
Les relations avec la Chine favorisent-elles le changement structurel des économies d'Afrique Sub-saharienne ?

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1. Introduction: Sub-Saharan African countries as the new emerging ‘lions’?

‘African lions’?

Notion promoted by, e.g., The Economist, Mc Kinsey, Boston Consulting Group, and others... Eg, *The Economist*, 10 June 2010, *Uncaging the lions*: “business is transforming Africa for the better”;

The Economist, 6 January 2011, *The lion kings?*: since 2001, SSA 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....

Go south, young man

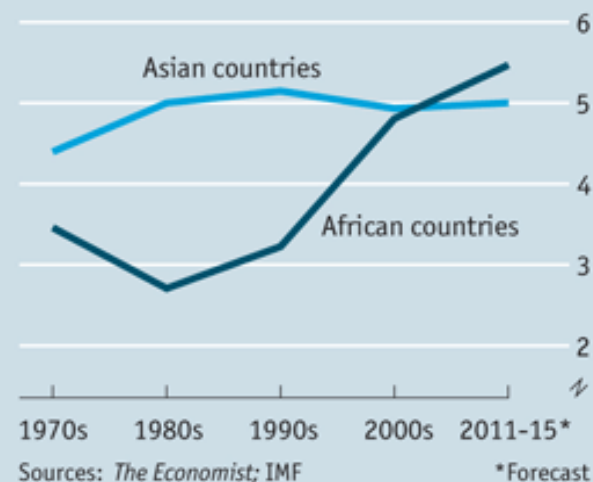
World’s ten fastest-growing economies*
Annual average GDP growth, %

2001-2010†		2011-2015‡	
Angola	11.1	China	9.5
China	10.5	India	8.2
Myanmar	10.3	Ethiopia	8.1
Nigeria	8.9	Mozambique	7.7
Ethiopia	8.4	Tanzania	7.2
Kazakhstan	8.2	Vietnam	7.2
Chad	7.9	Congo	7.0
Mozambique	7.9	Ghana	7.0
Cambodia	7.7	Zambia	6.9
Rwanda	7.6	Nigeria	6.8

Sources: *The Economist*; IMF
* Excluding countries with less than 10m population and Iraq and Afghanistan
† 2010 estimate ‡ IMF forecast

The forgotten continent

GDP growth, unweighted annual average, %



Source: The Economist, 6 January 2011.

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- ‘Lions’? **Ambiguity of the term:**
 - This may mean becoming a ‘lion’ **from existing market and export structures**, for example harnessing the benefits and windfall gains from higher prices for the export of a primary commodity, e.g., oil, gas, copper, coffee...
 - Or, in contrast, becoming a ‘lion’ may mean the **structural transformation of the economy**.
 - **In economics, structural transformation:**
 - = a **break in the pre-existing structure of the economy:**
 - **i.e. the diminution of the share of primary products, industrialisation** – or increase in the share of services -,
 - and **productivity growth**
 - Many studies: Hausmann and Rodrik (2006); Rodrik (2008); McMillan and Rodrik (2011)....
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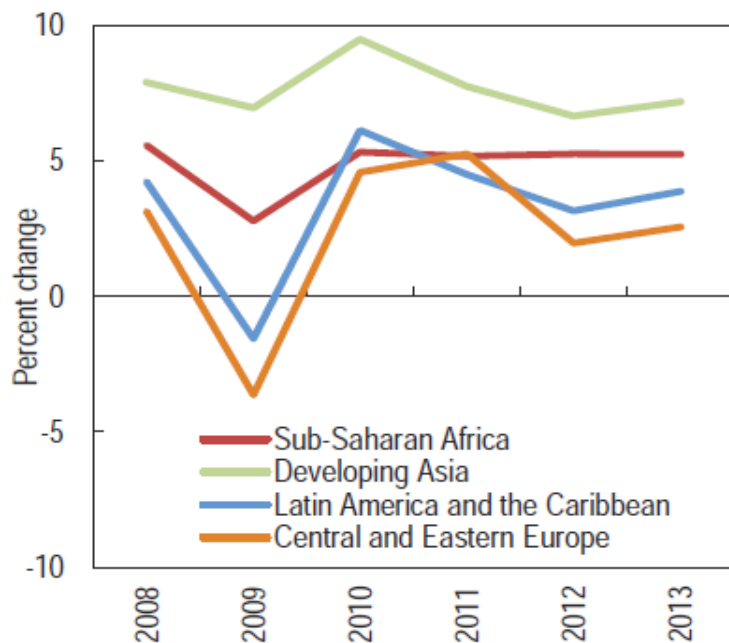
2. Sub-Saharan African countries growth performances: premises for structural change?

Many arguments for optimism regarding SSA

Many episodes of growth in SSA countries over the 2000s

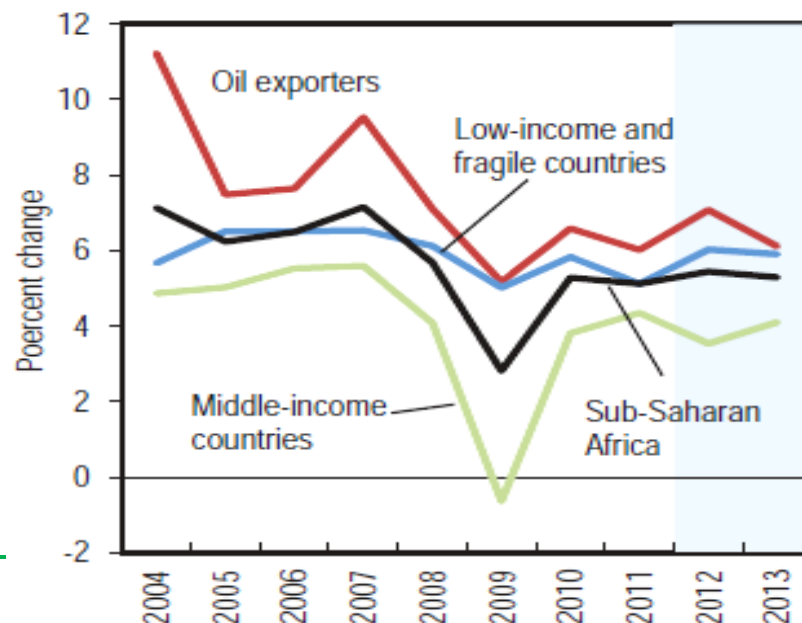
Also, SSA could overcome the impact of the 2008-09 financial crisis: what the IMF has called 'resilience'.

Selected regions: Real GDP growth, 2008–13



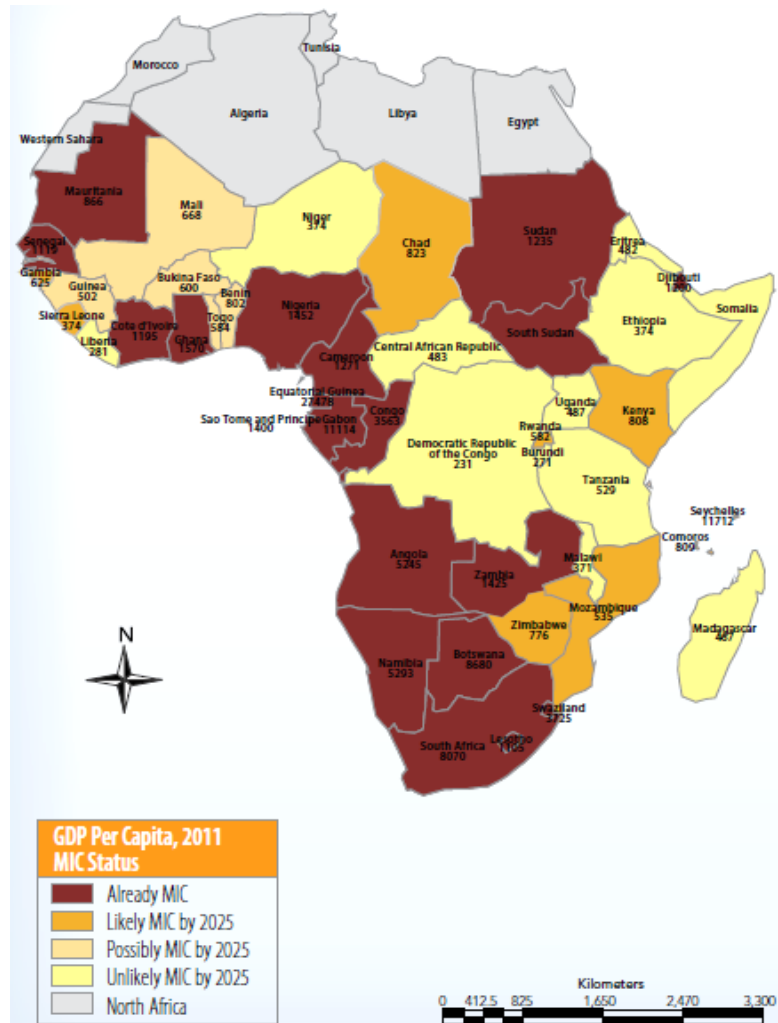
Source: IMF. 2012. SSA Regional Outlook, October.

Sub-Saharan Africa: real GDP growth by country group



Source: IMF (2012c)

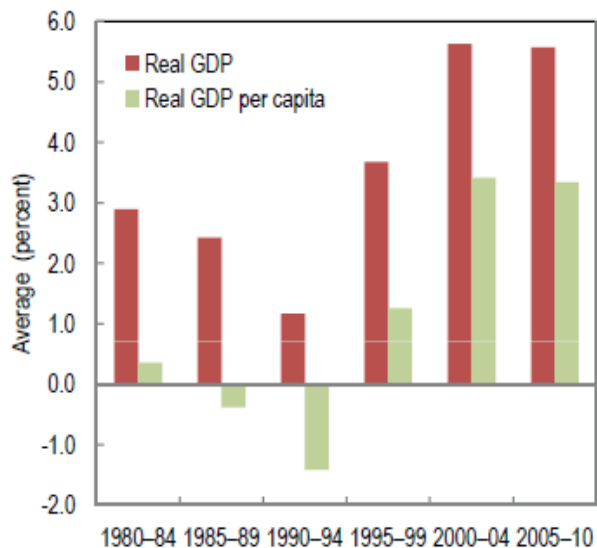
21 SSA countries are already at middle income, and 10 more would reach MIC-status by 2025 at current growth rates



Source: Devarajan and Fengler (2012).

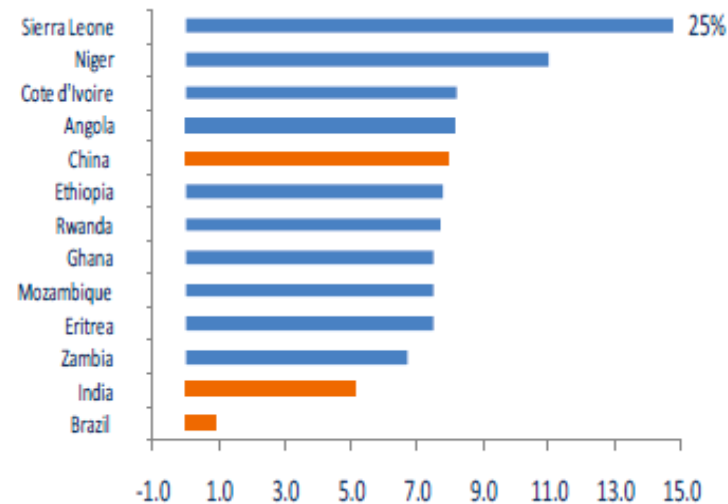
A growth that is driven by commodity prices: but not only: also driven by domestic demand

Sub-Saharan Africa: Real GDP growth

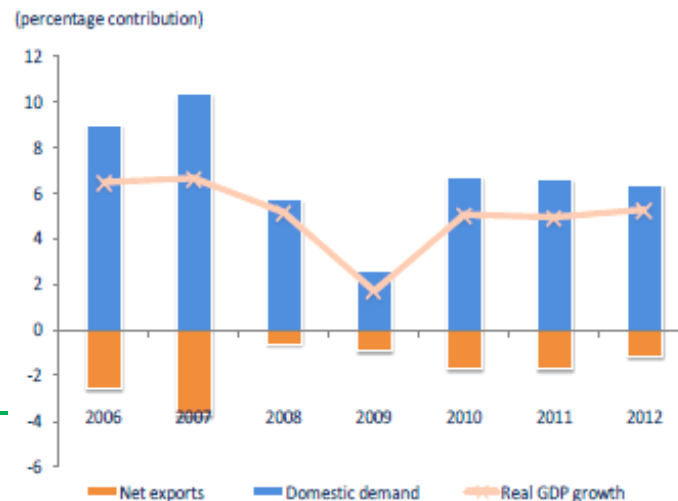


Source: IMF (2011b).

Fastest growing SSA economies in 2012



Domestic demand is a pillar of growth in SSA



Source: World Bank. 2013. Global Economic Prospects, January.

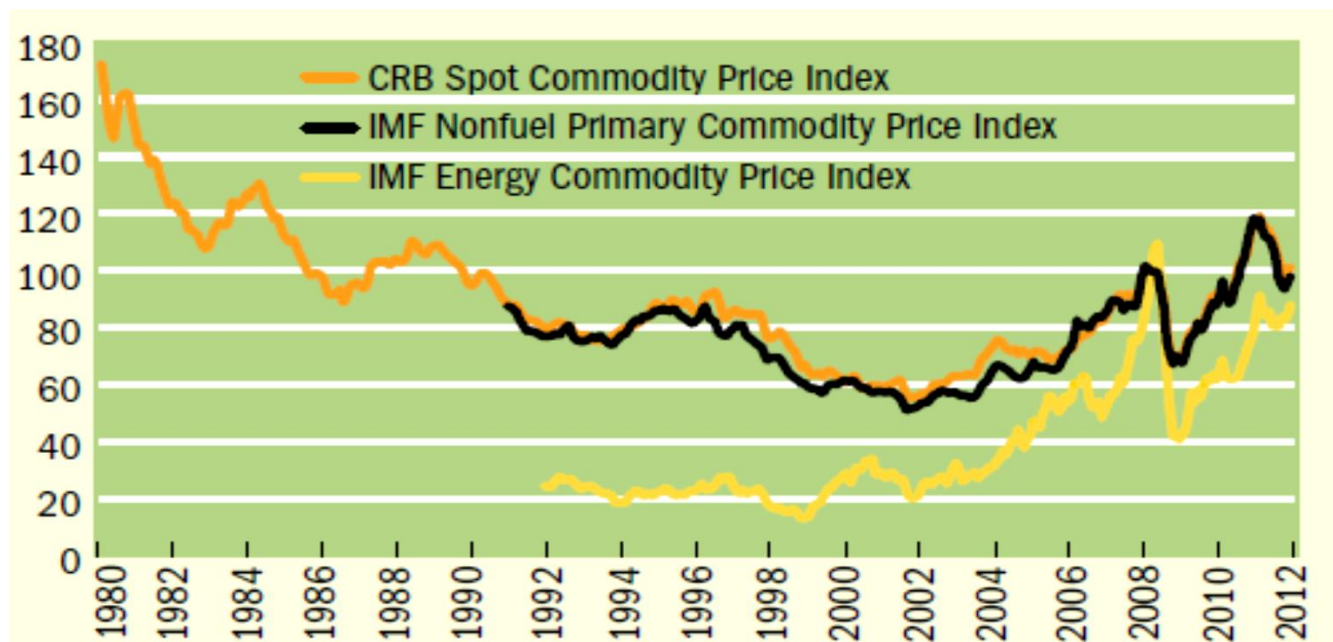
The growth of many SSA countries stems from the fact that their exports are commodities, and that these commodities enjoyed high prices over the 2000s.

For the IMF, **optimism that commodity prices will remain high in the medium term.**

Helbling (2012): the global economic crisis hurt commodity prices far less than in earlier recessions.

Commodity prices rose through the 2000s until the 2008-10 crisis, then fell sharply, then recovered.

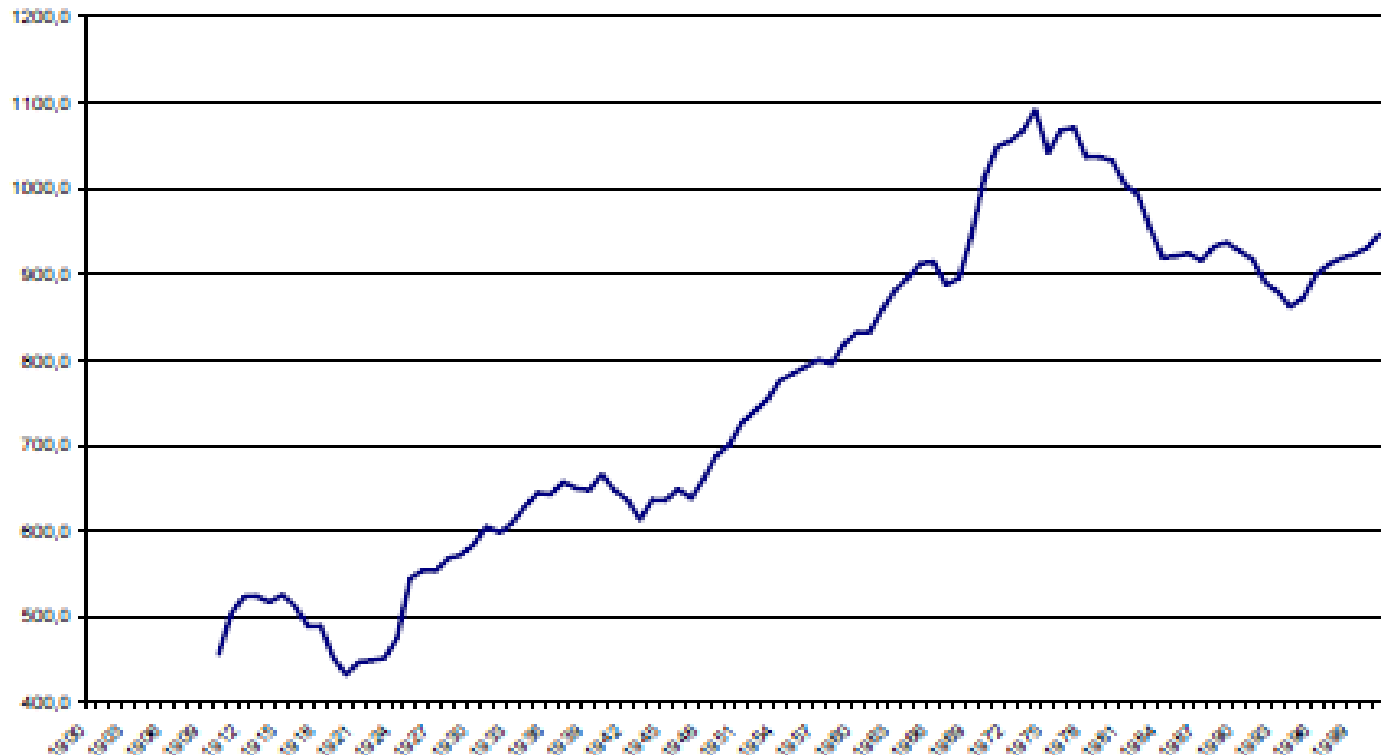
Commodity prices, 1980-2012 (2008:Q2 = 100, constant U.S. dollars)



This confirms economic historians' findings: in contrast with many studies, the story of SSA growth is not that of a long-term 'growth failure':

Over the long term, SSA characterised by patterns of 'rise and fall'.

Levels of GDP per head of population in SSA, 1910-2000 (constant prices in USD of 1985)



Source: Smits (2006).

M Jerven's studies: **similar pattern of rise and decline:**

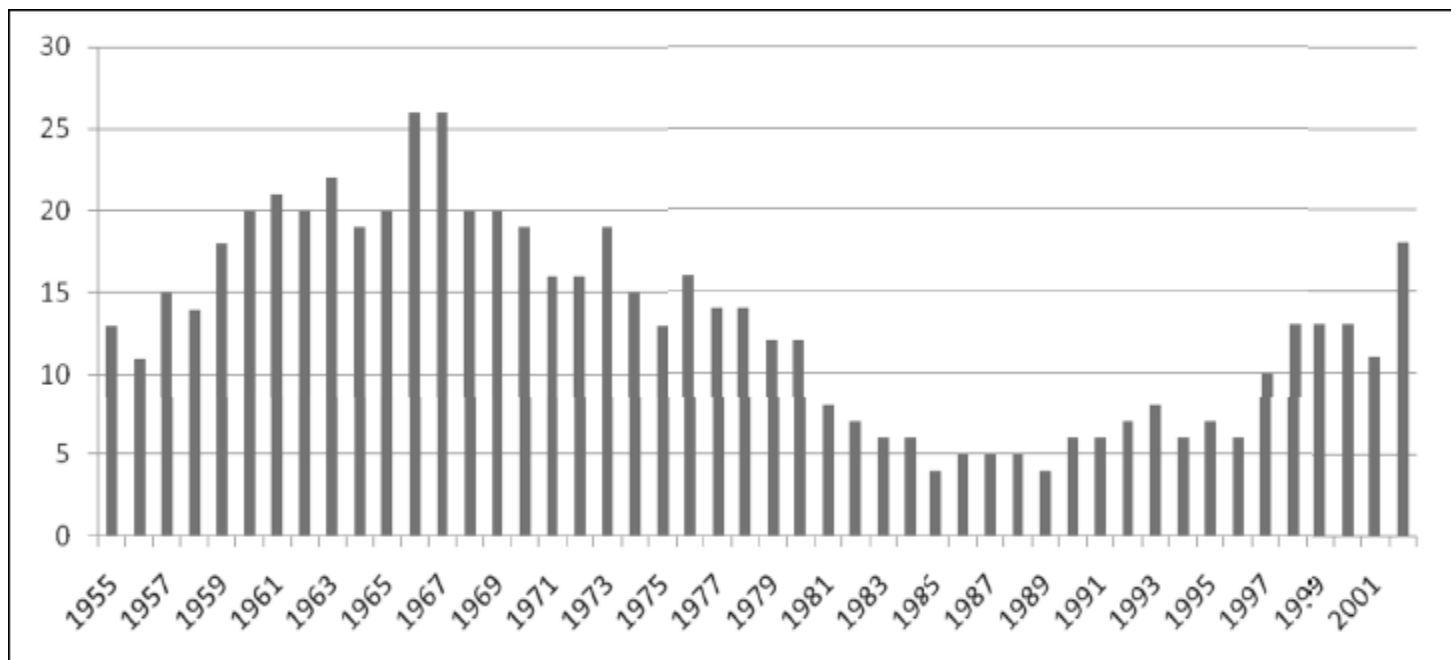
Africa has not suffered a chronic failure of growth. **African growth has been recurring.**

The proximate cause of low income in SSA: growth spurts have always been followed by a bust.

High growth at the time of independence, until the 1970s.

The global economic downturn in the 1980s hit Africa harder than other continents.

Number of African countries experiencing sustained growth, 1950-2006



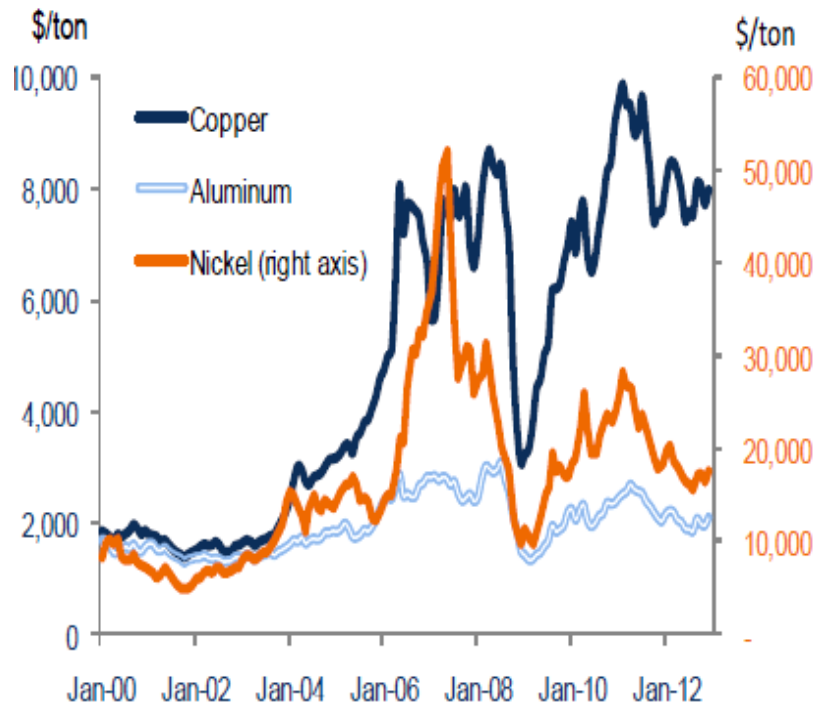
Source: Jerven (2010), based on Angus Maddison's data.

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- **Emerging countries as key contributors to structural change in SSA?
China's trade and investment relationships with SSA**
 - SSA economies not only benefit from trade and investment from 'traditional' partners, but from a spectacular increase in trade and investment linkages **from emerging countries: firstly, China** -also India and Brazil.
 - **China contributes to an 'exceptional' period** for SSA since the 1970s
 - **Question:** will this global rebalancing, this shift, be the basis for **structural change and virtuous cycles of industrialisation,**
 - **or will it preserve of the status quo?**
 - *China's contribution to structural change in SSA via its contribution to high commodity prices*
 - **The increase in SSA growth rates of the 2000s stems from the increase in commodity prices,**
 - **which itself stems from the increasing importance of China's demand in commodity price formation,** and other emerging countries (India): **China's demand pushes prices upwards.**
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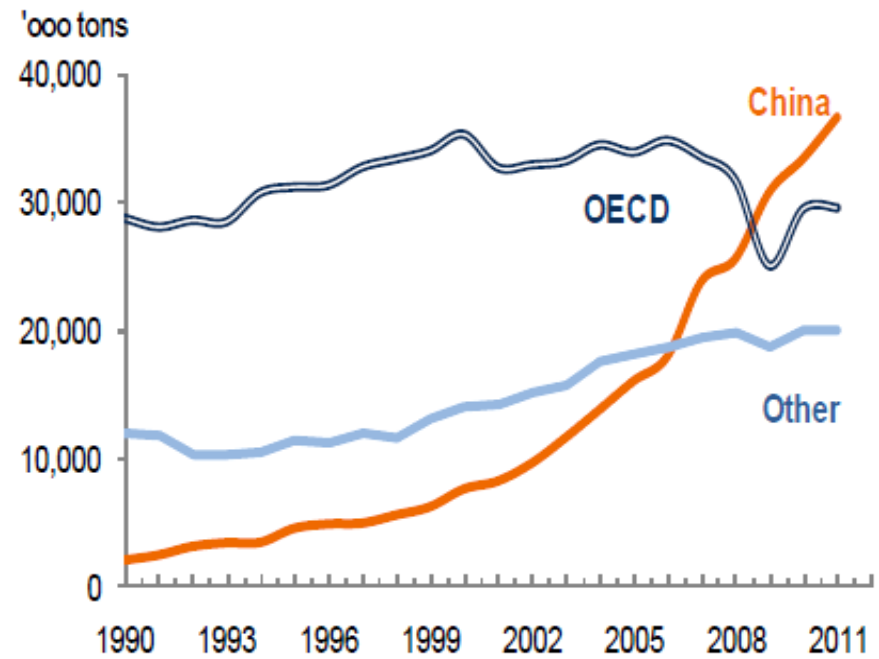
Especially China's demand for metals: aluminum, coal and copper.

This has pushed metal prices upwards, which is beneficial for producing countries (e.g., Zambia, where copper is a key export)

Metal prices, 2000-2012

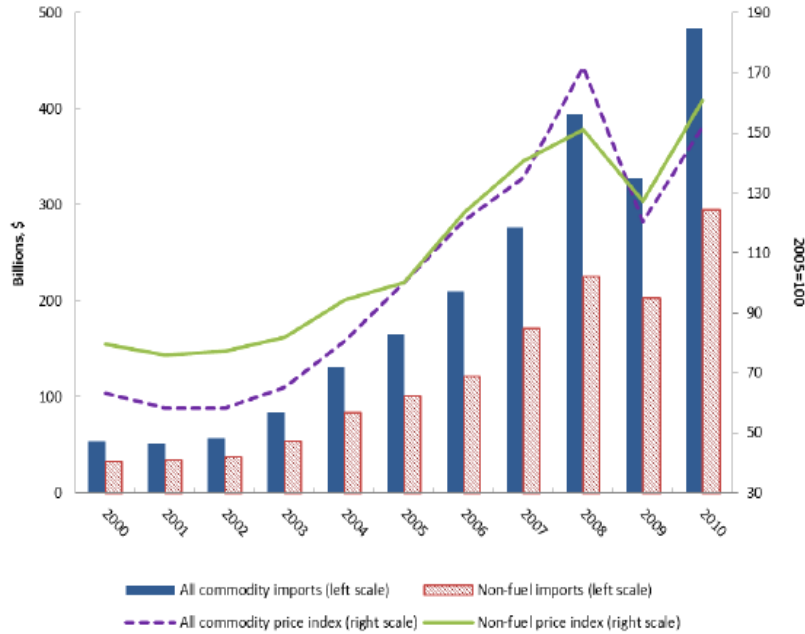


Consumption of metals, 1990-2011



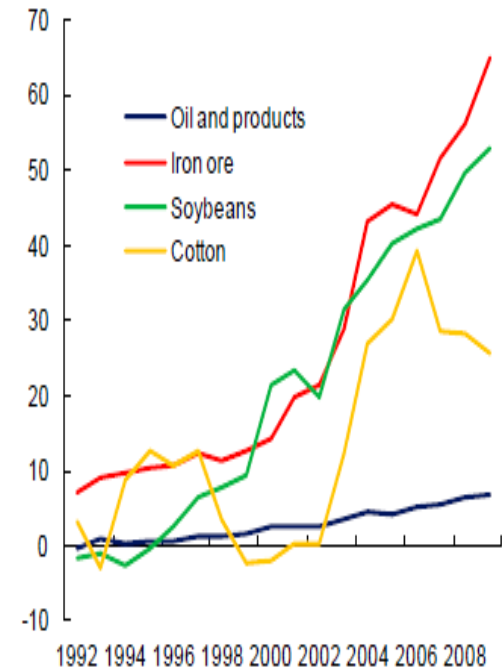
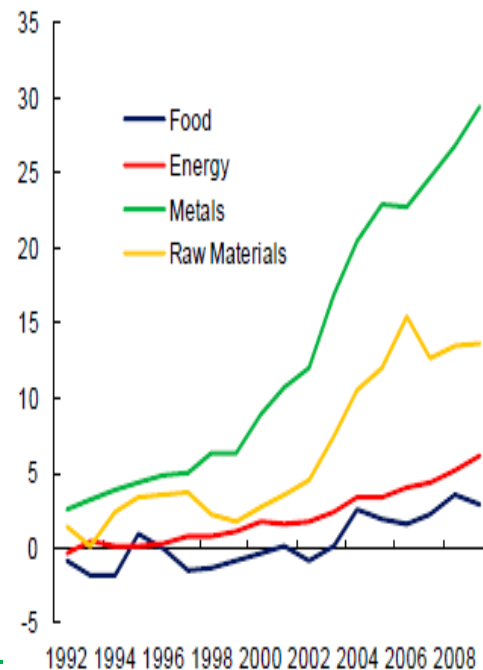
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- **This is particularly significant for the prices of energy, e.g., oil.**
 - **China now the first energy consumer in the world:**
 - energy consumption in China projected to double by 2017 and triple by 2025 from its 2008 level (IMF, 2011a).
 - IMF (2011b): a **1-percentage-point increase in China's industrial production growth => 2-percentage-point increase in oil and copper prices.**
 - **The demand from emerging markets, especially China, also contributed to the increase in food prices between 2010 and 2011.**
 - China =key importer in global grain and oilseeds markets, cotton and rubber .

Commodity prices and commodity imports of China, 2000-2010



Source: Akyuz (2012).

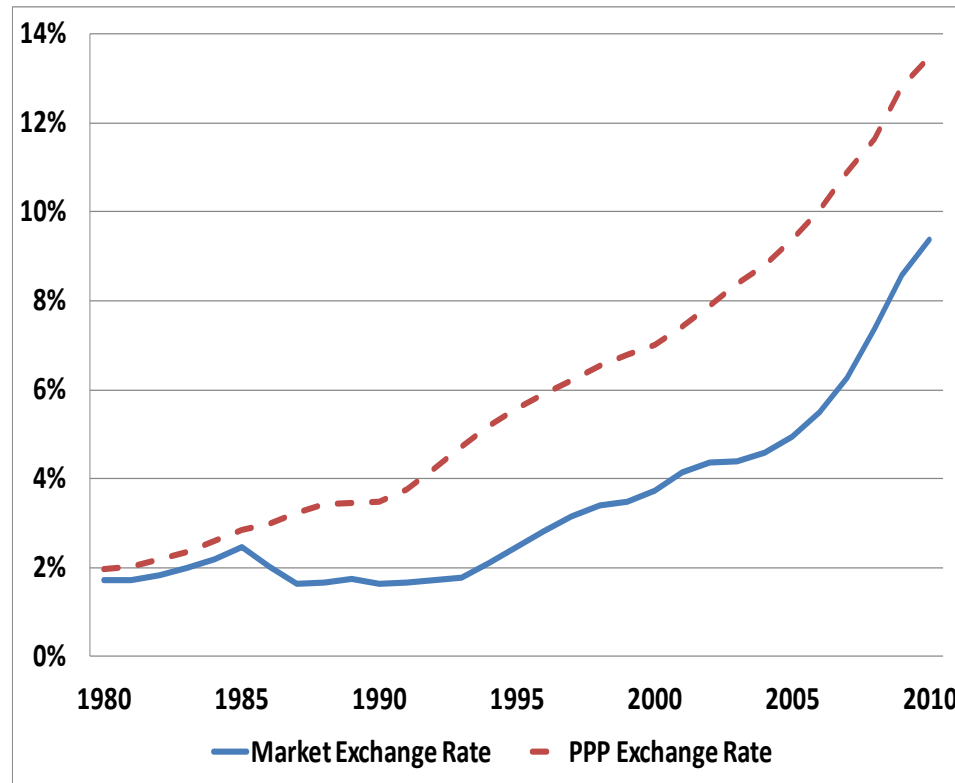
China's share of global commodity trade (net imports percent of world imports)



Source: Roache (2012)

This processes are expected to last, given the growth trend of China

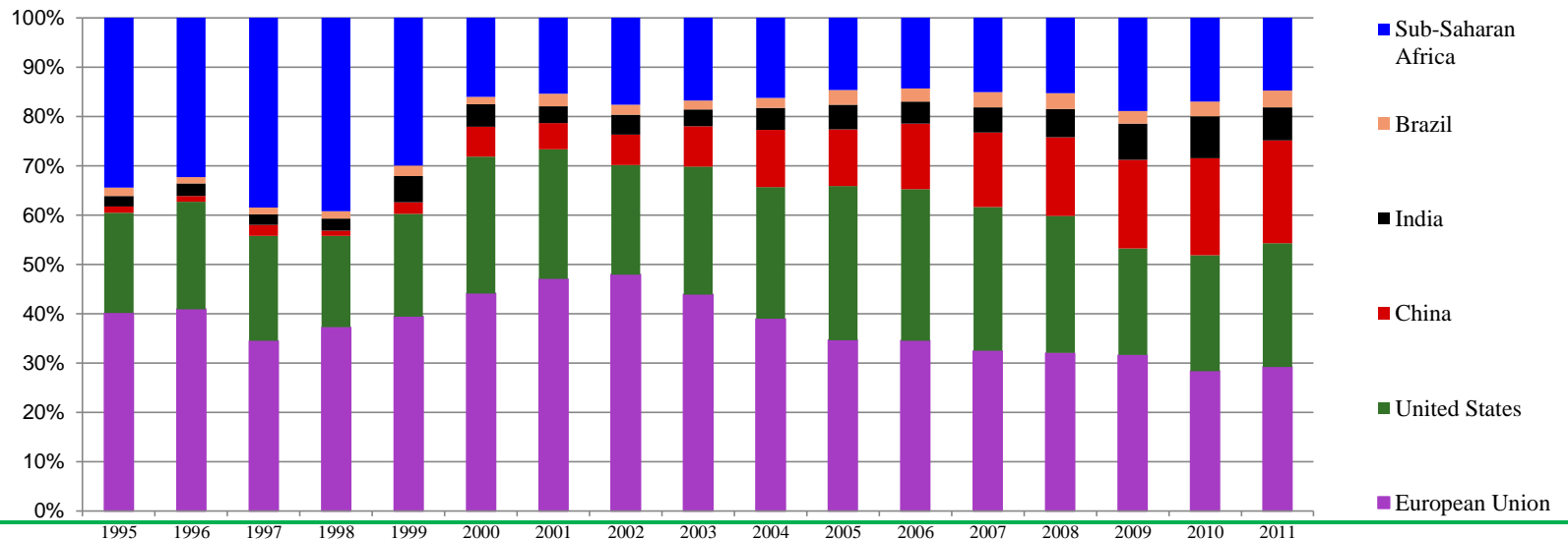
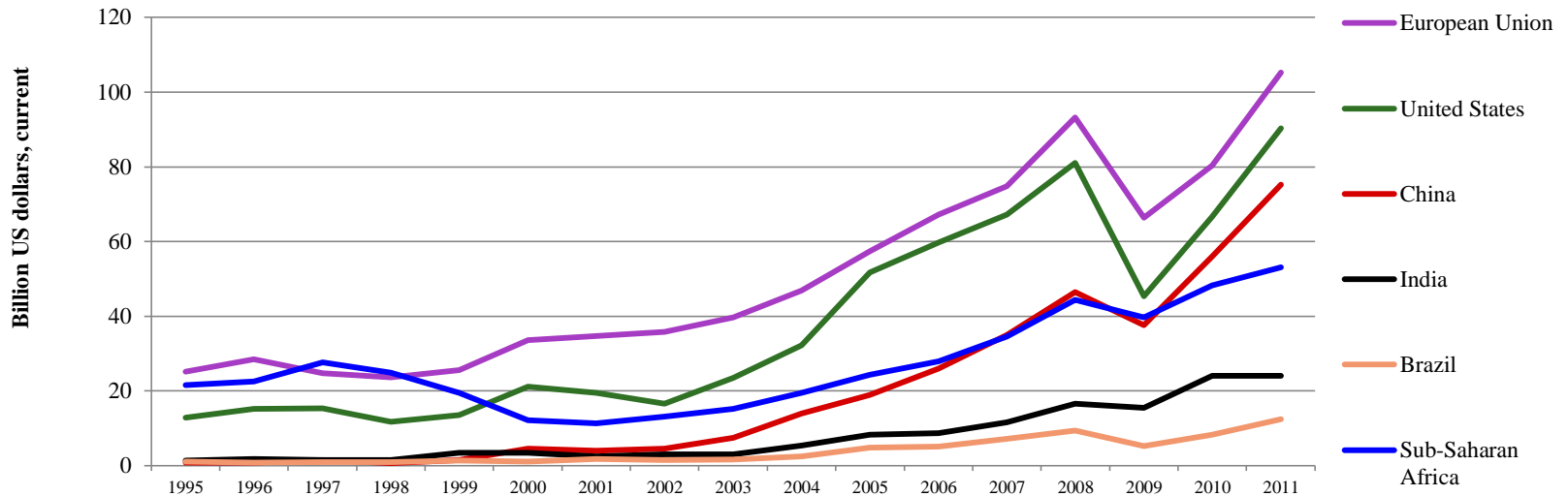
China's share of global GDP, 1980-2010



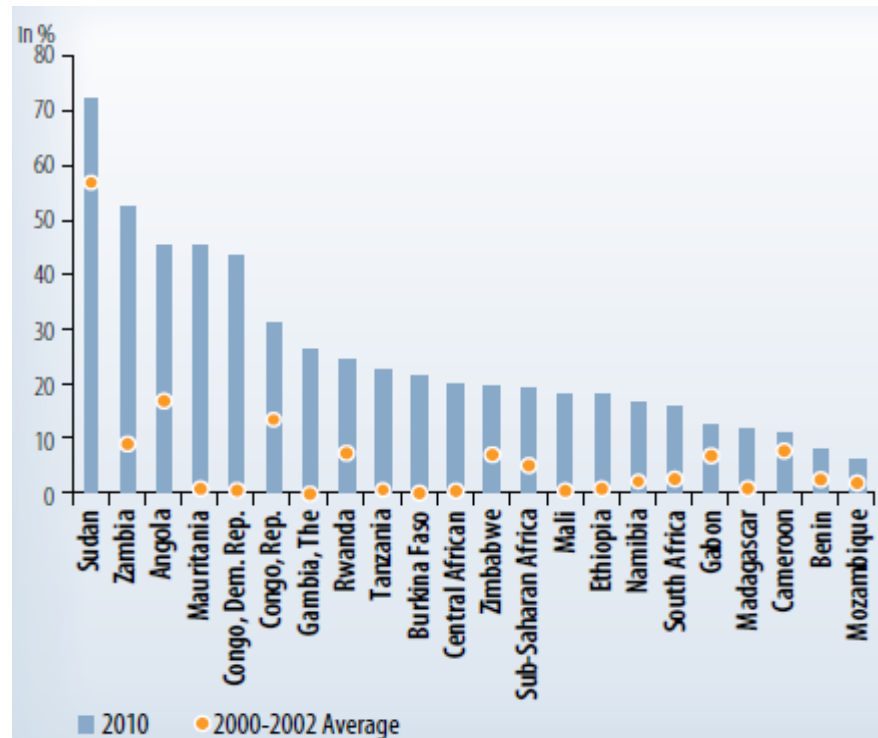
Source: Helmut Reisen. 2013. Re-measuring the World: China'S Global Development Impact, London, LSE.

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- *China's demand vis-à-vis SSA: structural change via trade, investment and infrastructure?*
 - **China as a driver of sustained demand for SSA exports, and increase in trade flows between SSA and China: a genuine engine of growth.**
 - **Structural change via trade?**
 - **If China pursues its growth rates, its demand for SSA products will remain sustained, not only for primary commodities, but for low-end manufactured products that will no longer be made in China due to increasing local factor costs.**
 - **All SSA countries export a lower share of their products to OECD than in 1990, and a greater share to China:**
 - **=an important opportunity for SSA countries.**
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Sub-Saharan Africa: total exports and percentage of exports by partner (United States, European Union, China, India, Brazil, Sub-Saharan Africa)



Selected SSA countries: exports to China as a share of total exports, 2010



Source: World Bank. 2012. Africa Pulse, n°6, October.

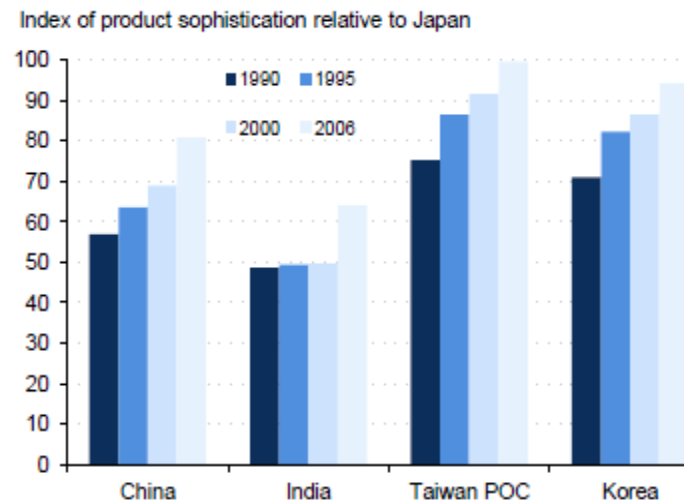
SSA exports to China have increased over the 2000s.

But: for the World Bank, this makes the **exports of minerals vulnerable to fluctuations in China's economy.**

Industrial upgrading in China has increased wages and is causing China to graduate from labour-intensive to more capital- and technology-intensive industries

= opportunity for lower wage countries to start **labour-intensive industrialisation**:
'leading dragon phenomenon', **an opportunity for low-income SSA.**

The sophistication of China's exports has grown rapidly



Source: World Bank. 2012. China Quarterly Update. April.

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- **Also, a contribution of China to structural change via investment?**
 - In economic theory **investment is among the most robust predictors of growth, increases in investment via Chinese investment is likely to have a positive impact on SSA economies.**
 - **Chinese FDI are difficult to measure** (Pairault, 2011a, b; Christensen, 2010; Mlachila and Takebe, 2011). Many studies (e.g., Ye, 2010; Corkin, 2008, 2011).
 - High variations regarding volume, number of projects, number of firms..(Gu, 2009).
 - **High variations across countries:** top recipients: South Africa, Nigeria, Zambia, RD Congo, Niger, Sudan, Angola (Chevallier, 2012).
 - **SSA is not the major destination of Chinese FDI – directed towards Asia, Latin America, Europe -, but these FDIs are important for SSA.**
 - Chinese FDI to SSA as a share of total FDI to SSA: from less than 1% in 2003 to 16% by 2008 (IMF, 2011b).
 - **China: no exceptionalism**
 - **=the structure and impact of Chinese FDIs on SSA share many similarities with those of the other investing countries** (Kragelund, 2009): i.e. in SSA, whatever the investor's country, FDI has a strong focus on the primary sector, and especially oil.
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- In 2009, the top recipients of FDI flows (above 2 billion \$) were **Angola, Nigeria, the DR Congo, the Republic of Congo and Ghana** (starting oil production) (UNCTAD, 2011).
 - **Similarly, Chinese investments in SSA focus on the primary sector and natural resources extraction.**
 - **In terms of value, Chinese investments are thus mostly resource-seeking and often involve large Chinese state-backed enterprises** (Liang et al., 2011).
 - **Also, state-backed investment is of long-term nature.**
 - E.g., contribution of China's sovereign wealth funds: e.g., investing via **the China-Africa Development Fund, jointly with SOEs (2007), an equity fund, investing in Chinese enterprises with operations in Africa** (Turkisch, 2011).
 - **Indeed, Chinese investment is also oriented towards SSA industrial sectors: opportunity for structural change, since industrialisation is a key determinant of long-term growth** (Rodrik, 2009).
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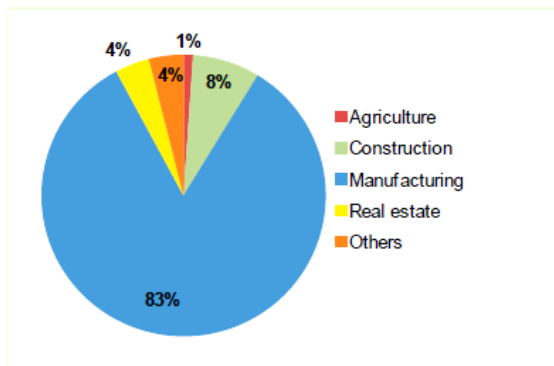
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- **But China investment is not only driven by the resource-seeking motives of large state-backed enterprises, or by market-seeking motives**
 - Also, its is not only driven by the OLI motives (ownership, location, internalisation) but also by the motives of **creating linkages**:
 - =**firms invest abroad not so much to exploit their firm competences** (as in the OLI explanation), **but in order to augment these competences by learning from their overseas operations** (Kaplinsky and Morris, 2009).

 - **Besides oil, mining, infrastructure, Chinese investment is also directed toward manufacturing, construction, finance** (IMF, 2011b) (e.g., a major FDI in 2007: South Africa Standard Bank), **agriculture, services** (involving large firms, e.g., Huawei, ZTE; Chevallier, 2012).
 - Increasing number of Chinese medium and small enterprises (Gu, 2009).

 - **Chinese private-sector investment drives the manufacturing sector in some SSA countries, due to increased pressure of industrial restructuring in coastal China**:
 - =**some labour-intensive firms relocate to other developing countries, including SSA** (Shen, 2013).
 - China also established several SEZs in SSA, with the official aim of promoting manufacturing (Brautigam and Xiaoyang, 2011).
-

Cumulative Chinese FDI to Ethiopia by sector, 2003–09 (percent)

However, they are also examples that data on FDI may be excessively aggregated, and confused on the definition of an FDI



Chinese FDI in selected SSA economies

Source: IMF, 2011. SSA Regional Outlook, October.

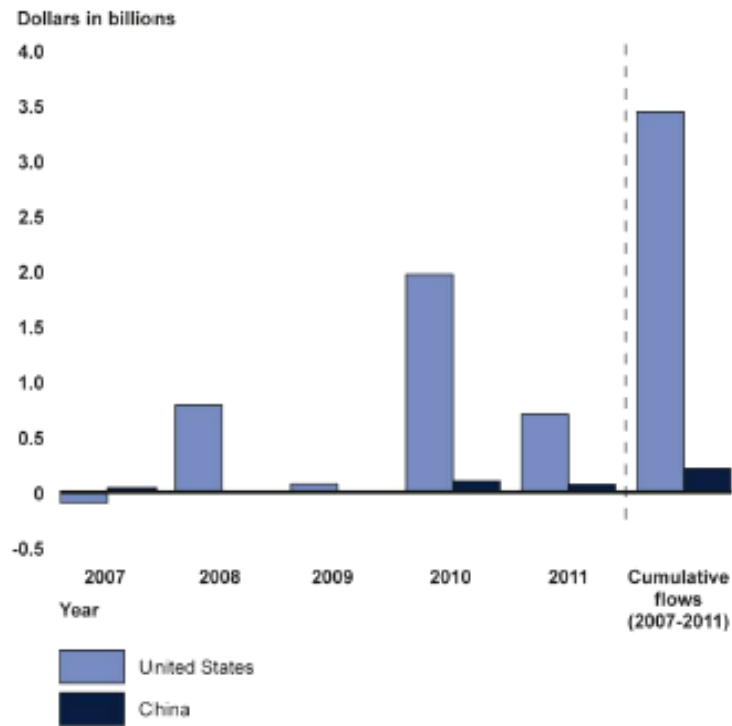
Country	Oil/gas	Mining	Agriculture	Services	Infrastructure	Manufacturing
Angola	X	--	--	Telecommunications	Housing, roads, railways	Light vehicles
Chad	X	--	--	--	Roads, power plant	--
Ethiopia	--	X	--	Telecommunications, electricity, water	Construction	Garments, shoes/leather
Gabon	X	X			Port, railway, power plant	
Ghana	--	--	Poultry	Small-scale trading, import/export	--	Garments, shoes/leather
Kenya		X	Coffee	Telecommunications	Roads	Garments, shoes
Madagascar	--	--	Sugar	Financial, telecommunications	--	Garments
Mali	--	--	Cotton	Electricity, water	Construction	Food processing
Nigeria	X	--	--	Telecommunications, technical services	Construction	Agro-processing
Mauritius	--	--	--	Small-scale trading, import/export	--	Garments, textiles
Uganda	--	X	Cotton	Telecommunications, electricity	Construction	Electronic goods, agro-processing
Zambia	--	X	Cotton	Financial, telecommunications, tourism	Construction	Garments, textiles, agro-processing

Source: Mlachila and Takebe (2011), based on Kaplinsky and Morris (2009), itself based on African Economic Research Consortium Scoping studies.

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- **Indeed, among the motives for optimism:**
 - **=possibility of linkages of the sectors of primary commodities with other sectors: Albert Hirschman's framework**
 - **= unexploited opportunities for industrial development through linkages from the commodities sector,**
 - **more for backward than for forward linkages, e.g., in the minerals and energy sectors:**
 - E.g., linkages between industry and services and the commodities sector
 - See R Kaplinsky project: Morris et al. (2011a, b; 2012):
 - = the '*making the most of commodities*' (MMCP) programme, on 8 SSA countries.

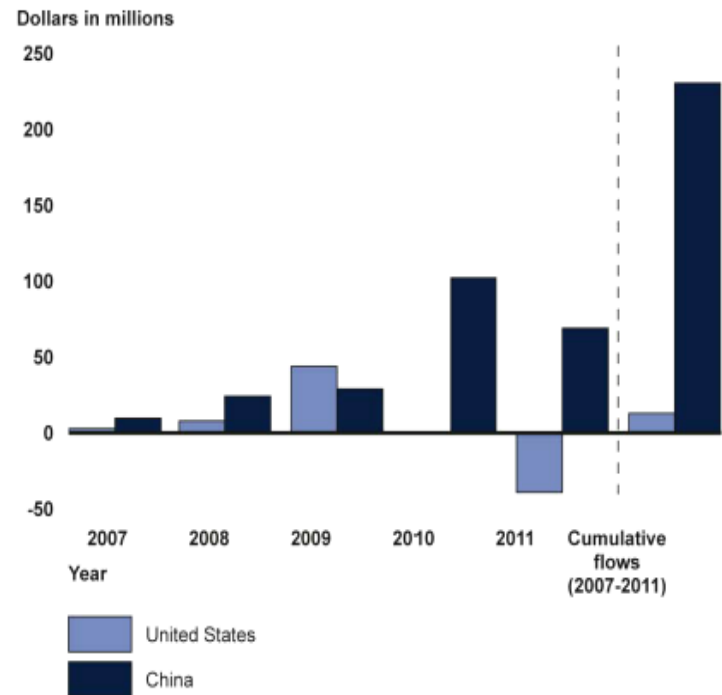
But China is not always a key investor: high variations across countries

Reported flows of Foreign Direct Investment from the United States and China to Angola, 2007-2011



Source: US GAO (2013).

Reported flows of Foreign Direct Investment from the United States and China to Kenya, 2007-2011



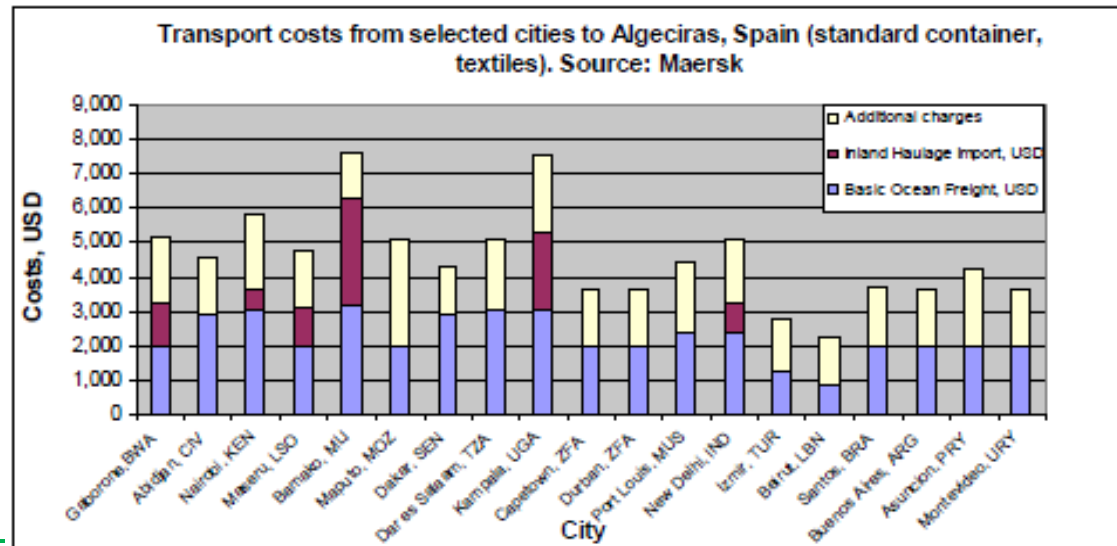
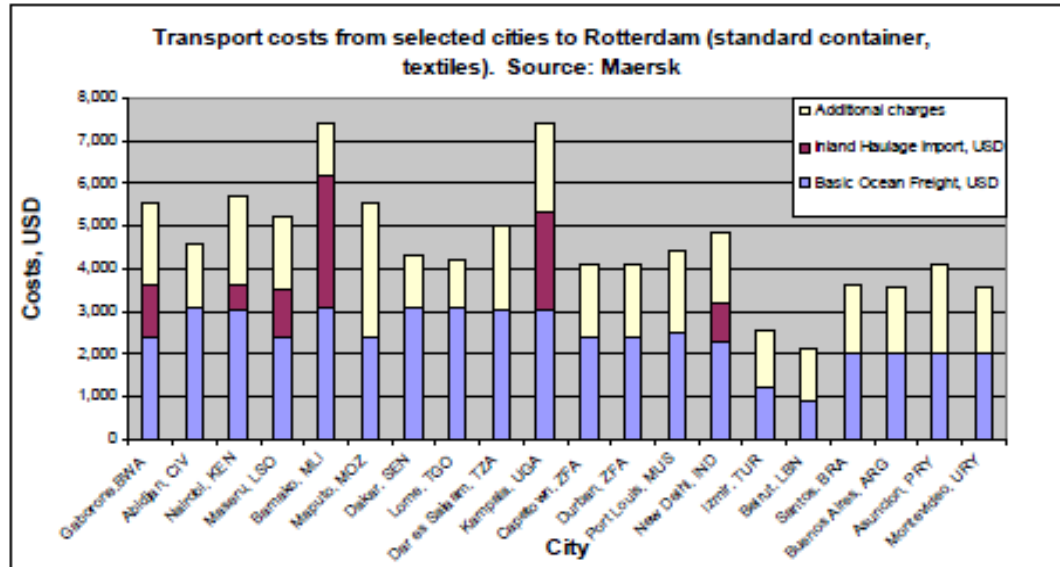
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- **Similarly, China invest in SSA infrastructure:**
 - (61% of China – subsidised- loans would be directed towards infrastructure, Government of China White paper on aid, 2011)

 - **This is crucial, as infrastructure is one of the key determinants of growth** (Calderon and Serven, 2010; Foster and Briceño-Garmendia, 2010).

 - **Indeed, infrastructure is a key problem for the competitiveness of SSA:**
 - Very low levels regarding power, rural electrification and transport
 - =>hence, constraints and transaction costs on the circulation of goods and people. Transportation costs are much higher in SSA than in other regions.

 - **Correlation between infrastructure and export diversification**
 - =the current low levels and distorted composition towards commodities and undiversified exports in SSA are partly due to poor trade infrastructure (Hummels, 2001; 2007).
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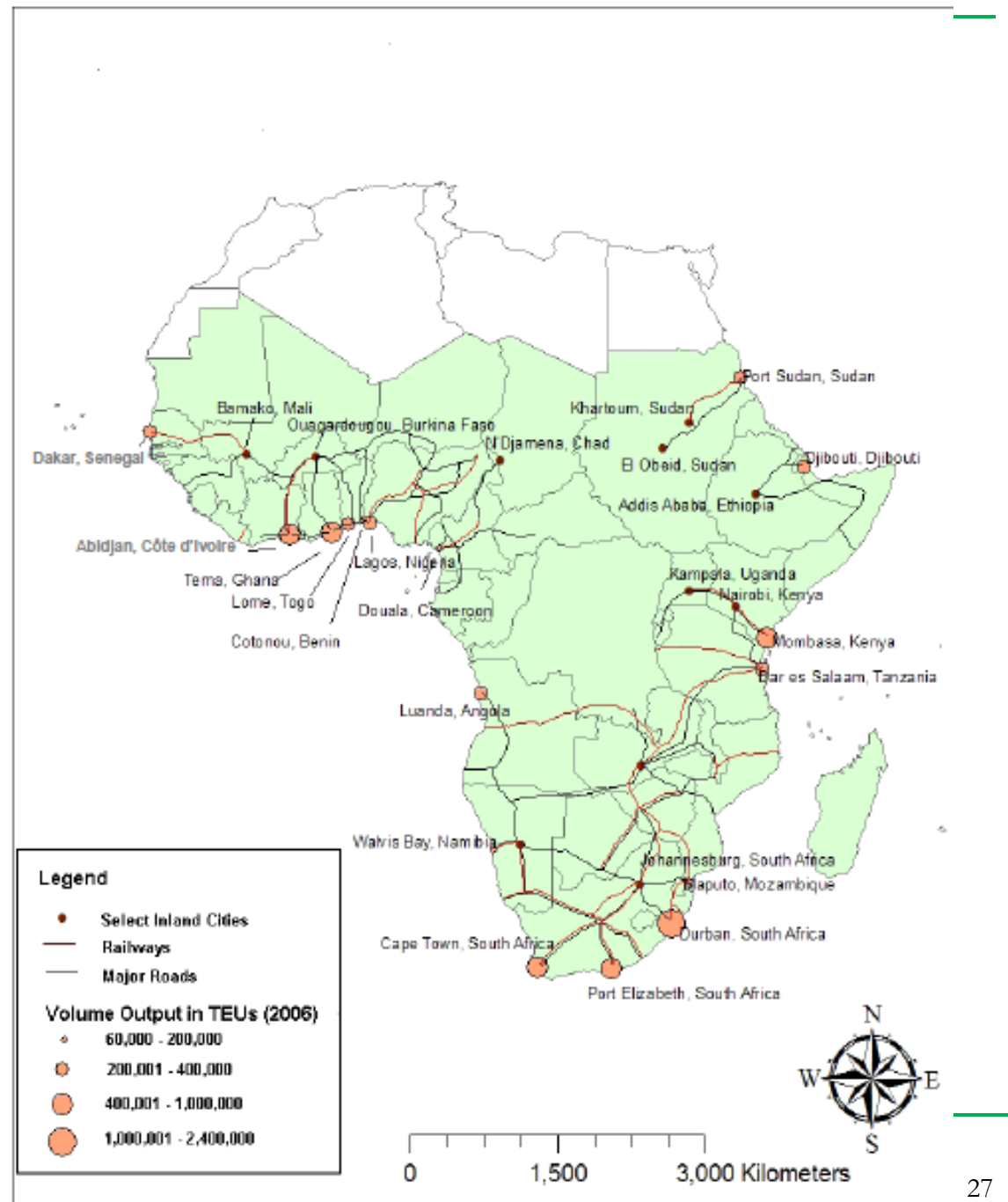
SSA as the region with the highest transport costs



Source: Portugal-Perez and Wilson (2008), based on Maersk, July 2008.

The very poor state of infrastructure in SSA

Major land transport routes and ports in SSA



Source: U.S. International Trade Commission. 2009. Sub-Saharan Africa: Effects of Infrastructure Conditions on Export Competitiveness, Third Annual Report.

Note: TEU refers to a twenty-foot equivalent unit, the cargo capacity of a standard shipping container 20 feet long and eight feet wide.

3. The narrow bases of SSA growth pattern: commodity prices as key drivers of growth, together with aid

Growth rates that mostly depend on commodity prices

**Most SSA countries are characterised by a very high reliance on a very small number of commodities for their exports:
= high dependence on primary commodities for their exports.**

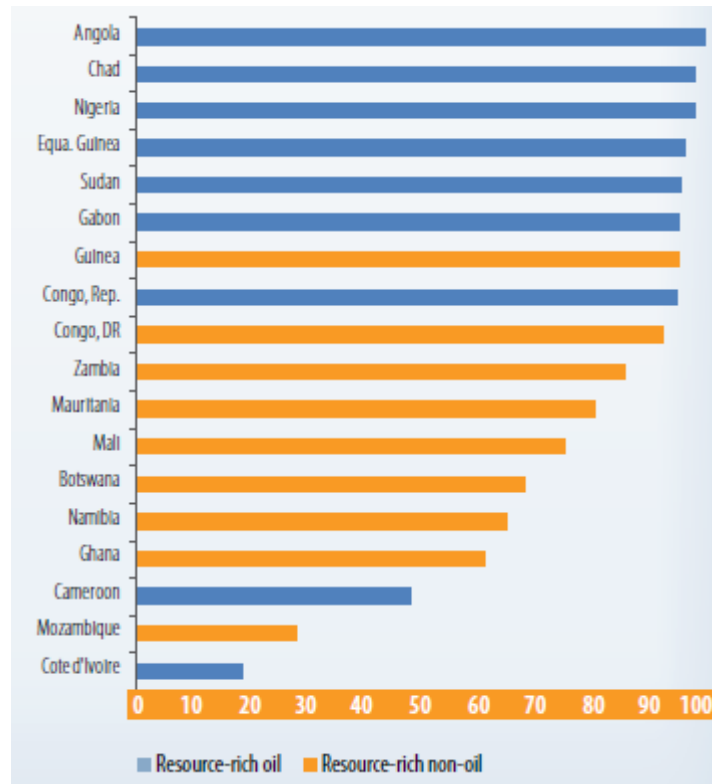
Structure of merchandise exports of SSA countries, 1995-2010

	Food (% of total)		Agricultural raw materials (% of total)		Fuels (% of total)		Ores and metals (% of total)		Manufactures (% of total)	
	1995	2010	1995	2010	1995	2010	1995	2010	1995	2010
Low- and middle income SSA countries**	18	15	7	4	36	32	8	18	28	31
Low-income countries	31	25*	10	8*	2	3*	11	14*	44	50*
East Asia and Pacific	11	8	4	2	6	8	2	3	74	79
Latin America and Caribbean	20	16	3	2	15	21	7	10	55	51
South Asia	17	12	2	2	1	13	3	6	76	66

Source: adapted from World Bank World Development Indicators 2011, table 4.4. * all SSA countries except Equatorial Guinea.. **: 2009.

10 SSA countries have exports where commodities make over 75% of total exports

Sub-Saharan Africa: primary commodities exports as % of total exports, 2011



Source: World Bank. 2012. Africa Pulse, n°6, October.

SSA is becoming an oil-producing region: Angola, Cameroon, Chad, the Republic of Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Nigeria....
New producers, e.g., Ghana...

Given the specificities of **oil markets in terms of price formation, financialisation and global political economy**, significant consequences:
=typically, 'Dutch disease' effects, deindustrialisation.

Oil Producers 1975



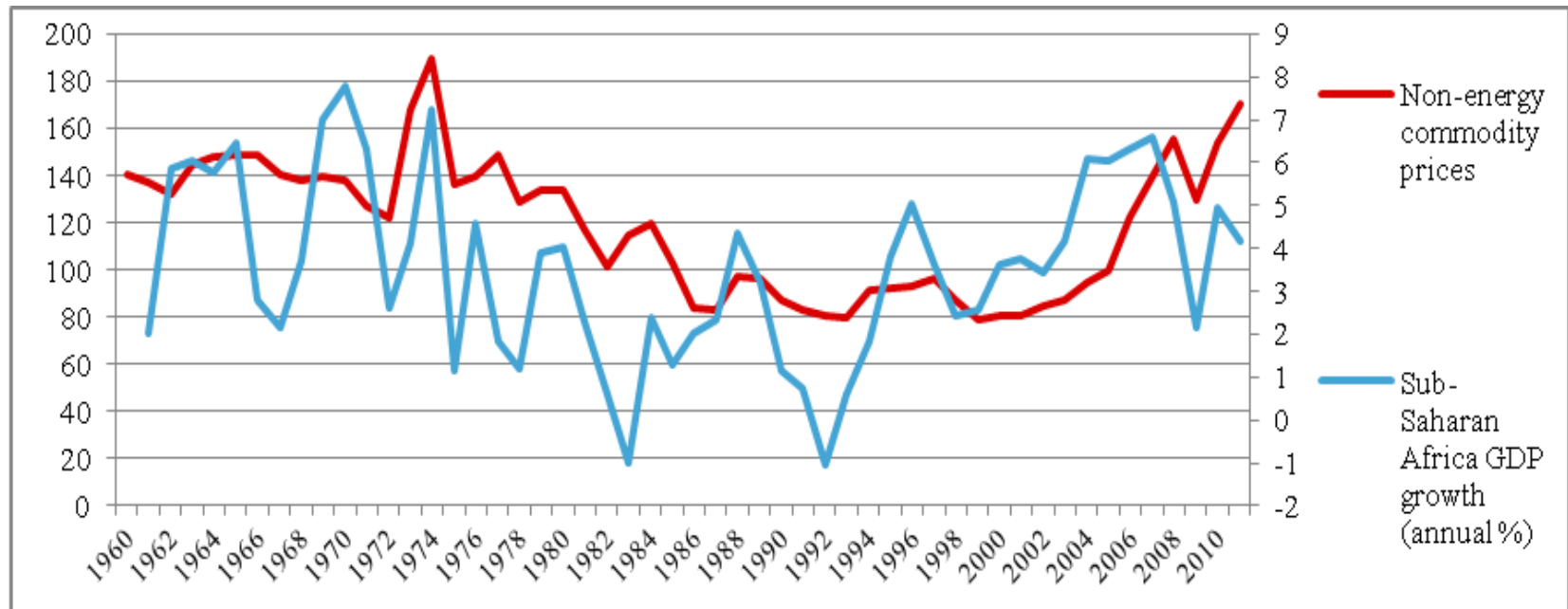
Oil Producers 2015



Source: Michael Ross., 2011. The Political Economy of Resource Discoveries, International Monetary Fund Conference, 21 September.

**Growth rates are higher, but they are mostly driven by commodity prices:
growth rates in SSA countries closely follow the fluctuations of commodity prices.**

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

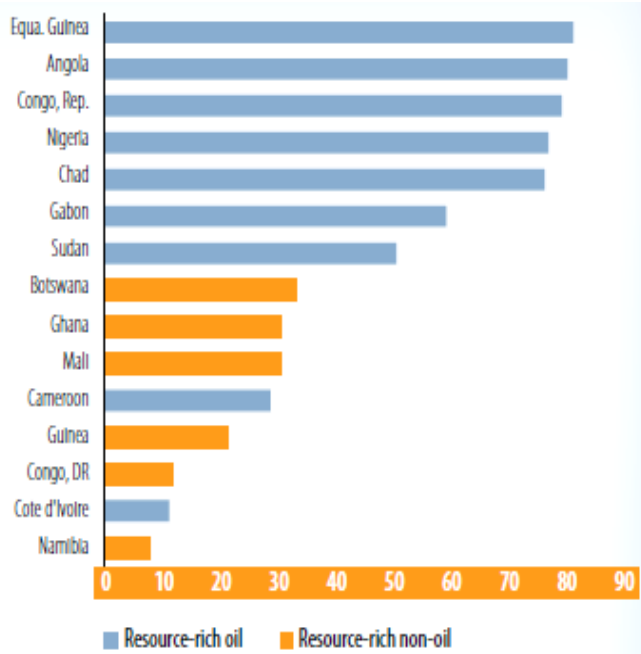


Also commodity-dependent structures imply a distorted fiscal structure, based on the taxation of external trade.

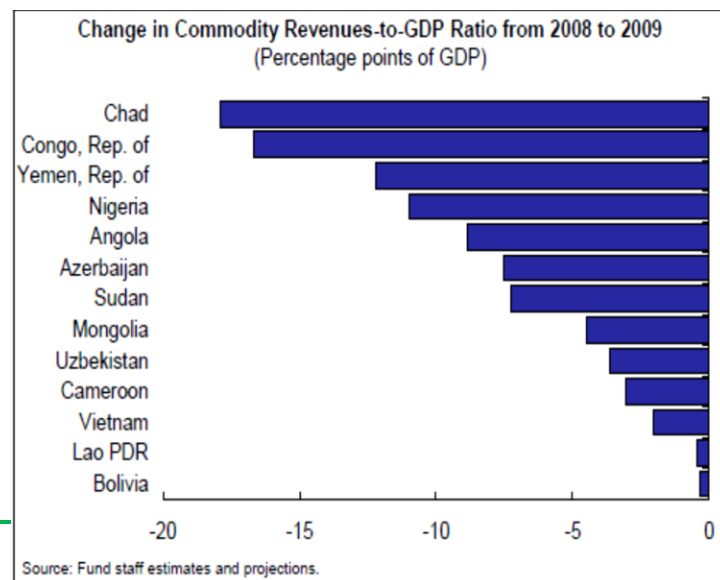
Most commodity-based economies, especially oil producers, rely on few commodities for the largest part of their earnings

=> **fiscal revenues are vulnerable to terms of trade shocks and commodity price volatility.**

SSA: government revenue from primary commodities in 2011 (% general government revenue)



Hence high vulnerability, large impact of external shocks, such as a fall in prices: e.g. the 2008-09 crisis



Source: World Bank. 2012. Africa Pulse, n°6, October.

Source: IMF. 2009. The Implications of the Global Financial Crisis for Low-Income Countries—An Update .

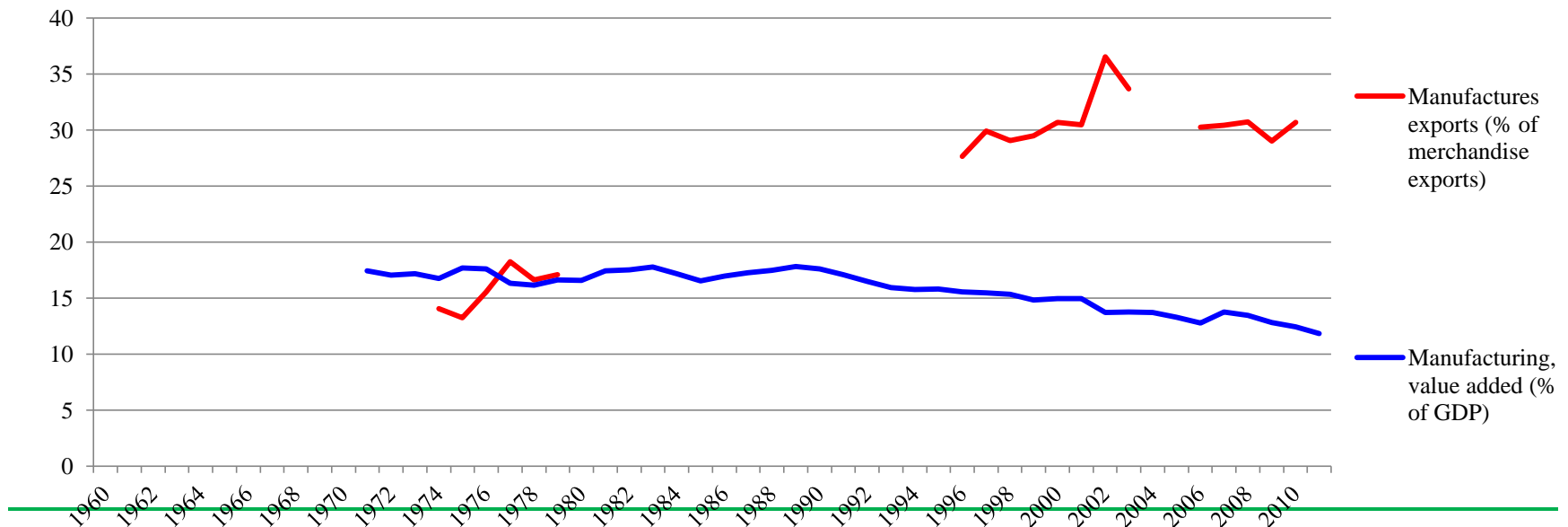
A related problem: SSA is characterised by a narrow industrial base, especially regarding manufactures.

This issue has not been improved by the recent increases in commodities prices and growth rates:

During this period -the 2000s-, the contribution of manufactures to GDP pursues its decline.

Question: can the trade and investment relationships with China modify these trends?

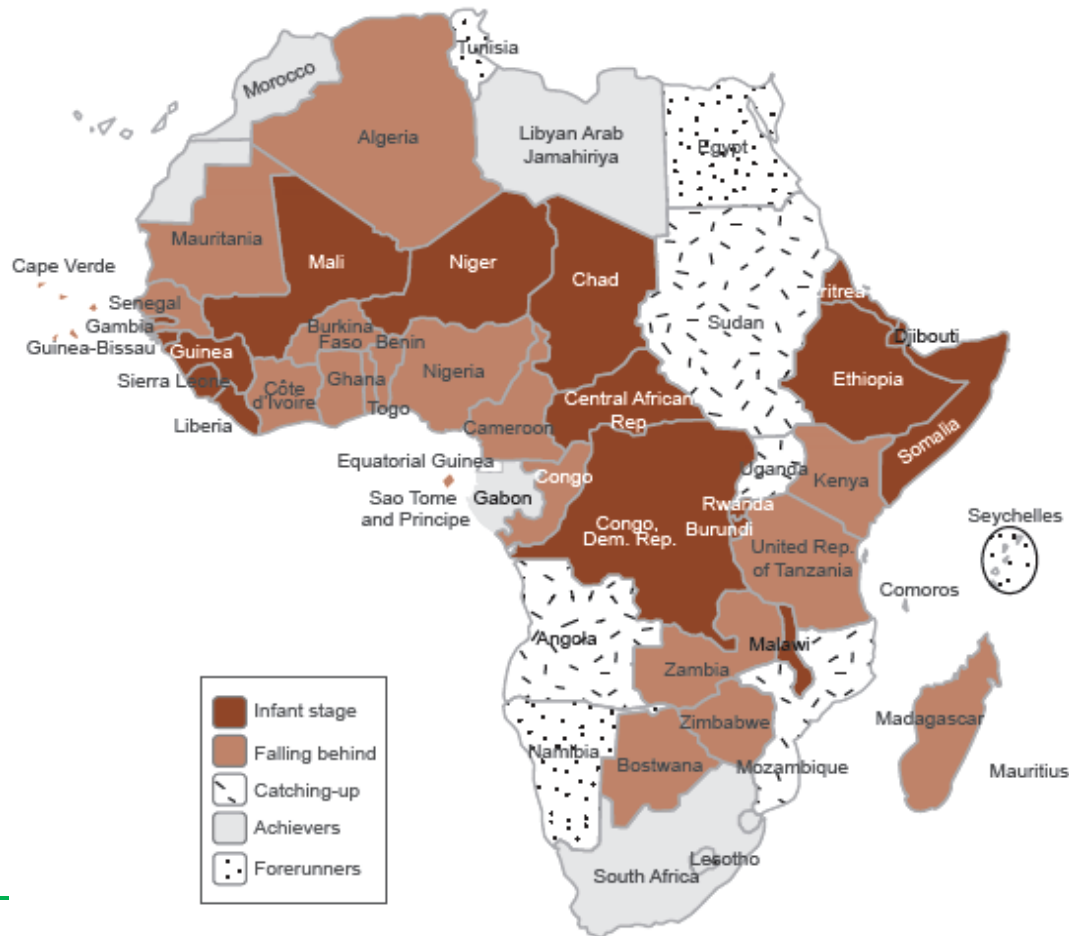
Sub-Saharan Africa: exports of manufactures as a percentage of total merchandise exports and manufacturing value added as a percentage of GDP



Structural change = industrialisation, higher productivity

Question: can higher commodity prices, and China trade and investment relationships, modify such trends, and be a vector of structural change?

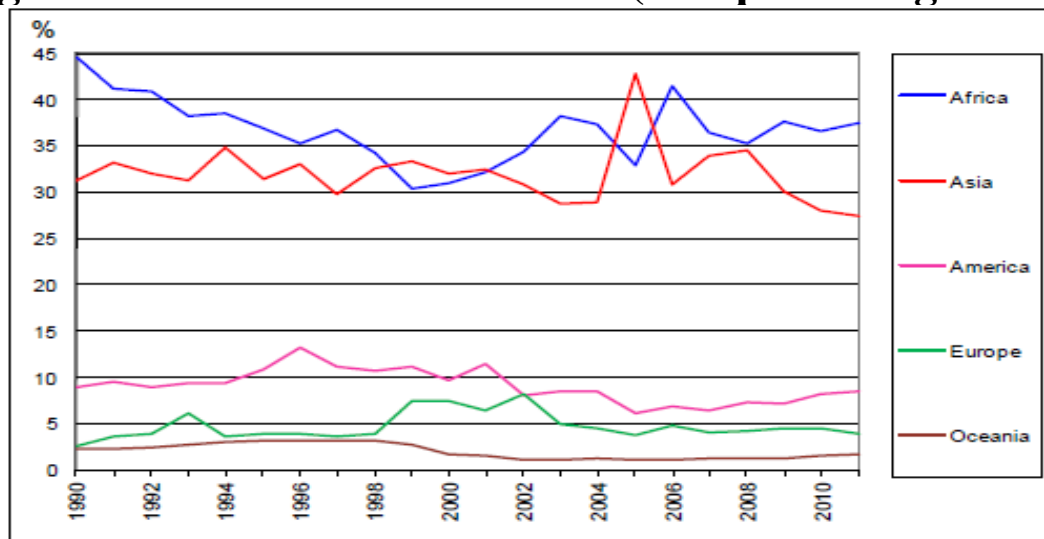
Sub-Saharan countries industrial performance



Source: UNCTAD-UNIDO (2011).

- **A growth also fostered by aid flows in low-income countries**
- Some SSA countries have received ‘aid surges’ (Uganda, Ghana, Tanzania, Ethiopia, Mozambique...)
- **Aid in SSA: net ODA= 20 \$ per capita in 2000 or 4.1% of GNI; 54 \$ per capita and 4.3% of GNI in 2010**
- **Aid = in 2000, 23.1% of gross capital formation, and 18.8% in 2010**
- **Aid: in 2000, 11% of imports of goods, services and income; in 2010, 9.9% (World Bank World Development Indicators 2012).**
- **Aid dependency driven by SSA low income countries:**
- **Aid to low-income countries (global): in 2010, 9.6 of GNI; aid =40.9% of gross capital formation; 24.6 of of imports of goods, services and income.**

Regional shares of total net ODA (as a percentage of total net ODA)



Source: OECD-DAC. 2013. Development Aid at a Glance 2013: Statistics by Region, Africa. Note: Africa includes North Africa.

Example of Ghana:

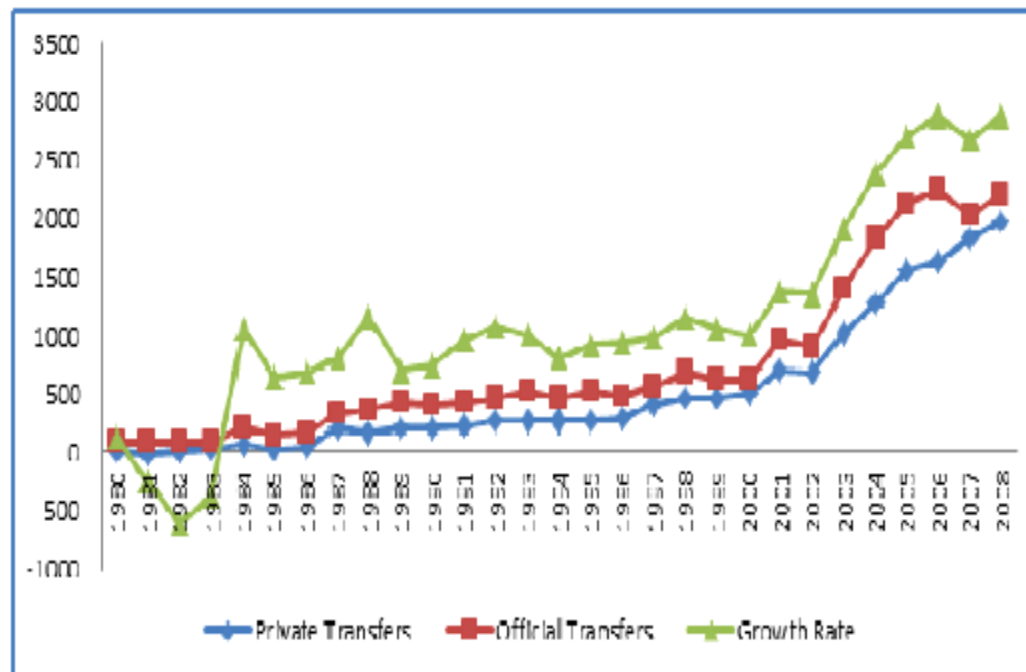
Osei (2012): the structure of the economy has changed over the years, but **the change has not been of the developmentally transformative type.**

Production still takes place on the lower end of the technology scale and exports are still dominated by primary products.

Revenue from oil can at best replace foreign aid in the long run.

But in the short to medium term, Ghana will have the complement of both oil and aid.

Aid and growth correlations in Ghana, 1980-2008



Source: Osei (2012).

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

- Risk for SSA commodity-exporting economies of being locked in commodity-dependence

- SSA growth is generated by commodity prices.

- High commodity prices are incentives for remaining in the production of primary commodities:

- =risks of 'lock-in' effects of China' trade relationships with SSA.

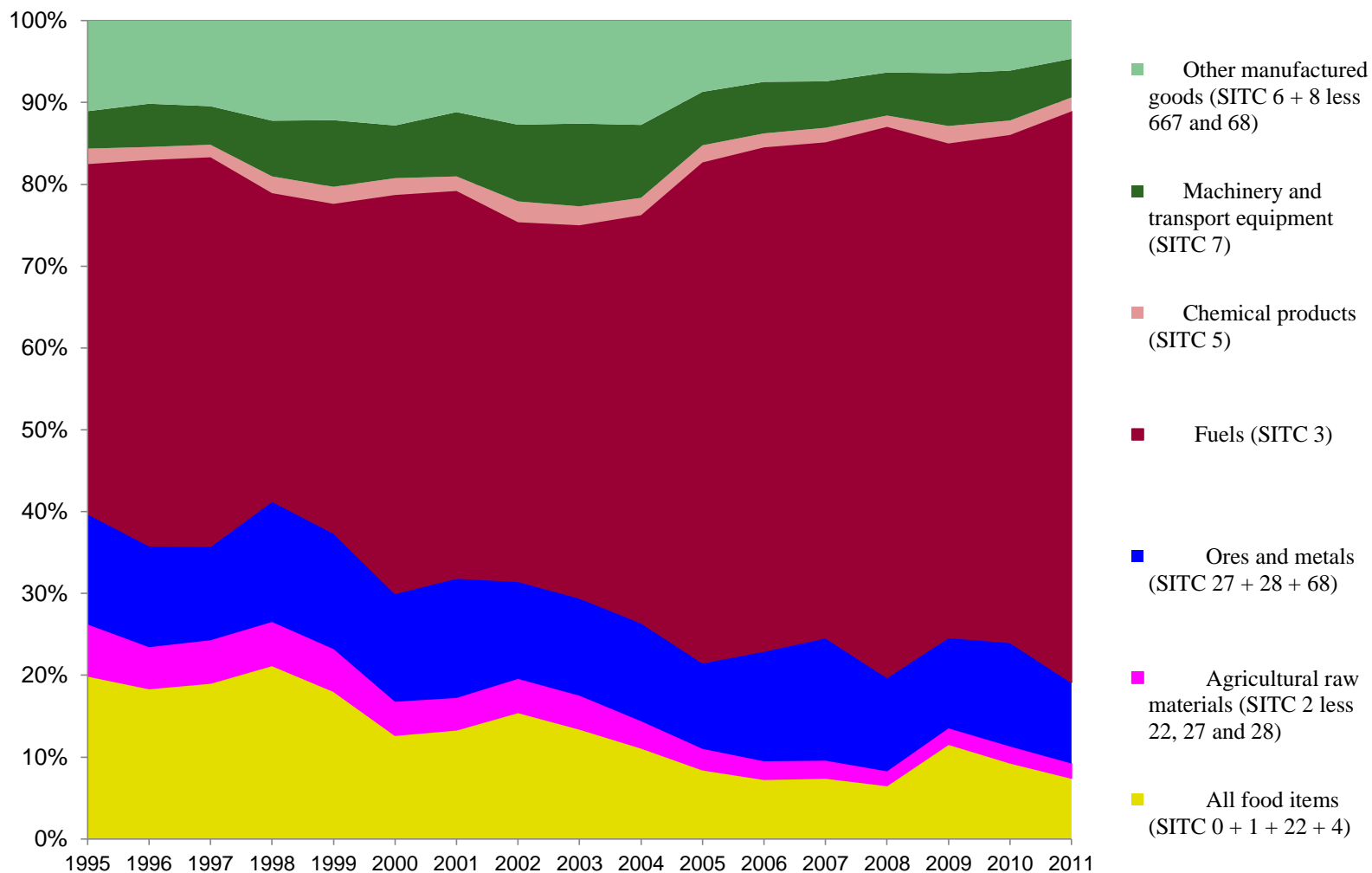
- However, China does not exhibit any exceptionalism

- =the export pattern of SSA to China does not differ from SSA pattern to the Rest of the World.

- Oil dominates SSA exports to China, but SSA exports to the Rest of the World exhibit the same composition.

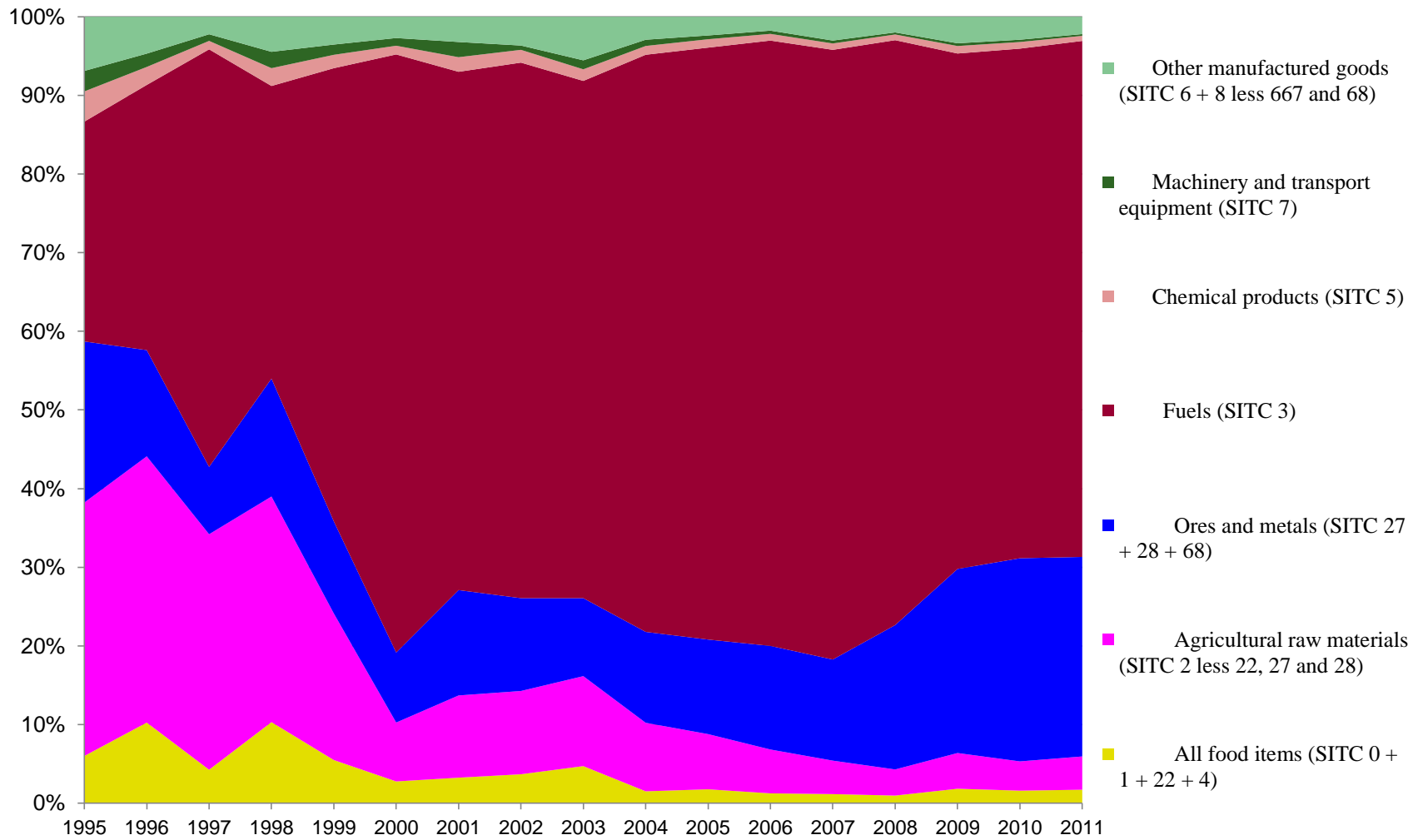
- The 6 largest SSA exporting countries to the rest of the world=South Africa, Nigeria, Angola, Côte d'Ivoire, Equatorial Guinea, Gabon, **almost all oil countries**, plus South Africa.

Sub-Saharan Africa exports to G8 countries by key product groups, 1995-2011

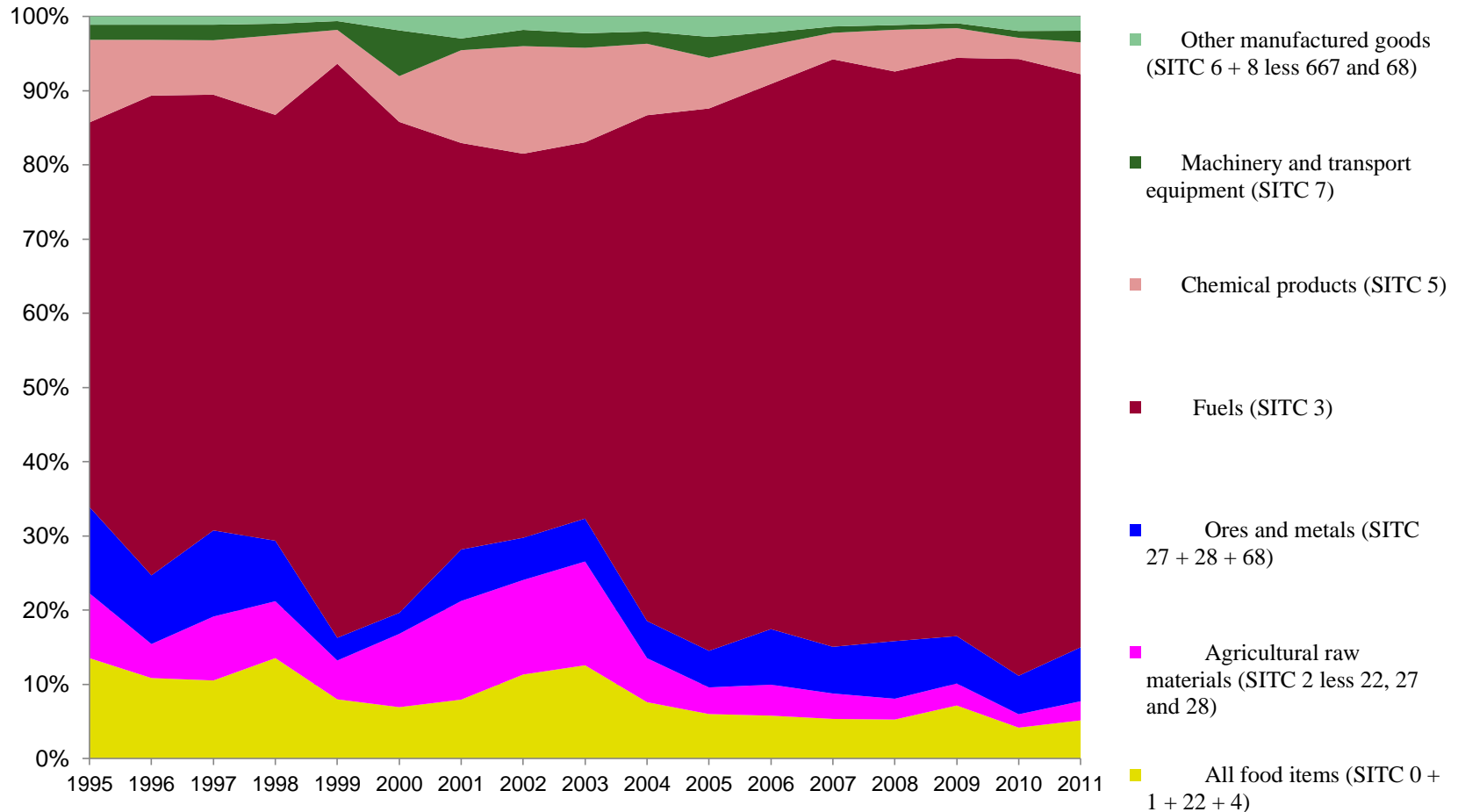


Source: <http://unctadstat.unctad.org>, author's calculations.

Sub-Saharan Africa exports to China by key product groups, 1995-2011

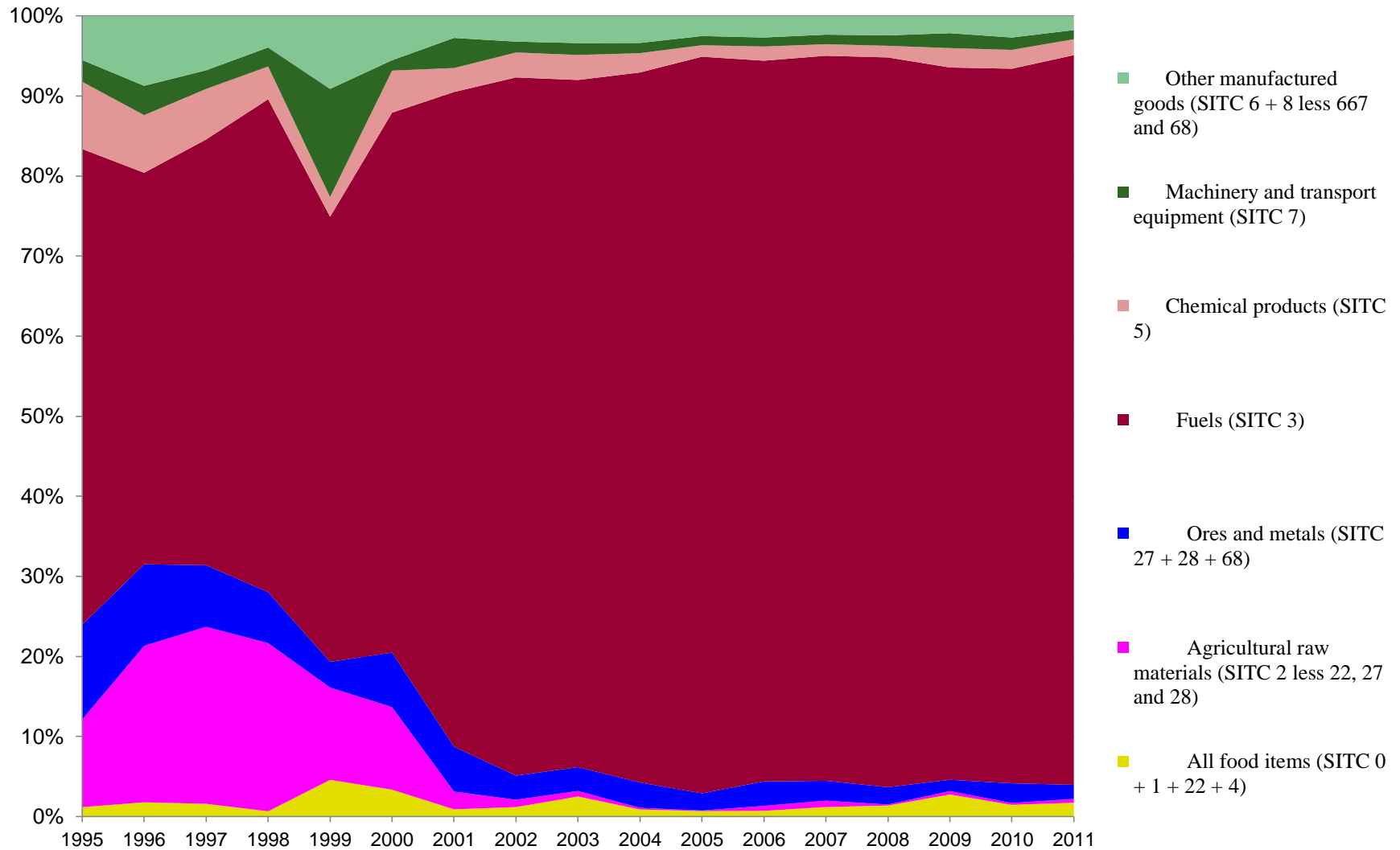


Sub-Saharan Africa exports to India by key product groups, 1995-2011



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

Sub-Saharan Africa exports to Brazil by key product groups, 1995-2011

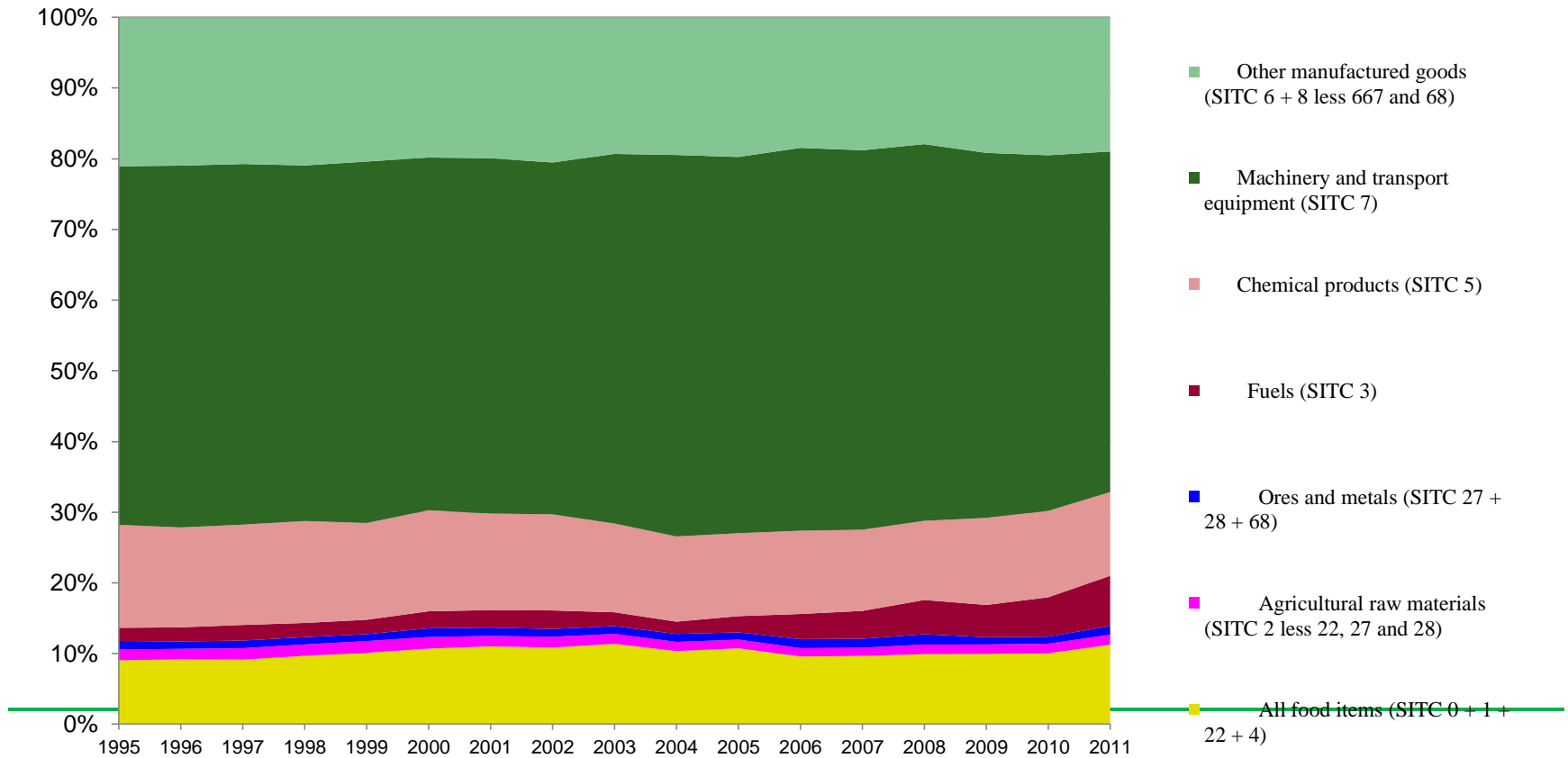


Source: <http://unctadstat.unctad.org>, author's calculations.

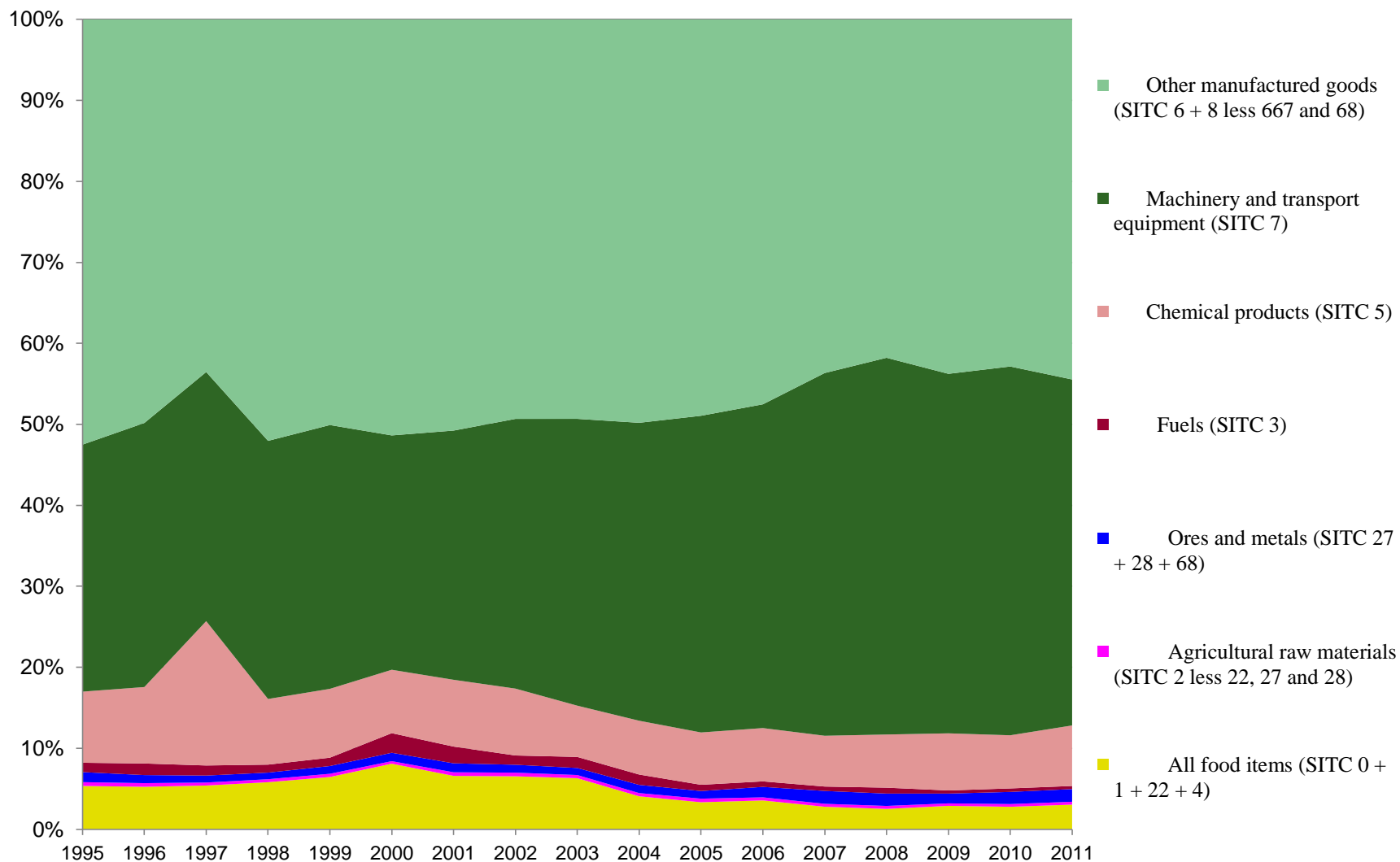
The pattern of SSA imports from China and from the RoW does not exhibit significant differences.

SSA imports manufactured goods and processed commodities from the world, e.g., manufacturing goods, machinery and equipment, food and chemicals - with a greater share of manufactured goods from China.

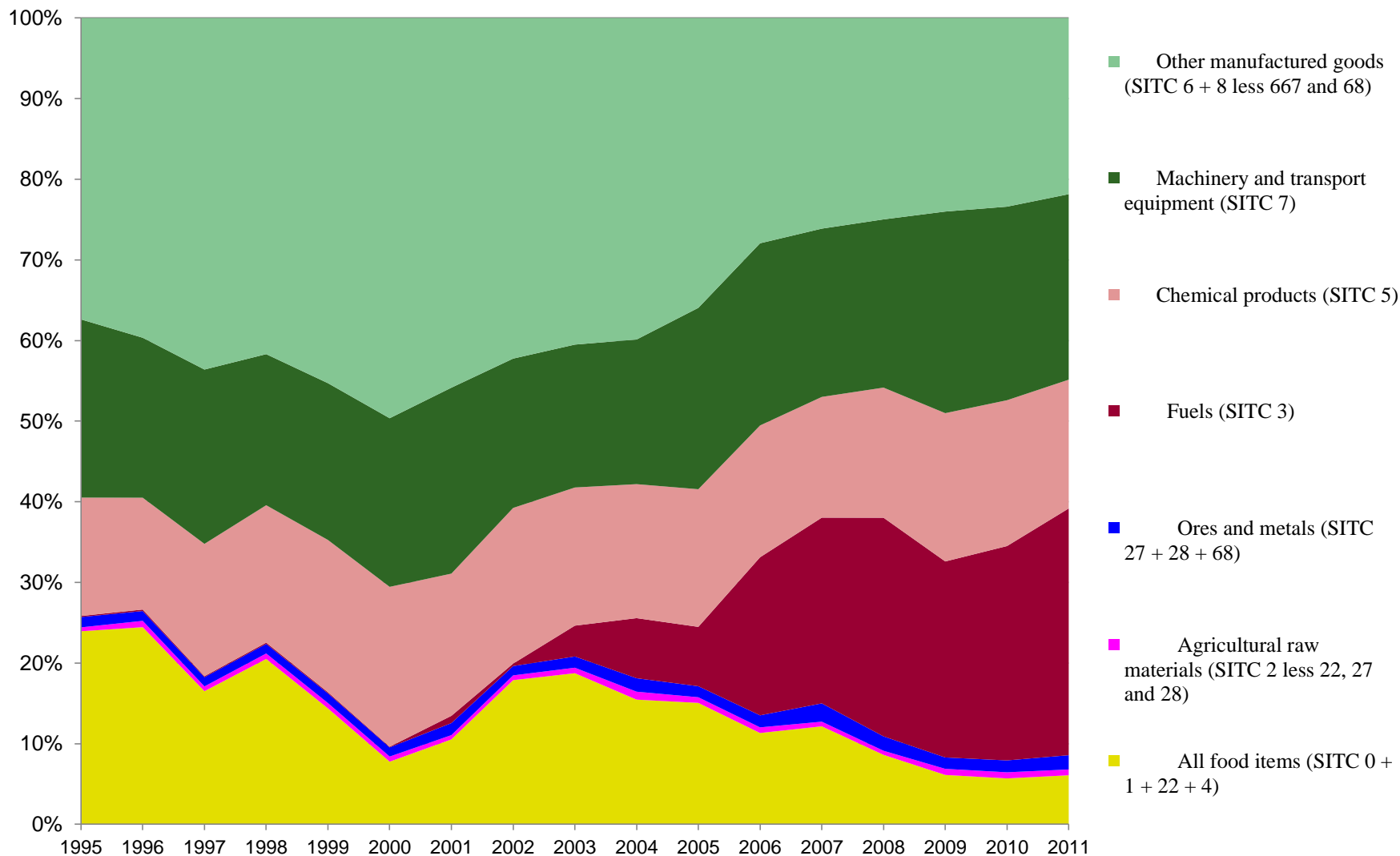
Sub-Saharan Africa imports by key products from G8 countries, 1995-2011



SSA imports by key products from China, 1995-2011

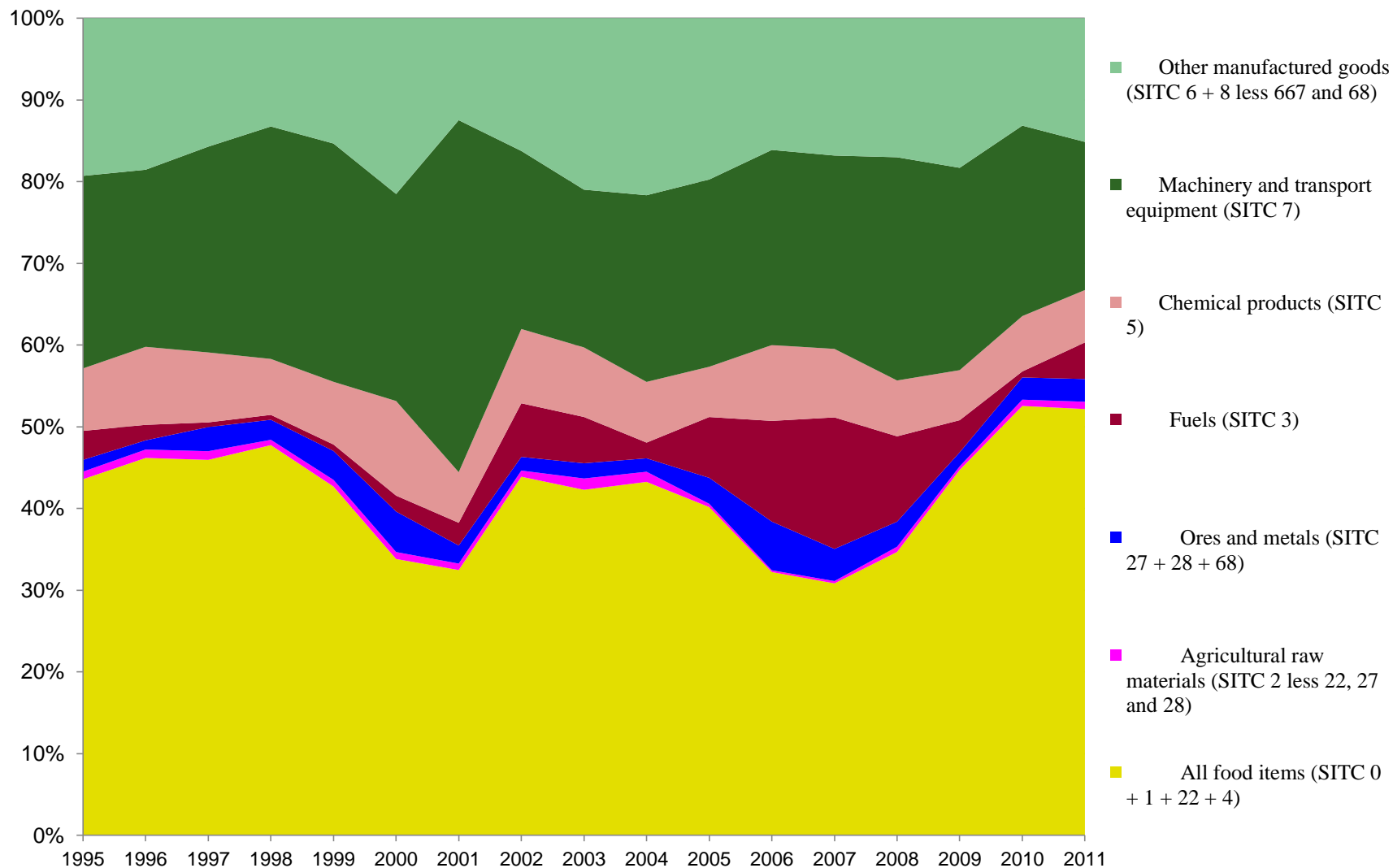


Sub-Saharan Africa imports by key products from India, 1995-2011



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

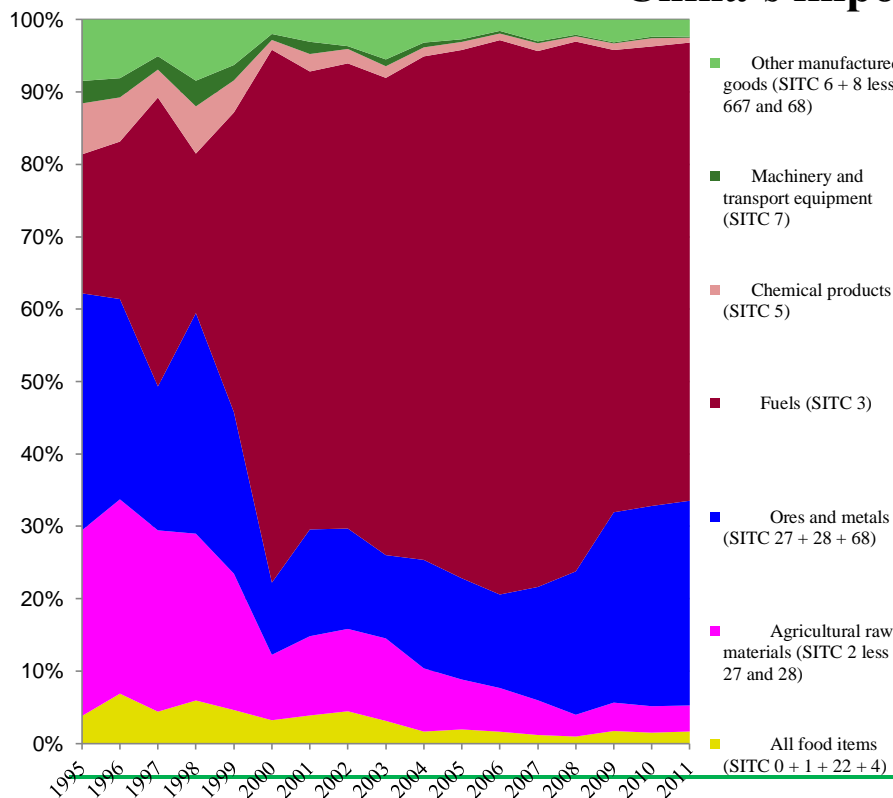
Sub-Saharan Africa imports by key products from Brazil, 1995-2011



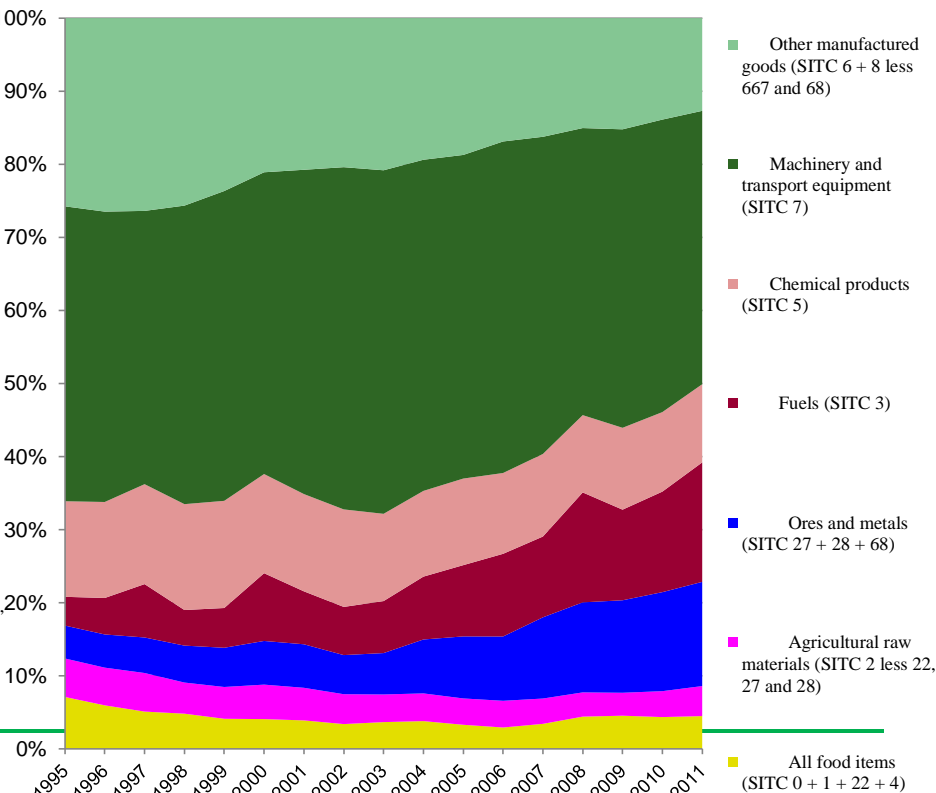
BUT the type of goods China imports from SSA are very specific to SSA. This strengthens the view that China trade relationships with SSA are keeping SSA in its specialisation of commodity-exporting region.

China imports commodities from SSA, but imports different products from other parts of the world: manufactured goods, transport equipment and machinery, chemicals.

China's imports by key products from SSA, 1995-2011



China's imports by key products from the world, 1995-2011



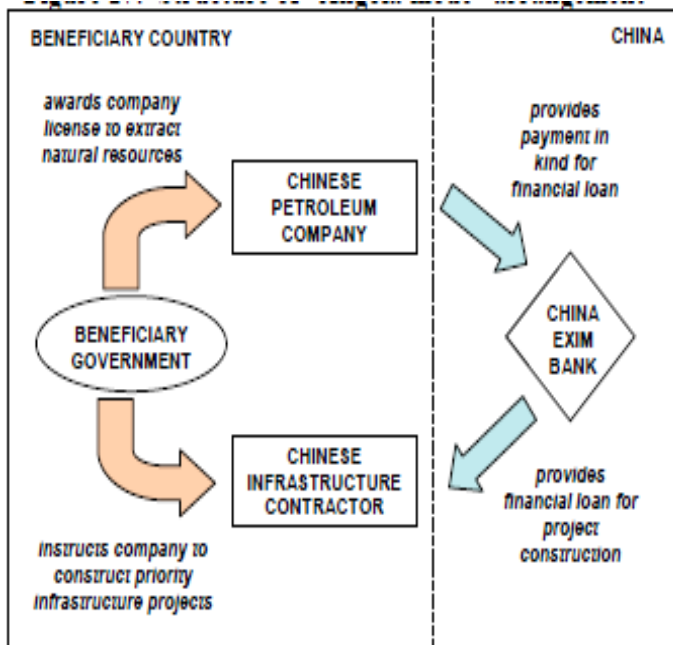
Similarly, the main motives of China's investment by large state-owned enterprises remain mainly resource-seeking – typically, oil, minerals.

Risk of reinforcing specialisation, of locking SSA recipient economies in the production of primary commodities

'Barter' dimension of the so-called Angola model (vast literature, Kaplinsky and Morris, 2009; Corkin, 2013, ...)

Unpredictable repayments? If oil prices fluctuate over the period, the terms of the loan are adjusted, e.g., shortening of the repayment period if oil price rises (Foster et al., 2008).

Structure of the Angola mode arrangement



Source: Foster et al. (2008).

Source: Mattoo and Subramanian (2011).

China's FDI in natural resources: share of natural resources in China's total FDI (left scale); share of China in global FDI in natural resources (right scale)



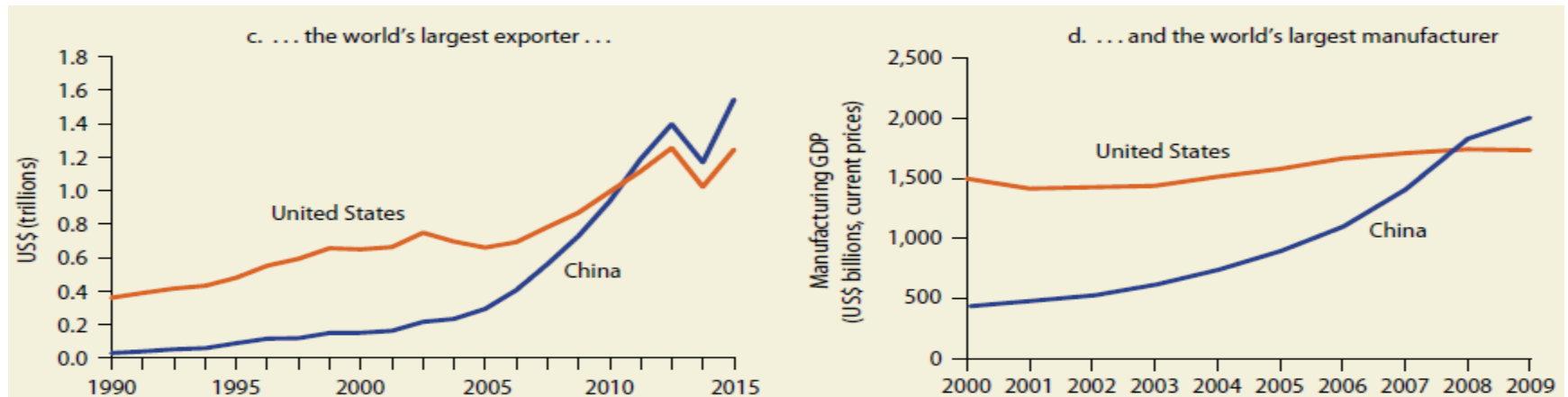
The further weakening of comparative advantage of SSA economies in industrial exports

China as an exporter of manufactures undermines the prices of many manufactures (Kaplinsky, 2006; Fu, Kaplinsky et al. 2009. The impact of China's exports on global manufactures prices).

=lesser possibilities for SSA industrial sectors of upgrading and shift from resource-based industries to non-resource and skill-based ones.

China is the world largest manufacturer, and has pushed the prices of manufactures downwards, especially low-end products: SSA manufacturing sectors cannot compete outside preferential agreements with developed countries importers (e.g., the AGOA with the US).

China as a key exporter of manufactures



-
- **China may be a threat for SSA labour-intensive industrial sectors:** typically textiles.
 - Kaplinsky and Morris (2008): **China may undermine export-oriented industrialisation, though export-oriented manufacturing constitute a developmental path, as for Asian ‘developmental states’ and China.**
 - While they are first step in export-oriented manufacturing growth, **SSA clothing and textile industries are threatened by the competition of China’s products:** risk for SSA industries of being excluded from global markets and threatened in their domestic markets.

 - Kaplinsky et al. (2007): the end of the Multifiber Arrangement (MFA) and its quotas in 2005
 - =>for **SSA exporters, a fall in their share of the US market, and the share of China grew significantly.**
-

-
- **Example of Zambia**, as a paradigm of these effects (Eliassen, 2012).
 - China was the second-largest destination for Zambian copper exports in 2010
Positive aspects but also negative impact on Zambia's industry:
 - = **Dutch disease**: the appreciation of the Kwacha due to Chinese demand and import of copper, have had a negative effect on Zambian exports such as textiles, in making textiles more expensive in major markets
 - = Chinese export of **cheap consumer goods** - textiles and clothes - undermines export-oriented industrialisation in Zambia.
 - Despite Chinese investors in the textile and clothing industry, Zambia exports cotton and in turn buys textile and garment products.
 - = **Zambia loses out in terms of employment creation and state revenue, and does not move up the value chain.**

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

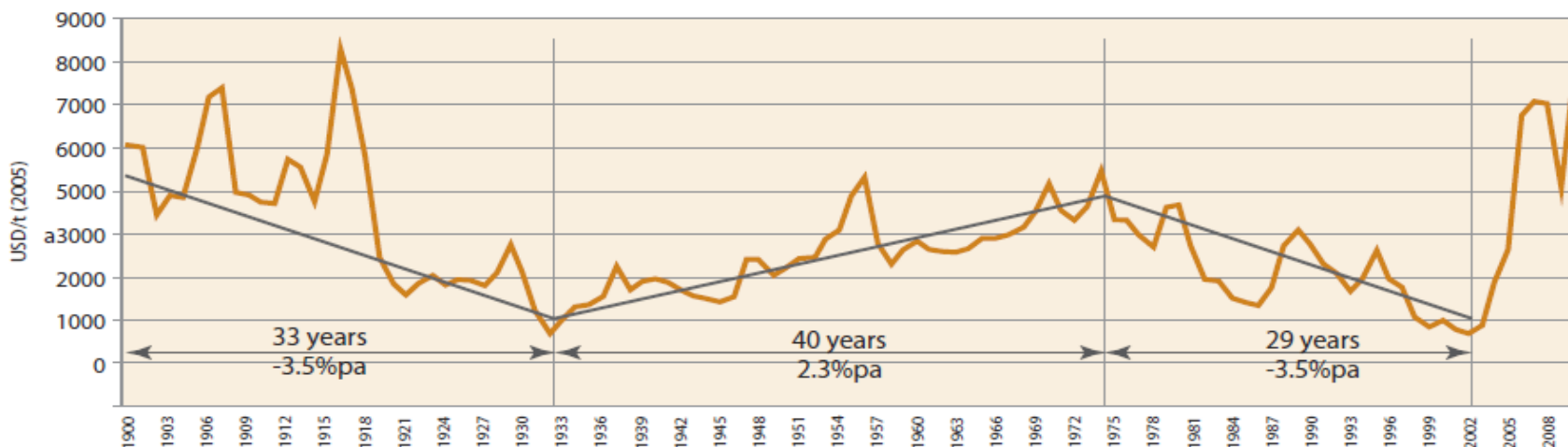
Export structures based on commodities reduce economic performance through many channels:

- the long-term decline in world commodity prices,
- price volatility,
- crowding out of manufacturing
- Dutch Disease effects.

An example: copper supercycles

End of decline? However, volatility

Long-term copper prices



Source: UNECA and African Union (2011).

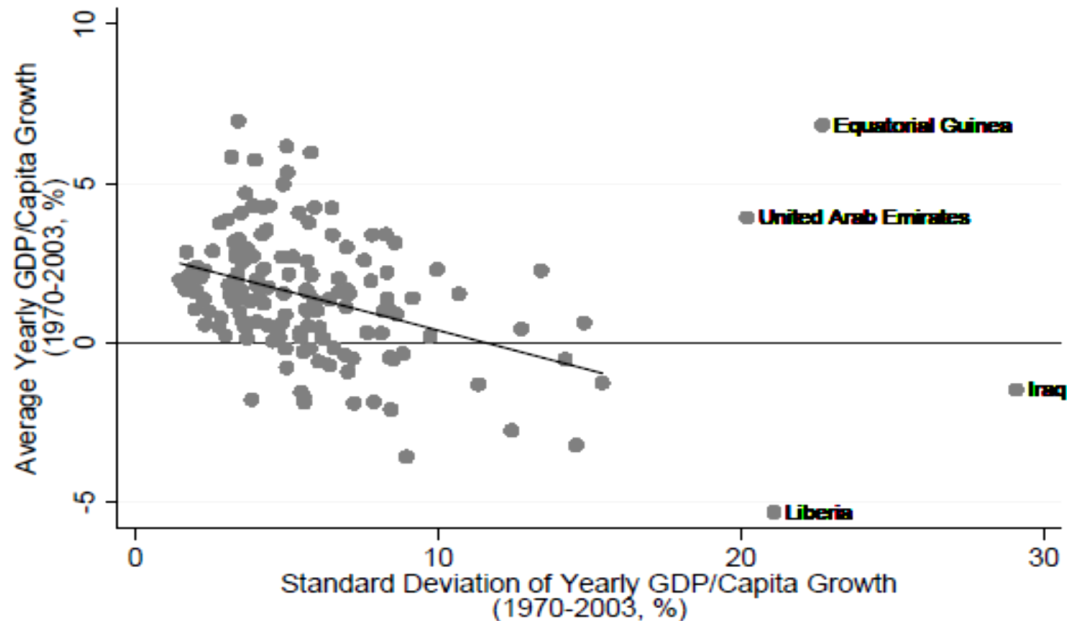
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- **The negative impact of commodity dependence** stems from the **inherent volatility of commodity prices** (Maizels, 1994; Nissanke, 2010, 2011; Sindzingre, 2010).
 - Volatility now intensified by the **financialisation of commodities** and commodities now treated as a financial asset class (Tang and Xiong, 2010a, b).
 - IMF (2009a): during the 2008-09 crisis, **volatility rose to unprecedented levels for many major commodities, especially oil.**

 - **There is a negative impact of commodity price volatility on growth:**
 - Not only Dutch disease, **but also price volatility expose commodity-based countries to shocks, in particular fiscal shocks:** yet, there is a relationship between exposure to shocks and low growth.
 - **Similarly, volatility has a negative impact on investment, and therefore impedes growth.**

 - There is a **negative relationship between macroeconomic volatility and growth** over the long-run.
 - Loayza et al. (2007): **macroeconomic volatility is both a source and a reflection of underdevelopment.**

 - Volatility also affects **aid flows**. Similar issues: Dutch disease, problems of absorption and spending of aid.
-

The lower annual growth in GDP per capita of volatile countries



Source: Van der Ploeg and Poelhekke (2009).

Vulnerability stemming from commodity-based export structure:

=growth depend on **external factors that are unstable, beyond the scope of SSA**

domestic policies:

the high levels of commodity prices since the 2000s depend on global business and industrial cycles, global demand, in particular China's growth and demand, and the movements of international commodity prices and their multiple determinants

=>**the growth of many SSA economies is intrinsically fragile.**

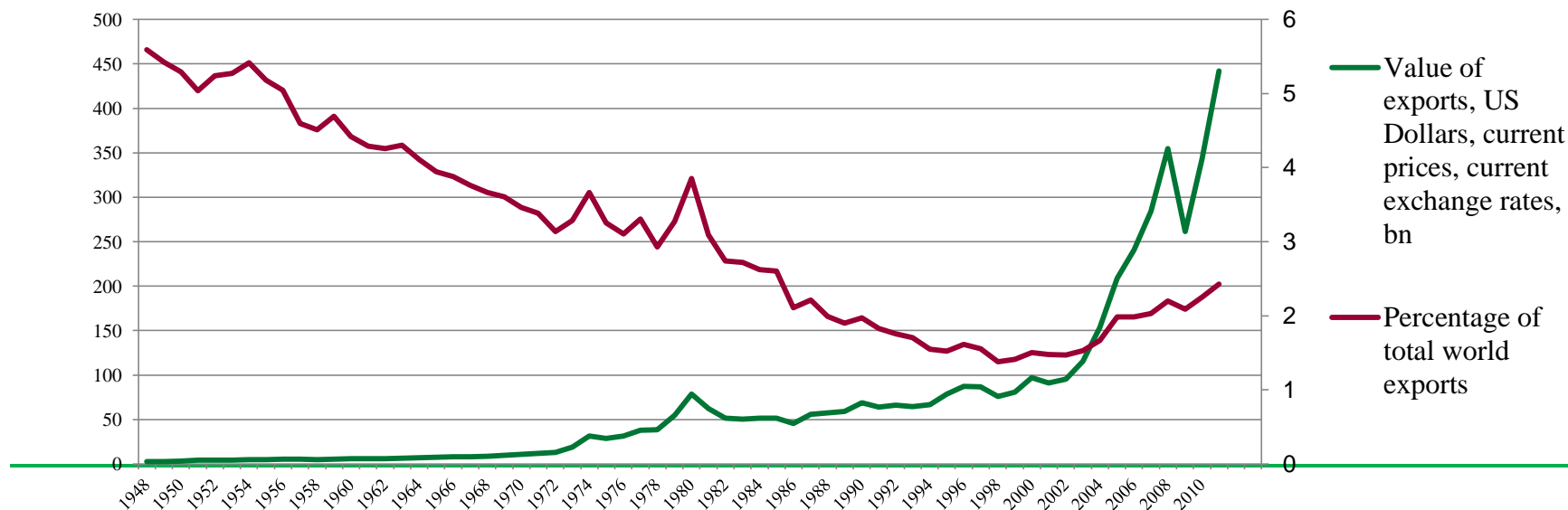
SSA countries suffer structural constraints, in particular **lower competitiveness and a lower labour productivity than its competitors** in the developing world, e.g., in emerging economies, especially in manufacturing.

The negative impacts of such structures appears in the long-term decline of SSA economies' share in world exports:

Despite trade orientation, the share of SSA in world trade has declined. SSA exports have grown much more slowly than world exports.

Question: can China change this processes and constraints, which appear to be long-term?

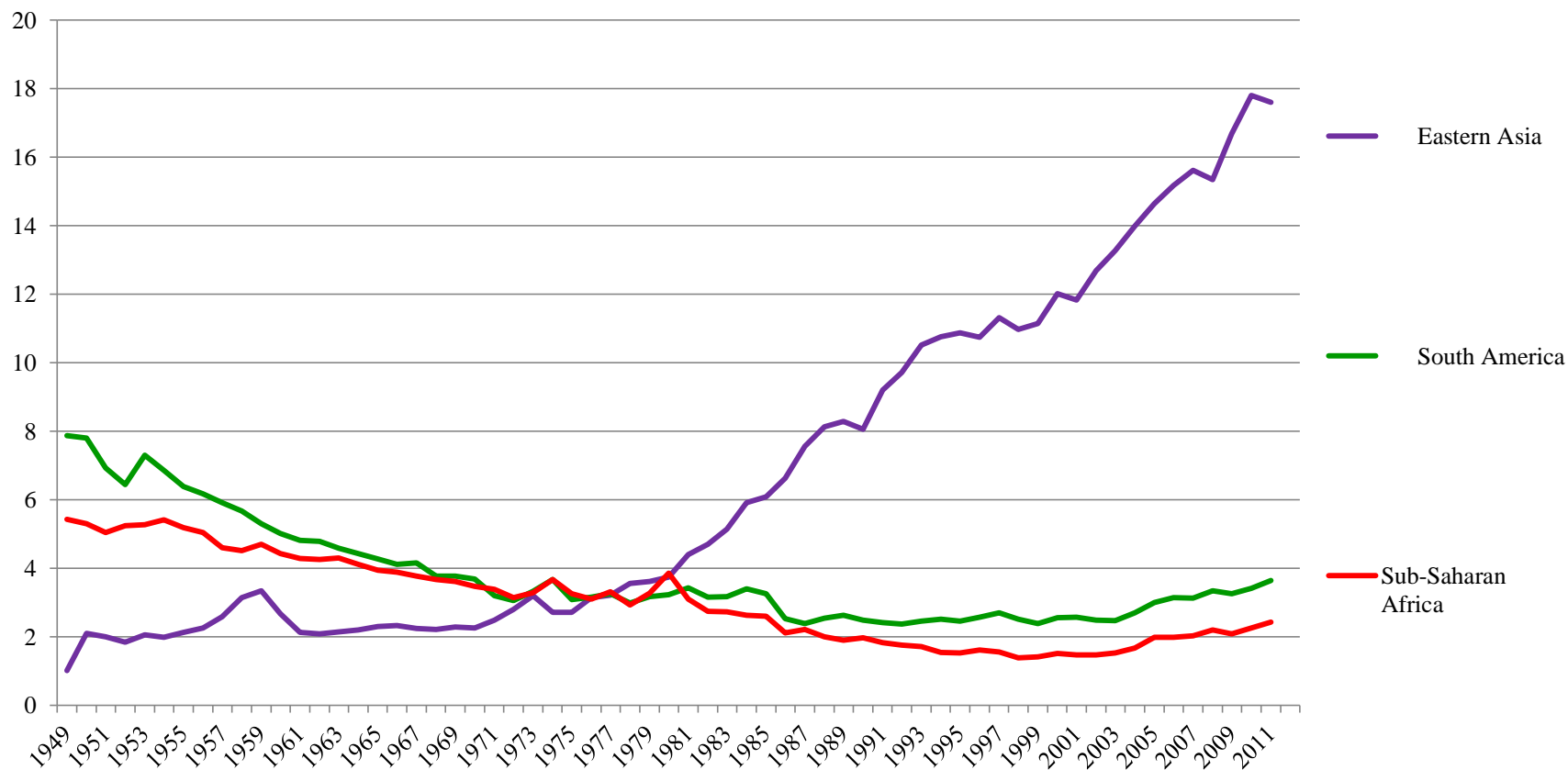
SSA exports: percentage of world exports (right scale) and value (left scale), 1948-2011



The decline of SSA in world exports is associated with the divergence of SSA with other parts of the world:

SSA share declines relatively to other regions that increase their share, i.e. Asia.

Share of exports in world exports by region, 1948-2011 (percent)



-
- **The IMF is aware of the problems associated with commodity dependence:** e.g., IMF SSA Outlooks, World Economic Outlooks:
 - it underscores **SSA vulnerabilities, in particular the vulnerability stemming from the correlation between commodity prices and growth rates.**
 - IMF (2012b): 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=>**a real GDP growth reduction of ½ to 1 percentage point in the downswing relative to the upswing.**
 - For crude oil exporters, an annual global activity shock that increases the real price of oil by about 12% **raises the real GDP of oil exporters by 0.4% on impact and by close to 2% 3 years afterward.**
 - IMF warnings: **sensitivity of SSA countries to global business cycles; inherent risks of SSA export structure** based on receipts generated by a few commodities.
 - IMF (2012a) : the key characteristics of **extractive industries** (oil, gas, mining) sectors include: **volatility, uncertainty, presence of rents, asymmetry of information, time inconsistency and exhaustibility.**
-

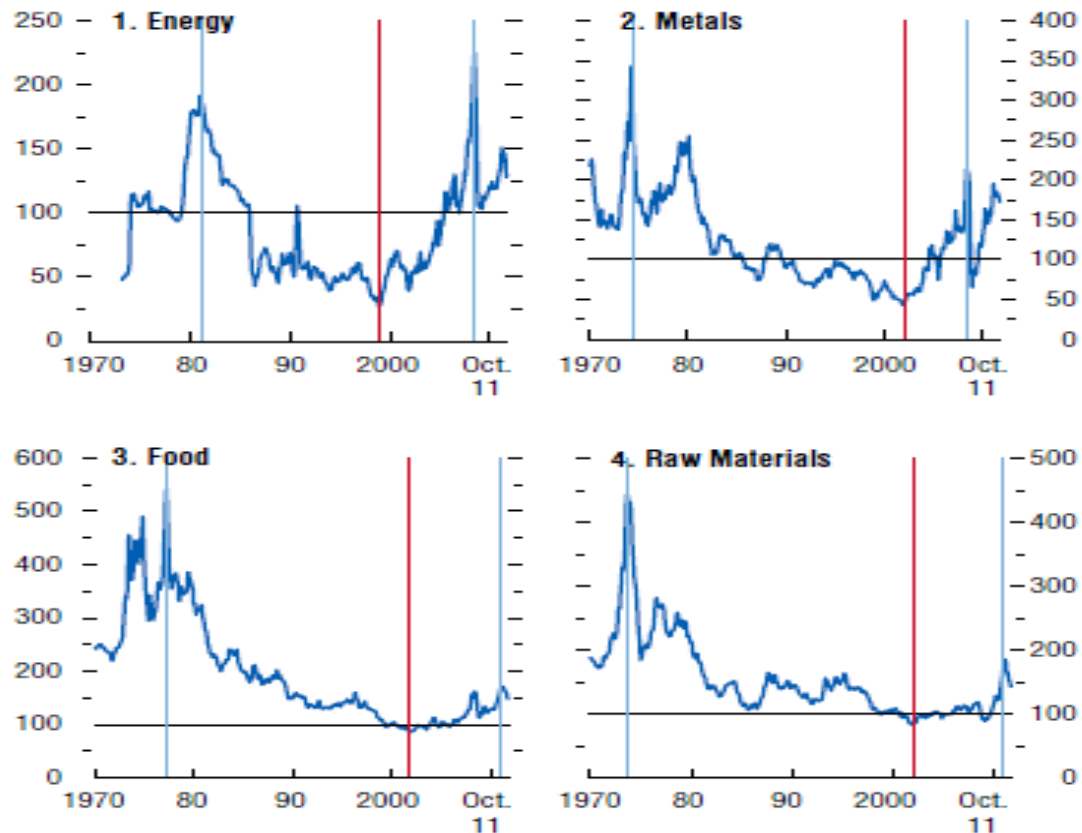
Not only volatility, but uncertainty: is short-term growth sustainable in the long-term?

Related question: can China contribute to this long-term sustainability?

- **The ‘supercycle’ of the 2000s: increase in all commodity prices**
- **Rebound after the 2008-09 crisis** (oil prices, some agricultural commodities), due to the demand for commodities from emerging countries (IMF, 2009a).
- But even after their post- 2008-09 crisis rebound, **most real commodity prices remain below their levels of the 1970s.**
- **The ‘supercycle’ may appear as ‘less-super’ due to the recession in European economies in 2012.**

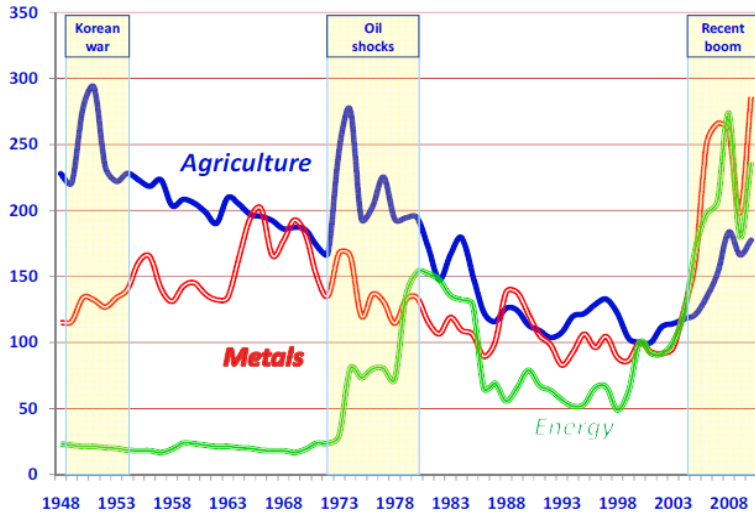
World commodity prices, 1970–2011 (in real terms)

There has been a broad-based rise in commodity prices during the past decade.

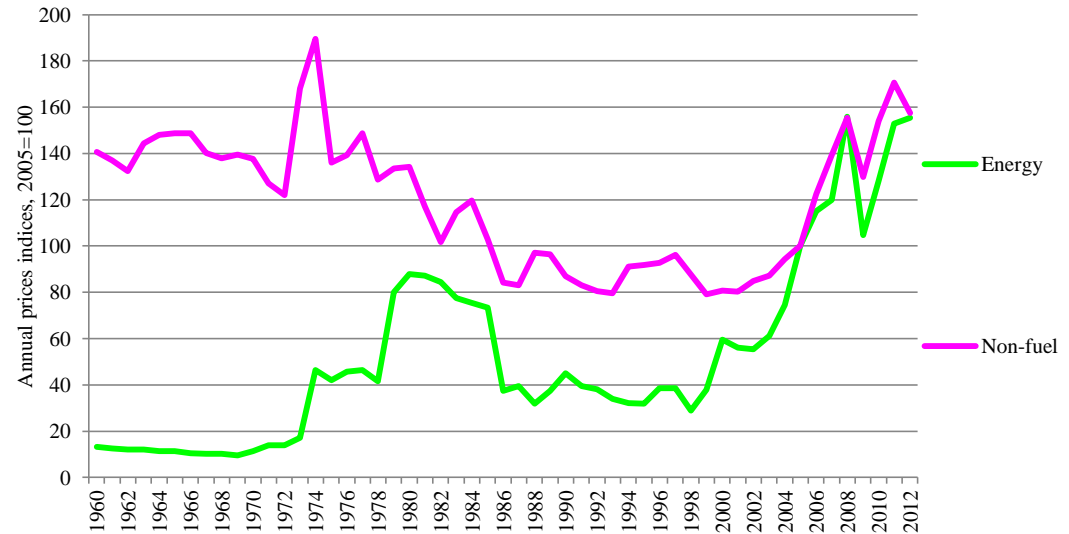


Source: IMF (2012b). The blue vertical lines indicate long cycle peaks, and the red vertical lines indicate long cycle troughs.

Commodity Price Indices (Real, MUV-deflated, 2000=100)

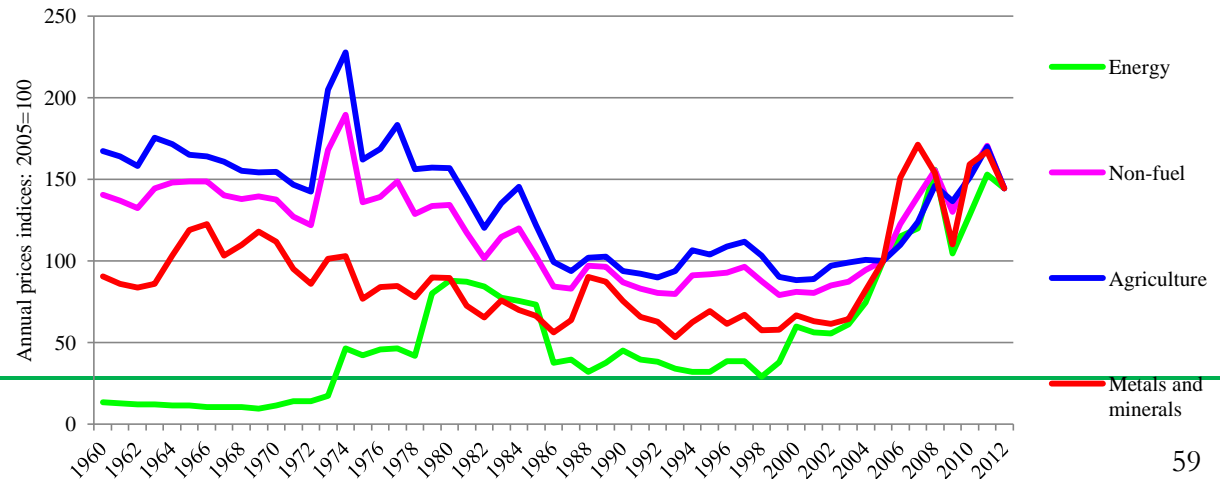


Real commodity prices, energy and non-fuel, 1960-2012 (2005=100)



Source: Baffes, John and Tassos Haniotis. 2010. Placing the 2006/08 Commodity Price Boom into Perspective, WB.

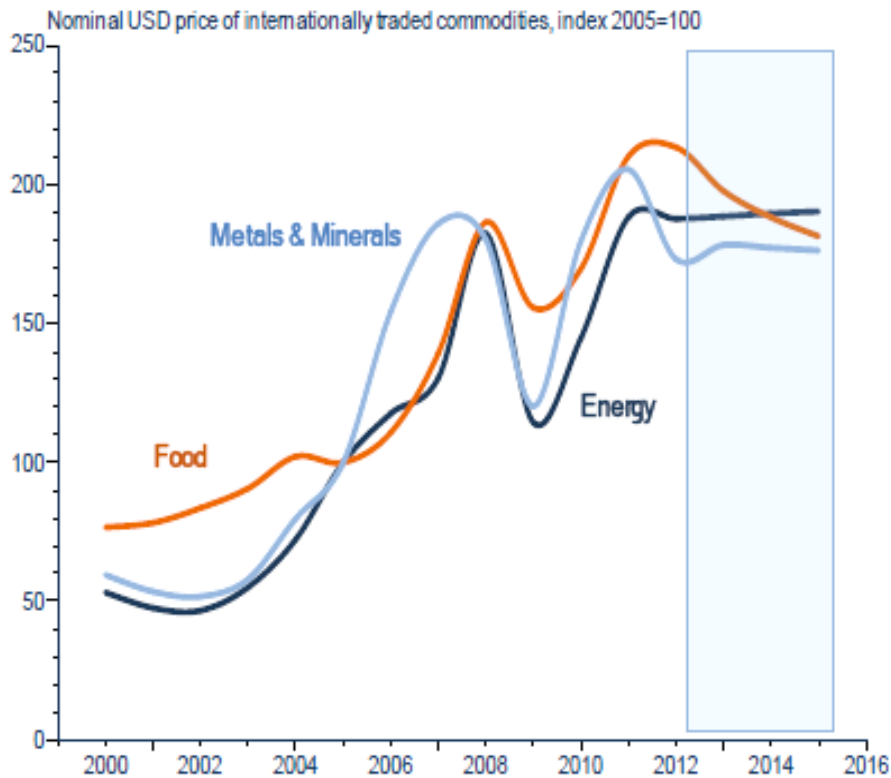
Real commodity prices, energy and non-fuel, 1960-2012 (2005=100): within non-fuel, displaying agriculture; metals and minerals



Source: World Bank, Global Economic Prospects, 2013

-
- **A key question: will commodity prices stay high in the medium term?**
 - **World Bank** (Global Economic Prospects, 2013, January): **Commodity prices should stabilise or decline due to the global context of moderate growth.** Despite important fluctuations in 2012, industrial commodity prices in 2012 were stable compared with 2011.
 - **But metals and minerals declined by 15%.**
 - The barrel price of crude oil was unchanged in 2012 at \$106 (\$104 in 2011). **Oil prices have remained resilient.** Despite the equilibrating trends in supply and demand, world prices remain in excess of \$100 per barrel, and **are expected to remain above \$100 over the medium-to-long term**, mainly because of the elevated extraction cost of newly discovered and new-technology oil.
 - **But deep uncertainties regarding prices, contradictory forecasts...:** World Bank: U.S. natural gas and coal: increasing downward pressure on international prices. Over the long-run, expanded use of natural gas could significantly erode the advantage of crude oil products, vs. upwards pressure due to environmental costs associated with new extraction techniques.
 - See International Energy Agency, March 2013 Monthly report: “2013 global demand forecast is cut slightly”, due to **slowdown in China and the Eurozone crisis**. Other forecast: fall in energy prices (many causes, e.g., shale gas)
 - => **A likely outcome: volatility....**
-

Barring supply disruptions, commodity prices are projected to remain stable or ease



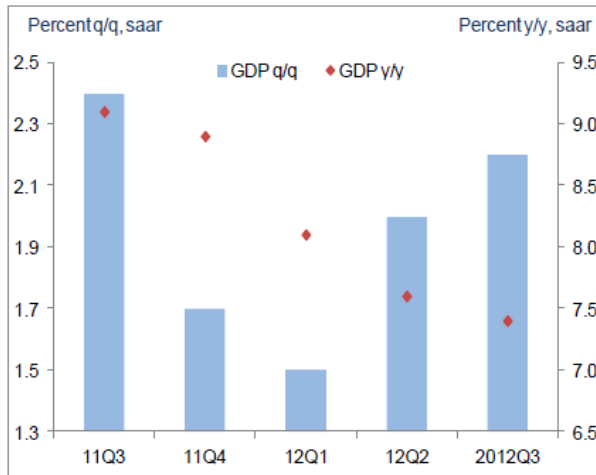
Source: Global Economic Propects. 2013. January

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- Akyuz (2012): 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 economic conditions**, shaped by unsustainable policies in advanced economies.
 - **The only developing economy which has had a major impact on global conditions, notably on commodity prices, is China.**
 - However, China's growth has been driven by an expansion of exports to advanced economies and after the global crisis, by an investment boom:
 - **both are not replicable or sustainable over the longer term:** export-led Asian economies' dependence on foreign markets is not sustainable.
 - For SSA commodity exporters, stable growth depend on the **reduction of their reliance on capital flows and commodity earnings – two determinants of their growth beyond national control.**

-
- **A related question: will China growth continue at the same pace?**
 - China's likely rebalancing of its growth toward private consumption may **reduce China's demand growth for some primary commodities** (metals):
 - **decline in 'commodity intensity' => adverse impact on the price of these commodities and therefore these commodities exporters.**
 - **The prospects for activity in China are crucial for many commodities.**
 - **=>They are crucial for many SSA countries:**
 - World Bank (Africa Pulse. 2012. n°6, October): **Should China not succeed in engineering the softlanding scenario, demand for and prices of major metals and minerals could decline significantly.**
 - =oil (Sudan, Angola, Republic of Congo) and metal and mineral exporters (Zambia, Mauritania, Democratic Republic of Congo) among the countries whose exports are heavily dependent on Chinese demand.
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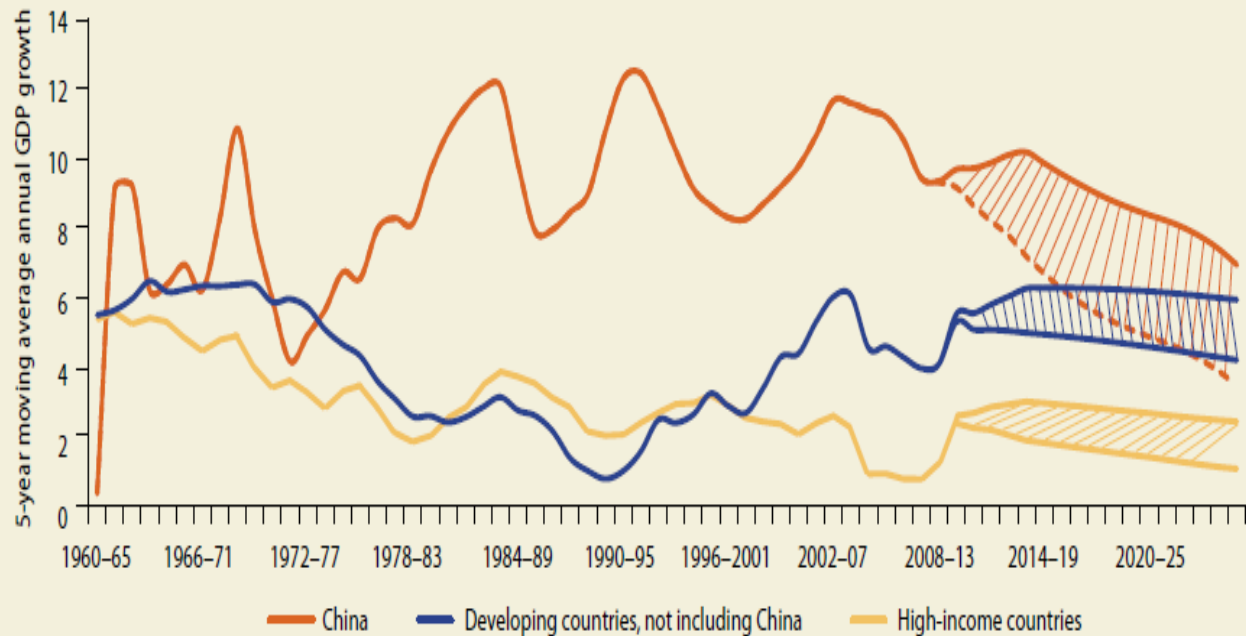
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- **The sustainability of China's growth remains uncertain.**
 - Eichengreen *et al.* (2011): **China's growth may slow down after 2015** - when its per capita income will reach around 17,000 US\$ (in 2005 constant international prices).
 - World Bank (Global Economic Prospects, 2013, January): GDP growth for East Asia and the Pacific is projected to slow to 7.5% in 2012 – due to weak external demand and China's policies towards moderating domestic demand and controlling inflation.
 - **GDP growth in the region is projected to accelerate to 7.9% in 2013 and stabilising at around 7.5-7.6 percent in 2014-2015, due to a modest acceleration in China in 2013 followed by growth stabilisation through 2015.**
 - **However, the recovery remains vulnerable to a renewed crisis in the Euro Area, to a weaker than expected recovery in the US, and the possibility that a decline in Chinese investment is not offset by robust consumption growth.**
-

China annual GDP growth slows



China growth trends

Source: World Bank. 2013. Global Economic Prospects, January



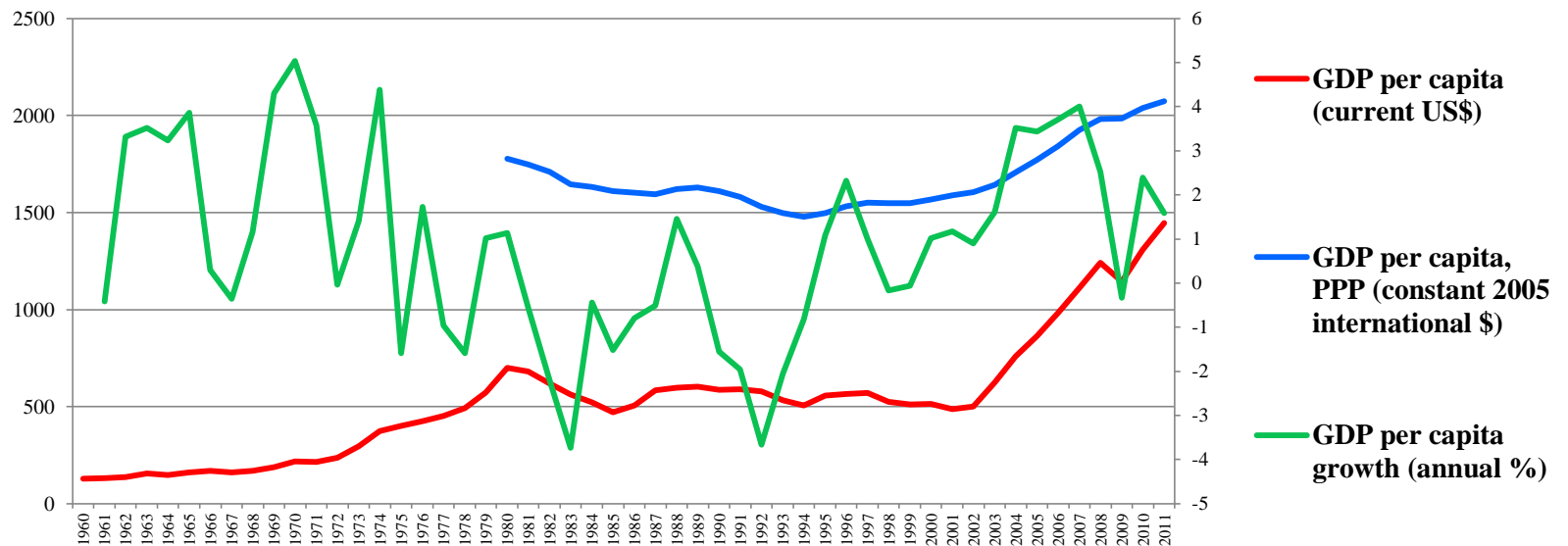
Source: World Bank. 2013. China 2030.

**Moreover, SSA exhibits a growth episode in the short-term:
But what may happen in the long-term?**

Growth performances significantly vary across countries: oil exporters and oil importers, food importers and food exporters, landlocked and coastal countries.....

But there are commonalities: even if some countries (e.g., Ghana) have upgraded in the 2000s to middle-income status, until the mid-2000s, a low income per capita and volatile growth rates.

GDP per capita (current and PPP constant 2005 US dollar) (left axis) and GDP per capita annual growth rate (right axis) in SSA



Source:
World Bank
World
Development
Indicators
database,
2012.

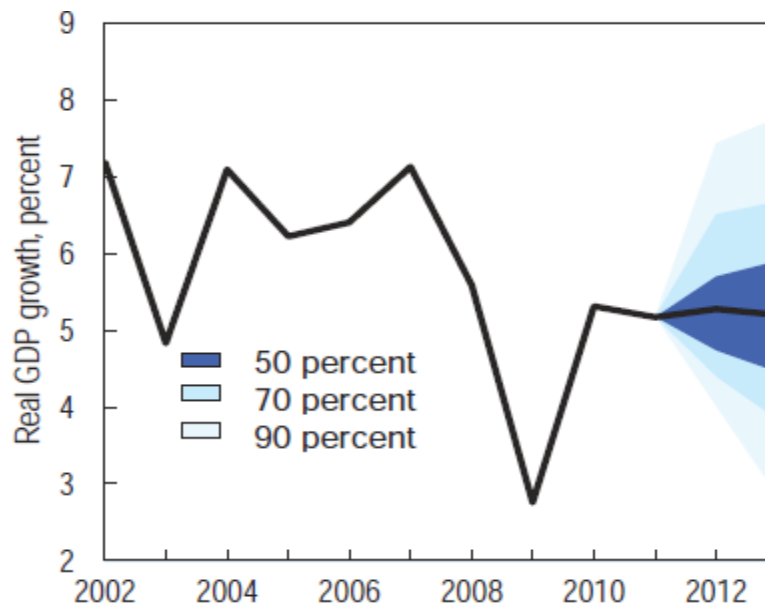
High uncertainty regarding the long-run....

These growth episodes strongly depend on ‘agency’ more than ‘structure’, i.e. countries’ rulers. Even the long-lasting growth of Botswana: genuine structural change?

Fragility of the bounce back of world exports after the 2008-10 crisis (World Bank, 2011b).

And fragility of forecasts...

Sub-Saharan Africa: growth prospects, 2002-2013



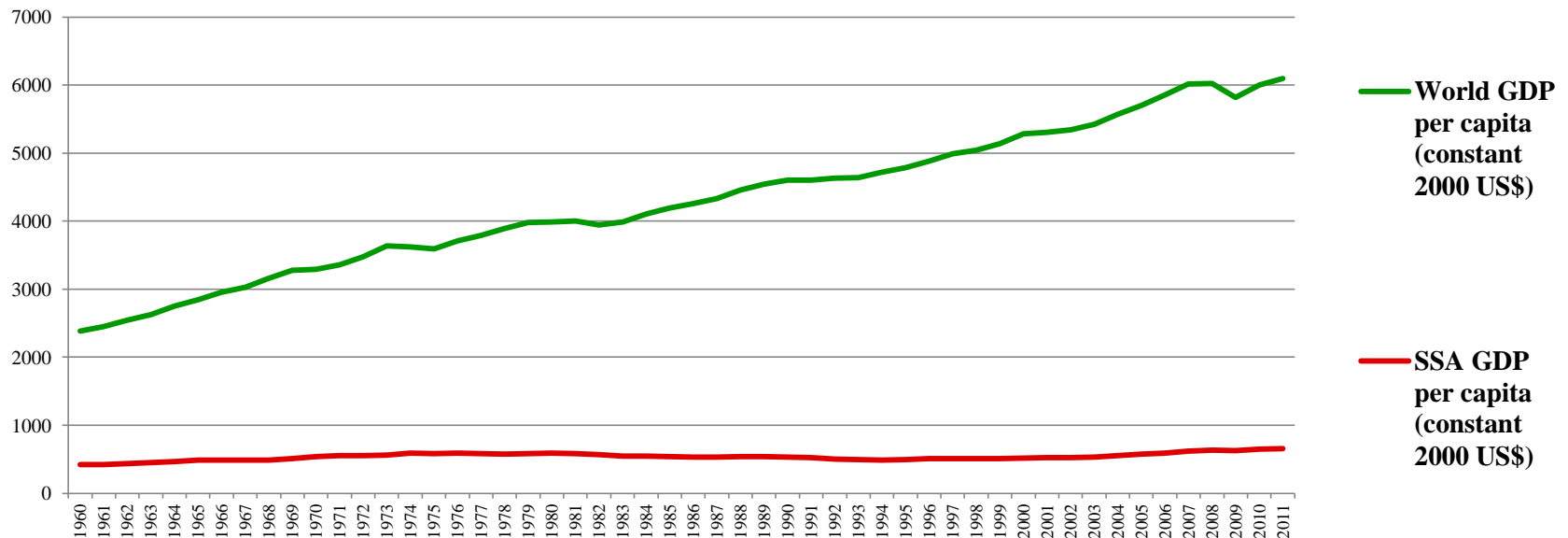
Indeed, the performance of SSA countries over the **long-term** suggests a profile of **stagnation, and possibly a trap, relatively speaking.**

SSA countries income levels seem to diverge vis-à-vis other regions.

For some (e.g., Easterly, 2005), **growth rates in SSA are positive, SSA countries are not caught in trapping processes.**

But the combination of **commodity dependence, poor infrastructure, weak institutions generate cumulative process: low equilibria traps** (Sindzingre, 2012).

GDP per capita, SSA vs. the world, 1960–2011(constant 2000 US\$)



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

-
- **5. Intrinsic uncertainty: outcomes as results from a combination of causes**
 - **The limits of economics....**
 - **Lessons from the Asian ‘developmental states’: the elements missing in SSA**
 - ‘developmental states’ - Japan, Korea, Taiwan, China: ingredients of long-term growth (Wade, 1990, 2000; Aoki et al., 1996; Sindzingre, 2007): **industrialisation is the key route towards structural change and sustained growth**, via industrial and taxation policies (e.g., subsidies, exonerations), targeted towards specific sectors and conditional to performance. Public policies also created suitable political conditions and coalitions involving the private sector.
 - China: the intertwining of state and market, associating competition and public ownership: but Naughton (2010): **a trajectory that cannot be replicated.**
 - **Growth and structural change stem from a successful shift from agriculture to industry fostered by state intervention, with intersectoral transfers** (Teranishi, 1997; Thorbecke and Wan, 2004). Asian states also improved their productivity
 - **Another feature =human capital.** Noland (2012), in the 1950s, South Korea had the world’s third highest ratio of human capital
 - **Developmental states had no natural resources.** They were land-scarce, their comparative advantage relied on labour-intensive industrialisation: **contrast with SSA states** (Herbst, 2000).
-

- **Bifurcations determined by policies and institutions**
- What would be the factors for the global changes **either to stabilise SSA economies in locking-in equilibria or making them bifurcate towards structural transformation?**
- SSA economies are obviously diverse: exports of manufactured products; or a few commodities=> the impacts of high commodity prices and China's trade and investment on SSA economies are **channelled by countries specific market structures**.
- **The bifurcations towards structural change or 'low equilibria' depend on export specificities, but *in fine* on domestic political and economic institutions and public policies:** the latter *in fine* shape the impacts of foreign inflows - trade, investment and aid.
- Market structures combining with political economy => the formation of traps: **in fine, 'institutions rule'....**
- Indeed, East Asian states showed the importance for growth of political institutions and public policies, **growth being instrumental in building political legitimacy**.
- i) IFI (and others) arguments: **high prices** create **fiscal space**, opportunities for investment
- **Indeed there is no 'resource curse'**: numerous countries have based their growth on commodities: Canada, Australia, etc. **Many commodity-dependent states have diversified via public institutions**, autonomous, credible, oriented towards long-term welfare.

-
- **Ex: Scandinavian countries:** relevant policies transform commodities windfalls into sustained growth (e.g., sovereign funds): **exports structures obviously are not the sole and systematic causal factors of weak growth performance:**
 - But many SSA political economies characterised by a **political economy not favourable to long-term growth and aggravating the consequences of export structures:** patronage, authoritarian regimes that suffer problems of credibility, which lower the efficiency of their policies: hence SSA governments may be **unable** to implement the appropriate policies.
 - ii) The modification of **one factor, e.g. high prices, does no modify the existing political economy.**
 - Depending on existing political economy and political structures, windfall gains feed corruption, capital flight (ex of oil states); growth more likely to strengthen the power of the incumbent.
 - **Domestic political economy ‘filter’ the opportunities created by high international commodity prices and increased demand for SSA exports:**
 - =*in fine*, SSA domestic political economies determine the directions of the **bifurcations** towards either **growth or ‘low equilibria’**.
 - **Political instability, commitment and credibility problems are crucial endogenous processes leading to poverty traps.**
-

-
- Olson (1993): the combination of political instability and dictatorships foster predators. This political economy is reinforced by commodity-based export structures, which in turn strengthen patronage, which in turn is consolidated by resources that can be distributed (Sindzingre and Milelli, 2010): such **combinations of export structures and such political economies may lock SSA economies in ‘low equilibria’ and traps**
 - **Trapping processes are typically self-reinforcing:** poor institutions, poor infrastructure, foster stagnation, while the latter foster political regimes that do not invest in public goods.
 - =political and economic institutions *in fine* command the composition of exports and the use of commodities.
 - => **commodity dependence is only an element: rather than elements taken in isolation, ‘combinations matter’,** of historical, political, social, economic, unique circumstances.
 - Arthur (1994), David (2001; 2007): **each combination create path dependence, irreversibilities and increasing returns.**
 - ***Ex post*, depending on the combination, countries may bifurcate towards either low equilibria and ‘traps’, or growth paths and structural transformation.**
-

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