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Structural Change or Path Dependence? Assessing the Growth Paths of Sub-Saharan African Economies in the Early 21st Century

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Abstract

Sub-Saharan African economies have exhibited spectacular growth rates since the early-2000s. For many observers, this marks the end of the pessimism that has long prevailed in the economic literature on the region. The paper argues that uncertainties remain, however. Growth rates mostly stem from distorted export structures - based on commodities -, and high international commodity prices due to demand from China and other emerging countries. These growth rates may not imply any change of export structures (which may even be strengthened), they remain vulnerable to price fluctuations and external shocks, and they may not involve structural transformation, i.e. a break in the pre-existing structure of the economy, industrialisation and productivity growth. On the other hand, sustained high commodity prices may foster structural transformation via higher fiscal resources; emerging countries also invest in Sub-Saharan African industrial sectors and infrastructure, which are key determinants of structural change; equally, commodities may trigger linkages towards industrialisation. The relative strengths of these arguments are assessed.

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() The opinions expressed herein are strictly personal and do not necessarily reflect the position of ISPI.*

1. Introduction¹

Sub-Saharan African economies have exhibited spectacular growth rates since the early-2000s. For many observers, this marks the end of the pessimism that has long prevailed in the economic literature on the region.

The notion of ‘African lions’ has been promoted in the early 2010s by a series of economic media and consultancies agencies, e.g., *The Economist*, Mc Kinsey, the Boston Consulting Group, among others. *The Economist* thus speaks about “*Uncaging the lions*”: “business is transforming Africa for the better” (10 June 2010). Similarly, another article praises ‘*The lion kings*’?(*The Economist*, 6 January 2011), with the argument that since 2001, Sub-Saharan African countries “had been home to six of the world’s top ten fastest growing economies, the gains being attributable not only to global demand for commodities, but also to structural reforms and better economic management...” The international financial institutions – the IMF and the World Bank – also emphasise the successes of ‘the New Africa’ – the title of a special issue of the joint IMF-World Bank journal *Finance and Development* (December 2011).

While the term ‘lions’ is attractive and seems to appropriately describe the spectacular growth episodes of Sub-Saharan African countries since the mid-2000s, it remains ambiguous. An economy may become a ‘lion’ in relying on existing market and export structures, for example - typically in Sub-Saharan Africa –, by harnessing the benefits of the export of a primary commodity, e.g., oil, gas, copper or coffee. In contrast, an economy may become a ‘lion’ because it has achieved structural transformation, a structural break in the pre-existing structure of the economy: i.e. diminution of the share of primary products, industrialisation – or increase in the share of services –, and productivity growth.

These differing views are at the core of the debates. Some analysts may see the persistence of existing exports structures – i.e., commodity dependence – as paving the way for a smooth transformation of African economies into ‘lions’, if, for example, commodity prices stay high, external demand for Sub-Saharan African countries exports remain sustained, and wise public policies allow for exports earnings to be allocated and spent so that they foster domestic growth. Such a view may be found within the World Bank, for example, or, more cautiously, in the IMF.

For other analysts, in contrast, long-term growth requires structural transformation in the sense of a departure from the existing commodity-based export pattern (Hausmann and Rodrik, 2006; Rodrik, 2008; McMillan and Rodrik, 2011), the diversification and increasing sophistication of exports, and output and product quality upgrading, and the shift of workers from low to high average productivity activities and sectors (as defined by IMF, 2012d, chap. 3). This change must rely on the manufacturing sector, and not only on the industrial sector or ‘non traditional’ exports, which can be commodities with limited processing (Ndikumana, 2012). Being a ‘lion’ also involves other types of structural transformations, for example in the social structure: for Pitcher (2012), ‘lions’ are still far from becoming ‘tigers’, notably due to steep inequalities and the thinness of middle classes in Sub-Saharan African societies.

¹ A first version was presented at the African Studies Conference, Pavia, University of Pavia, 18-20 September 2012, at the Panel: *The “African Lions”: Developmental State, Natural Resources, Sustainable Growth, Sustainable Democracies?*, Coordinators: Emanuele Fantini and Lia Quartapelle. Some elements of this article were also used in a presentation at the Workshop ‘Emerging Africa: Moment or Momentum? Critical Transitions’, organised by Daniel Bach, Bordeaux, Sciences Po-Bordeaux, Centre Emile Durkheim, and University of Nottingham-EU Co-Reach Programme, 1st-2nd March 2012, forthcoming in 2013 in the *South African Journal of International Affairs*.

The paper thus argues that uncertainties remain. Growth rates mostly stem from distorted export structures - based on commodities - and high international commodity prices due to demand from China and other emerging countries. It may be argued that these growth rates do not imply any change of export structures – commodity dependence may even be strengthened -, that they remain vulnerable to price fluctuations and external shocks, and that they do not involve structural transformation, i.e. a break in the pre-existing structure of the economy, industrialisation and productivity growth.

On the other hand, sustained high commodity prices may foster structural transformation via higher fiscal resources; emerging countries also invest in Sub-Saharan industrial sectors and infrastructure, which are key determinants of structural change; equally, commodities may trigger linkages towards industrialisation. The relative strengths of these arguments are assessed.

The paper is structured as follows. Firstly, it presents a series of facts that confirm the growth performances of Sub-Saharan African countries over the 2000s and the legitimacy of arguments that read premises of structural change in these performances. Secondly, it highlights the narrow bases of this growth, which mainly stem from movements of international commodity prices. Thirdly, it underscores the negative effects of the existing growth pattern, which is characterised by commodity dependence - in particular, effects of lock-in and path dependence, negative impacts of volatility, vulnerability and uncertainty.

The paper finally argues that the directions of bifurcations – either towards the maintenance of vulnerable economic structures, or towards structural change and long-term growth (becoming ‘lions’) – and *ex post* outcomes are inherently uncertain and cannot be predicted *ex ante*. They result from combinations of causes, where domestic policies and institutions combine with market structures. The actual outcomes of such combinations are specific to each country – being trapped by path dependence in low equilibria, or entering virtuous and cumulative growth processes.

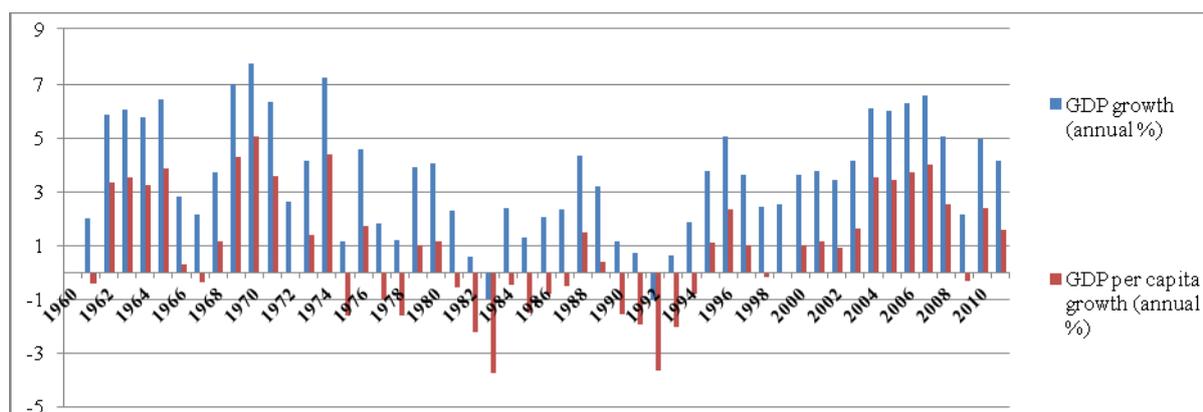
2. Sub-Saharan African countries growth performances: premises for structural change?

The view that a number of Sub-Saharan African (SSA) economies may soon become ‘lions’ is supported by several arguments, in particular the spectacular growth that many SSA countries have witnessed since the mid-2000s.

2. 1. The many arguments for optimism

SSA countries have been characterised by spectacular growth rates over the 2000s, which are all the more noticeable since developed countries have been affected after 2008 by the strongest recession since WWII in developed countries. The IMF has considered as a sign of remarkable ‘resilience’ the overcoming of the 2008-09 crisis by SSA economies (IMF, 2011b). Despite difficult external conditions, output in SSA grew by 5% in 2011 (IMF, 2012c).

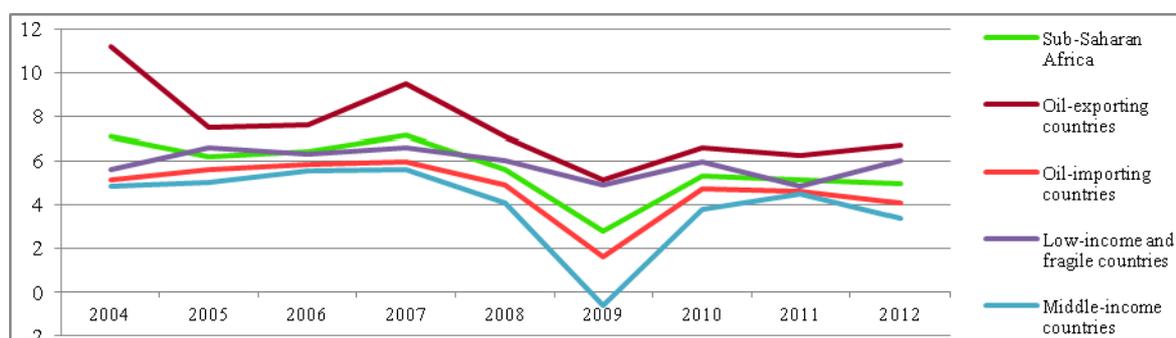
Figure 1: Sub-Saharan Africa: GDP growth and GDP per capita growth, 1960-2011



Source: World Bank, World Development Indicators, December 2012.

Growth rates, however, are mainly driven by exports. Sub-Saharan African countries differ regarding the composition of their exports, and growth performances precisely differ according to the types of exports, in particular for oil and non-oil exporters, and middle-income and low-income countries (IMF, 2012c).

Figure 2: Sub-Saharan Africa: real GDP growth by country group (annual percent change), 2004-2012



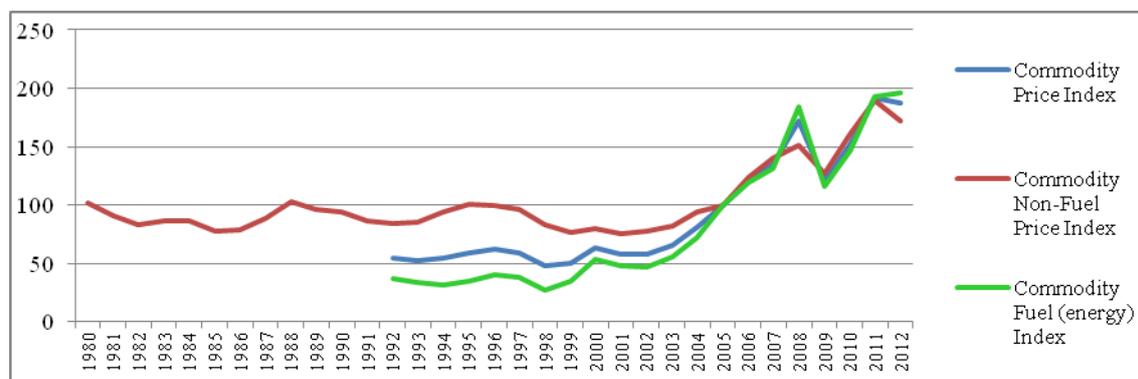
Source: IMF Sub-Saharan Africa Regional Economic Outlook Database, December 2012.

A key point is that the growth rates of SSA countries have been driven by high commodity prices over the 2000s. These years witnessed what has been analysed as a ‘supercycle’, and there has been a spectacular increase in all commodity prices, which took place after 3 major commodity booms and slumps in the 20th century: 1915–17; 1950–57; 1973–74, the 2003–2008 commodity price boom being the largest and longest one since 1900 (World Bank, 2009). By the end of 2011, average prices for energy and base metals in real terms were three times as high as just a decade ago, approaching or surpassing their record levels over the past four decades (IMF, 2012b).

Remarkably, commodity prices rebounded after the 2008-09 crisis, for oil prices, and for some agricultural commodities, due to the demand for commodities from emerging countries (particularly China) as inputs for their growth and industrialisation, the resilience of these countries’ growth performance, and the demand of new middle classes (IMF, 2009a; Blas, 2012a; Erten and Ocampo, 2012).

Some economists, e.g. within the IMF, are indeed optimistic that commodity prices will remain high in the medium term. Helbling (2012) thus underscores that the global economic crisis hurt commodity prices far less than in earlier recessions, although he emphasises the uncertainties of the long-run. Commodity prices rose through the 2000s until the crisis, then fell sharply, then recovered.

Figure 3: Commodity prices indices, 1980-2012 (2005=100)



Source: IMF World Economic Outlook database, October 2012. Commodity Price Index includes both Fuel and Non-Fuel Price Indices; Commodity Non-Fuel Price Index includes Food and Beverages and Industrial Inputs Price Indices; Commodity Fuel (energy) Index includes Crude oil (petroleum), Natural Gas and Coal Price Indices.

These facts undoubtedly constitute reasons for optimism. High growth rates obviously enhance countries' fiscal space and governments' room for manoeuvre regarding public investment, which is itself a key determinant of long-term growth. In addition, even if growth is caused by windfall gains stemming from commodity prices, governments may use revenue windfalls to reduce to increase their assets and reduce their debt (e.g., via a fiscal rule), as has been the case not only of Norway and Chile, but also Nigeria over the 2000s (Tanner and Restrepo, 2011).

Moreover, these facts confirm the findings of some economic historians. In contrast with recurrent studies that emphasise grim prospects for the continent, a long-run historical perspective shows that SSA is not a case of long-term 'growth failure': over the long term, SSA displays a pattern of 'rise and fall'. SSA economies did well during the first half of the 20th century, GDP per head of population expanded considerably, including during the globalisation backlash of the 1930s: the period 1920-1973 exhibited strong growth and SSA negative performance is concentrated in the post-1974 period (Smits, 2006). Jerven (2010), quoting Maddison (2009), also demonstrates a similar pattern of 'rise and decline', which is substantiated by several case studies: SSA growth rates were high at the time of independence until the 1970s, but the global economic downturn in the 1980s hit SSA harder than other continents. For Jerven, the proximate cause of low income in SSA stems from growth rate volatility and the fact that growth spurts have always been followed by busts.

If there is no 'structural' cause underlying negative growth performance and no 'structural' stagnation, one may legitimately be optimistic in regard to SSA's progression towards sustained long-term growth.

2. 2. Emerging countries as key contributors to structural change? China's trade and investment relationships with Sub-Saharan Africa

The determinants of SSA growth over the 2000s involve a series of factors that can be viewed as paving the way to long-term growth.

Firstly, SSA growth is fostered by the growth and demand of emerging countries vis-à-vis SSA. Emerging countries are increasingly diversified, even if China, India and Brazil constitute the main emerging countries that import SSA exports. This reduces the vulnerability of SSA exporting countries to the business cycles of a single product and the volatility of a country's growth rates. SSA economies have diversified their trade and investment relationships from 'traditional' partners – the United States and European countries –, and increase their trade and investment linkages with emerging countries. Secondly, most emerging countries are expected to stay on a trajectory of growth in the medium-term, even if their growth rates are likely to decelerate, as in the debated case of China.

More than any other emerging country, China contributes to an 'exceptional' period for SSA since the 1970s. Is it the basis for structural change and virtuous cycles of industrialisation, or the preservation of the status quo? Regarding this key question, several arguments plead for a positive perspective and possible structural change.

China's contribution to structural change in Sub-Saharan Africa via its contribution to high commodity prices

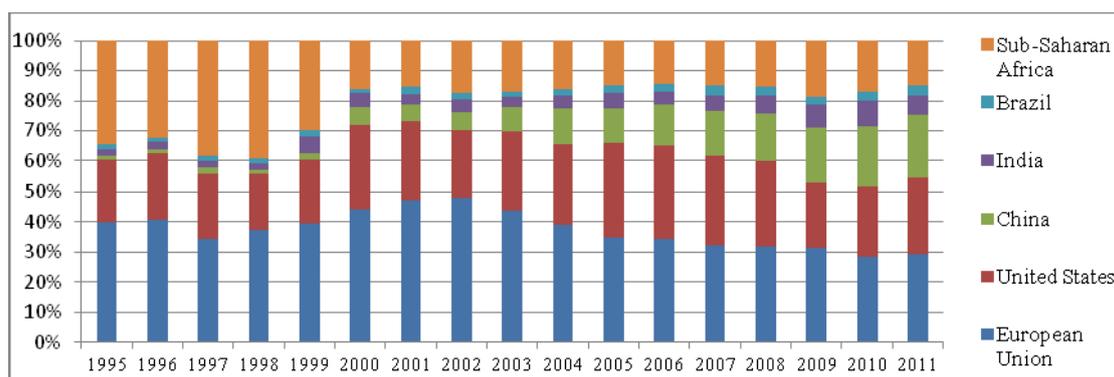
China has become a central driver of high prices in a significant number of commodities (Akyüz, 2012): the price boom of the 2000s stems from the increasing importance of China's demand in commodity price formation, together with other large emerging countries, such as India. High commodity prices obviously represent a positive gain for SSA exporters of these commodities, as they imply increased fiscal earnings and enhanced fiscal space, hence more space for investment, which is a key cause of long-term growth.

China's demand is especially strong for metals, notably aluminium, copper and iron. While China's impact on world trade and prices varies by commodity, it has become the dominant importer of base metals and agricultural raw materials, and its role in food and energy markets, though small, is growing (Roache, 2012; Nissanke and Söderberg, 2011). China is now the number one energy consumer in the world, and its energy consumption is projected to double by 2017 and triple by 2025 from its 2008 level (IMF, 2011a). A one-percentage-point increase in China's industrial production growth induces a two-percentage-point increase in oil and copper prices (IMF, 2011b).

Emerging countries' demand vis-à-vis Sub-Saharan Africa: structural change via trade, investment and infrastructure

China has become a central driver of demand for the exports of SSA economies – oil, metals and minerals –, with trade flows between the two exhibiting a spectacular increase. The IMF (2012c) thus confirms that all SSA countries export a lower share of their products to OECD than in 1990, and a greater share to emerging countries, in particular China.

Figure 4: Sub-Saharan Africa: percentage of exports by partner, 1995-2011



Source: <http://unctadstat.unctad.org>, author's calculations.

This increase, with the intrinsic benefits of the associated diversification of trade partners, may be viewed as a genuine opportunity and an engine of growth for SSA countries. Moreover, industrial upgrading in China has increased wages and China increasingly graduates from labour-intensive to more capital- and technology-intensive industries, which is an opportunity for lower wage countries to start labour-intensive industrialisation. This 'leading dragon phenomenon' may be an unprecedented opportunity for low-income SSA countries (Chandra et al., 2012).

If China's growth rates continue, its demand for SSA products will not only be directed towards primary commodities but also towards low-end manufactured products that will no longer be made in China due to increasing local factor costs. The sector of manufactured products with little sophistication— which is usually labour-intensive – is often viewed as a first step towards industrialisation, diversification and therefore long-term growth: therefore, emerging countries growth and demand may be an effective factor of structural change for SSA economies.

Not only have trade relationships increased between emerging countries and SSA economies, but emerging countries, and China in particular, constitute important drivers of foreign direct investment (FDI) in SSA. Chinese FDI to SSA as a share of total FDI to the region climbed from less than 1% in 2003 to 16% by 2008 (IMF, 2011b).

For all investing countries, a key motive for FDI in SSA is resource-seeking, and a great share of FDI is directed towards primary resources, in particular oil. Emerging countries do not differ from developed countries in this regard. China multinationals, mainly state-owned enterprises or backed by the state, thus invest in the resource sectors, such as oil and mines (Kragelund, 2009). Much of this type of FDI consists in a contractual package that 'exchange' commodities for investment by Chinese firms, often in infrastructure – the so-called 'Angola model' (Alden and Alves, 2009; Corkin, 2008, 2011).

Emerging countries, however, also invest in SSA industrial sectors, which is an opportunity for structural change since industrialisation is a key determinant of long-term growth (Rodrik, 2009). Besides oil and mining, Chinese investment is directed toward manufacturing, construction, finance, agriculture, services (IMF, 2011b). In some SSA countries Chinese FDI is more concentrated in the manufacturing sector than in primary commodities, as is the case in Ethiopia (IMF, 2011b). China established several Special economic Zones (SEZs) in SSA with the aim of promoting manufacturing. An increasing number of private medium and small enterprises from China operate in SSA in the sectors of manufacturing, infrastructure, agriculture and services (Shen, 2013; Gu, 2009). Moreover, even if emerging countries' trade

and investment would mostly target the sector of primary commodities, this is not necessarily an obstacle to structural change. As shown by Morris et al. (2011a, b, 2012), the commodities sector may create linkages in Hirschman's (1958) sense, which may lead to industrialisation.

In addition, emerging countries invest in infrastructure, and infrastructure is a key determinant of growth (Calderon and Serven, 2010; Foster and Briceño-Garmendia, 2010): the cost of power outages and the lack of transportation infrastructure may be viewed as a central impediment to structural transformation in SSA (IMF, 2012d). Likewise, it has been argued that the current low levels and distorted composition of exports in SSA are partly due to poor trade infrastructure (Hummels, 2001; 2007). Indeed, the low levels and quality of infrastructure - power, electrification and transport - generate huge transaction costs on the circulation of goods and people, and impede competitiveness, trade and therefore diversification and growth. Therefore, the enhancing of infrastructure by investors from China and other emerging countries is undoubtedly beneficial for growth and may create the conditions for structural change in SSA.

3. The narrow bases of Sub-Saharan Africa growth pattern: commodity prices and aid

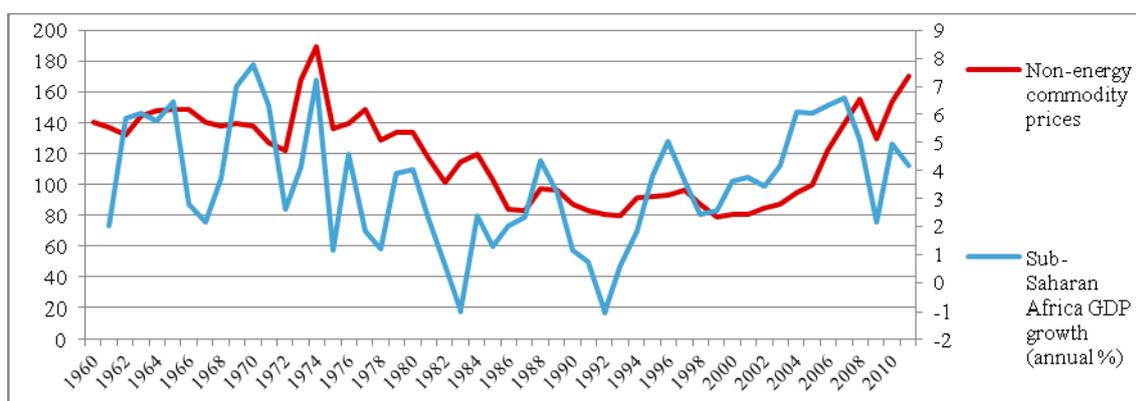
Against these positive views, it may be argued that most SSA countries are characterised by a high level of commodity dependence and a high reliance on a very small number of commodities for their exports.

3. 1. Growth rates that depend on international commodity prices

The growth performance of SSA economies is based on a limited number of factors, mainly the movements of international commodity prices. Indeed, SSA economies are characterised by high commodity dependence, distortion of the exports structure, and lack of diversification. In SSA low- and middle income countries, in 2010, fuels represented 32% of total merchandise exports; manufactures, 31%; ores and metals, 18%; food, 15%; and agricultural raw materials, 4% (World Bank *World Development Indicators* 2012, table 4.4). Significantly, fuels and metals represent an increasing share of SSA exports, when compared to 1995. This importance of fuels increases the risks of 'Dutch disease' and deindustrialisation effects. SSA economies also display a distorted fiscal structure, which is based on the taxation of external trade, and rely on a few commodities for the largest part of their revenue (IMF, 2009b).

Growth rates are high but they closely follow the fluctuations of international commodity prices. They are driven by factors that are external and outside the control of SSA policymakers, whatever the accuracy of their policies.

Figure 5: Sub-Saharan Africa: growth rate (right scale) and commodity prices (annual price index, 2005=100, real 2005 dollars, left scale), 1960-2011



Source: World Bank Commodity Price Data,

<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:21574907~menuPK:7859231~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html>; World Bank World Development Indicators, December 2012.

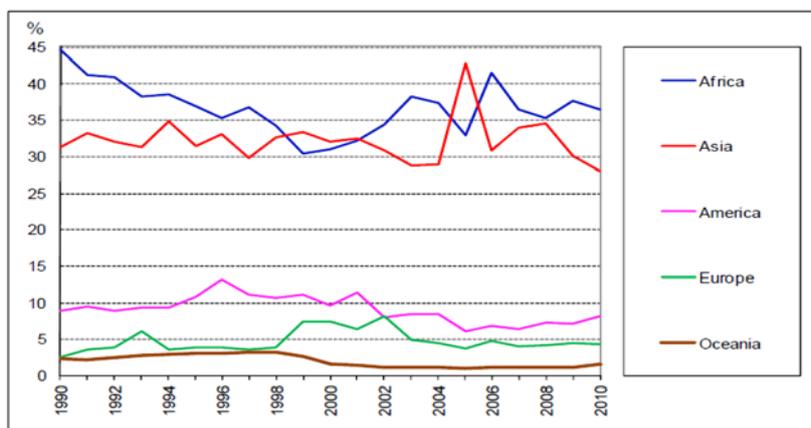
3. 2. A growth also fostered by aid flows

Foreign direct investment represents larger flows than official development assistance (ODA) in many SSA countries (OECD, 2012), which may be viewed as an encouraging sign regarding structural transformation.

However, as argued by OECD (2012), for the majority of low income countries ODA remained the main external resource in 2010, and investment exceeds other flows only in resource-rich countries. Moreover, 6 lower middle-income countries (Cameroon, Cape Verde, Côte d'Ivoire, Djibouti, Sao Tomé and Príncipe, Sudan) had ODA as the largest external inflow in 2010. As a share of GNI, Liberia is Africa's most aid dependent country, with ODA representing 177% of its GNI, followed by Burundi, DRC, Sierra Leone and São Tomé and Príncipe each with ODA representing over 20 % of GNI. Aid dependency ratios have increased during the 2000s: in 2010, nearly half of SSA countries had a ratio ODA/GNI over 10% (OECD, 2012). Some SSA countries have also received 'aid surges' (e.g., Uganda, Ghana, Tanzania, Ethiopia, Mozambique).

Indicators indeed suggest a worsening dependence. Net ODA represented 20 \$ per capita in 2000 or 4.1% of GNI; 53 \$ per capita and 4.9% of GNI in 2009 (World Bank, World Development Indicators 2011). In 2000, aid represented 23.1% of gross capital formation, and 25% in 2009 (World Bank, World Development Indicators 2011). In 2000, aid represented 11% of imports of goods, services and income; in 2009, 12% (World Bank, World Development Indicators 2011). SSA remains the most 'aided' region in the world.

Figure 6: Regional shares of total net ODA (as a percentage of total net ODA)



Source: www.oecd.org/dac/stats/regioncharts, Development Aid at a Glance 2012: Statistics by Region; http://www.oecd.org/document/11/0,3746,en_2649_34447_2002187_1_1_1_1,00.html

Ghana may be an example of the difficulty of moving from an aid- and commodity-based structure to one that would be more developmental. Osei (2012) thus demonstrates that over the 1980-2008 period growth has remained strongly correlated with aid: the structure of the Ghanaian economy has changed over the years, but this cannot be viewed as structural change: production still takes place on the lower end of the technology scale and exports are still dominated by primary products (cocoa, gold). Oil has been discovered, and in the short to medium term, Ghana will have the complement of both oil and aid. Revenue from oil, however, may just replace foreign aid in the long run.

4. The risks inherent in existing growth patterns: lock-in, path dependence, volatility, vulnerability, uncertainty

Sub-Saharan African countries have exhibited spectacular growth rates over the 2000s. A series of consequences of their export and market structures, however, may constitute significant constraints on their transformation into 'lions' and their long-term sustained growth.

4. 1. Risk of being locked in commodity-dependence

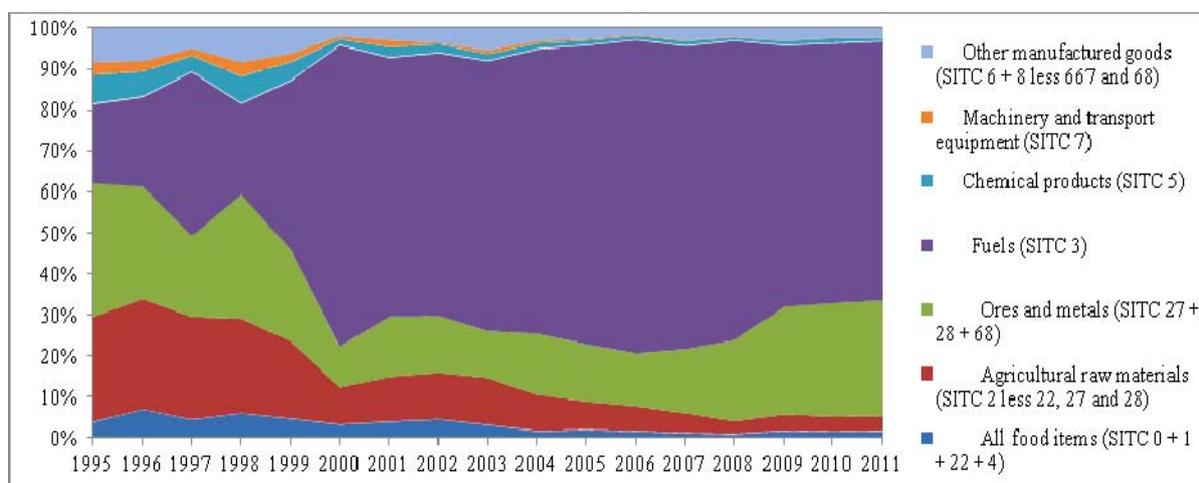
An important component of the SSA growth in the 2000s is generated by movements of international commodity prices: this generates for SSA economies the risk of being locked in past commodity export structures and reinforcing the status quo and path dependence. Indeed, high commodity prices are for SSA economies strong incentives for remaining in the production of primary commodities.

Sub-Saharan African increased trade relationships towards emerging countries may appear as diversification. The export pattern of SSA to emerging countries, however, does not differ from SSA pattern of exports to the Rest of the World. Oil dominates SSA exports to the US and EU countries. SSA exports to China, India and Brazil exhibit the same composition: firstly oil and gas, then non-petroleum minerals and metals (Wang and Bio-Tchané, 2008, IMF, 2011b, fig. 3.5; Ye, 2010).

Similarly, the pattern of SSA imports from China and from the Rest of the World does not exhibit significant differences (Ye, 2010): SSA countries import manufactured products, e.g., machinery and equipment, and processed commodities, e.g. food and chemicals, from the world, with a greater share of manufactured goods from China.

In contrast, the type of goods that China imports from SSA are very specific to SSA. China imports commodities from SSA, but imports different products from other parts of the world: i.e., manufactured goods, transport equipment and machinery, and chemicals. This strengthens the argument that China trade relationships with SSA are keeping SSA in its specialisation of commodity-exporting region.

Figure 7: China's imports by key products from Sub-Saharan Africa, 1995-2011



Source: <http://unctadstat.unctad.org>, author's calculations.

Despite the increase in FDI over the 2000s, these risks of 'lock-in' effects of emerging countries' trade and investment relationships with SSA are reinforced by investment modalities such as the 'resources-for-infrastructure' contracts ('Angola model') (OECD (2012).

4. 2. The further weakening of comparative advantage of Sub-Saharan African economies in industrial exports

In addition, China may undermine SSA prospects for industrialisation, although the export of manufactured products constitute the crucial elements of structural transformation, as is shown by Asian 'developmental states' and China (Kaplinsky and Morris, 2008; Rodrik, 2008). Not only does the pattern of global demand from emerging countries – along with the US and EU –, provide incentives for SSA to specialise in the export of commodities driven by high commodity prices, but SSA trade patterns with emerging countries may weaken non-commodity sectors, in particular industrial sectors.

China, as an exporter of manufactured goods, undermines the prices of many of these (Kaplinsky, 2006), making it so that SSA manufactured goods cannot remain competitive. This lessens the possibilities for SSA to shift from resource-based industries to non-resource and skill-based ones. China may be a threat for SSA labour-intensive industrial sectors, particularly clothing and textiles (Kaplinsky and Morris, 2008; Kaplinsky et al., 2007).

4. 3. The negative impact of commodity-based export structures and growth: volatility

Export structures based on commodities reduce countries' economic performance through many channels, particularly through long-term decline in commodity prices, inherent price volatility and the associated Dutch Disease effects (such as the crowding out of manufacturing), and the lowering of investment.

Commodity prices have steadily declined since 1845, as shown by *The Economist* composite index of industrial commodity prices (*The Economist*, 15 April 1999). Movements of commodities differ among themselves: co-movements, however, exist for most prices, especially between energy and non-energy commodities (Baffes, 2011). In addition, commodity price formation depends on factors that cannot be predicted *ex ante*, such as supply and demand, exchange rates, level of inventories, and the degree of financialisation of the market of the commodity (Frankel, 2008).

Apart from decline, which remains debated – oil prices appearing to be an exception –, a crucial channel of the negative impact of commodity dependence is the inherent volatility of commodity prices (Maizels, 1994; Nissanke, 2010, 2011). This volatility has been intensified by the financialisation of commodities since the early 2000s and the increasing treatment of commodities as a financial asset class among other financial assets (Mayer, 2009; Tang and Xiong, 2010a, b). During the 2008-09 crisis, volatility rose to unprecedented levels for many major commodities, especially oil (IMF, 2009a).

Commodity price volatility has a negative impact on growth, which is why export structures that depend on commodities are confronted with severe constraints on their path towards long-term growth. First of all, volatility has a negative impact on investment, as it is an incentive for investors to remain in the status quo, and therefore impedes growth.

Other important channels of this negative impact of price volatility are the exposure to Dutch Disease, but also the exposure of commodity-exporting countries to repeated terms of trade and fiscal shocks. There seems to be a negative relationship between exposure to shocks and growth (Easterly et al., 1993). SSA fiscal revenues are indeed highly vulnerable to terms of trade shocks and price volatility, as SSA countries are characterised by a tax base where revenues strongly depend on external trade, a large share of which is composed of commodities (IMF, 2009c). Likewise, with the Middle East, SSA is the region of the world that is the most affected by terms of trade shocks, which Funke et al. (2008) explain precisely by SSA's low level of diversification and low manufacturing base. Overall, there seems to be a negative relationship between macroeconomic volatility and growth over the long-run (Van der Ploeg and Poelhekke, 2009; Loayza et al., 2007), although it remains debated (Arbache and Page, 2010).

Volatility also affects aid flows, which create problems that are similar to commodity prices, earnings or output volatility, i.e. Dutch disease and a difficult management of windfall gains, and problems of absorption and spending (Gupta et al., 2005; Killick and Foster, 2007; Harrigan, 2007; Bulir and Hammann, 2008; Berg and Hussain, 2008).

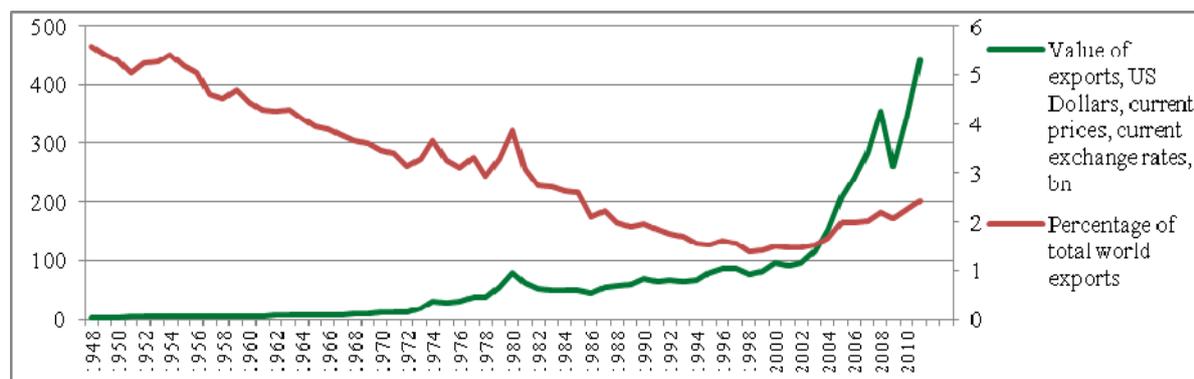
In addition, as argued by the IMF (2012b), among nonfuel commodities, especially for food and raw material prices, downswings typically last longer than upswings. Food and raw material prices may be affected by persistent negative factors – weather being one – that do not generally affect the prices of energy and metals. Deaton and Laroque (1992) and Cashin et al. (2002) had already showed that for agricultural commodity prices upward movements were shorter than downwards ones.

More generally, commodity-based export structures inherently generate vulnerabilities. Commodity-based market and export structures are associated with low productivity, suggesting pessimistic prospects for the long run, as technological progress has reduced the quantity of commodities used per unit of GDP (World Bank, 2009). SSA countries indeed suffer from a lower competitiveness and a lower labour productivity than their competitors in the developing world, especially in manufacturing. The fact that a series of economic fundamentals are stagnating in SSA – savings, investment, productivity and export diversification – suggests that SSA may not be at a ‘turning point’ (Arbache et al., 2008), despite its growth performance over the 2000s. In addition, the gains of commodity price increases are not evenly distributed within countries, and not even to the workers of the commodity sectors, as shown by the recurrent social unrest². This is not a sign of an inclusive growth and change from the highly skewed income distribution that is a key characteristic of SSA countries.

Moreover, SSA growth depends on external factors that are unstable and beyond the scope of SSA domestic policies. The high levels of commodity prices since the 2000s depend on global business cycles, global demand, and the movements of international commodity prices and their multiple determinants. Forecasts for GDP growth rates in developed countries are uncertain due to sovereign debt crisis in the eurozone (IMF, 2012b). The bounce back of world exports after the 2008-10 crisis may not last (World Bank, 2011b), and growth forecasts for SSA are uncertain (IMF, 2012d). SSA growth is intrinsically fragile.

As a result, over the long-term, despite SSA economies’ enhanced trade orientation, the share of SSA exports in world exports has declined. According to UNCTAD statistics, this share was 3.9% in 1980, and in 2009, 2% of world exports, and 1.5% excluding South Africa. SSA exports have grown more slowly than world exports.

Figure 8: Sub-Saharan Africa’s exports: percentage of world exports (right axis) and value (left axis), 1948-2011



Source: UNCTAD Statistics: <http://unctadstat.unctad.org>

The decline of SSA in world exports is associated with the divergence of SSA with other parts of the world. SSA’s share has declined relative to other regions that have increased their share, in particular East Asia.

The IMF is aware of the problems associated with commodity dependence. The key characteristics of extractive industries (oil, gas, mining) sectors include volatility, uncertainty,

² As in Zambian and South African mines in 2012.

presence of rents, asymmetry of information, time inconsistency and exhaustibility (IMF, 2012a). IMF (2012b) thus reveals that a typical downswing in energy and metal prices lasts 2–3 years, with a real price decline of 40 to 50% from peak to trough: this means a real GDP growth reduction of ½ to 1 percentage point in the downswing relative to the upswing.

For the IMF, however, commodity prices volatility can be solved through appropriate financial instruments (e.g., hedging) and ‘appropriate policies’, such as saving during good times for use in bad times via countercyclical budgetary policies. Also, for the IMF research, volatility is not a specific feature of commodity prices, but manufactures’ prices are also volatile (Arezki et al., 2011).

4. 4. Not only volatility, but uncertainty: is short-term growth sustainable in the long-term?

Sub-Saharan African countries are confronted with global uncertainties. The IMF warns that the growth of SSA countries in the 2000s is fragile, as underscored in the spring 2012 report on the world economy (“*Growth Resuming, Dangers Remain*”, IMF, 2012b) and the title of the IMF Sub-Saharan Africa *Regional Economic Outlook* of the autumn 2012 (“*Maintaining Growth in an Uncertain World*”) (IMF, 2012d). Growth rates are not only volatile but also characterised by high uncertainty regarding their levels. Uncertainty is indeed a key feature of economies that are based on the export of commodities (Nissanke 2010; Sindzingre, 2010).

In addition, in some countries these growth episodes depend on ‘agency’ rather than ‘structure’, i.e. on these countries’ rulers. Growth may be viewed as independent from specific rulers’ commitment only in a limited number of countries, e.g., Botswana, Ghana, Mauritius, where policies subsist even when rulers change.

Firstly, the ‘supercycle’ that has underlain high growth rates in SSA over the 2000s must be put in perspective. For many commodities, even after their post- 2008-09 crisis rebound, most real commodity prices remain below their levels of the 1970s. In addition, the ‘supercycle’ may appear as ‘less-super’ in the years following 2012 due to the recession in European economies and its impact on global markets (Blas, 2012a, b). Indeed, commodity prices may decrease over the 2010s, for example crude oil prices³.

Secondly, the growth of SSA economies is strongly dependent on external demand and the business cycle of its main client markets, i.e. the US, the EU and China. The 2008-09 financial crisis and later the crisis of European countries’ sovereign debt have had a impact on SSA economies, which is visible in the growth trajectories of all SSA countries. The IMF expects reduced growth rates in 2012 and 2013 in SSA due to the financial problems of the euro area, which will vary across SSA countries depending on their links to Europe (IMF, 2012c).

Akyüz (2012) thus argues that the acceleration of growth in developing countries since the 2000s is due not so much to improvements in underlying fundamentals as to exceptionally favourable global conditions, shaped by unsustainable policies in advanced economies and by China and its impact on commodity prices. China’s growth, however, has been driven by exports to advanced economies and after the global crisis, by an investment boom, which are both not replicable or sustainable over the longer term: export-led Asian economies’ dependence on foreign markets is not sustainable. For Akyuz, a stable growth for SSA commodity exporters depend on the reduction of their reliance on capital flows and

³ World Bank, Global Economic Prospects, Commodity Price Forecast Update, 12 June 2012: http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1304428586133/Price_Forecast.pdf

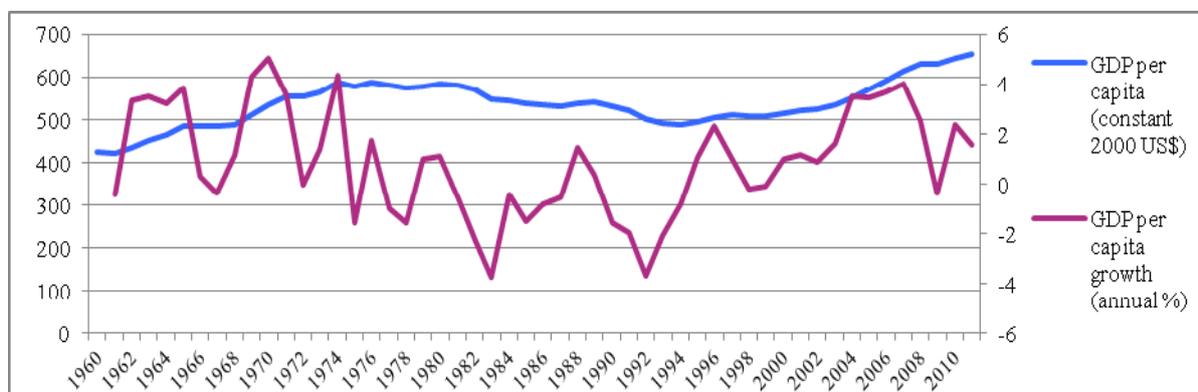
commodity earnings, because these two determinants of their growth which are largely beyond national control.

The maintenance of high commodity prices in the medium term remains a debated question, and in particular, the question as to whether China's growth will continue at the same pace in the 2010s. China's rebalancing of its growth toward private consumption may reduce the growth of China's demand for some primary commodities (e.g., metals), leading to a decline in the 'commodity intensity' of its growth pattern. This is likely to have an adverse impact on the price of these commodities and therefore on the exporters of these commodities, including in SSA. In addition, the sustainability of China's growth remains uncertain. As argued by Eichengreen *et al.* (2011), China's growth may slow down after 2015.

In addition, foreign direct investment in SSA also remains fragile, as it is highly sensitive to the growth of investing countries and international business cycles. As underscored by OECD (2012), SSA share of FDI to developing countries decreased in 2011 as more money went to emerging economies, particularly China. It remains higher than in the 2000, but lower than its peak in 2009, indicating that FDI has not fully recovered. Aid flows are also volatile and uncertain, and as shown by a large literature, aid dependence, together with the harmful effects of donors' aid fragmentation, may typically lead to aid traps (Sindzingre, 2012a).

It may be argued that growth performances significantly vary across countries, between oil exporters and oil importers, food importers and the others, landlocked and coastal countries. There are, however, commonalities: besides a few upper middle-income and high-income countries⁴, SSA countries are low- and lower-middle income, and they display volatile growth rates.

Figure 9: Sub-Saharan Africa GDP per capita (constant 2000 US dollar) (left axis) and GDP per capita annual growth rate (right axis), 1960-2011



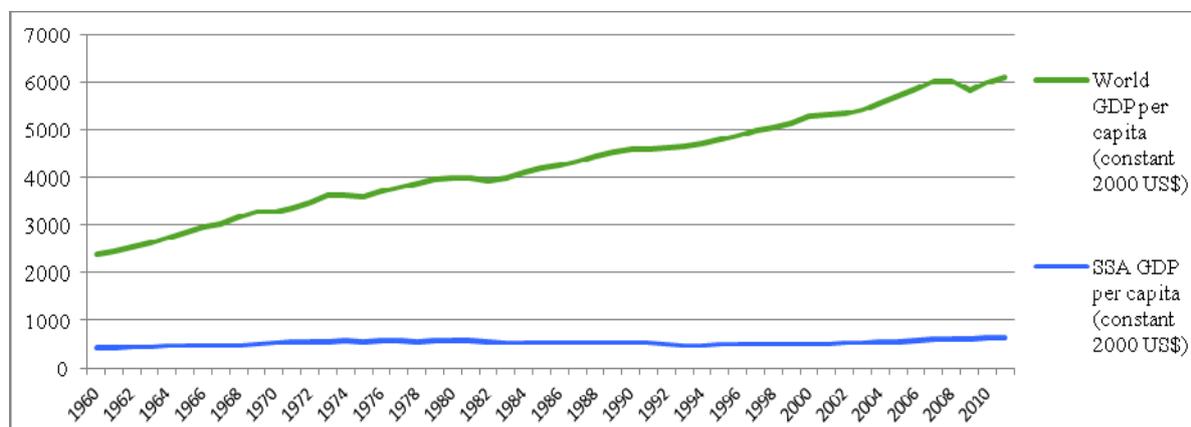
Source: World Bank World Development Indicators database, December 2012. Arbache and Page (2007) similarly underscore the low level of GDP per capita and growth rates volatility.

Indeed, the performance of SSA countries over the long-term suggests a profile of stagnation and possibly a trap, not in the absolute sense, but relatively to other parts of the world. For some analysts (e.g., Easterly, 2005) growth rates in SSA are positive, and SSA countries are not caught in trapping processes. The combination of commodity dependence and other factors, such as low investment and poor infrastructure, however, may generate cumulative

⁴ Botswana, Gabon, Mauritius, Mayotte, Namibia, Seychelles, South Africa—upper-middle income—and Equatorial Guinea—high income, according to the World Bank classification: <http://data.worldbank.org/about/country-classifications/country-andlending-groups>

process and low equilibria traps (Sindzingre, 2012b). SSA countries income levels appear to diverge vis-à-vis other regions.

Figure 10: GDP per capita, Sub-Saharan Africa vs. the world, 1960–2011



Source: World Bank, World Development Indicators database, December 2012.

This divergence appears to operate on the very long term for some countries (Pritchett and de Weijer, 2010): this puts SSA growth episodes of the 2000s and their capacity of creating structural transformation and ‘lions’ in a more relative time perspective.

Therefore, the question remains regarding the sustainability of the SSA economies’ growth episodes of the 2000s, and as to whether they are the premises of a long term sustainable growth. The answer depends on many elements, the effects of which, as well as the effects of their combination, cannot be predicted *ex ante*.

5. Intrinsic uncertainty: outcomes as results from combinations of causes

The determinants of long-term growth and structural change remain a matter of heated debates. The ‘developmental states’ of East Asia - Japan, Korea, Taiwan, now China - are among the few economies that achieved structural change and entered a path of long-term growth, having started the growth process in the mid-20th century. They can therefore suggest a few lessons regarding the ingredients of long-term growth.

5. 1. Key features of the Asian ‘developmental states’: the elements missing in Sub-Saharan Africa

The characteristics of ‘developmental states’ are the subject of a vast literature (among many others, Wade, 1990, 2000; Aoki et al., 1996; Sindzingre, 2007). These states confirmed the views of the first theoreticians of development economics at the time of WWII – Paul Rosenstein-Rodan, Albert Hirschman – that industrialisation is the key route towards structural change and sustained growth.

These views have been disputed. For the World Bank, for example, Asian growth may be explained by ‘sound’ (liberalisation) policies – as argued in the World Bank’s ‘Asian miracle’ report (1993) -, while other studies explained Asian economies’ growth by state intervention (Amsden, 1994). Likewise, considering that appropriate policies may foster growth,

international financial institutions do not view the dependence on commodities as an obstacle to long-term growth.

A common feature of developmental states is the active devising and implementation by governments of industrial and taxation policies (e.g., subsidies, exonerations), which were targeted towards specific sectors and conditional to performance with growth as the final goal. Policies provided incentives, not aiming at ‘owning’ the economy or recycling the country’s wealth via high levels of taxation (Grabowski, 2010). Public policies also focused on education and the building of a technically competent bureaucracy. They not only aimed at enhancing the functioning of markets, but also created suitable political conditions and coalitions involving the private sector. For Naughton (2010), the intertwining of state and market, associating competition and public ownership, is thus at the root of China’s growth: Naughton argues, however, that the specificities of government-business relations cannot be replicated in other countries. Asian states have also been the recipients of important capital flows, while they also improved their productivity, both that of labour and capital. Such was the subject of the well-known debate on capital accumulation vs. better total factor productivity as key causes of Asian growth (Krugman, 1994; Young, 1995; Rodrik, 1997; Easterly and Levine, 2001).

Moreover, developmental states showed that growth and structural change stem from a successful shift from agriculture to industry fostered by state intervention, and the promotion of labour-intensive industry and outward-oriented industrialisation (Teranishi, 1997; Thorbecke and Wan, 2004). Another common feature is human capital. In the 1950s, South Korea had the world’s third highest ratio of human capital to the contemporaneous level of per capita income, and in the following decades, South Korea accumulated human capital more rapidly than comparable developing countries (Noland, 2012).

Developmental states had no natural resources. They were land-scarce, their comparative advantage relied on labour-intensive industrialisation. As underscored by Noland (2012), such factor endowments and land scarcity have been incentives for Japan, South Korea, Taiwan, Hong Kong, and Singapore to begin manufacturing activities early in their development and to specialise in these activities.

All these features contrast with SSA states, which are characterised by land abundance (Herbst, 2000), commodity endowments, scarcity in human capital and physical capital, reinforced by the colonial model of ‘small open economies’ (Hopkins, 1973). Most SSA states – including South Africa – do not display features and initial conditions that have been crucial for the launching of growth in developmental states. Therefore, firstly, the ingredients of the Asian developmental states may not be replicable. Secondly, despite obvious differences among ‘developmental states’ themselves, the current pattern of SSA growth may be very different from that of developmental states.

5. 2. Bifurcations determined by policies and institutions

Growth trajectories are path dependent and result from unique combinations of historical, economic, political, characteristics, which are specific to countries. They cannot be predicted *ex ante*, and are observed *ex post*. SSA economies may be locked in low equilibria or may bifurcate towards structural transformation.

SSA economies are obviously diverse: some export manufactured products, others only one or a few commodities: the bifurcations toward either structural change or ‘low equilibria’, the impacts of the growth episodes of the 2000s, of high commodity prices and of emerging countries trade and investment are channelled by countries’ specific market structures. *In fine*,

however, domestic institutions and public policies shape the impacts of foreign inflows - of trade, investment and aid. It is the combination of market and export structures with domestic policies, institutions and political economy that induces bifurcations towards either traps or growth. Indeed, East Asian states showed the importance for growth of political institutions and public policies, growth being instrumental in building political legitimacy.

Firstly, it may be argued that high prices create fiscal space and opportunities for investment, and that there is no 'resource curse'. Export structures are indeed not the sole and systematic causal factors of weak growth performance: numerous countries have based their growth on commodities and demonstrate that diversification can be achieved when credible public policies and institutions harness windfalls gains towards long-term welfare. In Scandinavian countries, for example, relevant policies have transformed commodities windfalls into sustained growth (e.g., the creation of sovereign wealth funds). Many SSA political economies, however, are characterised by a political economy that may aggravate the consequences of commodity-based export structures – e.g., patronage and authoritarian regimes that suffer problems of credibility, which lowers the efficiency of their policies.

Secondly, the modification of an external factor, such as higher export prices, does not modify the existing domestic political economy. Depending on this political economy, windfall gains may feed corruption and capital flight (as in many oil states). Domestic political economy 'filters' the opportunities created by high international commodity prices and increased demand for SSA exports: hence *in fine*, SSA domestic political economies determine the directions of the bifurcations towards either growth or 'low equilibria'.

Growth processes are endogenous and cumulative, and trapping processes are typically self-reinforcing. Political instability and commitment problems are endogenous processes leading to poverty traps: specific political economies may be reinforced by commodity-based export structures, which in turn may strengthen patronage, while the latter is consolidated by windfall gains that can be distributed to 'clients' and perpetuates under-investment in infrastructure and public goods (Sindzingre and Milelli, 2010). Such combinations of export structures and political economies may lock SSA economies in low equilibria.

To conclude, commodity dependence is only an element of the bifurcations towards 'low equilibria' or structural change. Rather than by elements taken in isolation, bifurcations are driven by varying degrees of path dependence and by unique combinations of historical, institutional and political legacies with specific economic market structures: in turn, each combination creates new cumulative causation, path dependence and irreversibilities (Arthur, 1994; David, 2001; 2007). *Ex post*, depending on these unique combinations, economies may bifurcate towards either 'traps' or structural transformation.

6. Conclusion

Emerging countries have contributed to a period of growth for SSA since its 'lost decades' of the 1980s and 1990s, through higher prices for some exports, higher trade and investment, in particular in infrastructure and the manufacturing sector, enhanced fiscal earnings and fiscal room for manoeuvre, and a beneficial diversification of partners. This can be the basis for virtuous cycles of industrialisation and long-term growth.

Emerging countries may, however, maintain the status quo via their demand for commodities and deepen the specialisation of SSA in primary products. Because commodity prices are inherently volatile, and because there is a negative relationship between output volatility and stagnation, the Asian 'developmental states' show that SSA growth is sustainable and SSA economies may become 'lions' only if structural change occurs.

This article has shown that SSA economies are confronted with heavy constraints that stem from their commodity-based export structures. These structures combine with policies and institutions, and a lesson of Asian developmental states is to demonstrate the latter's crucial importance. Therefore, even if actual combinations cannot be predicted *ex ante*, and even if the direction of bifurcations cannot be ascertained, certain combinations of growth episodes, policies and institutions may reinforce themselves towards higher-growth equilibria and trigger long-term growth. Optimism is therefore possible.

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