

Open Research Online

The Open University's repository of research publications and other research outputs

What Does the Rise of China Do for Industrialisation in Sub-Saharan Africa?

Journal Item

How to cite:

Kaplinsky, Raphael (2008). What Does the Rise of China Do for Industrialisation in Sub-Saharan Africa? *Review of African Political Economy*, 35(115) pp. 7–22.

For guidance on citations see [FAQs](#).

© [\[not recorded\]](#)

Version: [\[not recorded\]](#)

Link(s) to article on publisher's website:
<http://www.roape.org/cgi-bin/roape/show/11502.html>

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

oro.open.ac.uk

WHAT DOES THE RISE OF CHINA DO FOR INDUSTRIALISATION IN SSA?

Raphael Kaplinsky
Department of Policy and Practice,
The Open University
R.Kaplinsky@open.ac.uk

Paper prepared for Review of African Political Economy Special Issue 'Good friends, good partners, good brothers: the 'new' face of Sino-African co-operation', March 2008.

I am grateful to Masuma Farooki for considerable support in the collection and analysis of trade data, to Jeff Readman for his research on the furniture sector and to two anonymous reviewers for helpful comments.

SUMMARY

China's rapid growth and deepening global presence creates a major challenge for the conventional wisdom of industrialisation as a core component of development strategy. These challenges are expressed through a combination of direct impacts (expressed in bilateral country-to-country relations) and indirect impacts (reflected in competition in third country markets). In current structures, these impacts are predominantly harmful for SSA's industrial growth, as expressed through its recent experience in the exports of clothing to the US under AGOA. If Washington Consensus policies prevail, these harmful impacts will be sustained and deepened.

Key Words

SSA

Industrialisation

Export oriented growth

AGOA

Washington Consensus

1. INTRODUCTION

Industrialisation is widely seen as being central to the development challenge. This basic axiom follows in part from observed historical reality - high per capita incomes are closely associated with economies intensive in industrial activities. There are also sound analytical reasons why industrialisation should be favoured as a strategic development objective – industry is characterised by rapid technological change and productivity growth; there are important technological and learning spillovers in and from industry; and the terms of trade have (historically, at least) turned against commodities and in favour of manufactures. Moreover, the promotion of industry also has strategic implications (military systems require a supportive industrial structure to be effective) and promotes rational class-based political discourse at the expense of ethnic (and often millenarian) belief systems.

From the 1950s, the state playing a key role in emerging economies in promoting structural change from the primary sector to industry. Particularly in India and China lessons were explicitly drawn from the Soviet experience during the 1930s, and incentive systems were put into place favouring inward-oriented import-substituting industrialisation. This policy framework was replicated in Africa as decolonisation rolled through the continent during the 1950s, 1960s and 1970s. However, after the mid-1970s a revised orthodoxy emerged, still favouring industrial growth, but promoting this through an external focus, and a sweeping away of the state, both as a direct participant in production and as a facilitator and regulator of the growth of productive activities.

This industrial policy agenda evolved through a stable period of global hegemony, with the historically-industrialised and capitalist north not only driving systems of global governance, but increasingly also the political and economic agendas within countries. However, by the turn of the millennium it was becoming increasingly clear that this hegemonic agenda would be challenged by the rise of two very large Asian economies, China and India. These two economies are increasingly referred to as the Asian Drivers, not just because they are very large and have a “big country effect”, but also because they comprise (at least by hypothesis) distinctive social and political actors (open.ac.uk/asiandrivers/; Kaplinsky and Messner, 2008).

Potentially, the Asian Driver economies provide a disruptive presence, shaping the trajectory of the 21st century global economy. This is like the previous era of rapid Asian growth during the last third of the 20th century. For at no time did the combined population of Japan and Korea exceed more than four percent of the global total. Yet China alone accounts for around 20 percent of global population, and in 2006 it became the largest emitter of greenhouse gases. India follows on closely behind, not just also growing rapidly, but projected to have an even larger population than China by 2030. It is thus highly unlikely that the global political economy can absorb rapid Asian Driver growth and globalisation without a severe disruption to accepted developmental axioms, including with respect to the desirability and feasibility

of industrialisation. Moreover, their size and trajectory means that this impact will be felt worldwide, including in SSA.

In this paper we examine the ways in which China's rapid advance as an exporter of manufactures may affect the developmental agenda in SSA promoting industrialisation. Because this is a rapidly changing tableau at an early stage of development, the analysis which follows will to some extent inevitably be conjectural, and evidencing of the emerging impact will necessarily be uneven. We begin with a brief overview discussion of the ways in which the Asian Driver economies might have an impact on SSA (Section 2), and then look briefly at SSA's performance in manufacturing (Section 3). In Section 4 we examine the emerging evidence on China's impact on domestically-focused industrial activity, complementing this in Section 5 with a focus on SSA's nascent outward-oriented industrial development, before drawing general conclusions in Section 6.

2. A FRAMEWORK FOR ASSESSING THE IMPACT OF CHINA ON SSA

It is important to set in context the analysis of China's impact on SSA's industrialisation. This is partly because the links to African industrialisation are complex and arise from a variety of interactions between China and Africa, and China and the global economy. But it is also because China's presence in Africa is much more coordinated than that of previously hegemonic northern powers. Thus, whereas western aid tends to be *relatively* distant from its commercial interests, in China's case there is much less light showing between these two channels of interaction.

An overview of China's links with SSA distinguishes different channels of impact transmission, the distinction between complementary and competitive impacts, and between direct and indirect impacts (for more detail see Kaplinsky, 2007)

Channels of interaction

There are a variety of different channels through which individual countries interact with other economies, in their regions and elsewhere. Clearly, these channels are contingent – they change over time, and vary in importance depending on factors such as location, resource endowment, trade links, and geo-strategic significance. Six key channels stand out in importance:

- through trade links
- through investment flows (FDI and portfolio investments)
- through aid
- in institutions of global government
- through flows of people (including migrants)
- through environmental spillovers

Complementary and competitive impacts

In each of these channels of interaction, we can observe a mix of complementary and competitive impacts. For example, with regard to trade, the Asian Drivers may both provide cheap inputs and consumer goods to

SSA, and be a market for SSA's exports. On the other hand, imports from the Asian Drivers can readily displace local producers. In relation to FDI, the Asian Drivers may be a direct source of inward FDI into SSA and perhaps crowd-in FDI into SSA from third countries as parts of extended global value chains. These are complementary impacts. But the Asian Drivers may also compete with other economies for global FDI. The rising power of the Asian Drivers in a western dominated global governance system may strengthen the voice of developing countries in international organizations. The emerging conflicts between the Asian Drivers, the US and Europe on energy, resources and markets might also marginalise development policy issues in world politics. Similarly, financial flows environmental spillovers and migration may be either complementary or competitive.

The key element of these interactions is the "for whom" component. Countries may be affected differentially – in some cases, for example, the export of fabrics from the Asian Drivers to SSA may feed productively into a vibrant clothing and textile value chain; in other cases, it may displace a country's exports and production for the domestic market. But these effects are not just felt at the national and economy-wide level. They affect groups within countries differentially. For example, cheap clothing imports from China may displace clothing and textile workers, but cheapen wage goods and hence reduce wage costs for producers in other sectors (which is indeed what has been occurring in many high-income economies during the early years of the 21st Century). These impacts on a complementary-competitive axis may also change over time, and most importantly, they will vary for different classes, regions and groups within economies.

Direct and indirect effects

The complementary-competitive axis of impacts is readily comprehended and widely recognised. Less widely acknowledged is the distinction between direct and indirect impacts. In part this is because the indirect impacts are difficult to measure. Indirect impacts occur in third country markets and institutions. For example, China's trade with the US may open or foreclose the opportunities for SSA economies to export into that market. Similarly, China's high savings rate has had the effect of lowering global interest rates, indirectly facilitating investment in SSA. As in the case of the complementary/competitive access, the impact of the direct and indirect impacts can be gauged either at the country level, or at intra-national levels, for example with regard to different regions, sectors, classes and genders. (As we shall see below in Section 5, in many cases the indirect impacts may in fact be much more significant than the direct ones).

Figure 1 summarises this framework for assessing the impact of China on SSA, both as a general phenomenon and in relation to particular sectors, such as the industrial sector addressed in this paper.

Figure 1. A framework for assessing the impact of China on SSA

Channel	Impacts			
	Complementary		Competitive	
	Direct	Indirect	Direct	Indirect
Trade				
Investment				
Aid				
Global governance				
Migrants				
Environment				

3. SSA'S MANUFACTURING PERFORMANCE: A BRIEF OVERVIEW¹

In recent years, the African continent has seen revived growth. The sources of this growth are not yet clear, but a sound conjecture is that at least in some part this is due to the post-2000 boom in commodity prices. In turn, this commodity price boom is closely linked to the voracious demand of China for imported inputs used in the construction of infrastructure and in its expansion of manufactured exports. China's share of global demand for the main base metals (aluminium, copper, iron ore, nickel, steel and zinc) grew from seventeen percent of global demand in 1993 to 20–25 percent in 2003 (Kaplinsky, 2005). In the case of steel, its share has grown from less than 10 percent in 1990 to more than 25 percent in 2003, equivalent to three times that of Japan, and more than either the EU or the US (around 20 percent each) (ibid). This expansion in Chinese commodity imports was associated with – and arguably was a primary cause of – the increased price of these hard commodities. (Kaplinsky, 2008).

Yet, despite this rapid economic growth, there has been little change in economic structure in the continent. Manufacturing value added (MVA) as a share of gross domestic product is not only much lower than in the rest of the world (including in many developing economies), but its share remained unchanged between 1996 and 2004 (Table 1).

Table 1: Share of MVA in GDP (At Constant 1995 Prices) (%)

	1995	2000	2004 ^a
Africa ^b	12.1	12.3	12.1
China	34.7	36.7	39
India	16.3	15.7	15.0
Developing Group excl China	19.2	20	20.4
WORLD	19.8	20.1	19.9

Source: UNIDO International Year Book 2006

a Estimate

b For Africa and not SSA.

¹ For more detail on SSA's manufacturing performance, see Kaplinsky and Morris, 2008.

Consistent with the boom in commodity prices, and reflecting in large part the pressure of Washington Consensus institutions to force SSA out of its inward focus, Africa's recent growth spurt has been associated with a sharp increase in its external orientation. Table 2 shows a sharp change in direction towards outward orientation, particularly with regard to exports. Between 1998 and 2004, SSA's exports grew at a rate 50 percent higher than global exports.

Table 2. Average Annual Growth Rates of Merchandise exports and imports (%)

	1990-1997		1998-2004	
	Exports	Imports	Exports	Imports
World	8.1	7.7	8.8	9.0
SSA	4.4	6.0	12.5	8.1
China	17.1	15.8	21.4	26.5
India	11.7	10.5	13.8	14.5

Source: Calculated from UNCTAD (www.unctad.org) accessed in January 2007

How did SSA's manufacturing exports perform in this export boom? At face value, export-oriented manufacturing performed at a stellar level, more than doubling between 1990 and 2005, from \$5.7bn to \$12.5bn. However, this impressive headline growth needs to be adjusted in some key respects. First, the largest component was unset diamonds, accounting for exports of \$5.5bn. Second, there were significant "exports" of "railway/tramway" equipment from Liberia (\$1.3bn in 2005, virtually entirely ships) and Senegal (£100m in 2005, virtually entirely aircraft). However, a closer look at the data shows that both these economies were in trade deficit in both trade classifications. Their "exports" thus represent re-exports to the region. Third, included in this "broad manufactures" category are also methanol exports from Equatorial Guinea which is effectively a petroleum export, and uranium from Namibia and Niger. If we net out these items from the "broad manufactures category" we obtain a narrower classification of "narrow manufactures".

Focusing on these narrow manufactures, and excluding South Africa from the picture (since South Africa is a very special case in the African context), the value of SSA's manufacturing exports was not \$5.7bn but \$2.2bn in 1990, and \$4.6bn rather than \$12.5bn in 2005. Crucially, clothing and textiles accounted for a combined total of 53 per cent of all "narrow manufactures" exports from SSA excluding South Africa in 2005, and this had risen from 42 percent in 1990. (The share of low-tech and labour-intensive clothing rose from 33 to 50 percent, and that of higher-tech and capital-intensive textiles fell from 9 to 2.6 percent). The next most significant "narrow manufactures" exports was corkwood manufactures (almost entirely veneer sheets) (9.4 percent), followed by iron and steel products and leather manufactures.

4. CHINA'S EMERGING IMPACT ON SSA'S INWARD-ORIENTED INDUSTRIALISATION

Unfortunately, there is a vacuum of research on the impact of Chinese-sourced imports on the domestically-oriented industrial sector in SSA and we are limited to a few research fragments which are suggestive of an impact rather than providing detailed insights into the extent and nature of these impacts.

In Zambia the trades unions assert that imports of Chinese clothes have undermined the clothing and electrical sector, and in Nigeria trades unions blame Chinese imports for the loss of 350,000 jobs (<http://www.nzherald.co.nz/>). This latter figure is clearly fictional of the degree of impact, but nevertheless Chinese-sourced imports have displaced employment in these sectors in both of these countries. For example, an embarrassing incident during President Hu Jintao's visit to Zambia as part of his tour around SSA in early 2007 was the closure of the Mulungushi textile factory and the loss of more than 1,000 jobs. This was a direct result of competitive imports from China, and, ironically, led to the closure of a textiles factory which the Chinese had built and supported with great fanfare in the 1970s.

In Ethiopia, although competition from Chinese shoe imports has led to an upgrading of processes and design by many domestic firms, it has simultaneously had a negative impact on employment and domestic output. A study of 96 micro-, small and medium domestic producers reported that as a consequence of Chinese competition, 28 percent were forced into bankruptcy, and 32 percent downsized activity. The average size of microenterprises fell from 7 to 4.8 employees, and of SMEs, from 41 to 17 (Egziabher, 2006),

In South Africa, imports from China grew from 16.5 percent of total clothing imports in 1995 to 74.2 percent in 2005 (all data in this and the following paragraph from Morris, 2007). Including imports from Hong Kong, China-sourced clothing were 78.8 percent of total clothing imports in 2005. The expansion of clothing imports was associated with a period of rapid decline in formal sector manufacturing in both clothing and textiles. In clothing, employment fell from 97,958 in 2004 to 78,694 in 2006, and in textiles from 21,380 in 2003 to 16,800 in 2005. Morris cautions that this over-estimates the extent of employment loss, since at the same time there is evidence that the informal clothing sector grew rapidly. However, wages and job security in the informal sector are much inferior to the formal sector, suggesting a period of wage compression during this period of import expansion from China.

In an important observation – often ignored in discussions of industrial policy – Morris highlights the welfare impact of increased imports from China. Between 2000 and 2005, whilst the overall price index increased by 30 percent, that of clothing fell by five percent. Significantly, as in the case of the Ethiopian shoe industry, competition from Chinese manufactures forced local manufacturers to upgrade their competitiveness. As Table 3 shows, price deflation occurred both with regard to imports and locally produced apparel,

and was reflected in both lower consumer prices and lower costs to the retailer.

Table 3: Changes in retail price by major retailer for imported and locally produced clothing products, 2004-2006.

	Imports	Locally produced
Number of sectors	65	27
% categories experiencing price deflation	61.5%	29.3%
% categories experiencing price inflation	23.1%	22.2%
% categories experiencing no change	15.4%	18.5%
Average % price change	-16.8%	-7.3%

Source: Morris, 2007.

The Chinese government is of course sensitive to the negative impact of its manufactured exports on SSA's industrial sector, and announced a series of initiatives designed to promote African industry. For example, in 2006 it publicised a planned investment package of \$300m in Zambia, to include \$100m in a "high-tech" economic zone manufacturing TVs, mobile phones and other electronic items (Centre for Chinese Studies, 22 June 2007). Reflecting pressure from the Chinese government, China's Shaoxing Textile Company announced a plan to build a \$50m textile park in Nigeria (Centre for Chinese Studies, China Briefing, 15th June 2007). How successful these intentions will be is a different matter, since in the context of Washington Consensus policies on trade liberalisation, these proposed industrial investments will need to survive in a hostile global economic environment, facing competitive pressures from a range of producers, including firms based in China.

So much for the impact of Chinese exports on SSA's inward-focused manufacturing sector. But what about the impact on intra-continental trade in manufactures? As in the case of SSA's manufacturing sector, there is a dearth of data on intra-continental trade. But, working with COMTRADE trade data, it is possible to compare the technological profile of intra-SSA trade in manufactures with SSA's trade with the external world (Table 4). What emerges from this is that Africa's exports to China are predominantly primary commodities and simple resource-based products, to an even greater extent than its exports to the rest of the world. However, it is significant that SSA's internal trade in manufactures is much more technology intensive than either its trade with China or the rest of the world, and that this technological intensity grew in the 1995-2005 period (Kaplinsky and Morris, 2008). We will return to the significance of this in the concluding section of this paper.

Table 4: Technological Intensity of SSA's trade: Share of exports comprising different categories of products, 2005 (%).

	World (excl. China, India)	China	Intra-SSA
Primary Commodities	67	81	17
Resource Based	16	15	35
Low Technology	4	1	13
Medium Technology	9	2	23
High Technology	1	0.1	5

Source: Calculated from COMTRADE (Accessed through <http://wits.worldbank.org>) in January 2007

Technological-intensity taxonomy derived from Lall (2000).

5. CHINA'S EMERGING IMPACT ON SSA'S OUTWARD-ORIENTED INDUSTRIALISATION

As we saw in Section 3 above, more than half of SSA's manufactured exports (excluding South Africa) were clothing and textiles, and almost all of this was clothing. Moreover, clothing and textiles are widely considered as a first learning step in the ladder of technology capability-building in industry. Therefore, SSA's export performance in the clothing and sectors provides an important window into its export oriented manufacturing growth-trajectory, not just in the past but also for the future.

AGOA and the ending of the MFA

SSA's clothing and textile exports have grown very rapidly since the mid-1990s, when it began to export to the external world. (Prior to this only South Africa had been a clothing exporter, but exclusively in niche markets such as men's woollen suits, Joffe, et.al, 1995). The growth of these exports speeded up after the turn of the millennium, mostly as a result of the US's African Growth and Opportunities Act introduced in 2001. This gave significant incentives for SSA exporters of manufactured goods, providing not just tariff preferences, but allowing low-income SSA clothing exporters to side-step rules of origin regulations and to utilise duty-free textiles sourced from China and other low-cost producers. The consequence of this AGOA scheme was a very rapid growth in clothing exports from low-income Kenya, Lesotho and Swaziland, complementing clothing exports from established producers in Madagascar, Mauritius and South Africa. As Table 5 shows, these exports were considerable. In Lesotho they comprised all of manufactured exports and were equivalent to 50 percent of the value of its GDP. In Kenya, employment in export processing zone clothing firms comprised the equivalent of 20 percent of all formal sector manufacturing employment.

Table 5. Global exports and share of US in exports of major SSA clothing and textile exporting economies

Country	Year	Exports \$ '000	US Share (%)	AGOA as Share of Exports to US (%)
---------	------	-----------------	--------------	------------------------------------

Kenya	2000	78,000	89.6	NA
	2005	306,000	95.3	98.5
Lesotho	2000	154,000	94.9	NA
	2005	406,000	96.5	99.4
Madagascar	2000	633,000	18.9	NA
	2005	771,000	37.0	98.5
Mauritius	2000	1,652,000	16.3	NA
	2005	1,384,000	12.4	85.8
South Africa	2000	867,000	31.0	NA
	2005	571,000	33.8	64.8
Swaziland	2000	56,000	88.4	NA
	2005	171,000	99.4	99.0

Source: UNSD COMTRADE database, accessed via World Integrated Trade Solution (WITS) 23 January 2007; Country and sectoral data calculated on the basis of US imports; For share of AGOA, for 2001, Gibbon, 2003; for 2004- 2005 values www.agoa.info accessed 19th March 2007

This growth in SSA clothing exports was not only a result of AGOA. They also reflected a system for the regulation of global trade in clothing and textiles, stretching back to the 1950s when Japan's clothing industry first began to threaten US producers. This involved a complex system of quantitative quotas which limited the number of items which individual countries could export to North America and the EU. Since Asian producers rapidly filled their quotas, they took advantage of unused quota allocations in SSA and located some of their production in the six major SSA exporting countries listed in Table 5 above.

However, after many years of negotiation, the last quotas were removed at the beginning of 2005.² This meant that even though Chinese clothing exporters to the US were penalised with higher tariffs, there was no longer a physical limit on the number of items which they could export into that market. The consequence for SSA's clothing and textile sector – bear in mind that this was 50 percent of total non-South African SSA manufactured exports in 2005 – has been very severe. As Table 6 shows, the result was that in the first two years after quota removal, SSA's clothing exports to the US fell by 26 percent. The impact on Mauritius and South Africa (who, because of their high per capita incomes were unable to utilise duty-free fabrics from China in their AGOA exports) was even more severe. At the same time, and comparing like-for-like products, Chinese exports into the US grew by 85 percent, on the back of a halving of unit prices.

² In fact, despite the agreed removal of quotas, the surge of Chinese clothing exports to both the EU and the US led to the reimposition of some temporary "China Safeguard" quotas. In June 2005, the EU and China reached an agreement that limited 10 categories of Chinese textiles exports to the EU to between 8 and 12.5 percent growth above a specified base period for the next three years. In December 2005, the US and Chinese trade representatives agreed to a three-year agreement reducing US imports of Chinese textile and apparel products in all or parts of 34 sensitive categories

Table 6: Change in value of clothing exports to the US, 2004, 2005 and 2006 (%)

	2005/2004		2006/2005		2006/04		Change in Unit Price of top 10 products 2005/04	
	SSA	China	SSA	China	SSA	China	SSA	China
AGOA	-16.5	56.9	-11.2	17.8	-25.9	84.8	-0.9	-46
Kenya	-2.5	77.8	-2.7	18.7	-5.1	112.9	-1.9	-45
Lesotho	-14.3	110.8	-0.9	28.5	-15.1	170.9	-3.2	-46
Madagascar	-14.4	72.2	-13.9	21.0	-26.3	108.3	-9.5	-44
Mauritius	-26.4	73.2	-28.7	17.9	-47.6	104.2	-4.6	-45
Swaziland	-9.9	93.3	-16.0	22.1	-24.3	136.1	-2.7	-52
S Africa	-43.7	63.9	-17.0	15.4	-53.3	89.1	3.0	-33

Source: Calculated from <http://dataweb.usitc.gov> data, accessed on 19th March 2007

^a Unit prices calculated for top 10 products in 2004 for each AGOA country's exports

Not just clothing, but also furniture

This adverse impact of China on SSA's clothing and textile exports is mirrored in the timber and furniture sector. This, as we saw in Section 3 above, was the second most significant manufactured export from SSA (excluding South Africa), predominantly from West Africa. Preliminary research in this sector suggest that China and other newly dynamic Asian Driver economies are severely threatening the growth of competences in the value adding wood products sectors by undermining exports and the learning derived from exporting. For example, in 2005, Europe's major importer of garden furniture ceased sourcing from South Africa and Ghana, and divested itself of its joint venture equity in Ghana's major furniture exporting firm. Imports were switched to Vietnam and China. There is a single reason for this – SSA is not price competitive. In 2005, the same garden furniture product imported from South Africa at £60, could be obtained for £50 from Ghana, £38 from Vietnam and only £30 from China (Interviews). By contrast, China's furniture industry has been booming. Between 1993 and 2002 it moved from being the world's eighth largest to the second largest exporter. In the face of this inability to compete with Asia in general and China in particular, SSA's furniture manufacturers are moving backwards into their resource sectors, exporting raw logs, chips for the paper industry, and sawn timber. There is also probably a significant trade in illegally-logged hardwoods from West and Central Africa to Asia, but this is by its nature very difficult to evidence. Much of this SSA-sourced timber is used by Asian manufacturers to produce furniture which displaces SSA from global furniture markets.³

This evidence on China's impact on SSA's clothing, textile and timber-based exports is thus suggestive of both a competitive and indirect impact. However,

³ This echoes the experience of Thailand, whose furniture industry suffered from Chinese competition in the Japanese market. Having developed this market for a new type of wood (historically rubber-wood had not been used for furniture), Thai producers found their market eroded by rubber-wood exports from China, using a combination of Thai and Indonesian rubber wood imports (Mitsuhashi, 2006).

in one particular respect it might be argued that the impact is positive. This is because as a consequence of the rules of origin derogation for low income SSA exporters under AGOA, clothing exporters in Kenya, Lesotho and Swaziland have been able to utilise fabrics sourced from China on a duty-free basis. In 2005, fabric imports from China were equal in value to more than 90 percent of all of SSA's clothing exports, and this had risen from less than 20 percent in 2005 (COMTRADE, accessed through <http://wits.worldbank.org>) on 23rd March 2007).

The dynamics of global value chains

This indirect impact on SSA of Chinese exports to the US is readily visible, and has been the source of some concern in policy circles, so that the planned abolition in AGOA in 2006 of the derogation on rules of origin (allowing low income SSA economies to utilise duty free fabrics from China) was put off until 2011 (Kaplinsky and Morris, 2008). However, there is a further indirect impact of China on SSA's existing and potential exports of manufactures which is more nuanced in nature but potentially of considerable significance. To comprehend the nature of this challenge it is necessary to digress briefly and to focus on the evolution of global value chain dynamics. Global value chains are important since it has become increasingly clear that a country's ability to participate in global markets does not only reflect the competences of its producers, but also the mechanisms whereby they are connected to global markets.

The neo-classical conception of trade is that it involves the arms-length exchange of goods and services between unrelated parties, each seeking to maximise profits. Transactions are one-off and anonymous, and neither party is of sufficient size or influence to affect the prices and conditions of exchange which are instead determined by conditions of supply and demand. The rise of vertically integrated corporations, which grew to significance from the last quarter of the nineteenth century (Chandler, 1977), increasingly operating across national boundaries, both reinforces and undermines this conception of specialisation and trade. On the one hand they challenge the small-firm-price-taker assumption. But, on the other hand, they show how when trust-based relationships are important, these tend to be removed from market exchanges. The market may thus remain the repository of anonymity,

Transaction costs theory argues that firms internalise market-based relations for a combination of two reasons (Williamson, 1985). First, they do so when the costs of communication with customers and suppliers are higher than the supervision costs of controlling intra-firm operations. And, second, assets required to produce inputs may be very specific, so that the firm needs to protect itself from the dangers of opportunistic behaviour from its suppliers. When these two conditions apply, it pays the firm to take over – and own - the production of key inputs or to control the destination of key outputs.

What transactions costs theory did not absorb is that there an increasingly attractive third option has emerged, sitting between arms-length impersonal market relations and internalised (and increasingly foreign-owned) direct investment. This enables firms to meet the needs of discerning customers and

to draw on the distinctive competences of specialised suppliers (and buyers) without incurring the coordination costs of direct ownership. The key to this is for the firm to develop long-term and obligational high trust relationships with key suppliers (and customers) which protect the firm from opportunistic behaviour. Then, by adding to this structured supply chain management programmes in which they work with suppliers (and customers) to enhance capabilities, the firm is able to ensure the systemic efficiency of the chain as a whole (competence trust).

It is these non-internalised but repeated and “personal” relationships between different firms in a production and distribution chain which are referred to as value chains; where they cross national borders, they are referred to as global value chains (Gereffi, 1994; Kaplinsky and Morris, 2001; Gereffi, 2005). By necessity, these are *coordinated* chains of production, subject to hierarchical forms of governance, and thus characterised by power asymmetries which determine the division of labour in the chain and influence the distribution of rewards. Understanding SSA’s past and future role as a participant in global value chains requires an understanding of the dynamics of global value chain governance, since an increasing proportion of trade in manufactures occurs through these coordinated and globally dispersed and disarticulated global value chains.

In order to understand the changing nature and significance of value chain governance and its impact on outward oriented industrialisation in SSA, we need to briefly situate the pattern of emerging technological development during the decades of the 1970s and 1980s. By the early 1970s, post-war reconstruction in the industrially-advanced economies was nearly complete. Having their basic needs satisfied, consumers in these economies began to be much more demanding of product variety, product innovation and quality (Piore and Sabel, 1984). Associated with this was the growth in concentration in the retail sectors of most high-income economies, placing concentrated power in the hands of a limited number of global buyers (Feenstra and Hamilton, 2005). At the same time, reducing barriers to global trade led to intensified global competition in production. A significant element in meeting these needs of final consumers and buyers was the capacity to meet increasingly demanding standards, often set by the private sector and affecting the rules of participation of different parties in the chain. For example, in the auto sector, suppliers have become increasingly subject to detailed performance targets with regard to quality, cost and delivery. In the furniture sector, the Forestry Sustainability Council (FSC) accreditation requires all parties in the chain to be subject to conditions affecting the environment, bio-diversity and the respect of the needs of communities living in forests. In the food sector HACCP (Hazard Analysis and Critical Control Points) are required by all producers, as are standards affecting phytosanitary conditions in production and storage. Fair-trade labour standards, too, are of growing significance.

Hence, the major final sellers of commodities were confronted with a problem. On the one hand customers were becoming increasingly demanding of quality and variety and innovation; on the other hand, production systems were

becoming increasingly fragmented, diversified and geographically extended. How were these different forces to be reconciled? The answer was that production chains had to “governed”, to be coordinated in manners which allowed differentiated consumer needs to be met through complex and disarticulated production systems.

In the relational global value chains, the lead firms increasingly provided support to suppliers over a long term in exchange for a commitment by suppliers to systematically cut costs (including by facilitating change in their own suppliers) and to pass the gains on to the lead firms. Where this resulted in single-sourcing or technology-based suppliers, it was also important that suppliers abstained from opportunistic behaviour, so trust was key (Sako, 1992). Supply chain management programmes were the intermediating “glue” which facilitated this supply chain upgrading (Bessant, Kaplinsky and Lamming, 2003). These supply chain management programmes are particularly attractive to poor economies such as those in SSA, since they need dual targets. They insert producers into global markets and at the same time they provide concrete assistance in the upgrading of SSA production capabilities. They provide flesh to the policy skeleton of promoting diversified growth through the externalities provided by industrialisation in general, and export-oriented production in particular.

Over the past three decades there have been important developments in both these relational links in global value chains and in the standards which govern supply chain performance (Figure 2). Prior to the 1970s, exchange occurred either through the impersonal market or within the firm. Standards were largely irrelevant, particularly with regard to independent suppliers. Then, from the early 1970s through to the early 1990s, new forms of obligational non-equity based durable relationships were developed, buttressed with high-trust and long-term supply chain management programmes and the process standards which drove these programmes. However, since these supply chain programmes were costly, they were followed initially by a separation between equivalent and non-equivalent relations whereby the lead-firms were prepared to trust their core suppliers and customers to bring their distinctive competences to the chain. This allowed them to concentrate their supply chain upgrading activities on relatively low-skilled suppliers. However, in turn, this gave core suppliers (some of whom in the automotive industry came to be called “0.5” tier suppliers, somewhere between being equal partners and first-tier suppliers) significant power over chain governors. So in the most recent period, lead firms have gone back to more market-based relations with key suppliers, based on industry standards (Sturgeon, 2002). This enables the lead firms to realise product and process standards and at the same time to introduce more competition into their supply and customer chains. The better their suppliers, and the better defined chain standards, the more the chain governors can abstain from costly supply chain upgrading programmes.

From the perspective of countries with a weak supply base, as in SSA, the structures prevailing in the second and third categories of governance (Figure 6) are most attractive to the upgrading of competences. In these structures, the core, lead-firms have a vested interest in upgrading supplier capabilities,

and are interested in long-term relationships. They utilise extensive supply chain management programmes, either through their own efforts or by engaging specialised service providers. The structure predominating prior to the 1970s is not very attractive to these weak supply-base links in global value chains, since no lead party has an interest in the promotion of upgrading. But, similarly, the currently emergent structure of chain governance is also problematic for them, since they find themselves having to compete with what Sturgeon has called “turnkey” or “modular” suppliers, able to work to industry standards without costly assistance.

Figure 6. The dynamics of Value Chain Governance structures

Period of dominance	Governance structure	Nature of chain links	Importance of standards	Emerging problems
Pre 1970s	Arms-length	Market	No	Transactions costs, opportunistic behaviour
	Internalised	FDI	Within firm	Coordination costs
1970s-early 1990s	Arms-length	Market	No	Transactions costs, opportunistic behaviour
	Obligational	Supply chain management	Process standards	Costs of support
	Internalised	FDI	Within firm	Lack of distinctive competences
Mid 1980s-late 1990s	Arms length	Market	No	Transactions costs, opportunistic behaviour
	Obligational Asymmetric Symmetric	Supply chain Management Supply chain learning	Process standards Process standards	Costs of support Costs of learning
	Internalised	FDI	Within firm	Lack of distinctive competences
Late 1990s to now	Arms length	Market	No	Transactions costs, opportunistic behaviour
	Obligational Asymmetric Symmetric Modular	Supply chain management Supply chain learning Competitive, standards key	Process and product standards	Costs of support Costs of learning
	Internalised	FDI	Within firm	Lack of distinctive competences

We can now turn the spotlight back from this long digression on the dynamics of global value chain governance to the impact of China on SSA’s export-oriented industrialisation strategies. The point is that during the second and third types of value chain governance structure SSA had much to gain from the growing dominance of manufacturing trade through the extension of global value chains. In order to deliver satisfactorily to increasingly demanding and standards-intensive markets, the major chain governors were forced to upgrade their suppliers. But this was always a second best option for the lead firms. Supply chain management programmes can be very costly, so that the development of competences in China and other parts of Asia which provided all of the benefits of obligational supply chains without most of the costs of supply chain development has allowed many TNCs to wind down their supply chain management programmes. But this could not be done for SSA suppliers

who in general lack turnkey capabilities. Thus the development of capabilities in China, in a context of surplus manufacturing competences around the world, has severely restricted the incentive for TNC chain governors and global buyers to draw on suppliers in SSA. And it is not just that this has been phenomenon of the past. Perhaps more damagingly, it also affects their future incorporation in global value chains.

6. CONCLUSIONS

Despite the absence of data, particularly with respect to the impact of China on SSA manufacturing sectors targeting domestic markets, it is possible to draw a number of general conclusions.

First, the unfolding of the Washington Consensus agenda of trade liberalisation and the undermining of the developmental state have had dual, and to some extent contradictory, impacts of undermining industrial production in most of SSA but at the same time upgrading the efficiency of those firms which have survived the competition from imports. China-sourced imports and their impact on SSA industrial dynamism fits into this wider picture. But it does so in a much more intensified form. This is because China competes directly in labour-intensive and low-technology industrial sectors which are widely seen as the stepladder for SSA's industrial growth. This has had major impacts on the domestically-focused industrial sector in virtually all SSA economies (indeed, in fact in all global economies).

Second, with regard to SSA's export-oriented industrialisation, China's threat is significant, but indirect in nature. The most obvious threat is to be seen in its squeezing of SSA's clothing, textile, furniture and footwear exports in both the US and EU markets.⁴ It is important to bear in mind that these clothing and textiles alone represent more than half of all SSA's manufactured exports (excluding South Africa). But there is a second, and more subtle impact of China's growing industrial competences. This is that they are leading to a change in the organisation of global value chains, allowing lead chain governors to retreat from the supply chain upgrading which is widely considered to be of considerable assistance to the growth of competences in SSA industry.

Therefore, on both counts – in domestic and in extra-SSA markets – the impact of China on SSA's industrialisation appears to be harmful, both in the near future as well as the medium and perhaps long term future.

A number of possible countervailing factors can be identified. One is that the heavy investments which China is making in infrastructure and in the mining sectors in SSA will lead to the growth of local production capacities providing inputs into these investments. However, at least so far, backward linkages from Chinese infrastructure and mining investments in SSA have been very

⁴ However, it is possible that some of this threat may be diminished as consumer pressure grows in relation to product safety standards and "fair labour" concerns. US buyers report that labour conditions in African garment factories are far superior to those in Chinese factories (Kaplinsky and Morris, 2008). products

weak, much weaker for example than those arising from investments by western and South African firms in the same sectors (Burke and Corkin, 2006). A second potentially countervailing factor is the possibility that Chinese firms will begin to use SSA as a manufacturing base. So far there is no evidence of this occurring (although Indian, Sri Lankan and Taiwanese firms have done so in the clothing sector to take advantage of quota and AGOA access to the US market). In 2007 China announced a number of plans to facilitate such investments, but it is not clear how these Chinese-owned manufacturing firms can survive without overthrowing the Washington Consensus induced trade policy reforms introduced since the early 1990s. These reforms swept aside import controls, forcing SSA firms to swim in a very competitive sea of global producers. And, finally, it is possible that China's manufacturing industry will run out of labour and productive capabilities, forcing its costs to rise and providing space for SSA producers to take its place. A note of caution is due here however. For one thing, China is estimated to have a reserve army of labour in excess of 150m people, with a total formal sector manufacturing labour force of less than 85m (Kaplinsky, 2005). So it will be some time before it runs out of labour and before wage will rise significantly. For another, China is not the only low-wage industrially-competent competitor to SSA's industrial sector. By 2030 India will have a larger and younger population than China and its industrial sector is also growing very rapidly. It is a new threat which looms over the horizon for SSA.

So, what implications does this hold for industrialisation in SSA. The brutal answer is that it is very difficult to see apposite future for manufacturing in Africa unless SSA is able to insulate its infant industries from global competition in general, and perhaps China (and India) in particular. This protection may take a regional form, both to encourage scale and competition (Kaplinsky, 2005). This would represent something of a retreat to an earlier era of import substituting industrialisation. But even if the global community "allowed" this retreat it is fraught with the danger of reintroducing sub-optimum-scale plants operating in monopolistic markets. Hence it is crucially important that an inward-focused trade and industrial policy of this sort searches for larger scale, and here the possibility arises of greater intra-regional integration. It is worth bearing in mind here that intra-regional trade is globally growing more rapidly than extra-regional trade (including in Africa) (Evans et al, 2006) and as we saw in Section 3 above, SSA's intra-regional trade is much more technology intensive than its extra-regional trade. Perhaps this challenge comes at a propitious time, since in the context of increasing imbalances in the global economy, there are growing calls for greater protectionism in many markets, including in the US and the EU.

REFERENCES

- Bessant, J., R. Kaplinsky and R. Lamming (2003), "Putting supply chain learning into practice", International Journal of Production Management, Vol. 23, No. 2, pp167-184.

- Burke, C. and L. Corkin (2006), China's Interest and Activity in Africa's Construction and Infrastructure Sectors, The Centre for Chinese Studies, Stellenbosch: Stellenbosch University.
- Centre for Chinese Studies, China Briefing, 15th June 2007, Stellenbosch: University of Stellenbosch.
- Centre for Chinese Studies, China Briefing, 22nd June 2007, Stellenbosch: University of Stellenbosch.
- Chandler, A. D. (1977), The Visible Hand, Cambridge, Mass.: Harvard University Press.
- Evans, D., M. Gasiorek, P. Holmes, L. Iacovone, K. Jackson, T. Iwanow, S. Robinson, and J. Rollo (2006). "Regional Trade Agreements and Developing Countries: Shallow and Deep Integration, Trade, Productivity, and Economic Performance." Report to DFID under project no. 04 5881, Brighton: University of Sussex.
- Feenstra, R. C. and G. G. Hamilton, (2005), Emergent Economies, Divergent Paths: Economic Organization and International Trade in South Korea and Taiwan: New York: Cambridge University Press.
- Gereffi, G. (1994), "The Organization of Buyer-Driven Global Commodity Chains: How U. S. Retailers Shape Overseas Production Networks", in G. Gereffi and M. Korzeniewicz (eds.), Commodity Chains and Global Capitalism, London: Praeger.
- Gereffi, G. (2005), "The Global Economy: Organization, Governance, and Development." in Neil J. Smelser and Richard Swedberg (eds.), The Handbook of Economic Sociology, 2nd ed. Princeton, NJ: Princeton University Press and Russell Sage Foundation, pp. 160-182
- Gibbon, P. (2003). "The African Growth and Opportunity Act and the global commodity chain for clothing", World Development, Vol.31 (11).
- Joffe A., D. Kaplan, R. Kaplinsky and D. Lewis (1995), Improving Manufacturing Performance: The Report of the ISP, Cape Town: University of Cape Town Press.
- Kaplinsky, R. (2005), *Globalization, Poverty and Inequality: Between a Rock and a Hard Place*, Cambridge: Policy Press.
- Kaplinsky, R. (2007), "The impact of China and India on the developing world", CESifo Forum, 1/2007, pp. 15-21.
- Kaplinsky, R. (2008, forthcoming), "China, Commodities and the Terms of Trade" in D. Greenaway, C. Milner and Shujie Yao (Eds.), China and the World Economy: Consequences and Challenges, London: Palgrave.
- Kaplinsky, R. and D. Messner (2008 forthcoming), "The Impact of the Asian Drivers on the Developing World", Introduction to World Development Special Issue on Asian Drivers and their Impact on Developing Countries
- Kaplinsky, R. and M. Morris (2001), A Handbook for Value Chain Research, <http://asiandrivers.open.ac.uk/>
- Kaplinsky, R. and M. Morris (2008, forthcoming), "Do the Asian Drivers Undermine Export-Oriented Industrialisation in SSA", World Development Special Issue on Asian Drivers and their Impact on Developing Countries

- Lall, S. (2000), "The Technological Structure and Performance of Developing Country Manufactured Exports, 1995-1998, *Oxford Development Studies*, Vol. 28, No. 3, pp 337-369.
- Mitsubishi, K. (2006), "The Furniture Value Chain from Thailand to Japan: Upgrading and the Roles of Buyers", *D Phil Dissertation*, Brighton: University of Sussex.
- Morris, M. (2007), "The rapid increase of Chinese imports: how do we assess the industrial, labour and socio-economic implications?", Paper delivered at the 20th Annual Labour Law Conference, Sandton Convention Centre, 4th July.
- Piore M. J. and C. Sabel (1984), The Second Industrial Divide: Possibilities for Prosperity, N. York: Basic Books.
- Sako, M. (1992), Prices, Quality and Trust: Inter-firm Relations in Britain and Japan, Cambridge Studies in Management 18, Cambridge: Cambridge University Press.
- Sturgeon, T. (2002), "Modular production networks: a new American model of industrial organization", Industrial and Corporate Change 11 (3): 451-496.
- Tegegne, Egziabher Gebre (2006), "Asian Imports and Coping Strategies of Medium, Small and Micro Firms: The Case of Footwear Sector in Ethiopia", *mimeo*, Addis Ababa: Addis Ababa University.
- UNIDO (2007), *International Yearbook*, Vienna: United Nations
- Williamson, O. E. (1985), The Economic Institutions of Capitalism: Firms, Markets and Relational Contracting, New York: Praeger