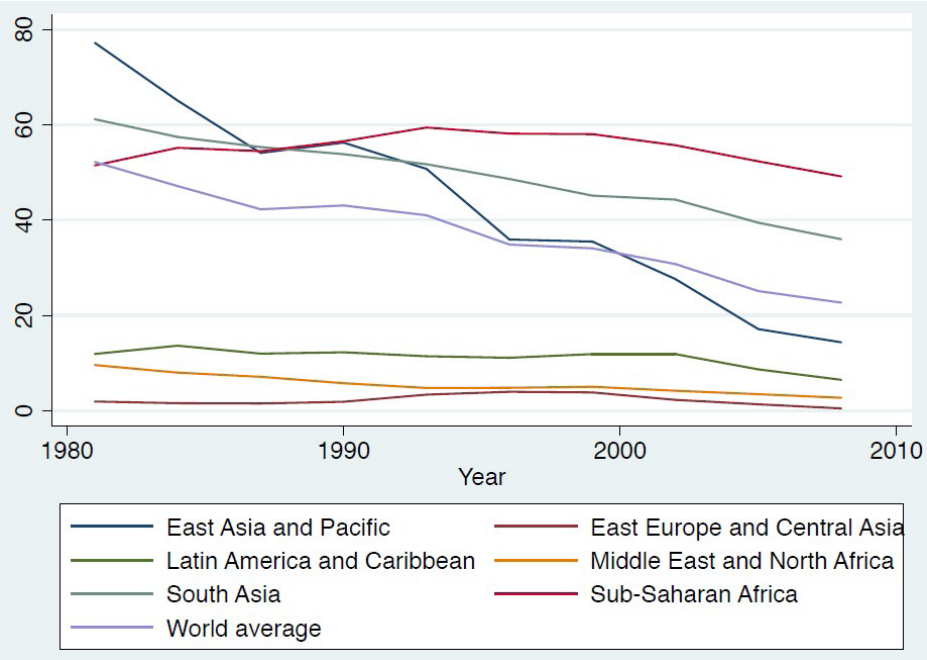
Figure 6 shows that there is a weak relationship between the rate of economic growth and the change in the Gini coefficient for a large sample of African economies. However, the relationship is visibly stronger for the subset of economies that have an initially high Gini coefficient,[2] as represented by the green fitted line. In addition, the correlation between initial inequality and current inequality for the above sample of African countries is statistically significant, at the 1 per cent level, with a magnitude of 0.56. These results only show that initial inequality can potentially explain a large proportion of the current levels of inequality, emphasizing the path-dependent nature of the phenomenon. It would also follow, then, that not only do the sources of growth matter for inequality, but so do initial conditions.

The synthesis of the authors' own observations and the findings in the literature point to a set of early conclusions. First, it is difficult to derive a clear and consistent storyline around the nature and pattern of inequality across Africa given the substantial variation in both levels and changes over time. Second, it can be suggested although the data provisionally point to the fact that inequality has on average declined in Africa, it is driven mostly by the economies not classified as highly unequal. Third, Africa has a higher mean and median level of inequality than the rest of the developing region. Fourth, an important feature of inequality on the continent is the presence of the "African outliers": seven economies exhibiting extremely high levels of inequality. When excluding these African outliers, it is evident that Africa's level of inequality approximates those of other developing economies. Finally, estimating the relationship between growth and inequality suggests that for countries with initially high inequality, there is a stronger relationship between economic growth and inequality.

Africa's growth-poverty-inequality nexus

Despite the remarkable macroeconomic performance of Africa over the last decade, the continent has fallen behind in its goal of poverty reduction. While extreme poverty has fallen since 1990, almost 50 per cent of Africa's population (413 million people) continue to live below the extreme poverty line. Figure 7 shows that poverty is now falling in Africa, but not as rapidly as in South and East Asia. This has resulted in Africa's share of global poverty increasing from 22 per cent in 1990 to 33 per cent in 2010 (Africa Progress Panel, 2014).

Figure 7: Poverty headcount ratio in different regions of the world



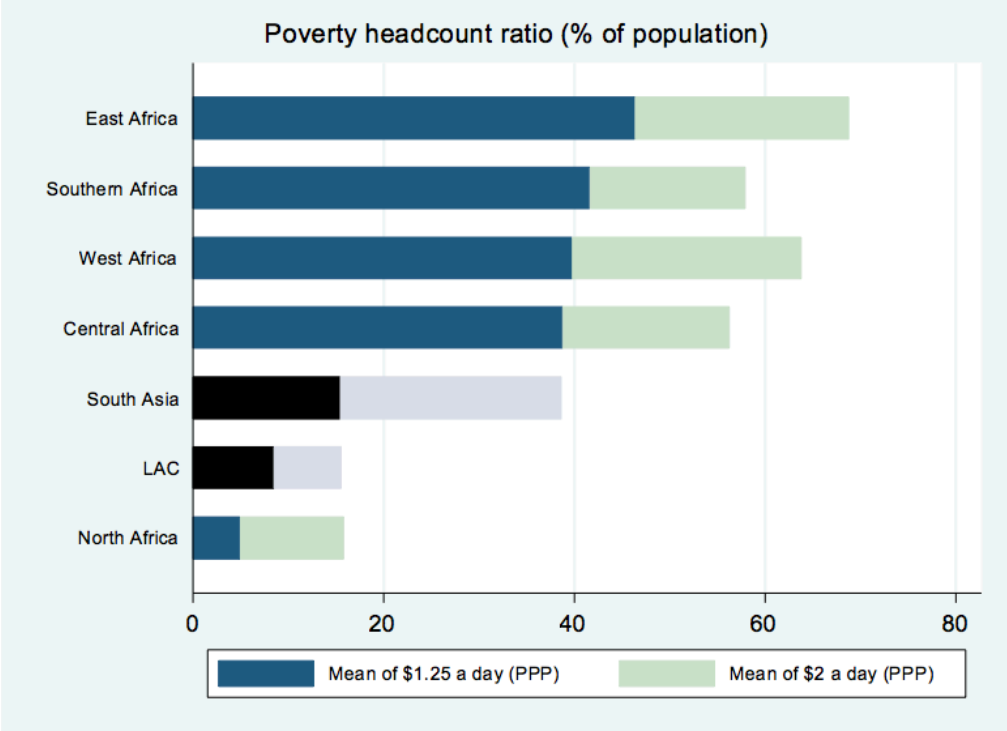
Source: World Bank, 2014, PovcalNet; own graph.

[2] A Gini coefficient of above 0.5 in the 1990s.

Across most of Africa, except North Africa, the proportion of the population living below the extreme poverty line is similar on average, at 39-46 per cent of population (Figure 7). This is significantly higher than the poverty rates in the other developing regions of South Asia and Latin America and the Caribbean (LAC). For example, the proportion of people living in extreme poverty in Central Africa is 2.5 times that of South Asia and 4.6 times that of LAC. Clearly, there are marked variations in poverty levels across the different countries. Four of the most populous countries in Africa, Nigeria, Ethiopia, the Democratic Republic of the Congo and Tanzania, are home to almost half of Africa's poor, which inextricably links Africa's progress in reducing poverty to the performance of these countries.

Furthermore, the depth of poverty in Africa is more extreme. For those living below the poverty line in Africa, the average consumption level is only US$.70 a day, considerably below the level in other regions, which are all nearly approaching the $1 a day level (Africa Progress Panel, 2014). This can also be seen in Figure 8, where around two-thirds of the population in the four African regions, excluding North Africa, living below the $2 a day poverty line are living in extreme poverty; around one-third live on $.25 to $2 a day. In contrast, in South Asia, 60 per cent of the poor live on average incomes between $1.25 and $2 a day.

Figure 8: Poverty rates across Africa, LAC and South Asia, 2010



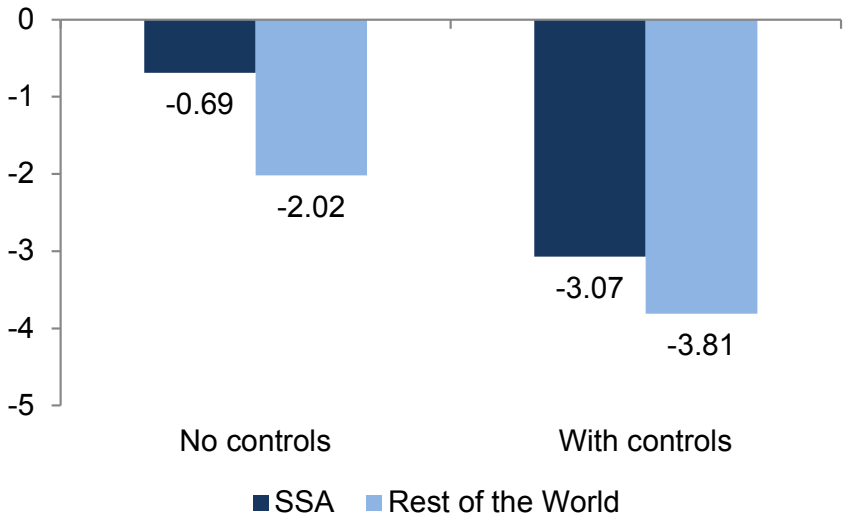
Source: *World Bank, 2014, PovcalNet.*
Note: Authors calculated average poverty rates per region using the United Nations regional classifications.

Clearly, there are obstacles to Africa's poverty reducing power of growth. Indeed, the estimated growth elasticity of poverty in the two decades since 1990 in SSA is -0.7, which implies that a 1 per cent growth in consumption is estimated to reduce poverty by 0.7 per cent (Figure 9). For the rest of the world (excluding China), however, this elasticity is substantially higher, at -2.

An important factor mediating the growth-poverty relationship is, expectedly, inequality. Higher initial inequality has been shown to hamper the poverty-reducing effects of growth (Ravallion, 1997; Fosu, 2009). In particular, Fosu (2009) calculates the income-growth elasticities for 30 countries in SSA over the 1977-2004 period and reveals substantial variation in the estimates, from 0.63 in Namibia, a highly unequal country, to 1.4 in Ethiopia.

In addition, as noted above, it is not only growth that matters, but also where the sources of growth are located. Evidence has shown that growth in labour-intensive sectors such as agriculture or manufacturing are typically more poverty-reducing than growth in capital-intensive sectors such as mining (Ravallion and Datt, 1996; Khan, 1999; Ravallion and Chen, 2007; Loayza and Raddatz, 2010). The growth path of many African economies where resource extractive industries are dominant would thus be an important determinant of the observed low growth-poverty elasticities for the region.

Figure 9: Growth elasticity of poverty



Source: *World Bank (2013b) based on Christiaensen, Chuhan-Pole and Sanoh (2013).*
Note: Controls include initial consumption, inequality and an indicator for a natural resource share >5% of GDP. Country fixed effects are controlled for in all results.

Supporting the importance of these factors, it can be observed that when they are controlled for through a variety of variables, the growth elasticity of poverty in SSA approaches that of the rest of the world (Figure 9). The impact of growth on poverty reduction is lower when initial inequality and mineral resource dependence are higher (World Bank, 2013b).

High and rising levels of inequality is an important hindrance to poverty alleviation on the continent, arguably the biggest development challenge of the century. The following sections uncover some of the important drivers of inequality in Africa, within which it is argued, resource-dependence plays a central role.

IV: Drivers of inequity in economic growth patterns

Despite the recent growth rates recorded in Africa, there is a genuine concern regarding the long-term sustainability of Africa's rapid economic expansion and importantly, whether this high growth at the country level can be translated into achieving key development objectives, such as poverty reduction, a more equitable distribution of income, enhanced human capital accumulation, and improved infrastructure. The drivers of economic growth are then critical to understanding whether growth is likely to be sustainable, and more importantly, more inclusive. Economic theory and cross-country experience have indicated that a more diverse economic base increases the probability of a sustained economic performance at the country level. This is also true because it more likely that the gains from growth driven by a more diverse range of economic sectors will be more equitably distributed. As discussed below, a more equitable income distribution results in a middle-class that is able to act as the driver of domestic consumption.

Structural transformation is the reallocation of labour from low- to high-productivity sectors, and the rate of this change can boost growth significantly. In Rodrik's (2014) typology of growth processes, it can be observed that rapid industrialization or structural change to high-productivity sectors can quickly shift countries into middle- or upper-income status. This highlights his evidence that modern manufacturing industries exhibit unconditional convergence to the global productivity frontier (Rodrik, 2014). This is the classic pattern of growth in low-income countries where surplus labour moves from agricultural activities to industrial jobs, spurred by an export-led economic diversification strategy. In the later stages of this development process, however, growth begins to disproportionately rely on fundamental capabilities such as the availability and quality of institutions and human capital. For countries further along in the development process (i.e. middle-income countries), growth tends to be more capital- and skills-intensive, and more reliant on the services sector. In these countries, domestic demand is a key element of sustaining economic growth, and therefore, the impact that growth has on the distribution of income, insofar as it affects the size of the middle class, is an important growth challenge (Kharas and Kohli, 2011). In the first section, it was evident that several middle-income Southern African economies exhibit high levels of income inequality, which points to a small middle-class, and that these economies have been growing at rates below comparator countries. It is in these contexts that the complexity of the growth-inequality-poverty nexus is fully revealed.

In Africa, the agricultural sector remains an important contributor to GDP, particularly in West, East and Central Africa, where it contributes 29 per cent, 36 per cent, and 40 per cent of GDP, respectively (Table 2). Over time, however, there has been a gradual shift away from the traditional agricultural sector, but not towards manufacturing as in the classic pattern of economic development, as experienced by the European industrialisers and more recently, East Asia. Where industry[3] has grown in Africa, it is dominated by mining activities, which indicates there has been a considerable decline in manufacturing value added since the 1990s and 2000s across the continent. In contrast, the tertiary services sector has absorbed most of the shift away from agriculture, becoming the largest share in GDP for most parts of the continent.

[3] Industry comprises value added in mining, construction, electricity, water, gas and manufacturing – the last of which is also shown separately in the table.

Table 2: Sectoral breakdown of economic activity in Africa, 1990, 2000 and 2010-2012

Region	Sector	1990	2000	2010	2011	2012	1990-2000 change	2000-2012 change
North Africa	Agriculture (% of GDP)	21.46	18.81	14.18	14.33	14.95	-2.65	-3.87
	Industry* (% of GDP)	31.83	34.40	35.59	35.65	35.69	2.58	1.29
	of which: Manufacturing (% of GDP)	15.17	14.28	13.87	13.93	12.89	-0.89	-1.38
	Services (% of GDP)	46.71	46.78	50.24	50.02	49.36	0.07	2.58
West Africa	Agriculture (% of GDP)	34.97	34.47	31.27	29.54	28.83	-0.50	-5.64
	Industry (% of GDP)	21.82	23.41	22.37	24.47	29.18	1.59	5.77
	of which: Manufacturing (% of GDP)	9.56	8.91	6.00	5.87	5.99	-0.65	-2.92
	Services (% of GDP)	43.21	42.12	47.26	47.12	43.08	-1.10	0.96
East Africa	Agriculture (% of GDP)	39.91	32.74	32.63	32.92	35.95	-7.17	3.21
	Industry (% of GDP)	16.60	16.58	18.45	18.65	17.06	-0.02	0.49
	of which: Manufacturing (% of GDP)	8.82	7.81	8.41	8.26	7.84	-1.01	0.03
	Services (% of GDP)	43.49	50.68	48.92	48.43	46.99	7.19	-3.69
Central Africa	Agriculture (% of GDP)	30.83	25.01	32.32	32.13	39.73	-5.83	14.72
	Industry (% of GDP)	27.26	38.49	36.71	37.90	27.59	11.23	-10.90
	of which: Manufacturing (% of GDP)	10.97	7.05	4.06	4.13	4.35	-3.91	-2.71
	Services (% of GDP)	41.91	36.51	30.97	29.97	32.68	-5.40	-3.83
Southern Africa	Agriculture (% of GDP)	18.44	14.68	12.15	11.78	9.15	-3.76	-5.54
	Industry (% of GDP)	34.68	33.21	32.84	32.98	31.73	-1.47	-1.49
	of which: Manufacturing (% of GDP)	17.92	15.39	14.78	14.16	11.44	-2.53	-3.95
	Services (% of GDP)	46.88	52.40	55.01	55.24	59.13	5.52	6.72

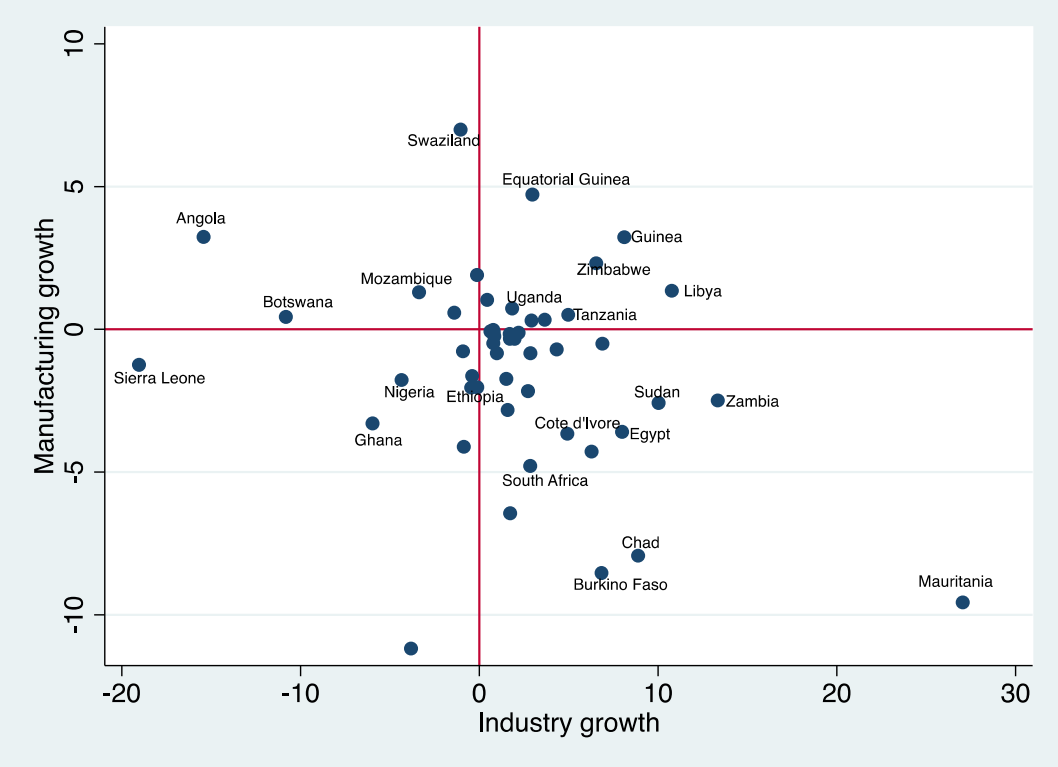
Source: World Development Indicators, 2014 and own regional average and change calculations.

Note: Industry corresponds to ISIC divisions 10-45 and includes manufacturing (ISIC divisions 15-37). It comprises value added in mining, manufacturing (also reported as a separate subgroup), construction, electricity, water and gas.
* Industry corresponds to International Standard Industrial Classification (ISIC) divisions 10-45 and includes manufacturing (ISIC divisions 15-37). It comprises value added in mining, manufacturing (also reported as a separate subgroup), construction, electricity, water and gas.

A closer examination of the dynamics of the secondary sector across African economies shows that, at an individual country level, only 15 of the 50 African countries included in this sample have increased the share of manufacturing in GDP since 2000, with many of the changes of a small magnitude (Figure 10). Figure 10 plots the change in manufacturing as a percentage of GDP against the change in mining and utilities as a percentage of GDP over the 2000-2010 period. A process of positive structural change over this ten-year period would be one where there is a shift from mining value added toward manufacturing value added – represented by quadrant one. Only six African countries in our sample fall into this category. In contrast, the figure shows that in most African economies – 35 out of 50 here – mining and utilities have seen a rising share in GDP over the period. The fast growing, resource-rich economies of Zambia, Burkina Faso, Chad, Guinea, and Côte d'Ivoire have witnessed some of the largest shifts of economic activity toward these two sectors. Conversely, there are also the fast-growing economies of Angola, Nigeria, Ghana and Mozambique that have seen large declines in mining and utilities over this period. However, these are economies that are starting off on an initially very

high base, since they yield very large shares of mining in GDP. For example, for Angola and Nigeria, mining and utilities continue to contribute up to 53 per cent and 44 per cent of GDP, respectively.

Figure 10: Change in industry and manufacturing as shares of GDP, percentage points (2000-2010)



Source: *World Development Indicators, 2014 and own calculations regarding the changes over time.*

Notes: 1. Industry comprises value added in mining, construction, electricity, water and gas. Manufacturing has been removed from this category and represented separately.

2. For some countries where 2010 data was not available, the latest available year after 2005 was used.

Overall, Africa's transition out of the primary sector predominantly into tertiary sector activities has not resulted in preferred economic development outcomes. This is because these activities are largely informal and not particularly productive. Hence, the growth of these largely informal sector activities are concentrated in low productivity areas of economic activity. In attempting to calibrate this shift, McMillan, Rodrik and Verduzco-Gallo (2014) estimate that structural change in Africa between 1990 and 2005 made a sizeable negative contribution to overall economic growth by as much as 1.3 per cent per annum on average.[4] Labour has moved in the wrong direction, toward less productive sectors.

Importantly, there is substantial heterogeneity in these African results. Nigeria and Zambia both exhibit negative structural change effects over the same 15-year period, where in both countries, the employment share of agriculture increased significantly. In Ghana, Ethiopia and Malawi, however, structural change over the 1990-2005 period was positive, in which the employment share of agriculture declined and that of manufacturing increased (MacMillan et al. 2014).

[4] A similar result was found for Latin America. Asia was the only of the three regions where the contribution of structural change to economic growth over this period was positive.

Africa's growth path is therefore characterized by: being heavily dependent on natural resources: having experienced a poor performance of the manufacturing sector, that has the ability to absorb excess labour into higher-productivity sectors; and having an over-reliance on subsistence farming. Agricultural activities in Africa are largely low productivity activities, but retain a significant contribution to employment in many African countries. Furthermore, the skewed nature of land ownership and access to agricultural land is likely to have an important impact on incomes in rural areas. Although data on public investment in agriculture are sparse, data for 12 African countries show that only 3.2 per cent of total agricultural land is irrigated and the use of machinery (i.e. tractors) is limited in this sample of economies (WDI, 2014). Thus, the benefits of economic growth are accrued to more capital-intensive sectors. This lack of economic diversification, particularly where there is a dependence on natural resources, makes African economies more vulnerable to external shocks. This may lead to a more volatile macroeconomic environment, which the poorest people are most vulnerable to.

Positive structural transformation is relevant to the discussion on inequality since a vibrant manufacturing sector will generate a large number of labour-intensive firms, which in turn boost wage employment. This would compress the wage distribution and hence decrease income inequality. In contrast, capital-intensive sectors have the potential to generate higher economic growth, but fewer jobs. Therefore, depending on the nature of the growth-inequality relationship in each economy (impacted by the sources of growth and initial conditions), either of the above growth paths can have a different impact on the distribution of income.

V: Drivers of inequality in Africa: Microeconomic and institutional considerations

The section above clearly emphasizes the role of the economic structure and the location of sources of growth within it in impacting on the income distribution of an economy. Furthermore, the paper has highlighted the importance of initial levels of inequality in determining the evolution of inequality throughout the growth process. For Africa, these two drivers of inequality are often highly connected.

A historical institutional perspective provided by Acemoglu, Johnson and Robinson (2001), Acemoglu and Robinson (2010) and Bratton and van der Walle (1997) is summarized here. According to this literature, Africa has historically lagged behind in terms of institutional formation. An important factor behind Early Modern Europe's sustained economic growth was the reform of the state that moved away from absolutism (i.e. where the power of the ruler is absolute and unconstrained by institutions (Acemoglu and Robinson, 2010) and patrimonialism (i.e. where the state is associated with the person of the ruler such that there is no distinction between the wealth or assets of the ruler and that of the state). While this transition was taking place in Western Europe, absolutism and patrimonialism were persisting in Africa and perhaps even intensifying. Thereafter, the 17th and 18th century intensification of the Atlantic slave trade catalysed warfare across the continent and fuelled the import of guns and ammunition that Europeans exchanged for slaves. This conflict and slavery had perverse effects on domestic economic and institutional formation, and distorted the incentives of those in power: institutions become "perverted by the desire to capture and sell slaves" (Acemoglu and Robinson, 2010: 30). The end of the slave trade reduced the external demand for slaves, but gave rise to "legitimate commerce" – i.e. the export of African commodities to global economic powers – to which those who would have been sold as slaves were put to work in extractive industries. The subsequent impact of the European colonial period during the 19th century was to reinforce Africa's institutional path, remove the possibility of any endogenous institutional reform, and create the "dual economy". There was very little possibility for most Africans to transition from the traditional economy to the modern economy, or even acquiring the means to do so, such as education.

Post-colonial Africa has largely been unable to reform the absolutist structures that were imbedded in colonial political and institutional systems. These ideas rely on a form of path dependence. Furthermore, European

colonial powers arbitrarily put together very different ethnic groups of people and created countries that would be difficult to govern and vulnerable to conflict in the post-colonial period.

It is also important to note that ethnic fractionalization remains a driver of horizontal inequalities since it impacts on the way the state implements policies and provides public goods and services (Stewart, 2002). Using data from 18 SSA countries, Jackson (2013) shows that, in ethnically diverse communities, access to water, electricity and education is lower. For education, in particular, he finds that those belonging to the dominant ethnic group have higher access to education rates. The reasons driving this could be that the language of instruction at schools disadvantages minority children and reduces the value of their education. Another reason could be that minority groups have inferior labour market opportunities, lowering the returns to education for them relative to majority groups. Alwy and Schech (2004) confirm this finding for Kenya, where they show that access to education is higher and the quality of education is better in the provinces from which the ruling elite came from.

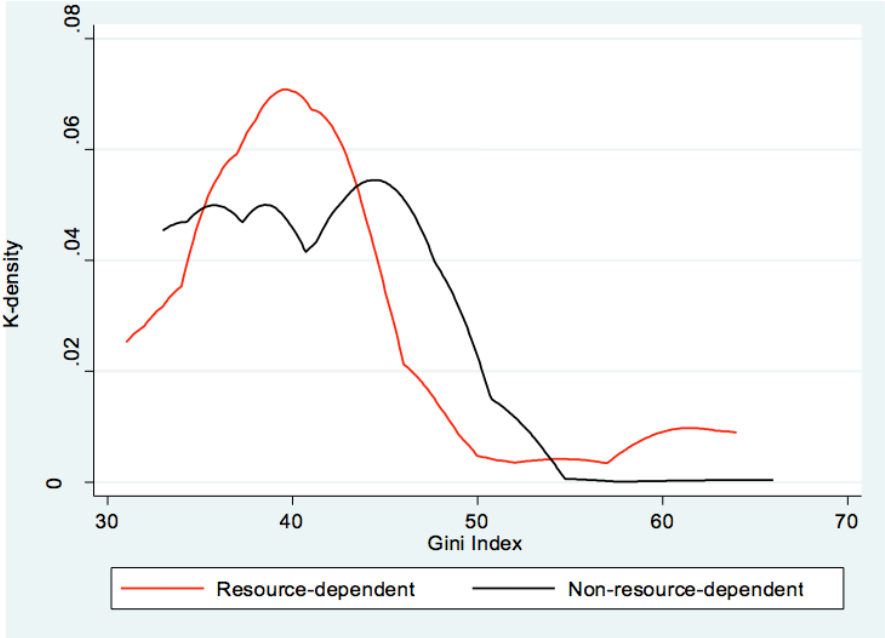
Finally, ethnic diversity has been shown to affect the ability of a community to act collectively. Collective action within ethnic groups has been shown to be more efficient than that between groups, and in effect, individuals in diverse communities are less willing to contribute to the public good (Vigdor, 2004; Miguel and Gugerty, 2005). This impacts on communities' ability to act together to hold governments accountable, thus perpetuating historical horizontal inequalities.

In summary, the high levels of initial inequality in SSA is related to how the natural endowments in the region shaped the nature of colonial institutions (van der Walle, 2009; Bigsten and Shimeles, 2004). These created the conditions for the high levels of inequality found today. High levels of inequality post-independence in many African economies, it is argued, resulted largely from the fact that there were small European populations (that still retained wealth), small highly extractive administrations and a focus on law and order rather than economic development. Upon independence, then, wealth was transferred to only a small group of African elite. Furthermore, there were sub-national tensions (ethnicity, religion and/or race) that further determined the initial distribution of resources and may continue to determine the provision of public goods and access to labour market opportunities. Within this context, this section will thus attempt to explore in more detail the role of extractive industries in driving inequality in Africa, primarily through its impact on governance.

Natural resources and inequality

Figure 11 shows the distribution of inequality, as measured by the Gini index on the x-axis, across resource- and non-resource-dependent countries in Africa, plotted in red and black, respectively. The distributions are weighted by the size of each country's population, which is measured on the y-axis. The graph shows that for the bulk of countries in Africa, the Gini coefficient ranges from 0.3 to 0.5. While the average levels of inequality are relatively similar between resource- and non-resource-dependent economies, there is clearly a difference at the upper end of the inequality distribution: there are a number of resource-dependent countries with very high levels of inequality, close to and above 60. This suggests that while there is no clear link between inequality and resource-dependence on average, there is a greater risk of high inequality outcomes in resource-dependent economies.

Figure 11: Resource dependence and inequality



Source: World Bank WDI, PovcalNet; own calculations of the population weighting of the Gini coefficient.
Notes: 1. Kolmogorov-Smirnov tests for equality of distributions cannot be rejected at the 5% level.
2. Data weighted by population and based on latest available Gini coefficient

Moreover, it will be shown that one of the key problems for resource-dependent countries is not that they lack the revenues to achieve a more equitable growth path, but rather, that chronic governance and institutional failures prevent the effective use of large resource rents. One example is the lack of controls and safeguards needed to manage revenue flows from extractive industries so as to curb enormous illicit revenue outflows, which could cover health and education budgets many times over.

Drivers of inequality in resource-rich countries

It has been widely reported that the commodity boom over the past decade has fuelled impressive growth performances in many African economies. However, this has not always translated into welfare gains for the populations of these economies. Due to rapidly rising income levels within highly unequal societies, the gains to growth have disproportionately accrued to the few richest, resulting in high levels of inequality and the widespread failures to meet many development targets, even by middle-income countries like South Africa. Some of the important ways in which the reliance on extractive industries can drive within-country inequality are outlined below.

The cross-country evidence of the monotonic effect of resource-dependence on growth and development is inconsistent (Robinson, Torvik and Verdier, 2006), and there is a growing body of literature to suggest that the quality of institutions is critical in determining whether or not natural resources are a curse. The link between growth driven by the extractive industry and inequality is mediated through governing bodies and institutions. There is therefore some evidence to suggest that the impact of resources on development is mainly indirect, through the channels of institutional quality (Bulte, Damania and Deacon, 2005). The state is arguably the most important agent that can catalyse the redistribution of income in highly unequal societies by implementing fair fiscal policies (including progressive tax collection and spending in quality public services) and regulating market structures.

There is no established literature on which to draw regarding the channels through which resource-dependence and institutions interact, but there are logical expositions as well as country examples that

guide our understanding. There are some studies that suggest that resource abundance can be a blessing for countries with good institutions and a curse for those with bad institutions (Mehlum, Moene and Torvik, 2006). A view that extends this further, suggests that the institutional setting of a country is endogenous and changes with respect to resource endowments (Jensen and Wanchekon, 2004). In this vein, the findings of an important study by Jensen and Wanchekon (2004) on Africa show that natural resource dependence can have a serious negative impact on both democratic transition and democratic consolidation (Collier and Hoeffler, 1998). From the period 1970 to 1995, African countries with higher levels of resource dependence tended to be more authoritarian and were associated with higher government consumption and worse government performance. After an initial wave of democratization on the continent, more highly resource-dependent countries slid back into authoritarian rule.[5] Finally, there has been recent cross-country evidence that the causality runs from weak institutions to resource-dependence since these countries are unlikely to develop non-primary production sectors (Brunnschweiler and Bulte, 2006).

According to Freedom House's 2014 report, Political Rights,[6] the scores of 55 African countries show that the most highly resource-dependent countries have the worst performing scores on average regarding the electoral process, political pluralism and functioning government (Table 3). Most of the countries in this group of countries are not considered "free" according to Freedom House's scoring methodology.

Table 3. Resource dependence and political rights

Resource-dependence	Political rights score (from 1 to 7, 1 being the best score)
Highly dependent (80-100%): 13 countries	5.62
Dependent (50-79%): 5 countries	4.20
Weakly dependent (25-49%): 17 countries	3.88
Not dependent (<25%): 20 countries	4.58
Total average	4.58

Source: Freedom House's Freedom in the World 2014 report; Own calculations regarding the average per resource-dependence status.

While there may not be a linear relationship between resource-dependence and degree of political rights, there is some evidence that highly-resource dependent economies are associated with lower levels of civil society engagement, less transparent electoral process and a less effective government. In sum, high resource-dependent economies are significantly more likely to be undemocratic than their African counterparts. Furthermore, the 13 countries that make up the top category include some of Africa's most populous countries such as Nigeria, the Democratic Republic of Congo and Algeria, which account for almost one-third of Africa's population in total.

Due to the lack of robust empirical work on the subject, the causality in the resource-governance link is poorly understood. One direction of causality runs from the discovery of natural resources leading to weakened institutions given the opportunity for the political capture of rents. This is independent of whether the country had initially strong or weak institutions. Over the last five years, there has been much optimism about new natural resource discoveries in the East Africa Rift Valley (oil) as well as natural gas off the coasts of Kenya, United Republic of Tanzania and Mozambique. While this represents a major opportunity for this subregion, there are already worries about whether resource revenues will be used for the benefit of the majority.

[5] A key example is Angola, where the civil war began immediately after independence in 1975 and continued intermittently for 26 years, even after the country adopted a new constitution and transitioned to democratic rule in 1992.

[6] For each country, this is an average of scores on the following three indicators: (i) Electoral Process; (ii) Political Pluralism and Participation; and (iii) Functioning Government.

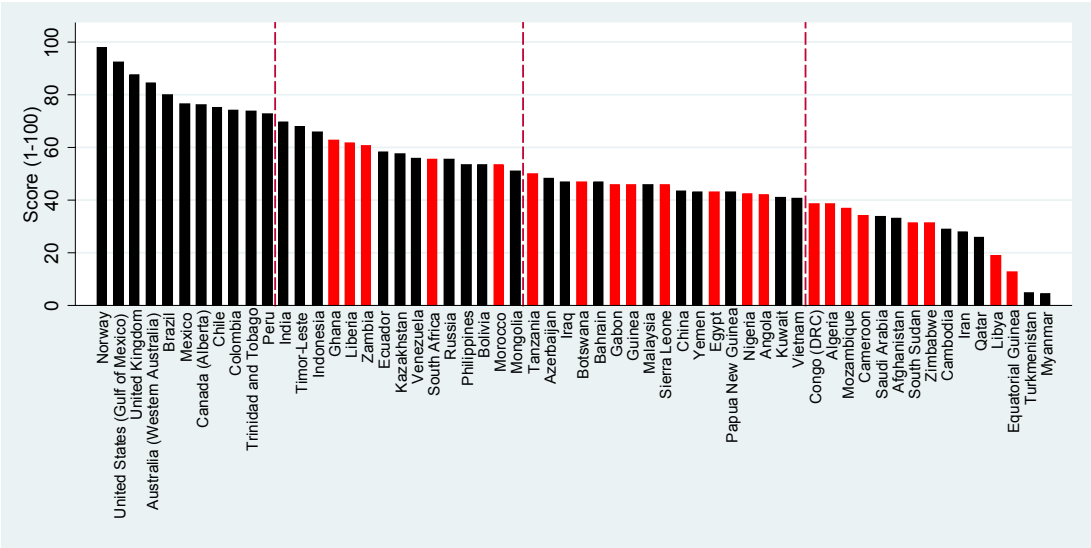
In 2012, there were already concerns of corruption in Uganda when lawmakers passed a new oil bill that included a clause stating that the Minister of Petroleum shall be responsible for granting and revoking licences (Reuters, 2012). Furthermore, there the potential for cross-country conflict in negotiating oil and gas deals (The Economist, 2012) and within country-conflict needs to be managed effectively. In the United Republic of Tanzania, the discovery of natural resources is now at the centre of the separatist movement debate between Zanzibar and the mainland since it remains unclear whether the responsibility of the extraction of oil and gas is that of Zanzibar (where it should create its oil petroleum company) or of mainland Tanzania.

When institutions are initially weak (i.e. where natural resources are then discovered, or the economy becomes more dependent on natural resources), there is inherently a weaker ability to translate this type of growth into welfare gains. This also indicates that where a country initially has strong, transparent, and accountable institutions, the ability to optimize the benefits of natural resource-driven growth is enhanced. A good example of this is Ghana, a country with a history of good institutions and resource-dependence, and which after the discovery of offshore oil in 2007, has become more dependent on the natural resource sector to drive growth. Nonetheless, Ghana has continued to do well in improving the country's socio-economic indicators.

Despite the studies mentioned above on the relationship between natural resources and institutions, the determinants of corruption and the channels through which institutional quality affects growth and development have in particular received little attention. Even within democratic states, there are specific mechanisms that reduce the effectiveness of resource revenues in contributing to economic and social development, and in particular to reducing inequality. A key channel is the provision of licences to allow for the extraction of natural resources. Opportunity for political capture of resource rents within the process of granting licences can arise when the process relies on the discretion of public officials, such as a Minister of Mining or Energy, and where there is no transparency in the process. Licensing, then, is a key portal through which rent-seeking and corrupt practices may occur. Even in situations where there are the correct incentives in place for African authorities, they may not have the capacity to negotiate, administer and monitor the mining contracts in order to maximize the domestic benefits.

The high initial capital cost of entry into the natural resources markets can also lend itself to monopolistic or oligopolistic market structures. While this is not particular to the resource sector, it is a defining characteristic and a key reason that inequality outcomes may be perpetuated through a growth path of this form. in addition to the issue of higher pricing leading to a less-than-optimal allocation of resources in the economy, economic literature has highlighted two further problems associated with markets that are controlled by a single or few firms: first, the resulting excess economic profit from higher prices (transferred from consumers to the monopoly) may result in an inequitable distribution of income; and second, the concentration of income by the monopoly also provides it with greater political influence over policies that might alter the market structure. Therefore, the fact that there are few licences to be granted means that the lobbying by multinationals and other large companies for these licences lends itself to acts of corruption and bribery.

Figure 12. The Resource Governance Index: Composite scores for developed and developing countries, 2013



Source: Own graph, Revenue Watch, 2013.

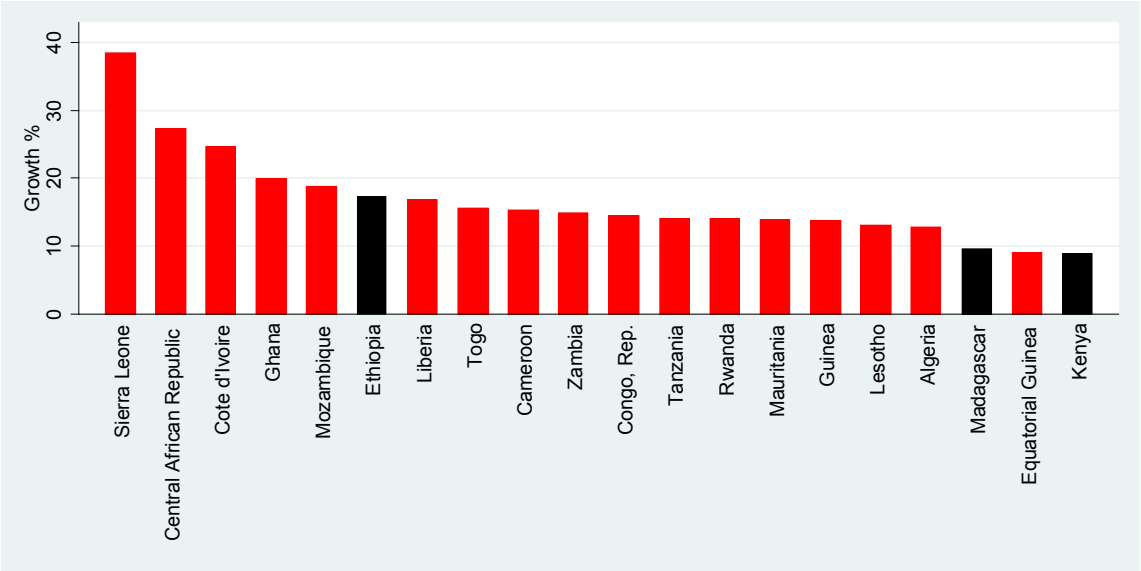
According to the composite scores of the Resource Governance Index (Figure 12),[7] which takes into account licensing and contracting procedures, 32 of the 58 countries mentioned had weak or failing institutions. Half of these weak or failing states were African. Over 75 per cent of the African countries included in the index had weak or failing resource governance bodies. The positive developing country examples such as several Latin American countries included in the Index suggest, however, that mechanisms are available to overcome a possible bias toward weak institutions in resource-dependent developing countries.

Second, as noted above, extractive industries are often characterized by their capital intensity, therefore limiting employment creation. Figure 6 shows that among the 20 African economies with the highest growth in capital formation, 17 are resource-dependent economies, most of which, as shown above, are the fastest growing economies on the continent. Where jobs are created within these extractive industries, they are often higher-skilled jobs. Given that a low skills base is often characteristic of low-income African countries, high-skilled labour is often imported into these economies. These two factors of a low-job creation quotient combined with a skills-biased pattern of labour demand contribute to maintaining high levels of inequality and perhaps even increasing inequality levels.

The South African economy, for example, has historically struggled with a consistently high rate of unemployment (24.1 per cent, Stats SA, 2013) and inequality (Gini index: 65, World Bank, 2011). For the 2001-2007 period, the South African economy had a simple output-employment elasticity of only 0.64 (Bhorat, Goga and Stanwix, 2013). This decreased substantially in the 2008-2010 post-crisis period to -0.16, which indicates that employment declined over this period. At the same time, however, the expansion in the South African economy was driven by tertiary sectors such as financial services and community services, which indicated that medium- and high-skilled occupations experienced significant gains. Changes in the skills intensity of the South Africa labour force is expected to have implications on the distribution of income – increasing wage premia for higher-skilled workers and declining wage premia for workers in jobs that involve automated or routine tasks (ibid).

[7] The Resource Governance Index categorizes states into four score categories, which are marked in the figure by the vertical lines: failing: 0-40; weak: 41-50; partial: 51-70; and satisfactory: 71-100.

Figure 13. Gross capital formation (annual % growth), 2008-2012



Source: World Development Indicators, 2014; own graph.

Third, which is related to the issue above, levels of beneficiation and secondary industry creation are relatively low, which again hinders wide-scale job creation and in particular the creation of better quality jobs. Resource-dependent economies showing high growth in capital formation such as the Central African Republic and Côte d'Ivoire have, as shown above, also seen manufactured goods as a percentage of GDP decline by 7 and 4 percentage points, respectively, from 2007 to 2011 (World Development Indicators, 2014). While this decline in manufacturing (shown earlier in Figure 10) is within the context of a lack of structural transformation, this phenomenon can also be explained as a symptom of the well-established Dutch Disease, the crowding out of non-resource investment (Papyrakis and Gerlagh, 2004), or hampered financial sector growth (Beck, 2011). However, potentially equally relevant is the emerging political economy literature that suggests that where elites are in control of resource revenues, they may be able to resist industrialization, which has the potential of diluting their political and economic power base (Isham et al. 2003).

Fourth, lost resource revenues through illicit financial flows significantly deplete a country's tax revenues which could arguably be used for productive, distribution-neutral or inequality-reducing investment such as infrastructure upgrading and social services. Illicit financial flows occur through various channels. Due to the combination of tax incentives offered by developing countries and aggressive tax planning by multinational companies, they can minimize tax payments through profit shifting strategies.

Fifth, trade mispricing through intra-company trade within complex company structures. Sixth, illegal tax evasion due to complex ownership structures and lack of transparency on beneficial ownership. And seventh, the presence of government corruption.

At the top of the investment chain in Africa's extractive industries are multinational corporate entities, which regularly report annual earnings that are, for example, 11 and 14 times the GDP of Zambia and the Democratic Republic of the Congo, respectively. The presence of offshore registered companies within these ownership structures limits public disclosure requirements and the use of subsidiaries and affiliates as conduits for intra-company trade creates opportunities for trade mispricing and tax avoidance sin companies can maximize the profit reported in low-tax jurisdictions.

Finally, using WDI's data on Social Protection, it emerges that while all African countries perform poorly, highly resource-dependent countries perform the worst. This further emphasizes the potentially skewed

distributional outcomes of resource revenues in these economies. A recent international Monetary Fund (IMF) report suggests that progressive taxation is underutilized in developing countries as a redistributive tool, with income tax in particular having the potential to significantly reduce inequality, as occurs in many more developed economies (IMF, 2014).

Ultimately, then, the above has suggested that the state and its associated institutions are potentially able to intervene in ways that reduce the potential inequalities arising from a dependence on natural resource sectors. There are, however, a number of potential channels through which a natural resource-dependent economy may lead to rising inequality. Through the political capture of rents; through ineffective and unprogressive tax systems or overly complicated ownership structures of extractive industry companies; when industrialization and human capital upgrading strategies are poorly realized; and when states do not fully consider appropriate social welfare programmes. The latter in particular has been shown to be effective in improving the well-being of citizens in other developing countries such as South Africa. These problems in turn are all inextricably linked to poor governance and a lack of transparency in government expenditure collection and allocations.

Governance and institutions

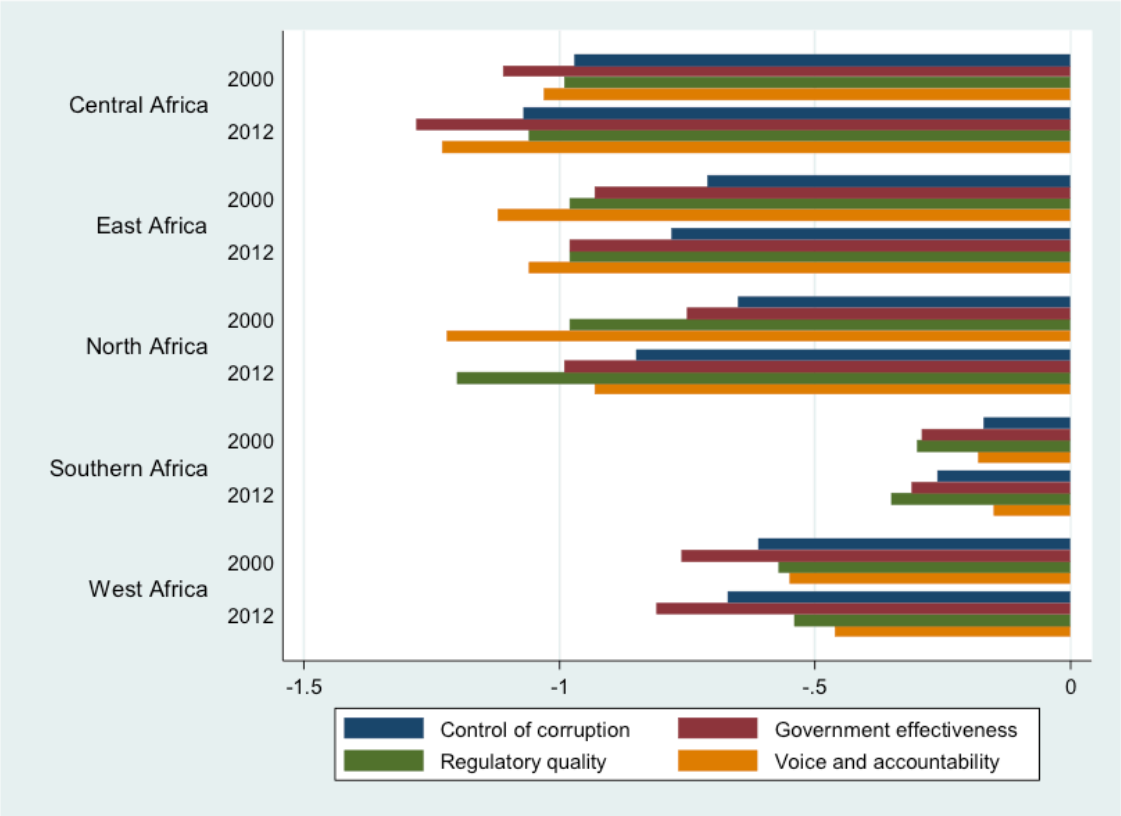
Despite the governance and institutional challenges that remain in most African countries, the continent has transitioned toward more democratic leadership over the last two decades. According to Freedom House, there were only four full electoral democracies in Africa in 1990, which increased to 20 countries by this year. While democratization has come in waves, with countries shifting between democratic and other regimes, democratic principles are becoming entrenched in some societies. Nonetheless, elections in Africa do not always produce representative governments and with poorly educated electorates, it is difficult to hold elected governments accountable.

The previous section focused more explicitly on the link between institutions related to natural resources and the possible impact on inequality. More generally, however, the state has the potential to play a key role in reducing inequality. Fundamentally, the effective management of public funds and investment in key areas such as education and job-creating industries can only positively contribute toward narrowing the income distribution. Furthermore, it could also leave fiscal space for targeted social protection policies for the most vulnerable. Regulating market structures, as mentioned in the previous section, is also an important aspect of state regulation, which can help to create more equitable market structures.

These elements of governance go beyond following democratic processes and require the capacity to design and implement effective policies,[8] regulate efficiently, and the political will to eradicate negative elements such as corruption that serves only to enrich political elites in otherwise low income countries. These are areas in which African governments perform poorly. Figure 15 shows selected governance indicators for African subregions over time.

[8] Even when public investments are made, they are often not equitably spread out within countries. This may drive inequality along spatial lines (for example, urban-rural) and may exacerbate conflicts within countries.

Figure 14. Selected governance indicators for Africa, 2000 and 2012



Source: Worldwide Governance Indicators, World Bank 2014; own graph.
Notes: Each indicator score ranges from -2.5 to 2.5, with the highest score being the best.

It is clear that, on average, corruption (i.e. measured as perceptions of the extent to which public power is abused for private gain as well as capture of the state by elites and private interests) has worsened across the continent since the beginning of the 2000s. In addition, the quality of policy formation and implementation, and the credibility of the government's commitment to such policies are represented by 'Government effectiveness' and show that, on average, governments have become less effective in these areas over the last decade. Overall, African countries score poorly on all of the above governance indicators. A positive trend is the improving score on 'Voice and accountability', which indicates, as the rising democratization of the continent would suggest, that citizens are increasingly able to participate in selecting their governments and that there is greater freedom of expressions, association and the media. An active citizenry, with adequate space for non-governmental organizations (NGOs) and civil society groups, is critical here to expose poorly performing governments and to demand better institutions that are focused on inclusive economic growth and development.

Demographic changes and the labour market

The nature and response of the labour market in the growth-poverty-inequality interactions is important. Two examples of where the labour market is important in this arena may strengthen this point. First, in the context of examining the inequality-growth relationship, labour demand responses during growth episode of an economy will often shape and influence the private distributional consequences from growth. A typical example of this response on the basis of cross-country evidence has been the advent of skills-biased labour demand shifts, where domestic economies have witnessed a disproportionate increase in the demand for skilled relative to unskilled workers during the periods of economic growth. The non-neutrality of response in the occupational labour demand function to economic growth is critical to understanding how economic growth can and does have distributional and poverty consequences.

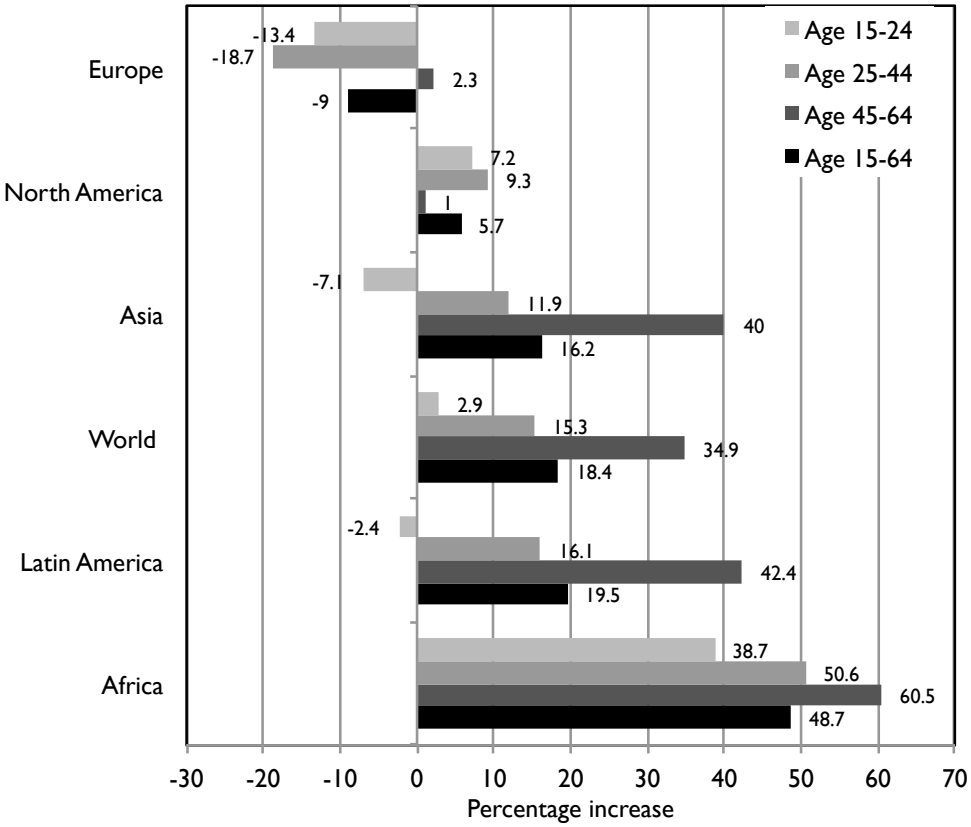
A second example of the relevance of the labour market to these broader debates is within the arena of initial income inequality. It is entirely possible that high levels of initial income inequality are in large part located within the labour market. High levels of initial wage inequality in a society may be precisely the labour market expression of how initial income inequality impacts on growth-poverty elasticities. Relatively high wage incomes from the formal as opposed to the informal economy, for example, may be the key determinant of initial income inequality in a society.[9] The reason, in turn, that Gini coefficients are so inelastic to economic growth may in part lie with the difficulty in, and long-run returns to, altering an unequal and poor quality schooling system within an economy. Human capital formation must therefore feature as one of the key issues identifying both the cause and solution for overcoming the low growth-poverty elasticities yielded through high inequality levels. This is particularly important when considering the projected demographic changes for Africa, where the growth of the young working-age population is expected to be rapid.

The regional population growth rate projections for the 2010-2030 period are illustrated in Figure 15. It is evident from the graph that the population of the working age – defined as age 15-64 – is projected to contract in Europe and grow in single digits for North America. The growth of the global workforce will be driven by Asia, Latin America and Africa. More specifically, the region projected to have the fastest growing working age population is Africa. This translates into a working age population of 793 million in 2030, a 70 per cent rise from the current 466 million. It is projected that in SSA there will be an additional 15.6 million people on average per year to the working age population in 2015-2020, rising to 17.2 million per year in 2020-2025, and to 19 million per year in 2025-2030.

Understanding the composition of the growth in the working age population is important given that it is the rapid entry of young workers that is most likely to put pressure on the labour market. The magnitude of the expected growth between 2010 and 2030 in Africa's youth population (15-24) is enormous: 38.7% compared to -2.4% in Latin America and -7.1% in Asia (Figure 15). Lam and Leibbrandt (2013) provide an example from Africa's most populous country, Nigeria, to illustrate the extent of the youth bulge in Africa. They show that while the growth in the 15-24 age population in Nigeria has fallen from its mid-1990s peak, it is expected to remain above 2 per cent until 2030, resulting in Nigerian youth continuing to make up one third of the labour force for the entire period.

[9] It is through standard income source decompositions of the Gini coefficient, for example (see Lerman and Yitzhaki,1985), that one can empirically establish the contribution of regular wage or self-employed income to overall inequality – relative to, for example, state transfers of interest income.

Figure 15: Percentage increase in size of age groups in working-age population, 2010 to 2030 (medium variant)



Source: ILO (2011).

The fact that Africa's working age population is expected to grow so rapidly, particularly the working youth, highlights that it is relatively not as far along in its demographic transition as many other regions of the world. While this implies a great opportunity for potential growth in the region, it also alludes to the increasing challenge of promoting growth that is job-creating.

The above suggests that there are two main implications of Africa's projected demographic changes on its labour force. First, most of the world's working age population growth will emanate from Africa. From 10 per cent of the global labour force in 2010, this is set to increase to 15 per cent (ILO, 2011). Second, most of this growth will originate from young workers in Africa, who are primed to stream into the labour market at an average annual rate of over 2 per cent[10] in the 2010-2030 period.

Turning to the current global labour market landscape, Table 4 shows that of the 3 billion people in the global labour force, only half of them are in wage employment, which is loosely defined as employment in which one earns a wage, either formal (officially recognized contract) or informal (oral/implicit contract). In SSA, however, a large majority (74 per cent) of the 297 million employed individuals are not in formal wage employment but, rather, are self-employed.[11] This indicates that the incomes of most of the employed in SSA are directly dependent on the profits of their enterprise, which are typically more variable than income from wage employment. Also unique to the region is that, on average, 56 per cent of the labour force work in agriculture, compared to 25 per cent of the labour force in both other non-OECD countries and for the global average. Ultimately, then, 77 per cent of the self-employed in SSA work in agriculture, compared with the corresponding figure of 55 per cent for other non-OECD countries.

[10] The total percentage change of young workers in SSA (age 15-24) over the 2010-2030 period is 55 per cent.

[11] According to ILO (1993), wage employment refers to jobs "where the incumbents hold explicit (written or oral) or implicit employment contracts which give them a basic remuneration…" in the form of wages. Self-employment is defined as "jobs where the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods and services produced (where own consumption is considered to be part of profits)".

Table 4: The Global Labour Market at a Glance, 2010 (million)

Region	Wage employ-ment	Self-employment Total	*of which:* Self-employment, agriculture	*of which:* Self-employment, non-agriculture	Total	Unemployment	Labour force
SSA	61.00	236.00	181.00	55.00	297.00	23.00	320.00
	(0.19)	*(0.74)*	*(0.56)*	*(0.17)*	*(0.93)*	*(0.07)*	*(1.00)*
Other non-OECD	1 118.00	1 068.00	584.00	484.00	2 186.00	134.00	2 320.00
	(0.48)	*(0.46)*	*(0.25)*	*(0.21)*	*(0.94)*	*(0.06)*	*(1.00)*
OECD	333.00	50.00	7.00	43.00	383.00	32.00	415.00
	(0.80)	*(0.12)*	*(0.02)*	*(0.10)*	*(0.92)*	*(0.08)*	*(1.00)*
Global total	1 512	1 354	772.00	581.00	2 866	189.00	3 055
	(0.50)	*(0.44)*	*(0.25)*	*(0.19)*	*(0.94)*	*(0.06)*	*(1.00)*

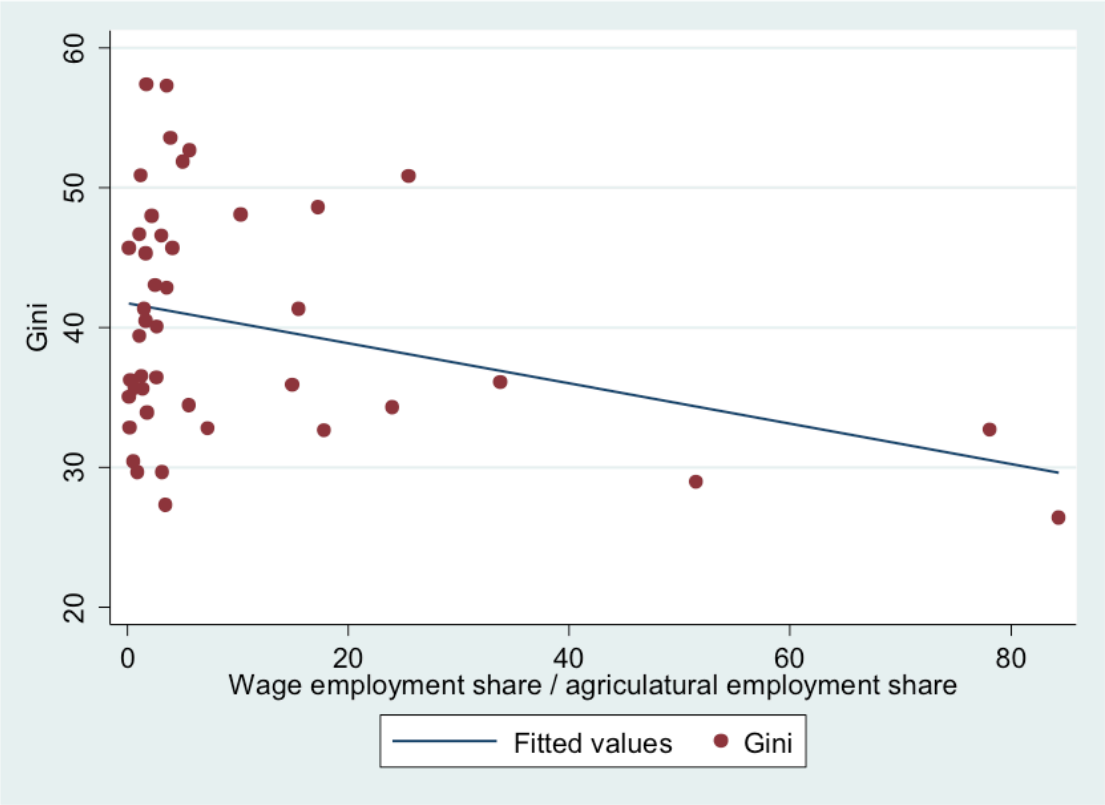
Source: Adapted from Bhorat (2013).

Notes: 1. The data are based on the World Bank's International Income Distribution Database (I2D2) dataset, which is a harmonized set of household and labour force surveys drawn from a multitude of countries.
2. Shares of regional labour force estimates in parenthesis.

A segmented understanding of an African developing onomy labour market necessarily needs to account for informal work, but more particularly, informal agricultural work and associated labour dynamics. Since labour in the region primarily involves activities related to working on land in rural areas (typically low-earning work), employment in the current context (self-employed agricultural work with associated inadequate earnings) will not be sufficient to narrow the income distribution and thus reduce income inequality.

To show this relationship, Figure 16 plots the ratio of the wage share of employment to the agricultural share of employment against the Gini coefficient for a range of developing and developed countries across the world. There is a weakly negative relationship suggesting that, in countries with a high ratio of wage to agricultural employment, i.e. where wage employment is sufficiently dominant, income inequality is lower. Much of Africa, however, is characterized by shares of wage employment that are too small within domestic labour markets. These small shares of largely urban, public sector wage jobs arguably exacerbate existing inequalities within the relevant economies.

Figure 16: Wage-agricultural employment and inequality



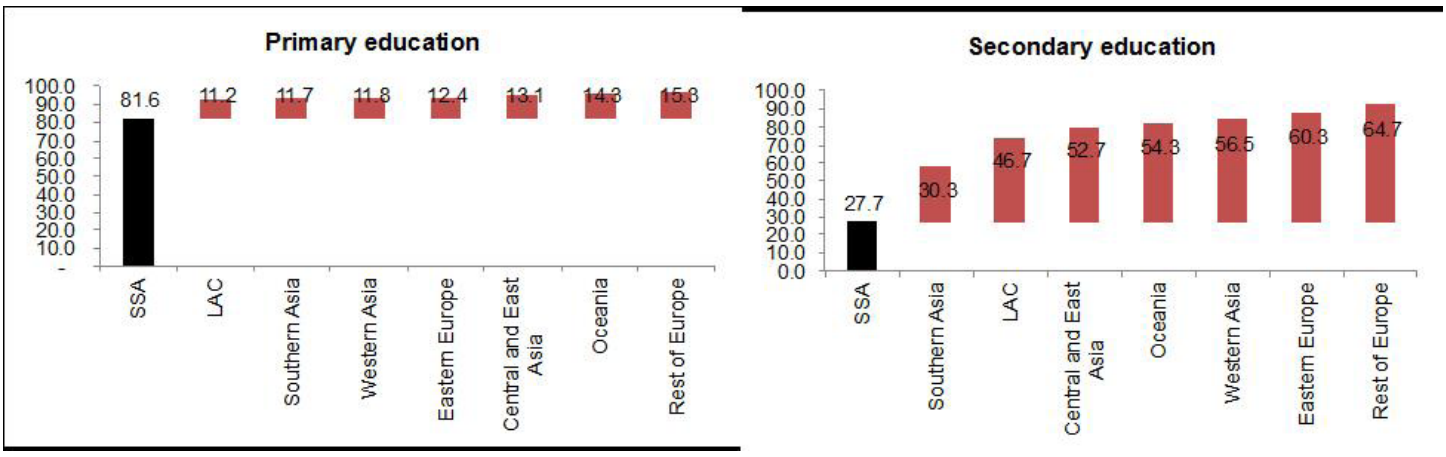
Source: World Bank (2012); Author's own graph.

The typology of Africa's jobs challenge is evident in the above data. In the first instance, since agriculture is so central to the average African economy, policies designed to promote growth in this sector, increase its global competitiveness and essentially serve as mechanisms for reducing the incidence of working poverty are critical. Increased income generation through agriculture is a key avenue for a reduction in overall income inequality in Africa. Second, large numbers of predominantly young people are entering Africa's fast-growing cities in search of employment. The majority end up in urban self-employment or unemployment. Rendering the informal sector a more sustainable form of employment, creating linkages to the formal sector and providing an enabling business environment for this sector to thrive is essential to a more equitable growth path. Finally, growing Africa's currently miniscule wage employment base must be a key strategy to reduce inequality and grow domestic economies for African governments. Expanding the light manufacturing sector is only one important job-generating growth strategy, which has worked in the high-success economies of East Asia.

Education and human capital development

The achievement of a primary enrolment rate above 80 per cent in Africa, on average, has garnered much praise in the international development community. Beyond this, however, the core problem in overcoming the economic development constraint remains the upgrading of the level of human capital in most of Africa. The poor quality of educational systems together with poor post-primary education enrolment rates are central to Africa's human capital challenge and to a more equal future growth and development trajectory. To show the extent to which secondary school enrolment has collapsed in Africa, Figure 17 illustrates the gap between primary and secondary school enrolment rates of countries in SSA against the rest of the regions of the world.

Figure 17: Median net enrolment rates – the gap between SSA and the rest of the world, 2012



Source: *Authors' own calculations using data from UNESCO Institute for Statistics (2013).*

Notes: 1. Where 2012 data were not available for certain countries, the latest available year 2010 was used; the earliest data used is 2010.
2. The United Nations regional categories have been used to categorize countries.
3. There are no data for secondary education enrolment in North Africa.

The figures make it clear that while SSA performance, in terms of primary school enrolment, lags behind that in other developing country regions of the world, it is the secondary school results that are disconcerting. The data reveal that for the 2012 cohort of learners, the median secondary schooling enrolment in SSA was approximately 30 percentage points below that found in South Asia and 57 percentage points lower than Western Asia. In addition, the secondary schooling enrolment was around 55 percentage points below the median for the world as a whole. Differential enrolment rates as one moves from primary to secondary schooling increase sharply and dramatically. These significant and large shifts in enrolment rates as one moves from primary to secondary schooling are strongly suggestive of a secondary schooling system within the SSA region that is significantly under-performing relative to international comparators. For Africa to move its economy toward higher-productivity sectors – not only to sustain growth, but also to reduce inequality by creating gainful employment for its citizens – it needs an adequate supply of skilled labour.

The regional variation in Table 5 shows that Central Africa has the lowest secondary school enrolment, with an almost 50 percentage point difference in primary and secondary enrolment. Excluding North Africa, which has the best performing enrolment rates in Africa, Southern Africa has the highest secondary enrolment rate, but the level is still less than half of primary school enrolment.

Table 5: Enrolment rates in Africa, 2011

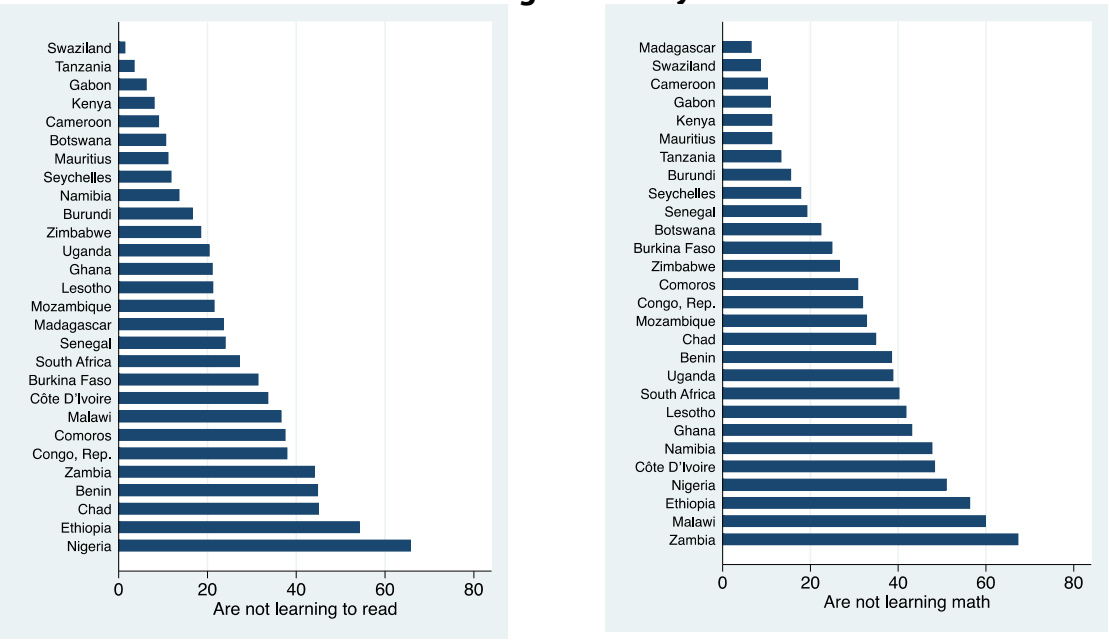
% gross	Central Africa	East Africa	North Africa	West Africa	Southern Africa
Pre-primary	22.85	24.92	56.94	69.34	15.72
Primary	108.55	99.31	108.57	120.23	98.84
Secondary	32.99	43.99	69.17	51.27	45.73
Tertiary	6.88	6.92	23.03	10.20	9.78

Source: *World Development Indicators, 2014.*

Notes: 1. Latest available data.
2. Gross enrolment rates can exceed 100% due to the inclusion of over-aged and under-aged students because of early or late school entrance and grade repetition.

In addition to enrolment rates, even the quality of education given to the children to attend school is poor. The Brookings Institute's Learning Barometer (2012) provides some insights into Africa's schools. It covers 28 countries and draws on regional and national assessments to identify minimum learning thresholds for Grades 4 and 5 of primary school.

Figure 18: Per cent of schoolchildren not learning effectively while in school

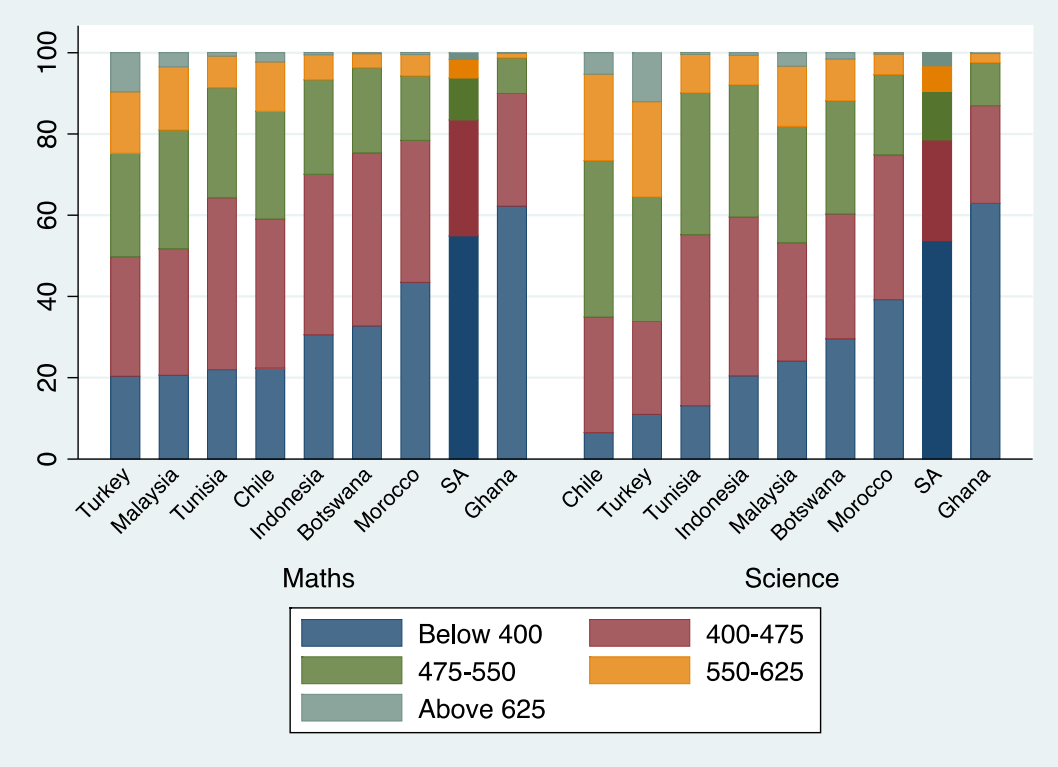


Source: Center for Universal Education at Brookings, 2014; Authors' own graph.

The figures in Figure 18 show that over one-third of pupils covered in the survey fall below the minimum threshold, with substantial variation across countries. In addition to enrolment rates, even the quality of education given to those children who attend school is poor (Figure 19). The Brooking's Institution's Learning Barometer (2012) provides some insights into Africa's schools; it covers 28 countries and draws on regional and national assessments to identify minimum learning thresholds for Grade 4 and 5 of primary school. Most worrying are the cases of Nigeria, Ethiopia and Zambia, where more than half of students in Grades 4 and 5 are below the minimum learning threshold. Even in the upper-middle income countries of Namibia and South Africa, this figure is over 30 per cent.

The effects of children not learning effectively in school can be seen more clearly when African students are compared to those in other developing countries. Using TIMSS data for Grade 8 students, the results of standardized mathematics and science tests can be compared. Ranking countries from worst to best, Figure 19 shows that the five African countries do not compare favourably to comparator countries such as Turkey, Thailand and Chile, and are at the bottom of the distribution. Over 50 per cent of Grade 8 pupils in these five middle-income African countries score poorly on mathematics and science, at below 475, which represents the intermediate international benchmark.

Figure 19: Grade 8 mathematics and science results



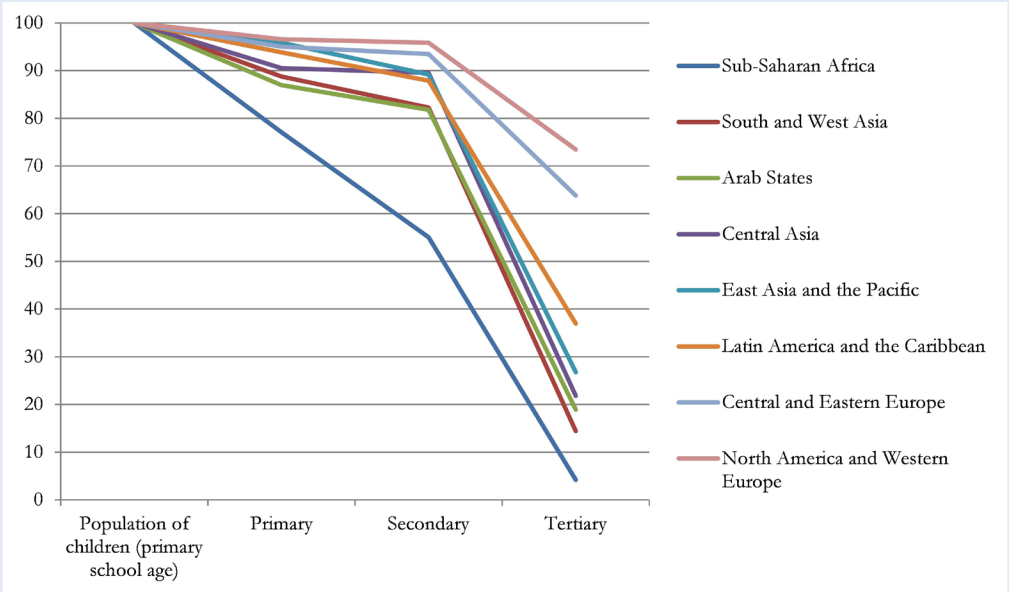
Source: TIMMS, 2011; Authors' own graph.

Notes: 1. According to the TIMMS methodology, four points in the overall subject scales are identified as international benchmarks: 400 is the low international benchmark, 475 is the intermediate international benchmark, 550 is the high international benchmark, and 625 is the advanced international benchmark.
2. 'SA' represents South Africa.

Figure 20 illustrates a more holistic picture of Africa's "conversion rate" within the educational system in order to combine the issues of enrolment and the quality of education. The data represented here calculate the shares of individuals within a cohort who would have enrolled at primary school and then progressed through the schooling and higher education system.[12]

[12] The Technical Vocational, Education and Training (TVET) data was not sufficiently reliable to allow for inclusion into this series. It is doubtful, however, that this would change the substance of the results obtained.

Figure 20: Conversion rates from primary to tertiary education, 2011



Source: *Bhorat (forthcoming) using data from UNESCO Institute of Statistics (2013).*

Notes: 1. Primary refers to the net enrolment ratio (NER) in primary education of primary school-aged children.
2. Secondary is calculated as the product of the NER and the ratio of the transition from primary to secondary education for each region.
3. Tertiary is calculated as the product of secondary and the gross enrolment in tertiary education for each region.

For Africa, the data suggest that there is an equal collapse in the conversion rates from primary to secondary schooling as there is in the conversion from secondary to tertiary enrolment. This is in contrast to the performance of the other regions of the world, even when compared to the developing region of LAC. In essence, for Africa, the data show that for every 100 children of primary school age, only four are expected to enter a tertiary educational institution. In the LAC region, 36 out of every 100 within the cohort should make it to a higher education institution, and even in South and West Asia, this figure is substantially higher than SSA, at 14 per 100 individuals. These figures highlight the rapid attrition from the schooling system and serve as a powerful indicator of the ineffectiveness of Africa's educational system. Furthermore, although not shown here, the region is also not producing graduates that match the supply characteristics, which are in demand by employers within these African economies.

Ultimately, then, the data suggest the presence of a serious deficiency in the supply of graduates from the schooling and higher education system in Africa. This is compounded by the poor quality of these graduates. In the view of long-run economic growth, currently espoused by Thomas Piketty and others, human capital accumulation is one key mechanism through which to overcome a growth path where the rate of return on capital (r) exceeds the rate of economic growth (g) – r>g. To generate a more equal growth path, thus equalizing r and g, it is argued that the schooling and educational pipeline plays a potentially crucial role in an economy's long-run growth trajectory. In Africa, on the basis of this supply-side evidence, it is clear that the continent is far from producing a schooling and higher education system, which is sufficiently inequality-reducing.

Box 1: Returns to schooling as a driver of inequality in South Africa

The South African schooling, vocational training and higher education system does not currently provide the ingredients for the pursuit of longer-run higher and more equal growth outcomes. We make this point below by comparing mean scores by country on the Trends in International Mathematics and Science Study (TIMSS). The TIMSS is an ongoing cross-country standardized testing instrument, which measures mathematics and physics competence in-country, at various levels of the schooling system. The survey has been ongoing since 1995 and remains one of the most widely used comparisons for educational performance. The results for South Africa reinforce the extent to which the country – in a sample of emerging market peers – lags behind considerably in schooling performance (graph not shown).

The mean scores for mathematics and science for South Africa are 1.7 and 1.8, respectively. Putting this into perspective, the global average for the two subjects was between 26 and 28 percentage points higher than that of South Africa. Hungary, Slovenia and Korea readily score twice as high, while Turkey, Thailand and Malaysia produce results are between 35 and 70 per cent higher than South Africa. Only Ghana in the sample scores below South Africa.

A more powerful reflection of the failure of the South African schooling system may lie in the production function estimates provided below. The results in Table A are based on a two-stage, semi-parametric production function which controls for both the simultaneity and non-linearity concerns (Olley and Pakes, 1996). Here, as is standard in the growth literature, the logged number of employed are measured as well as those in the population as a whole, by education level.

Table A: Production function estimates of schooling, 1995-2012

Variables	Employed	Population
None	-0.024	0.029
Primary	-0.023	0.164
Secondary	0.145	0.669***
Matric	0.159	-0.037
Certificate	-0.05	-0.025
Degree	0.104**	0.095*

Source: Bhorat, Cassim and Tseng (2014).
Note: Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1
1. Control variables are those for capital and investment expenditure. Capital, a stock variable, is measured by the rand value of tangible goods including fixed property, plant and equipment, while investment captures its gross formation. All variables are logged.
2. Capital and investment expenditure include 3rd order polynomials, which serve as additional controls, to proxy for the unobserved productivity shocks and resolve the simultaneity problem of the functional relationship between investment and capital.
3. A constant term is not included because the model assumes that the effect of TFP is invested within labour by various levels of education as human capital gains.

The results are stark. They suggest that when examining the employed only, the entire schooling pipeline does not significantly contribute to long-run economic growth in the South African economy. In South Africa, a significant and positive impact on economic growth is recorded only where the employed have a qualification from a higher education institution. When the sample is switched to the population as a whole, the secondary schooling system does have some positive impact on economic growth. Ultimately, however, the evidence suggests either a weak or non-responsive schooling system in South Africa with respect to impacting on productivity gains and economic growth.

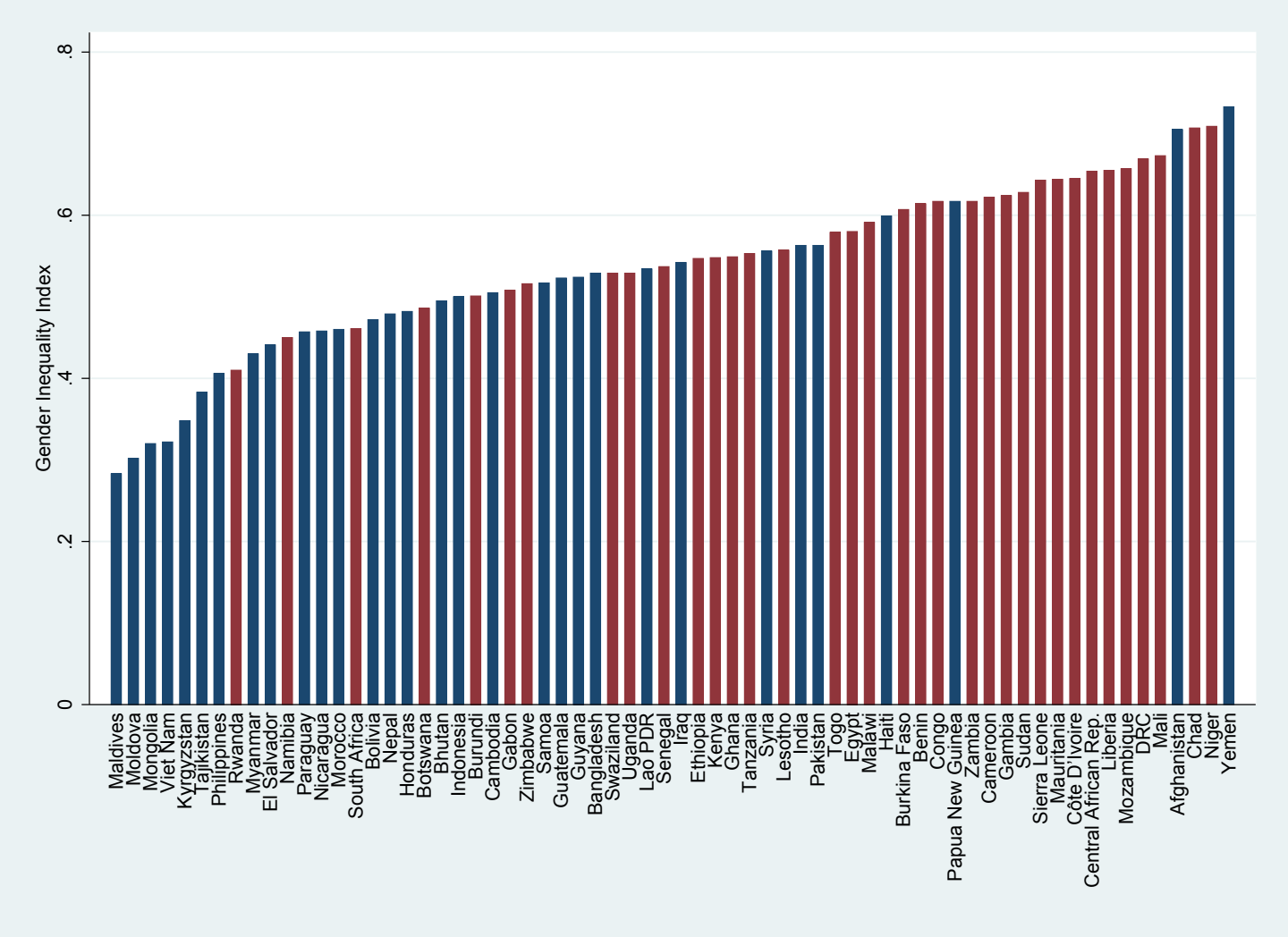
The notion, then, that income inequality can be mitigated through human capital accumulation, is surely not feasible within the schooling environment in South Africa. It is not evident that South Africa is at a point at which the institutions of human capital can act as a mechanism for growth convergence.

The above suggests that on the basis of low economic growth, a divergence from the growth trajectory of high-income economies and poor quality outcomes in human capital, South Africa's economic growth path would be both uneven and highly unequal. This growth path, without the channels through which to more evenly distribute the gains from growth, would be delivering growth to those with high initial endowments of land, capital and education. Indeed, this is in many ways this is a reflection of the general nature of South Africa's long-run growth path. More details on the method, testing approach, questionnaire and detailed results can be found at http://timssandpirls.bc.edu/#.

Gender dimensions of inequality

While the labour market and educational system challenges contribute to inequality, gender disparities within these institutions are an important source of inequality in Africa. The United Nations' Gender Inequality Index is a composite measure that reflects inequality in achievement between men and women in three dimensions: reproductive health, empowerment and the labour market, where the lower the score, the closer the gender parity. In the global distribution of scores for which there is data (152 countries), only three African countries score above the median – Libya, Tunisia and Mauritius. African countries are concentrated at the upper end of the distribution, with 28 out of 39 scoring in the worst quartile (Figure 21). The South Asian countries of India, Pakistan and Bangladesh perform better on the Gender Inequality Index than countries such as Malawi, Zambia and Mozambique, which are relatively higher-income countries.

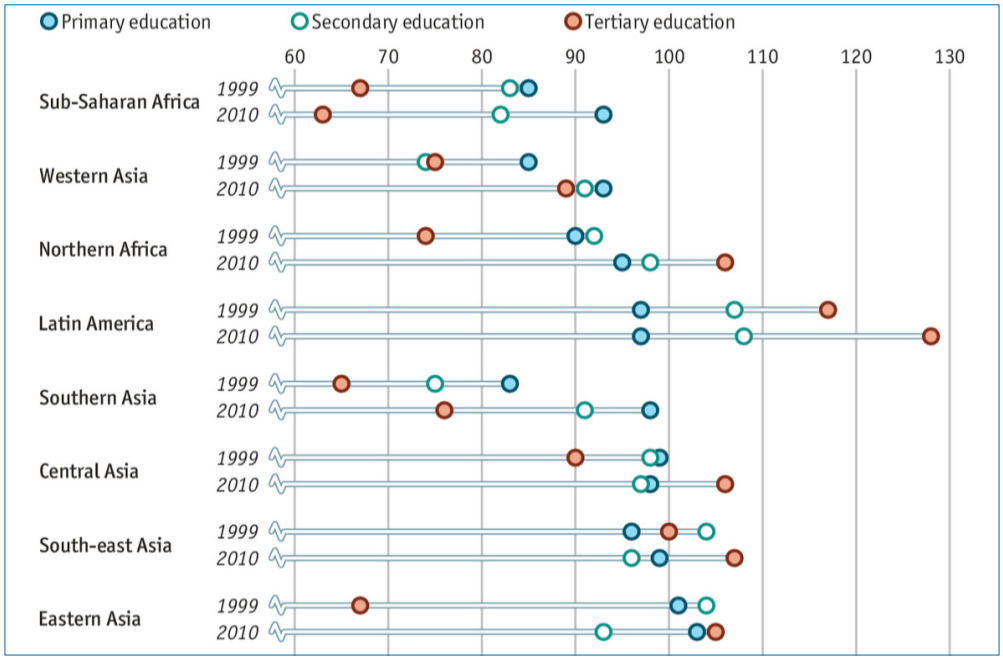
Figure 21: The Gender Inequality Index, upper half of the global distribution, 2014



Source: United Nations Development Program, Data from the Human Development Report, 2014; Authors' own graph
Notes: African countries are highlighted in maroon.

An important driver of gender inequality is access to education, which remains crucially important in determining individual's labour market outcomes. Since the late 1990s, there has been some progress in equalizing access to education for girls and boys in SSA. However, this has predominantly been achieved at the primary education level (Figure 22). Over this same time, there has been no progress on average in achieving gender parity in secondary schooling and there has been a widening of gender inequality in tertiary educational enrolment. This has occurred during a time when, in most other parts of the world, there have been improvements in gender parity at higher levels of education.

Figure 22: Ratio of girls to boys enrolment in school



Source: The Economist, 2013, adapted from United Nations data; see www.economist.com/blogs/freeexchange/2013/11/gender-inequality

These differences in educational attainment are important as they predict gender gaps in employment and earnings. According to the International Labour Organization's (ILO's) 2012 Report on Global Employment Trends for Women, only 14 per cent of working women in Africa are in wage employment compared to 29 per cent of employed men. Just under 40 per cent of working women are contributing family members, compared to 80 per cent for men. Income is associated with empowerment and decision-making power within households, where women remain disadvantaged.

In some African countries, it may not be an issue of gender discrimination per se, but one of a general lack of educational institutions to cater to the growing needs of those populations. In these cases where girls and boys compete for places at school, girls have to often sacrifice their place. Other related issues include the need for child labour to supplement household income during difficult periods, or culturally rooted biases. Gender inequality is no doubt a complex problem in Africa, as it is in some other parts of the world, and one that requires ongoing and heterogeneous policy responses.

VI: Conclusion

This paper aimed to provide a broad overview of the nature and pattern of inequality in Africa. The descriptive statistics highlight that it is difficult to draw simple generalizations about the nature and pattern of inequality across Africa since there is substantial variation in both levels and changes over time. However, a few key observations do emerge. First, on average, Africa has higher than average and median inequality than the rest of the developing region. Second, a notable feature of inequality on the continent is the presence of seven economies exhibiting extremely high levels of inequality, the "African outliers", which also drive this inequality differential with the rest of the developing world. Third, over time, based on the available data, average levels of inequality have declined in Africa, driven mostly by the economies not classified as highly unequal. It also emerges that, when estimating the relationship between growth and inequality in Africa, for those countries with initially high levels of inequality, there is a stronger relationship between economic growth and inequality, a confirmation of the cross-country evidence outside of Africa.

In terms of the drivers of inequality in Africa, it is shown above that the dependence on natural resources and its deleterious impact on building effective, transparent and accountable institutions remain key determinants of the high levels of inequality on the continent. Second, due to the labour market structure of many African economies, there are large proportions of the labour force involved in low-income agricultural self-employment or in informal sector jobs, which, when compared to the small share of wage employment in many African economies, often exacerbate inequality. The low stock of human capital is also central to this phenomenon. Individuals with a sufficient level and quality of education are able to earn high wage premia in the formal labour market. Until a large enough supply of skilled workers is available, inequality-inducing skills premia will persist in African labour markets.

Clearly, growth alone is not enough to lower inequality and reduce poverty in Africa at a rapid enough pace. Growth originating from capital-intensive sectors has a low likelihood of creating the kinds of formal jobs that are needed to narrow the income distribution. There is a need to enhance the industrial base of African economies and to build effective higher education institutions that are able to respond to the demands of a growing economy. This would place African economies on a more inclusive and equalizing growth path.

Policy issues

While economic growth remains crucial for policy formulation, the sources of this growth may be more so. Due to the need for economic diversification in Africa, policies to support positive structural change are key. These policies will vary from country to country, but include those related to improving agricultural productivity and nurturing key manufacturing sectors that exploit comparative advantage and are able to create decent jobs. To create decent jobs, there are clearly policies related to economic fundamentals that need to be implemented effectively: improve infrastructure in key areas, make use of information and communications technology (ICT) technology to spur growth, reform poor educational systems, and invest in research and development (R&D).

In countries that are dependent on natural resources, there are key areas of reform that are need to ensure a more equitable distribution of the benefits of resource revenues. Licensing is a key portal through which rent-seeking and corrupt practices may occur; to prevent this, it is important that the process of granting licences be conducted in a transparent manner and through a fairer system such as a bidding system. Furthermore, details of mining contracts should be publicly available, as well future revenue streams generated from the sector, so that governments and large mining companies can be held accountable. These are some of international standards that EITI is seeking to establish.[13]

[13] EITI (2013), 'The EITI Standard'; see http://eiti.org/files/English_EITI%20STANDARD_11July_0.pd

Furthermore, these resource-rich countries receive large revenues flows that need to be managed better, from adequate taxation to redistributive policies such as social transfers. Regarding transfers to the poor, this is a strategy that has received increasing attention and has been suggested by several influential analyses and case studies in recent years (Gelb and Majerowicz, 2011; Moss and Young, 2009; Devarajan et al., 2013). Based on country case studies in Africa and Latin America, evidence suggests that the cost of social security programmes in many African countries are not prohibitive. Tax revenues lost due to illicit capital flows would be sufficient to cover social protection programmes many times over. In essence, then, a "starter pack" in social protection may be a policy intervention worthy of serious consideration. This "pack" can have significant poverty reduction effects and does not necessarily constitute a very high share of GDP, and is thus particularly affordable for all of Africa's resource-dependent economies.

The role of education in improving people's labour market outcomes is a key channel through which inequality can be reduced. There are three key areas of educational system reform required. First, there is the need to increase enrolment rates at secondary school level and tertiary education, since these are the critical levels of education that provide the necessary skills for individuals to be productive in the labour market. Second, the enhancement of learning outcomes for those in school is critical. To this end, teachers need to be adequately trained, investment should be made in schooling infrastructure, and teachers should make use of technology as learning aids where possible. Finally, providing incentives for sending children to school, especially girls who remain disadvantaged, will be critical in unleashing the productive power of women and youth in Africa.

The state and its institutions play a central role in reducing inequality. Mechanisms to keep in the state in check need to be put in place to prevent the use of state resources for personal gain. Capacity-building within the state is also critical for the effective implementation and monitoring of development policy. Furthermore, the state has an important role in fostering social cohesion in ethnically diverse societies. This can be achieved by educating people about diversity and by removing discriminatory elements such as forms of discrimination against minority groups in the labour market.

Furthermore, there are some key areas of research that are required to inform the African policy agenda more concretely. First, the continued focus on improving the statistical capacity of African countries is important for ensuring that quality research can be conducted. Second, country-specific research at the microeconomic level is needed to more accurately understand the evolution and drivers of inequality – i.e. asset, income, horizontal and other forms – given any country's specific historical and institutional setting. Finally, there is also a key need to understand the dynamics of the growth-poverty-inequality relationship for specific groups of countries, for example, countries that are dependent on natural resources, fragile states or post-conflict economies.

VII: References

Acemoglu, D. and J. A. Robinson (2010). Why is Africa Poor? *Economic History of Developing Regions*, 25(1), 21-50.

Acemoglu, D. , S. Johnson and J. A. Robinson (2001). The Colonial Origins of Comparative Development: An Empirical Investigation, *American Economic Review*, 91, 1369-1401.

Adams, R. H. (2004). Economic growth, inequality and poverty: Estimating the growth elasticity of poverty. *World Development,* 32(12), 1989-2014.

Africa Progress Panel (2013). Africa Progress Report. 2013: Equity in Extractives. Geneva, Switzerland.

Africa Progress Panel (2014). Grain Fish Money: Financing Africa's Green and Blue Revolutions. Geneva, Switzerland.

African Union. (2014). Common African Position (CAP) on the Post-Development Agenda. African Union. Addis Ababa, Ethiopia.

Alwy, A. and S. Schech (2004). Ethnic Inequalities in Education in Kenya. *International Education Journal*, 5(2).

Amadou, S. (2014). Shifts in Financing Sustainable Development: How Should Africa Adapt in 2014? Brookings Africa Growth Initiative (AGI) Brief: Washington DC.

Appleton, S. (1999). Changes in Poverty in Uganda, 1992-1997. University of Oxford, Department of Economics, Economic Series Working Papers WPS/1999-22.

Beck, T. (2011). Finance and Oil: Is There a Resource Curse in Financial Development? European Banking Center Discussion Paper No. 2011-004.

Beck, T. , S. M. Maimbo, I. Faye and T. Triki (2011). Financing Africa: Through the Crisis and Beyond. African Development Bank, BMZ, and World Bank Report.

Bhorat, H. , S. Goga, and B. Stanwix (2013). Occupational Shifts and Shortages: Skills Challenges Facing the South African Economy', LMIP report. (Online) Available from: http://www. lmip. org. za/sites/default/files/events/LMIP%20Report%201%20Occupational%20Shifts. pdf

Bhorat, H. (2013). The Challenge of Job Creation: Input to the post-2015 HLP Agenda. Cape Town: Development Policy Research Unit, University of Cape Town. (Available upon request)

Bhorat, H. (Forthcoming). Growth, Employment Creation and Poverty Reduction: An Overview Evidence and Possible Applications to Africa. In E. Thorbecke, and A. McKay (eds), *Economic Growth and Poverty Reduction in Sub-Saharan Africa: Current and Emerging Issues*. Oxford University Press.

Bigsten, A. and A. Shimeles (2004). Prospects for Pro-Poor Growth in Africa. UNU-WIDER Research Paper No. 2004/02.

Botero, J. C. , S. Djankov, R. La Porta, F. Lopez-de-Silanes and A. Shleifer (2004). The Regulation of Labour. *Quarterly Journal of Economics*, (November), 1339-82.

Bourguignon, F. (2002). The Distributional Effects of Growth: Case studies vs. Cross-country Regressions, DELTA Working Paper 2002-23. Paris: DELTA.

Bratton, M. and N. van de Walle (1997). Democratic Experiments in Africa: Regime transitions in comparative perspective, New York: Cambridge University Press.

Brunnschweiler, C. N. and E. H. Bulte (2006). Reverse Causality and the Resource Curse : Paradoxes and Red Herrings. Mimeo: Tilburg.

Bulte, E. H. , R. Damania, and R. T. Deacon (2005). Resource Intensity, Institutions, and Development, *World Development*, 33(7), 1092-44.

Canagarajah, S. , and S. Thomas (2001). Poverty in a Wealthy Economy. International Monetary Fund. IMF Working Papers, 02/114.

Christiaensen, L. , P. Chuhan-Pole and A. Sanoh (Forthcoming). Africa's Growth, Poverty and Inequality Nexus - Fostering Shared Prosperity. World Bank Report.

Collier, P. and A. Hoeffler (1998). Greed and Grievance in Civil War, *Oxford Economic Papers*, 50(4), 563-573.

Collier, P. and W. Gunning (1999). Explaining African Economic Performance. *Journal of Economic Literature,* 37(1), 64-111.

Datt, G. and M. Ravallion (1992). Growth and Redistribution Components of Changes in Poverty Measures. *Journal of Development Economics* 38, 275-295.

Demombynes, G. , and J. G. M. Hoogeveen (2004). Growth, Inequality, and Simulated Poverty Paths for Tanzania, 1992-2002. World Bank Policy Research Working Paper, 3432.

Dermirguc-Kunt, A. and L. Klapper (2012). Measuring Financial Inclusion: The Global Findex Database. World Bank Policy Research Working Paper.

Devarajan, S. and M. Giugale (2013). The Case for Direct Transfers of Resource Revenues in Africa, CGD Working Paper 333.

Devarajan, S. , and W. Fengler (2012). Is Africa's Recent Economic Growth Sustainable? Washington DC: World Bank.

Dollar, D. and A. Kraay (2002). Growth is Good for the Poor. *Journal of Economic Growth*, 7(3), 195-225.

Easterley, W. (2009). How the Millenium Development Goals are Unfair to Africa. *World Development*, 37(1), 26-35.

Eifert, B. and V. Ramachandran (2004). Competitiveness and private sector development in Africa: Crosscountry evidence from the World Bank's investment climate data. Occasional paper series. Institute for African Studies. Ithaca, NY: Cornell University.

Eifert, B. , Gelb, A. , and V. Ramachandran (2008). The Cost of Doing Business in Africa: Evidence from Enterprise Survey Data. *World Development*, 36(9), 1531-1546.

Ferriera, F. and M. Ravallion (2008). Global Poverty and Inequality: A Review of the Evidence. World Bank Policy Research Working Paper.

Ferriera, F. H. G. , S. P. Firpo and J. Messina (2014). A More Level Playing Field? Explaining the Decline in Earnings Inequality in Brazil, 1995-2012. IRIBA Working Paper: 12 (September) Manchester, UK.

Fields, G. (2000). The Dynamics of Poverty, Inequality and Economic Well-being: African Economic Growth in Comparative Perspective. *Journal of African Economies,* 9 (AERC Supplement), 45-78.

Forteza, A. and M. Rama (2001). Labor Market Rigidity and the Success of Economic Reforms across More than 100 Countries. Mimeo. The World Bank: Washington, DC.

Foster, J. E. , J. Greer and E. Thorbecke (1984). A Class of Decomposable Poverty Measures, *Econometrica*, 52.

Fosu, A. K. (2009). Inequality and the Impact of Growth on Poverty: Comparative Evidence for Sub-Saharan Africa. *Journal of Development Studies*, 45(5), 726-745.

Fosu, A. K. (2014). Growth, Inequality and Poverty in Sub-Saharan Africa: Recent Progress in the Global Context. CSAE Working Paper WPS/2014-17. Oxford: University of Oxford.

Freedom House (2014). Freedom in the World 2014. [Online] Available from: https://freedomhouse. org/report/freedom-world/freedom-world-2014#. VGscBPmUd8E [Accessed: 11 November 2014]

Gelb, A. and S. Majerowicz (2011). Oil for Uganda – or Ugandans? Can Cash Transfers Prevent the Resource Curse? CGD Working Paper 261.

Gutierrez, C, C. Orecchia, P. Paci and P. Serneels (2007). Does Employment Generation Really Matter for Poverty Reduction? World Bank Research Working Paper. No. 4432. Washington, D. C. : World Bank.

Heckman, J and C. Pagés (2003). Law and Employment: Lessons from Latin America and the Caribbean. NBER Working Paper 10129. [Online] Available from: www. nber. org/papers/w10129

Huppi, M. and M. Ravallion (1991). The Sectoral Structure of Poverty During an Adjustment Period: Evidence from Indonesia in the Mid-1980s. *World Development*, 19(12).

International Monetary Fund (IMF) (2014). Fiscal Policy and Income Inequality, IMF Policy Paper.

IMF (2011). Regional Economic Outlook: Sub-Saharan Africa Recovery and New Risks. Washington DC.

International Labour Organization (ILO) (2011). World Population Prospects: The 2010 Revision. New York.

International Labour Organization (ILO) (2012). Global Employment Trends 2012: Preventing a deeper jobs crisis. Geneva.

International Labour Organization (ILO) (2012). Global Employment Trends for Women. Geneva: ILO. [Online] Available from: http://ilo. org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_195447. pdf

Isham, J. , M. Woodcock, L. Pritchett, Land and G. Busby (2003). The varieties of resource experience: How natural resource export structures affect the political economy of economic growth. Middlebury College Economics Discussion Paper 03-03: Middlebury College, Vermont.

Islam, R. (2004). The Nexus of Economic Growth, Employment and Poverty Reduction: An Empirical Analysis. Recovery and Reconstruction Department. International Labour Office: Geneva.

Jackson, K. (2013) Diversity and the distribution of Public goods in Sub Saharan Africa. *Journal of African Economies*, 22(3), 427-462.

Jensen, N. and L. Wanchekon (2004). Resource Wealth and Political Regimes in Africa, *Comparative Political Studies*, 37(7), 816-841.

Kaberuka, D. (2013). Sustaining Africa's Economic Growth: The Challenges of Inclusion and Financing Infrastructure. Taken from speech given by the President of the African Development Bank at the AACB Symposium on Financial inclusion in Africa: *The challenges of financial innovations for monetary policy and the stability of financial system,* August 2013: [Online] Available from: www. afdb. org/en/news-and-events/article/sustaining-africas-economic-growth-the-challenges-of-inclusion-and-financing-infrastructure-afdb-president-donald-kaberuka-12215/ [Accessed: October 2013]

Kahn, B. (2005). "Original Sin" and Bond Market Development in Sub-Saharan Africa. In: *Africa in the World Economy: The National, Regional and International Challenges*, Fondad.

Kakwani, N. (1993). Poverty and Economic Growth with Application to Côte D'Ivoire. *Review of Income and Wealth*, 39 (2) June.

Kanbur, R and L. Squire (1999). The Evolution of Thinking About Poverty: Exploring the Interactions. In G. Meier and J. Stiglitz (eds.) *Frontiers of Development Economics: The Future in Perspective*, Oxford University Press.

Kanbur, R. (2005). Growth, Inequality and Poverty: Some Hard Questions. *Journal of International Affairs* (Spring).

Kanbur, R. (2004). Growth, Inequality and Poverty: Some Hard Questions. Institute for Social and Economic Change, Working Papers 157.

Kanbur, R. (2008). Globalisation, Growth and Distribution: Framing the Questions. Commission on Growth and Development. Working Paper No. 5. The World Bank: Washington.

Khan, H. (1999). Sectoral Growth and Poverty-Alleviation: A Multiplier Decomposition Technique Applied to South Africa. *World Development* 27(3), 521-530.

Kharas, H. and H. Kohli (2011). What is the Middle Income Trap, Why do Countries Fall into it, and How can it be Avoided? *Global Journal of Emerging Market Economies*, 3(3), 281-289.

Kharas, H. (2014). More and Better Financing for Development. World Bank blog. [Online] Available from: http://blogs. worldbank. org/futuredevelopment/more-and-better-financing-development

Kuznets, S. (1955). Economic Growth and Income Inequality. *The American Economic Review*, 45 (1).

Lam, D. and M. Leibbrandt (2013). Global Demographic Trends and their Implications for Employment. Paper prepared as background research for the Post-2015 UN MDG Development Agenda on Employment and Employment Growth.

Lazear, E. (1990). Job Security Provisions and Employment. *Quarterly Journal of Economics*. August: 699-726.

Lerman, R.I. and S. Yitzhaki (1985). Income Inequality Effects by Income Source: A New Approach and Applications to the United States. *The Review of Economics and Statistics* 1, 151-156.

Li, H., Lyn Squire and H.F. Zou (1998). Explaining International Inequality and Intertemporal Variations in Income Inequality. *Economic Journal*, 108, 26-43.

Loayza, N. and R. Claudio (2006). The Composition of Growth Matters for Poverty Alleviation. World Bank Research Working Paper. No. 4077. Washington, D.C.: World Bank.

Loayza, N. V. (2010). The Composition of Growth Matters for Poverty Alleviation. *Journal of Development Economics* 93(1), 137-151.

Loayza, N, V., M. Oviedo and L. Serven (2005). The Impact of Regulation on Growth and the Informal Sector: Cross Country Evidence. Unpublished mimeo. World Bank: Washington DC.

McCulloch, N., B. Baulch and M. Cherel-Robson (2000). Poverty, Inequality and Growth in Zambia during the 1990s. Working Paper, Institute for Development Studies, University of Sussex.

McMillan, M., D. Rodrik and I. Verduzco-Gallo (2014). Globalisation, Structural Change, and Productivity Growth, with an Update on Africa. *World Development*, 63, 11-32.

Mehlum, Halvor, Karl Moene and Ragnar Torvik (2006). Institutions and the Resource Curse, *The Economic Journal*, 116, 1-20.

Miguel, E. and M.K. Gugerty (2005). Ethnic Diversity, Social Sanctions and Public Goods in Kenya, *Journal of Public Economics*, 89: 2325-68.

Moss, T. and L. Young (2009). Saving Ghana from Its Oil: The case for Direct Cash Distribution, CGD Working Paper 186.

Ostry, J., A. Berg, and C. G. Tsangarides (2014). Redistribution, Inequality and Growth. IMF Staff Discussion Note.

Papyrakis, E. and R. Gerlagh (2004). The Resource Curse Hypothesis and Its Transmission Channels. *Journal of Comparative Economics*, 32(1), 181-93.

Ravallion, M. (1994). Can High-Inequality developing countries escape absolute poverty? *Economics Letters* 56, 51-57.

–––– (2000). On Decomposing Changes in Poverty into Growth and Redistribution Components. *Journal of Quantitative Economics*, 16(1): 105-18.

–––– (2001). Growth, Inequality and Poverty: Looking Beyond Averages, *World Development,* 29(11): 1803-1815.

–––– (2004). Pro-Poor Growth: A Primer. World Bank Research Working Paper 3242. The World Bank: Washington.

Ravallion, M and S. Chen (1997). What Can New Survey Data Tell Us About Recent Changes in Poverty and Distribution?, *World Bank Economic Review*, 11(2): 357-382.

–––– (2007). China's (Uneven) Progress Against Poverty. *Journal of Development Economics* 82, 1-42.

Ravallion, M., and Datt, G. (1996). How Important to India's Poor is the Sectoral Composition of Economic Growth. *The World Bank Economic Review* 10(1), 1-25.

–––– (2002). Why has economic growth been more pro-poor in some states of India than others? *Journal of Development Economics* 68, 381-400.

Reuters (2012). Ugandan lawmakers pass oil bill, worry about corruption. 12 December, 2012. [Online] Available from: http://www.reuters.com/article/2012/12/07/uganda-oil-idUSL5E8N7AJH20121207

Robinson, J.A., R. Torvik and T. Verdierr (2006). Political foundations of the resource curse, *Journal of Development Economics*, 79, 447-68.

Rodrik, D. (2014). An African Growth Miracle? New Jersey: Institute for Advanced Study, Princeton.

Ssewanyana, N.S., A.J. Okidi, D. Angemi and V.Barungi (2004). Understanding the Determinants of Income Inequality in Uganda. Working Paper, WPS/2004-29, Centre for the Study of African Economies, University of Oxford.

StatsSA (2013). Quarterly Labour Force Survey. December.

Stewart, F. (2002). Horizontal Inequalities: A neglected dimension of development. QEH Working Paper Series QEHWPS81, Centre for Research on Inequality, Human Security and Ethnicity, University of Oxford.

Sunderland-Addy, E. (2008). Gender Equity in Junior and Senior Secondary Education in Sub-Saharan Africa. *African Human Development Series.* Washington DC: World Bank.

The Brookings Institution. (2012). Africa Learning Barometer. Brookings. [Online] Available from: www.brookings.edu/research/interactives/africa-learning-barometer [Accessed: 1 September 2014]

The Economist (2012). Eastern El Dorado? [Online] Available from: http://www.economist.com/node/21552265?fsrc=scn/fb/wl/ar/easterneldorado

The Economist and IMF (2011). Africa's Impressive Growth. Retrieved from The Economist. [Online] Available from: www.economist.com/blogs/dailychart/2011/01/daily_chart

Think Africa Press (2012). Reserving Judgement on Tanzania's Natural Gas Discoveries. [Online] Available from: http://thinkafricapress.com/tanzania/nascent-gas-industry-potential-or-potentially-dangerous-430billion

UNESCO Institute for Statistics (2012). Adult and Youth Literacy, UIS Factsheet No. 20. [Online] Available from: www.uis.unesco.org/literacy/Documents/fs20-literacy-day-2012-en-v3.pdf [Accessed: 1 September 2014]

UNU-WIDER (2014). World Income Inequality Database V3.0B. UNU-WIDER. [Online] Available from: http://www.wider.unu.edu/research/WIID3-0B/en_GB/database/ [Accessed: 11 November 2014]

Van der Walle, N. (2009). The Institutional Origins of Inequality in Sub-Saharan Africa. *The Annual Review of Political Science*, 12, 307-327.

Vigdor, J. L. (2004). Community Composition and Collective Action: Analyzing Initial Mail Response to the 2000 Census, *The Review of Economics and Statistics*, 86, 303-12.

Watkins, K. (2013). Too Little Access, Not Enough Learning: Africa's Twin Deficit in Education. Brookings. [Online] Available from: www.brookings.edu/research/opinions/2013/01/16-africa-learning-watkins [Accessed: 1 September 1 2014]

World Bank (2013a). Equal Opportunities, Better Lives: Gender in Africa. Washington DC.

World Bank (2013b). Africa's Pulse: An analysis of Issues Shaping Africa's Economic Future. 7.

World Development Indicators. 2014. The World Bank. [Online] Available from: http://data.worldbank.org/data-catalog/world-development-indicators [Accessed: 31 October 2014]

World Health Organization (WHO). (2014). World Health Statistics 2014. WHO.