

**THE IMPACT OF CHINA AND INDIA ON THE SSA: A
METHODOLOGICAL FRAMEWORK**

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1. ASIAN DRIVERS OF GLOBAL CHANGE

The global economy is undergoing a profound and momentous shift. The first half of the 21st century will undoubtedly be dominated by the consequences of a new Asian dynamism. China is likely to become the second biggest economy in the world by 2016, and India the third largest by 2035. A cluster of other countries in the Asian region, such as Thailand and Vietnam, are also growing rapidly. These newly dynamic Asian economies can collectively be characterised as the 'Asian Drivers of Global Change'. The economic processes they engender are likely to radically transform regional and global economic, political and social interactions and to have a major impact on the environment. This is a critical 'disruption' to the global economic and political order that has held sway for the past five decades. It is reshaping the world as we know it, heralding a new 'Global-Asian' era.

The two key Asian Driver economies are China and India (hereafter the ADs). But they reflect very different growth paths. China is integrated into an outward-oriented regional economy, involving fine divisions of labour in many sectors. By contrast (at least until now) India represents much more of a "standalone"* economic system. Yet, notwithstanding these differences in structure, they pose major and distinct challenges for the global and developing economies, for six major reasons.

The first is as a consequence of their size. As Figure 1 shows, from the beginning of their growth spurts (1979 and 1992 respectively), neither GDP or export growth in the two largest AD economies were unique. In recent years other Asian economies (for example Japan and Korea) have experienced similarly rapid growth paths. However, whilst China accounted for 20% of the world's population and India for 17% in 2002, at no time did the combined population of Japan and Korea's exceed four percent of the global total (Figure 2). So, unlike the case of Korea and Japan, who could grow without severe disruption to the global economy we have to suspend the "small-country" assumption in the case of the ADs. The very high trade intensity of China's growth makes the big-country effect particularly prominent in its case. Between 1985 and 2005, China's exports rose from \$50bn to \$772 billion, transforming China into the world's third largest trading nation.

Figure 1: Growth of GDP and Exports from onset of rapid growth: China, India, Japan and Korea

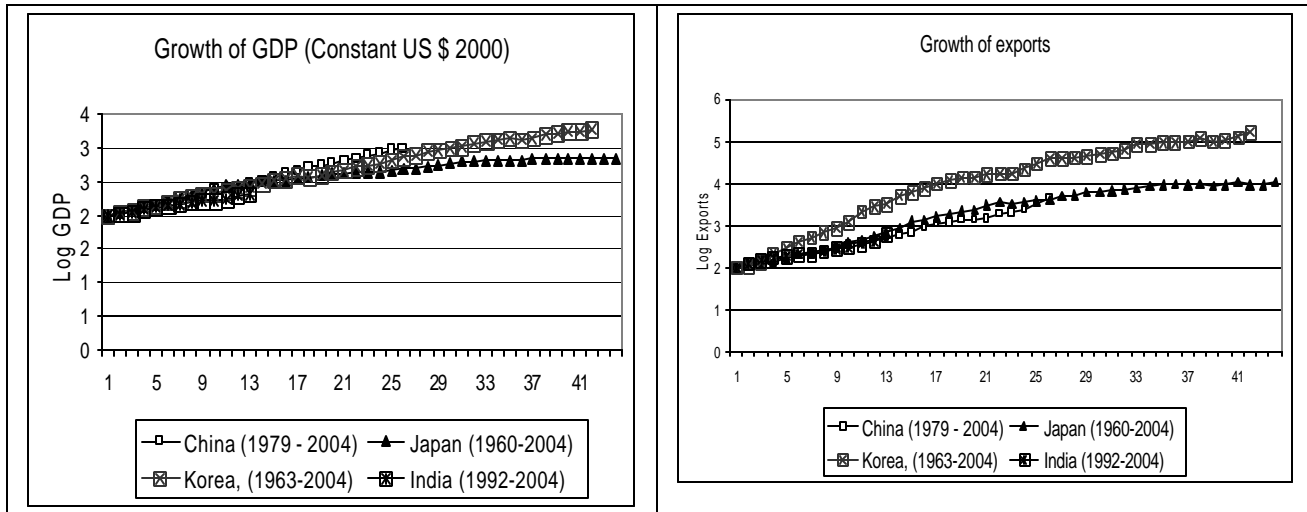
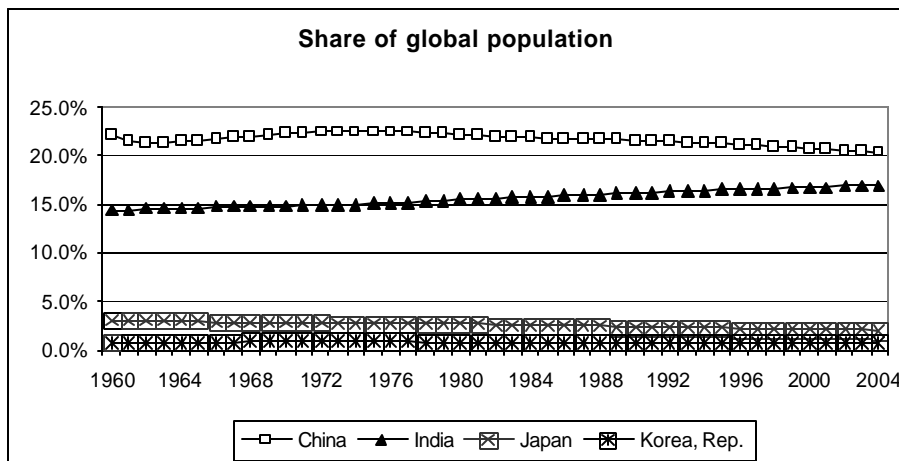


Figure 2.



Second, China (especially) and India embody markedly different combinations of state and capitalist development compared with the industrialised world. Chinese enterprises have their roots in state ownership, usually arising from very large and often regionally-based firms which reflect a complex and dynamic amalgam of property rights (Nolan, 2005; Shenkar, 2005). With access to cheap (and often subsidised) long-term capital, these firms operate with distinctive time-horizons and are less risk-averse than their western counterparts (Tull, 2006). Indian firms are probably less distinct from the western model, although they tend to be less specialised and often include elements of social commitment which are largely alien to western firms (Humphrey, Kaplinsky and Saraph, 1998). Associated with these complex forms of ownership and links to regional and central state bodies, Chinese firms often operate abroad as a component of a broader strategic thrust. This is particularly prominent in China's advance in SSA in its search for the

energy and commodities required to fuel its industrial advance (Kaplinsky, McCormick and Morris, 2006).

The third reason why the ADs present a new and significant challenge to the global and developing economies is that they combine low incomes and low wages with significant innovative potential. This means that they are able to compete across the range of factor prices. The oft-stated belief (and hope?) that China will run out of unskilled labour is belied by the size of its reserve army of unemployed, estimated at around 150m compared to the 83m people employed in formal sector manufacturing in 2002 (Kaplinsky, 2005; Shenkar, 2005). Moreover by 2030, India, also with a large reserve army of underemployed, is likely to have a larger population than China. But China and India are not content to operate in this world of cheap labour and mature technologies, and are investing heavily in the building of technological capabilities. China, for example, overtook Japan to become the world's second largest investor in R&D in 2006.

Fourth, China and India are associated with very different forms of regional integration. China is part of a distributed regional network of production, reflecting wider regional competitiveness. Traded goods 'manufactured in China' in fact usually emanate from regional production systems - China's trade deficit with East Asia grew from \$4bn in 1990 to \$40bn in 2002, and the region's share of China's merchandise imports grew from 55 to 62 percent in the same period (Lall and Abaladejo, 2004). An increasing proportion of China's trade involves the processing of imported raw materials and intermediates (widely referred to in the literature as "verticalised trade", Feenstra, 1998). Official data show that this form of trade grew to \$404.8 billion in 2003 (48 per cent of the total trade volume), up from \$2.5 billion in 1981 (5.7 per cent of total trade) (NiHaoOuZhou_com, 2006). By contrast, Indian exports are more an outcome of a "national system of production", so that the spread effects of the growth paths of these two AD economies are likely to be very different.

Fifth, both China and India are now heavily engaged in global institutions, but whereas India has long been a participant, China's global presence is more recent. Whilst the nature of their political engagements with the rest of the world differ sharply, they increasingly affect global and regional governance (Humphrey and Messner, 2006). India plays a major role as an "advocate" of the interests of the developing countries, for example as the leader of G22 within the WTO. China is pushing the Shanghai Cooperation Organisation (formed by China, Russia, Kazakhstan, Kirgizstan, Tajikistan and Uzbekistan) as a significant player in the area of global energy policies. China and India also provide a different policy role-model for many developing economies, with the possible rise of a "Beijing Consensus" to rival the Washington Consensus. These dynamics represent a transition from a quasi-unilateral US-dominated world order to a multipolar power constellation. This could lead to new turbulences and conflicts between the rising and the declining powers within the global governance system (Humphrey and Messner, 2006).

Finally, China and India have huge and rapidly-growing energy needs. China is already the second largest emitter of greenhouse gases (only exceeded by the US) and by 2015 its energy demand is expected to roughly double, and India's to rise by 50 per cent. The world's biocapacity will be severely stretched if it is to feed China's and India's resource hunger and sustain their growth.

2. THE IMPACT ON LOW INCOME ECONOMIES: KEY ISSUES

Thus, the ADs are clearly likely to have a major impact on the global economic, political, social and environmental economy. But it is only relatively recently that their specific impact on low income economies has been specifically problematised. Here we can identify five distinct development-related questions

1. What are the consequences of the emergence of the ADs for economic growth in other developing economies and regions?
2. Who are likely to be the losers and winners from the growing dynamism of the ADs, within and between low-income economies and regions?
3. How should developing countries engage with the global economy in general, and the AD in particular?
4. What effect will the shift in global power in institutions of regional and global governance and in private and non-governmental organisations have on developing countries?
5. Given the enormous resource and energy hunger of the ADs, what are the environmental consequences for other developing countries?

These questions are relevant to all developing economies. But for SSA they represent an especial challenge.

On the one hand, the AD economies offer huge potential for SSA. After years of declining FDI, rapidly-growing inward investment from both China and India is a fresh source of resources to an investment-starved context. AD demand for primary commodities provides a huge market for SSA commodity producers. Migrants from China and India are a source of new, and appropriate entrepreneurship and skills. And aid from the ADs is not just increasing but, for many SSA economies, is seen to be a relief from the aid-conditionality associated with western and Japanese aid.

On the other hand, the AD economies pose a huge threat to SSA economies. Their exports into global markets are a huge threat to existing and nascent SSA exporters of manufactures and services and AD export dynamism threatens to marginalise SSA economies in many sectors for many years to come. And even the boon from rising commodity prices poses its own threats since the consequences of high commodity prices often are more a "resource curse" than a "resource boon". Their unquestioned support for questionable

political regimes threatens to undermine drives for better governance and democracy.

What is required is a synthetic framework which provides a way of sorting out threat from opportunity and identifying winners and losers so that SSA governments, firms and civil society organisations can maximise the potential of the new opportunities offered by the rise of the AD economies.

3. ASSESSING THE IMPACT OF THE ASIAN DRIVER ECONOMIES ON THE DEVELOPING WORLD

How might we assess these impacts? We can distinguish three sets of structuring principles to aid this analysis – the channels of AD interaction with the global economy; the distinction between complementary and competitive impacts; and the difference between direct and indirect impacts.

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.

The first of these are the trade links between the ADs and the global economy. China's share of global merchandise trade had risen to 6.7 per cent by 2004, exceeding that of Japan, and growing particularly rapidly from the mid 1990s (Table 1), a period in which the US's share of merchandise trade fell appreciably. By 2004, China's share of global manufacturing exports had risen to 8.3 per cent, still below that of the US and Germany, but growing rapidly. By contrast, India's share of global merchandise trade was basically stable in the same period, at a much lower level than China's. However, India's share of global service trade, particularly IT services grew (although no clear comparative data are available).

Table 1: World merchandise trade by region and selected economy, 1948, 1953, 1963, 1973, 1983, 1993, 2003 and 2004 (\$bn and per cent)

	1948	1953	1963	1973	1983	1993	2003	2004
United States	21.7	18.8	14.9	12.3	11.2	12.7	9.9	9.2
Europe	31.5	34.9	41.4	45.4	43.5	45.4	46.1	45.3
Japan	0.4	1.5	3.5	6.4	8.0	9.9	6.4	6.4
S. and C. America	11.4	9.8	6.3	4.3	4.4	3.0	2.9	3.1
Africa	7.3	6.5	5.7	4.8	4.5	2.5	2.4	2.6
Asia	13.6	13.1	12.4	14.9	19.1	26.1	26.1	26.8
China	0.9	1.2	1.3	1.0	1.2	2.5	6.0	6.7
India	2.2	1.3	1.0	0.5	0.5	0.6	0.8	0.8

Source: Kaplinsky and Messner (2007)

The second major channel of interaction is FDI. Already the ADs account for the major share of global inward FDI, with China and Hong Kong alone attracting almost 40 percent of total FDI destined for developing countries (UNCTAD, 2005). But the ADs are increasingly also a source of outward FDI. In some regions – SSA in particular (Kaplinsky, McCormick and Morris, 2006) – China has become the major source of new inward FDI, particularly in economies which because of their political fragility, have been shunned by western investors for some years. There are four primary types of FDI – technology-leveraging, resource seeking, market seeking and cost reducing. Chinese outward investment clearly fits into the first three of these – technology leveraging investments in the US (and, to a lesser extent, the EU), and resource-seeking and market-seeking investments predominantly in other developing economies.

The third channel is finance. Large trade surpluses in both China and India coupled with these countries' ability to attract FDI and other categories of capital flows have led to a build-up of large foreign reserves, estimated at more than \$1trillion in 2006. A significant change in how Asia's capital surpluses are managed could cause an abrupt adjustment in the US interest rates and the dollar and thereby destabilise the entire world economy. It could also accelerate a slow-moving structural change which is the gradual weakening of the role of the dollar as the world's main reserve currency. Both of these developments have significant indirect implications for other developing countries, affecting the structure of global financial markets and the competitiveness of their exchange rates.

The fourth channel of interaction arises in relation to institutions of global and regional governance. The emerging strategies of China and India towards multilateral institutions such as the WTO, the UN, World Bank and IMF, and the global climate regime and the bilateral interactions between the US, Europe and the ADs will profoundly change the international context for other developing countries (Chan 2006, Messner 2006). This could create new options for developing countries if China and India were to play the role of "voices of the South" in global politics. However, if they look primarily to their own interests, new conflicts between the ADs and other developing countries

might arise. China's close cooperation with "difficult states" like Sudan, Myanmar, Uzbekistan, and Zimbabwe and its close energy partnership with Iran provoke tensions with western countries and demonstrate that the ADs are able to alter geo-strategic maps and north-south relationships (Humphrey and Messner, 2006).

Migration from the ADs and interactions with diaspora communities represents a fifth channel of impact. To some extent, migration is already a "fact", of considerable importance, with large Chinese and Indian diasporas in Asia. Outward migration from India to SSA occurred during the late 19th century and first half of the twentieth century, and in the latter twentieth century extended to Europe, North America and Australasia. But more recently, AD migration has risen, particularly to SSA and from China. For example, by some counts, there are currently more than 200,000 Chinese living in South Africa, most of whom are recent migrants. The Chinese population of Lusaka grew from 3,000 to more than 30,000 between 1995 and 2005 and Chinese migrant communities are increasingly prominent in many African countries, including from poor regions in China.

The sixth and final major channel of impact on other economies arises from environmental spillovers. Rapid growth in China and India consumes natural resources and generates cross-border environmental damages within the Asian region. Problems with the use of natural resources are widely documented. For example, there have been repeated denunciations of the activities of illegal Chinese timber logging companies in Myanmar. It is estimated that between one third and one half of acid rain in South Korea and Japan is the result of sulphur dioxide emissions from China (Umbach 2005: 212). Beyond that, China's and India's rapidly rising imports of natural resources from all over the world are creating environmental problems in Africa, Latin America and the rest of Asia. The most import global environmental impact of rapid growth in the two Asian giant economies will be their contribution to global climate change. China's share of world wide CO₂ emissions could reach 25 percent in 2025, the corresponding figure for India being 10-15 percent.

Complementary and competitive impacts

Simplistically, and as a starting point, the interactions between the ADs, the global economy and individual regions and countries can be seen in a binary framework as comprising a range of complementary or competitive impacts. Figure 3 provides some examples, notional, but informed by the emerging nature of AD expansion. In each of these channels of interaction, we can observe a mix of complementary and competitive impacts. For example, with regard to trade, the ADs may both provide cheap inputs and consumer goods, and be a market for the exports from other developing countries. On the other hand, imports from the ADs can readily displace local producers. In relation to FDI, the ADs may either be a direct source of inward FDI or crowd-in FDI from third countries as parts of extended global value chains. But the ADs may also compete with other economies for global FDI. The rising power of the ADs in a western dominated global governance system may strengthen the voice of

developing countries in international organizations. The emerging conflicts between the ADs, the US and Europe on energy, resources and markets might also marginalize 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 ADs 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.

Figure 3: Examples of complementary and competitive impacts

Channels	Impact	Nature of links
Trade	Complementary	Imports of cheap consumer goods from ADs; Exports of commodities to ADs
	Competitive	Imports from ADs displace local producers
FDI	Complementary	Inflows of FDI from ADs
	Competitive	Competition for US FDI from ADs
Finance	Complementary	Loans from ADs to governments and private actors
	Competitive	Low-cost finance from ADs displaces local financial intermediaries
Global Governance	Complementary	Support for Development Round from ADs in WTO
Migration	Competitive	ADs side with EU in WTO
	Complementary	ADs migrants intermediate complementary trade with home countries
	Competitive	ADs migrants displace local entrepreneurs
Environment	Complementary	ADs cooperate in regional water projects
	Competitive	ADs as significant motors of global climate change

Direct and indirect impacts

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. However, in many cases, the indirect impacts may in fact be much more significant than the direct ones. Figure 4 gives some examples, for

purposes of illustration contrasting direct complementary impacts with indirect competitive impacts in Lesotho, a poor SSA economy. In 2000-2004 Lesotho's clothing exports to the US under the AGOA scheme grew very rapidly, but were undermined in 2005-6 by Chinese competition following the removal of MFA quotas (Kaplinsky and Morris, 2007). Looking at the trade channel, thus, direct complementary impacts included the supply of fabrics used in Lesotho's clothing exports. On the other hand, the indirect impact on Lesotho of China's growing competitiveness in the US led to a 17 percent fall in exports during 2005. Whilst some of these exports arose from Taiwanese-owned plants, in other cases potential foreign investors in Lesotho preferred to manufacture clothes in China (and India and Bangladesh). Lesotho suffered badly from the appreciation of the Rand (to which its currency was tied), an indirect impact of Southern Africa's burgeoning commodity exports to China. Lesotho also stands to lose from China's accession to the WTO and the power it might wield in removing preferential access to major markets for the exports of least developed countries, outweighing any possible positive impact of potential budgetary aid to government. Finally, Lesotho's major export other than clothing (vulnerable to ADs competition) and unskilled migrant labour is its water. A change in rainfall patterns consequent on global warming is likely to have very adverse economic impacts.

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 intranational levels, for example with regard to different regions, sectors, classes and genders.

Figure 4: Examples of direct complementary and indirect competitive impacts on Lesotho

Channels	Impact	Direct	Indirect
Trade	Complementary	ADs fabrics used in Lesotho's clothing exports	
	Competitive		ADs competition in US squeezes out Lesotho clothing exports
FDI	Complementary	ADs investment in Lesotho's clothing sector	
	Competitive		US foreign investors relocate clothing factories from Lesotho to China
Finance	Complementary	ADs aid for budgetary support	
	Competitive		ADs led realignment of currencies forces up the value of the Rand, and undermines profitability of Lesotho's clothing exports
Global Governance	Complementary	Budgetary support to government augments state power	
	Competitive		AD input into WTO removes AGOA preferences
Migration	Complementary	Chinese migrants facilitate imports of cheap consumer goods	
	Competitive		Chinese migrants squeeze out local traders
Environment	Complementary	Indian solar technologies enhance energy efficiency in rural areas	
	Competitive		ADs carbon emissions lead to global warming and reduce rainfall in Sub-Saharan Africa

4. AN EXAMPLE: SSA WINNERS AND LOSERS ON THE TRADE FRONT

We live in a research vacuum in addressing the impact of the ADs on SSA. This is partly because of the absence of adequate research effort, and partly because the picture is changing so rapidly. Therefore, at this early stage of the research challenge, we can only work at a speculative and schematic level.

Let us begin with the assumption that the terms of trade are changing as a consequence of the AD challenge, with the prices of manufactures falling

relative to those of commodities (that is, “hard”, “point-“ commodities such as minerals, oil and gas).

It is schematically possible to predict who the winners and losers in SSA might be as a result of these changing terms of trade. Working at a broad level of aggregation it is possible to group traded commodities into two sets. The first are those commodities which the ADs trade intensively. Some of these they import (for example, oil and primary commodities); others they export (for example, China’s manufactures, and India’s services). The second comparable dimension relates to SSA’s trade structure. This comprises products which SSA imports (for example, manufactures, and in some cases, oil) and those which SSA exports (for example, metal ores and oil).

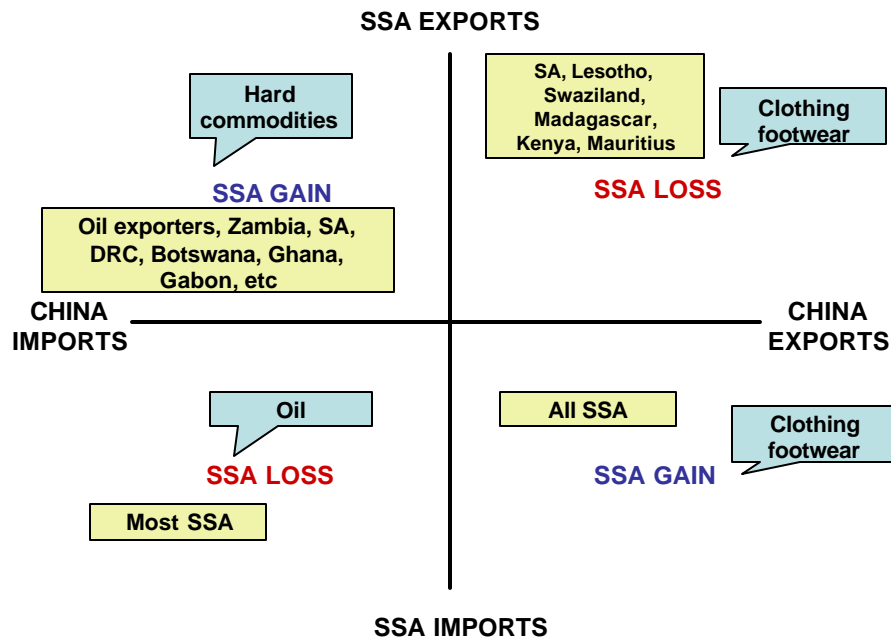
Grouping traded commodities in this way it is possible to identify “losing” countries and sectors and “winning” countries and sectors within SSA:

- The winners are those SSA economies which export what the ADs import and import what the ADs export. That is, they gain on the export side from rising demand and rising prices as ADs swell global demand, and they gain on the import side from falling prices resulting from competitive production in the ADs.
- The losers are those SSA economies which export what the ADs export, and import what the ADs import. They have to compete for imports in global markets characterised by rising prices due to enhanced AD demand, and they sell into global markets where competition is intense as a consequence of AD exports.

Figure 5 provides a graphical representation of these winners and losers, using China as an example, and at a very broad level of aggregation to illustrate these principles. The top left quadrant represents SSA countries which export the products which China imports. These are oil and mineral exporters such as Nigeria, Angola, Sudan and Zambia. The bottom right hand quadrant also comprises winners, SSA economies who import what China exports – predominantly cheap consumer goods. Conversely the top right hand quadrant identify losers who export the same products as China – the clothing and textile and other manufactured goods exporters discussed earlier in the paper. The bottom left hand quadrant category identifies another set of losers, those importing the same products which China imports; SSA oil importing economies are an important group here.

Figure 5 also addresses the question of the extent to which countries are homogenous entities. For example, the consumers who benefit from cheap Chinese clothing and textiles and shoes in the bottom right quadrant live in the same countries (and are often sometimes the same people) as the production workers in the top right hand quadrant whose wages and jobs are threatened by cheap Chinese products. Indeed even the workers who lose their jobs benefit as consumers of final products. Thus “winners” and “losers” are not particular economies.

Figure 5: Identifying winning and losing SSA economies



5. CONCLUSIONS: THERE IS MUCH THAT WE DON'T KNOW

The rapidity of the rise of the ADs economies means that we are only beginning to recognise the enormity of their likely impact on the world economy in general, and low income economies and SSA in particular. We know that this impact is likely to be large. We also know that this impact can be transmitted through a variety of channels, and have identified six of the more important channels. We also know that these impacts might have a combination of complementary and competitive impacts. In general, actors in SSA tend to see more opportunities and complementary synergies with the rise of the ADs. By contrast, observers in the high-income countries (particularly those focusing on low income economies) tend to be more aware of competitive impacts. And, finally we also know that these impacts may be direct and indirect. In general, most attention is placed on the direct impacts, since these are more visible through bilateral relations. But the indirect impacts may often be more important, and much more difficult to unravel.

These pockets of information are just that – pockets. There is an enormous and urgent task ahead of documenting these emerging impacts, distinguishing between different types of economies and regions, and different communities within these countries and regions. Unless these trends and subtleties are adequately understood, it will be very difficult for low income countries to maximise the opportunities and minimise the threats arising from the rise of the ADs.

Based on preliminary scoping research, the AERC AD programme addresses these issues by taking a combination of a sectoral and country focus. The sectors are grouped into two sets, reflecting commonalities in research

methodology and questions (Figure 6). These sectors will be researched by multi-country teams, aiming to identify cross-country issues, including with respect to bilateral discussions with the individual AD economies (as in FOCAC). The policy implications of these studies are those which require coordinated responses by more than one government.

Figure 6: AERC Research Programme, sectoral focus

Group	Sectors	Geography	Types of issues
Group 1	Infrastructure and commodities - roads, railway, telecoms, minerals, oil and gas	Sub-regions (e.g. East Africa, West Africa)	Use of local inputs; use of local labour and skills; terms of aid; regional impact of investment
Group 2	Agriculture, services, manufacturing, infrastructure	Across SSA	Market opportunities in ADs and elsewhere; competition in domestic SSA markets; fostering dynamic capabilities; infrastructure facilitating these objectives

In addition to these cross-country sectoral studies, individual country-studies will be undertaken to identify economy-specific challenges which are amenable to policy interventions by individual country governments.

In addressing these sectors and regional and country-specific studies, four common questions will be addressed which have an impact on growth, development and policy. In each case the country and sector studies will focus on the specific impact of the ADs on:

- Economic growth
- Income distribution
- Relations of power and governance
- The environment

Finally, this is a programme as much pulled by “policy demand” as driven by “research supply”. There are a number of different modes in which the AERC research community interacts with policy makers. In terms of governments, one key set of policy issues is that which involves clusters of governments. For example, what approach should East African governments as a group take towards China in relation to Chinese aid to, and investments in East African infrastructure? How can these governments ensure that infrastructure investments in different countries are complementary and harmonised and are geared as much to meeting the needs of the domestic population for internal logistics as in greasing the export of primary commodities which China needs to fuel its own infrastructural investments? These clustered issues are ideally

raised in discussion with China and India in “set-piece” gatherings such as FOCAC.

A second set of policy-related issues are those which are relevant to specific country policies. For example, what steps should Nigeria take to ensure that Chinese investments in infrastructure or oil and gas involve spillovers into the local economy? How should commodity exporting economies harvest the rents accruing from rising commodity prices without having a negative impact on other sectors? These country-specific issues are ideally raised in bilateral discussion with China and India by individual country governments.

But policy makers do not only comprise governments. They include other stakeholders such as the Business Community, NGOs and also external aid donors and technical assistance institutions. They too need to be informed about the significance and complexity of the impacts which the ADs are having on SSA societies and economies. And, as in the case of the ADs, SSA governments need to decide which of these “triangular” (AD, SSA and other donors) discussions require a coordinated approach by a number of SSA governments and which are best undertaken on a bilateral basis.

In seeking to maximise the policy impact of this research programme, it is clear from past experience that the traditional “conveyor belt” approach to policy-related research does not function effectively. Gibbons and his collaborators refers to this traditional model as Mode 1 research – a sequential process in which disciplinary specialists work in isolation from research users until they have completed their “rigorous” enquiries to their own satisfaction (Gibbons et. al., 1994). Mode 1 research is both slow and, more importantly, does not engage adequately with users who are unlikely to use the results of research where they have little role in influencing the research questions. Gibbons et. al. contrast this with MODE 2 research, a multidisciplinary process in which the researchers interact continuously with research users.

The AERC AD programme is very much committed to the Mode 2 framework. Policymakers – from the public and private sectors, and from civil society – have been incorporated in the research process from the outset and will continue to be involved in the programme throughout its life cycle.

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