



# Introduction: The Impact of Asian Drivers on the Developing World

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**Summary.** — The growth and export trajectories of China and India are not unique. Their significance arises from their size and the distinctive nature of their economic and political actors. For this reason they are having an increasing impact on other economies including in the developing world. This paper provides a framework for assessing these impacts, distinguishing different vectors of interaction, complementary and competitive impacts and direct and indirect impacts. This sets the scene for the articles included in this Special Issue.

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## 1. INTRODUCTION

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. The rise of China and India as global economic and political powers is one of the most important transformative processes of our time—challenging the international political economy dominated by the “transatlantic West.” It is likely to remain significant for many years to come. A cluster of other countries in the Asian region, such as Thailand and Vietnam, are also growing rapidly. We refer to these newly dynamic Asian economies collectively as the “Asian Drivers of Global Change.” The term “driver” signifies the distinctive and significant impact which these emerging economies are likely to have on the global economy, arising not just from their size, but also from their distinctive public and private actors. 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 impact of the Asian Drivers on the global political economy has, to date, largely been considered in relation to the developed world. Yet, these newly emergent Asian economies pose huge challenges for the rest of the developing world, presenting both threat and opportunity. China, for example, offers a rapidly growing market for commodity exporting countries, but it is also the leading exporter for many labor-intensive, manufactured products, potentially accelerating a “race to the bottom” elsewhere. Additionally, with their growing economic power, China and India can change the “rules of the game” on international trade and in the global political economy more generally. Their successful experience—

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largely at variance with the “augmented” Washington Consensus (Rodrik, 2002)—also provides new policy role models for other developing economies.

This Special Issue addresses these challenges, based on an initial assessment of the impact of the Asian Drivers on the developing world. It reflects the output of a networked research program, involving a group for researchers drawn from high- and low-income economies (<http://asiandriversonline.ac.uk>; <http://www.ids.ac.uk/asiandriversonline>). In this article, we briefly address the historical significance of the Asian Driver economies and provide a taxonomy for assessing their global impact, particularly on developing economies. Section 2 identifies six factors which convince us that the rise of the Asian Drivers is historically significant, having a non-marginal impact on the global economy. This is followed in Section 3 by a listing of the major challenges this poses to developing economies and the development agenda and identifies the major channels of interaction between the Asian Drivers and the developing world. In this, we elaborate a methodological framework designed to assess the nature and the degree of these developmental impacts. In the concluding section, we briefly summarize the papers which are included in this Special Issue.

## 2. ASIAN DRIVERS

Regional economic agglomerations have been an important feature of recent economic history (Evans, Kaplinsky, & Robinson, 2006). The global trading system during the 1960s was a bipolar world, dominated by the United States and Europe and their close neigh-

bors and ex-colonies. The following two decades saw the emergence of an East and Southeast (E&SE) trading group, largely reflecting the rise of Japan and the Asian Tigers, with increasingly close links to the North American trading bloc. Toward the close of the 20th century, the Asian bloc grew to a dominant role in global trade, but this time driven by the dynamism of two large new Asian economies, India and China. In China’s case, the growth spurt began in the late 1970s, and in India, from the early 1990s.

As McDonald, Robinson, and Thierfelder in this volume show, China and India reflect very different growth paths. China is integrated into an outward-oriented regional economy, involving fine divisions of labor 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 nor export growth in the two largest Asian Driver economies was unique. However, in 2004 China accounted for 20% of the world’s population and India for 17%. By contrast, at no time did the combined population of Japan and Korea exceed 4% of the global total (Figure 2). So, unlike the case of Korea and Japan, which could grow without severe disruption to the global economy we have to suspend the “small-country” assumption in the case of the Asian Drivers. The very high trade intensity of China’s growth makes the big-country effect particularly prominent in its case (Figure 3).

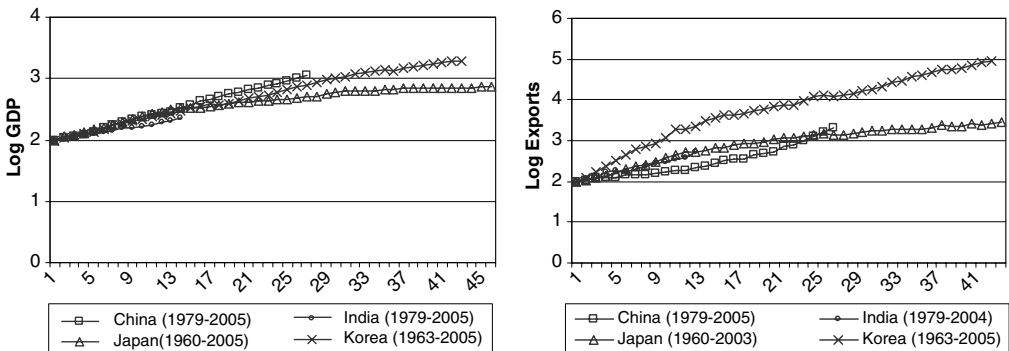


Figure 1. Growth of GDP and exports from onset of rapid growth: China, India, Japan, and Korea. Source: Calculated from World Bank, World Development Indicators (2004).

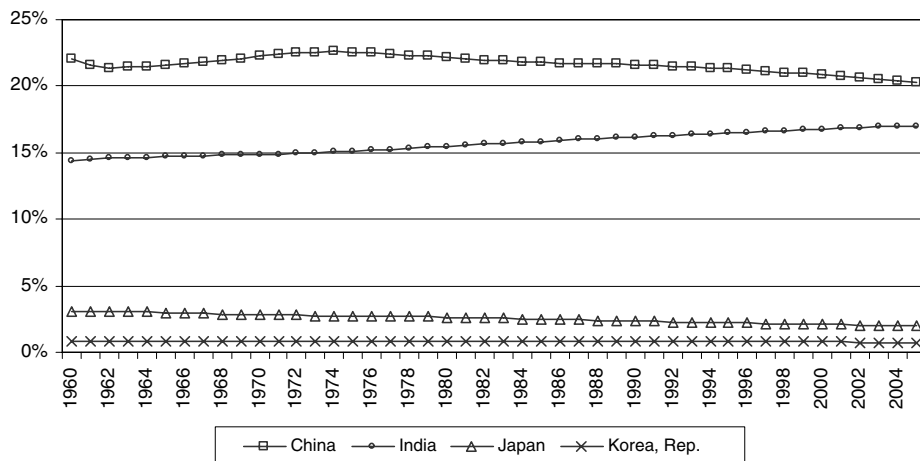


Figure 2. Share of global population (%).

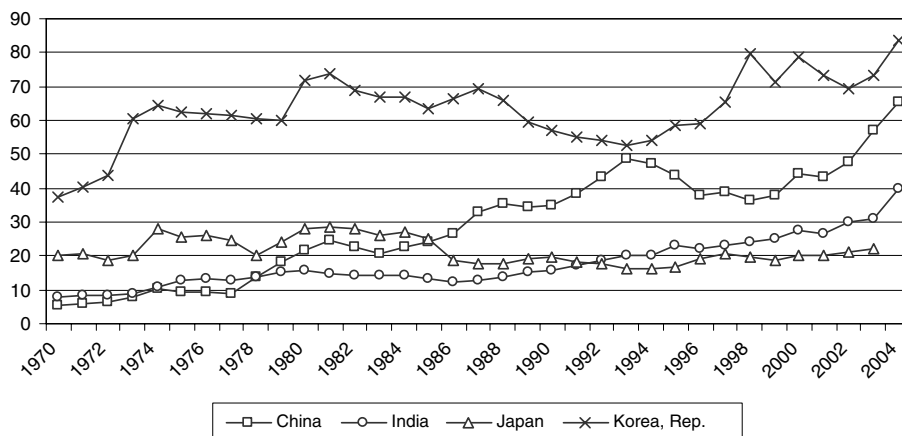


Figure 3. Trade as a proportion of GDP (%), 1970–2002. Source: Calculated from World Bank, *World Development Indicators* (2004).

During 1985–2005, China's exports rose from \$50 billion to \$798 billion, transforming China into the world's third largest trading nation. The big-size effect of China and India amounts to tectonic shifts in the world economy.

Second, these economies markedly embody different combinations of state and capitalist development compared with the industrialized world. Chinese enterprises have their roots in state ownership, usually arising from very large and often regionally based firms (Nolan, 2005; Shenkar, 2005). They reflect a complex and dynamic amalgam of property rights—"The ownership of each of China's large SOEs [state owned enterprises] has spread gradually among a variety of public institutions, each of which

has an interest in the firm's performance... [based on the 'ownership maze' and vaguely defined property rights" (Nolan, 2005, p. 169). With access to cheap (and often subsidized) 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 specialized and often include elements of social commitment, which are largely alien to the western firms (Humphrey, Kaplinsky, & 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, & Morris, 2006). It is likely, therefore, that Asian Driver firms (and particularly Chinese enterprises) will interact with the global economy—including through outward foreign direct investment (FDI)—in historically distinctive ways.

The third reason why the Asian Drivers 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. In 2006, China overtook Japan to become the world's second largest investor in R&D and although the output of engineers and scientists in these economies is often overestimated (Gereffi, Wadhwa, & Rissing, 2006), and although the number of engineers and scientists per capita is relatively low by comparison with global innovation leaders, there nevertheless is a large pool of human capabilities to foster innovation. The return of graduates studying abroad (Saxenian, 2006; Shenkar, 2005)—the “brain gain”—has also done much to foster innovative capabilities. However, this growth in innovative capability does not necessarily signify an inability to compete across the range of factor prices. The oft-stated belief (and hope?) that China will run out of unskilled labor is belied by the size of its reserve army of unemployed, estimated at around 150 million compared to the 83 million people employed in formal sector manufacturing in 2002 (Kaplinsky, 2005). As Shenkar observes, “China's enormous labor reserves,

with pay scales radically lower in the hinterland than the coast and in urban areas (the average income on the farm, where more than half of the Chinese population lives, is less than \$25 per month), creates the equivalent of a country within a country; so, instead of Vietnam or Bangladesh replacing China as a labor-intensive haven, Hunan will replace Guangdong” (Shenkar, 2005, p. 134). Moreover by 2030, India, also with a large reserve army of underemployed, is likely to have a larger population than China. There is no doubt that the Asian Drivers are altering the underlying patterns of the global labor markets (Polaski, 2006).

Fourth, China and India are associated with very different forms of regional integration. China is a part of a distributed regional network of production, reflecting wider regional competitiveness. Traded goods “manufactured in China” in fact increasingly emanate from regional production systems. China's trade with East Asia grew very rapidly and significantly during the 1990s, initially with a growing surplus (\$12 billion in 1990 and \$20 billion in 2000) and then falling into deficits of \$17 billion in 2003 and \$35 billion in 2005. An increasing proportion of China's trade involves the processing of imported raw materials and intermediates (widely referred to in the literature as “verticalized trade,” Feenstra, 1998; Hummels, Rapaport, & Yi, 1998). Official data show that this form of trade grew to \$404.8 billion in 2003 (48% of the total trade volume), up from \$2.5 billion in 1981 (5.7% of total trade) (NiHaoOuZhou.com (2006), Foreign firms dominate China's exports, accessed 30th June 2006). By contrast, Indian exports are more

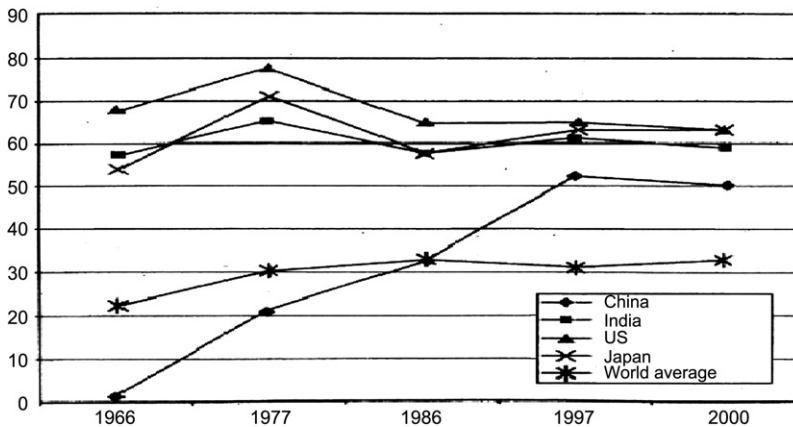


Figure 4. China's international organization memberships in comparative perspective. Source: Reproduced from Johnston (2003), p. 317.

an outcome of a national system of production, so that the spread effects of the growth paths of these two Asian Driver economies are likely to be very different.

Fifth, the economic rise of China and India results in large-scale changes in important global governance arenas. Both countries are now heavily engaged and influential in global organizations (Figure 4), but whereas India has long been a participant, China's global presence is more recent (Figure 5). While the nature of their political engagements with the rest of the world differ sharply, they increasingly affect global and regional governance (Chan, 2006; Gu, Humphrey, & Messner, 2008; Heberer & Senz, 2007; Wang, 2003). The role of China and India as the actors of global change has largely been ignored in the global governance literature (Kennedy, Messner, & Nuscheler, 2002; Nye & Donahue, 2000). But the simultaneous rise of both Asian giants (Winters & Yusuf, 2007) in world politics represents a far reaching power shift in global affairs with few parallels in history. India still 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 promoting the Shanghai Cooperation Organisation (formed by China, Russia, Kazakstan, Kirgistan, Tadjikistan, 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. Ramo, interviewing key informants in China in the early years of the 21st century, characterizes this new policy agenda as involving a measured pace of reform (rather than a

big-bang approach) and allowing for country-specific responses (rather than a one-size-fits-all policy agenda) (Ramo, 2004). We perceive these dynamics as a transition from a quasi-unilateral, United States and western dominated world order to a multipolar power constellation, with the two Asian giants as the new global governance poles. This power shift could lead to new turbulences and conflicts between the rising and the declining powers within the global governance system and will reshape profoundly the existing "North—South relationships" (Humphrey & Messner, 2006). While the more proactive global engagement of China and India may lead them to become "responsible and productive global citizens" (Bergsten, 2006, p. X); they are nevertheless likely to challenge the interests of other major powers and existing international norms. Richard Haass put it this way: "The choice . . . is between an effective multilateralism and either a gradual return to a world of great power competition or a world overwhelmed by disruptive forces, or both." (Haass, 2005, p. 17).

Finally, the huge natural resource hunger and energy needs of China and India will in the future serve to place the issue of sustainability squarely back on the agenda of global politics and development policies. By 2015, China's energy demand is expected to roughly double, India's to rise by 50%. Today, China is the second largest emitter of greenhouse gases (only exceeded by the United States) and is already responsible for 16.5% of global CO<sub>2</sub> emissions, the corresponding figure for India being 4% (Germany 3.5%) (Richerzhagen & Scholz, 2008). And as far as the imports of tropical timber are concerned, China is now the world's largest importer of softwood and hardwood

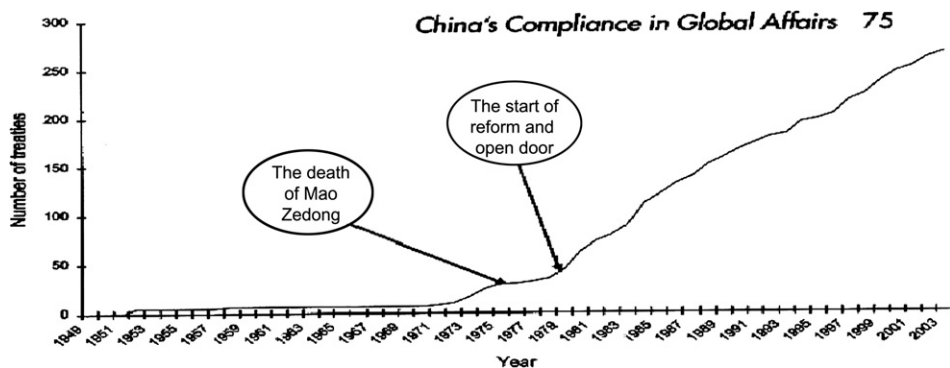


Figure 5. China's accession to international treaties, 1949–2003 (cumulative sum). Source: Chan (2006), *China's compliance in global affairs*, p. 75.

logs (Financial Times, May 5th, 2007, p. 19). Given that the OECD countries are still not able to reduce substantially its resource consumption, the world's biocapacities will not be sufficient to feed China's and India's additional resource hunger and sustain their growth. In other words: none of the key global environmental challenges will be solved without China and India (World Watch, 2005). From this point of view, China's and India's prospective innovation capabilities are highly relevant from a growth and global sustainability perspective. The flip side of the discussion on sustainability and global climate change is the renaissance of geo-economics and geo-politics: competition between the "old" and the "new" global powers for energy and resources in Africa, Latin America, Central Asia, and Russia (Umbach, 2005).

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

The rapid and distinctive growth of these large Asian Driver economies thus poses six distinct development-related questions

1. What are the consequences of the emergence of the Asian Drivers for economic growth in other developing economies, both in relation to individual-country performance and for different regions?
2. Who are likely to be the losers and winners from the growing dynamism of the Asian Drivers, within and between low-income economies, and within and between regional clusters of low-income economies?
3. Given these international growth and distributional impacts, what are the implications for development strategies in developing economies?
4. How should developing countries engage with the global economy in general, and the Asian Drivers in particular?
5. Given the rapid growth and the size of the Asian Drivers, what are the implications of this shift in global power for institutions of regional and global governance, in the public, private and non-governmental sectors? How will these shifts in the global governance arenas affect developing countries?
6. Given the enormous resource and energy hunger of the Asian Drivers, what are the consequences for other developing countries in environmental terms (e.g., impacts of

accelerating climate change), economic terms (e.g., rising resource and energy prices), geopolitical terms (e.g., conflicts for resources) and regarding development strategies and policies (e.g., from pro poor growth to sustainable development)?

These questions need to be addressed in a systematic framework, and here we distinguish between three sets of structuring principles—the channels of Asian Driver interaction with the global economy; the distinction between complementary and competitive impacts; and the difference between direct and indirect impacts.

#### (a) 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. Currently, and in aggregate, six key channels stand out in importance.

The first of these are the trade links between the Asian Drivers and the global economy. China's share of global merchandise trade had risen to 7.5% by 2005, exceeding that of Japan, and growing particularly rapidly from the mid-1990s (Table 1), a period in which the United States's share of merchandise trade fell appreciably. By 2004, China's share of global manufacturing exports had risen to 8.3%, still below that of the United States 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 information technology services grew (although no clear comparative data are available).

The second major channel of interaction is FDI. Already the Asian Drivers account for the major share of global inward FDI, with China and Hong Kong alone attracting almost 40% of total FDI destined for developing countries (UNCTAD, 2005). But the Asian Drivers are increasingly also a source of outward FDI. In some regions—SSA in particular (Kaplinsky *et al.*, 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

Table 1. *World merchandise trade by region and selected economy, 1948, 1953, 1963, 1973, 1983, 1993, 2003, and 2005*

	1948	1953	1963	1973	1983	1993	2003	2005
<i>Value (\$bn)</i>								
World	58	84	157	579	1838	3675	7369	10,159
<i>Share (%)</i>								
World	100	100	100	100	100	100	100	100
United States	21.7	18.8	14.9	12.3	11.2	12.6	9.8	8.9
South and Central America	12.2	10.4	7.0	4.7	4.4	3.0	3.0	3.5
Brazil	2.0	1.8	0.9	1.1	1.2	1.0	1.0	1.2
Europe	31.4	34.8	41.4	45.3	43.5	45.4	46.0	43.0
Africa	7.3	6.5	5.7	4.8	4.5	2.5	2.4	2.9
Asia	14.0	13.4	12.4	14.9	19.1	26.1	26.1	27.4
China	0.9	1.2	1.3	1.0	1.2	2.5	5.9	7.5
Japan	0.4	1.5	3.5	6.4	8.0	9.9	6.4	5.9
India	2.2	1.3	1.0	0.5	0.5	0.6	0.8	0.9
Six East Asian traders	3.4	3.0	2.4	3.4	5.8	9.7	9.6	9.7

Source: WTO Trade Statistics 2006.

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 United States (and, to a lesser extent, the European Union), 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 \$1.2 trillion for China alone 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 destabilize the entire world economy, including by raising global interest rates. 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 toward multilateral institutions such as the WTO, the United Nations, World Bank, and IMF, and the global climate regime and the bilateral interactions between the United States, Europe and the Asian Drivers will pro-

foundly change the international context for other developing countries (Chan, 2006; Cooper & Fues, 2008; Messner, 2006). This could create new options for developing countries in global governance institutions if China and India would play the role of the "voice of the South" in global politics. If they look primarily to their own interests, new conflicts between the Asian Drivers and other developing countries might arise—for example, in the area of trade, climate change, and regarding access to resources. 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 Asian Drivers are able to alter geo-strategic maps and North–South relationships. Many of the contradictory impacts of China's rise on the developing world have surfaced in Africa—rapidly improving African exports to China; a rapid growth in Chinese FDI and aid; concerns about the potential negative impacts of Chinese economic and political engagement in Africa on social, environmental, and human rights standards; fierce rivalry between China and Western countries for access to African resources (Gu *et al.*, 2008; Kaplinsky *et al.*, 2006; Tull, 2006). With regard to regional cooperation, the boldest Asian initiative is JACIK, a framework for economic and political cooperation of Japan, ASEAN, China, India, and Korea (Kumar, 2005). It is not yet clear whether this project will be realized in a near future. But there is no doubt that the

JACIK—and/or similar initiatives—are likely to have a significant impact on the structure of global governance.

Migration from the Asian Drivers and interactions with diaspora communities represents a fifth channel of impact. To some extent, migration is an already accomplished historic phenomenon, with large Chinese diasporas in Asia. Outward migration from India to SSA occurred during the late 19th century and first half of the 20th century, and in the latter 20th century extended to Europe, North America, and Australasia. But more recently, Asian Driver migration has risen, particularly to SSA and from China. For example, by some counts, the Chinese population living in South Africa grew from 4,000 in 1946 to 10,000 in 1980, 20,000 in 1994 and to between 100,000 and 200,000 by 2004 (Wilhem, 2005). The Chinese population of Lusaka grew from 3,000 to 30,000 during 1995–2005 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. Little of the region's timber is managed sustainably, and illegal logging is rife. For example, there have been repeated denunciations of the activities of illegal Chinese logging companies in Myanmar. Cross-border environmental challenges include the Songhua River incident (and subsequent water pollution incidents) in November 2005 in northern Chinese rivers and the problem of acid rain: it is estimated that between one-third and one-half of acid rain in South Korea and Japan is the result of sulfur dioxide emissions from China (Umbach, 2005, p. 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 on developing countries will be their rapidly growing contribution to global climate change. Climate change will damage agricultural resources in Africa and Asia, create water shortages around the world, undermine human security in many countries and could swamp the governance capacities of already weak states (Stern, 2006; WBGU, 2007).

### (b) *Complementary and competitive impacts*

Simply, and as a starting point, the interactions between the Asian Drivers, 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 6 provides some examples, notional, but informed by the emerging nature of Asian Driver 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 Asian Drivers 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 Asian Drivers can readily displace local producers. In relation to FDI, the Asian Drivers 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 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 the developing countries in international organizations. But the emerging conflicts between the Asian Drivers, the United States 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 Asian Drivers 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.



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

Figure 6. Examples of complementary and competitive impacts.

(c) *Direct and indirect impacts*

The complementary-competitive axis of impacts is readily comprehended and widely recognized. 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 7 gives some examples, for purposes of illustration, contrasting direct complementary impacts with indirect competitive impacts in Lesotho, a poor SSA economy.<sup>1</sup> In 2000–04 Lesotho's clothing exports to the United States under the African Growth and Opportunities Act (AGOA) scheme grew very rapidly, but were undermined in 2005–06 by Chinese competition following the removal of MFA quotas (Kaplinsky & Morris, 2008). 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 United States led to a 15% fall in exports during 2004–06. While 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 the government. Finally, Lesotho's major export other than clothing (vulnerable to Asian Driver competition) and unskilled migrant labor 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 axis, 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.

#### 4. CONCLUSIONS

Based on this template of different channels of interaction and the recognition that impacts can be both complementary and competitive, it

Channels	Impact	Direct	Indirect
Trade	Complementary	Asian Driver fabrics used in Lesotho's clothing exports	
	Competitive		Asian Driver competition in US squeezes out Lesotho clothing exports
FDI	Complementary	Asian Driver investment in Lesotho's clothing sector	
	Competitive		US foreign investors relocate clothing factories from Lesotho to China
Finance	Complementary	Asian Driver aid for budgetary support	
	Competitive		Asian Driver 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		Asian driver 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		Asian Driver carbon emissions lead to global warming and reduce rainfall in Sub-Sahara Africa

Figure 7. Examples of direct complementary and indirect competitive impacts on Lesotho.

is possible to move toward a comprehensive assessment of the impact of the Asian Drivers on other economies, in general, and developing economies in particular. As we have noted, this assessment will be contingent on the period, the location, the economy in question, and the welfare of different groups. The pace of change is such that these contingencies are of considerable significance.

The papers which follow in this Special Issue address some of these issues. The first four papers focus on regional impacts. Using a new global general equilibrium trade model, McDonald, Robinson, and Thierfelder analyze the impact on the global economy, especially developing countries, of the dramatic expansion of trade by India, China, and an integrated E&SE Asia trade bloc. While both India and

China are very large economies, the two main Asian Drivers differ in economic structures and trade patterns. China is an integral member of the E&SE Asia bloc, with strong links through regional value chains and trade in intermediate inputs, while India is not a part of any trade bloc. The analysis considers the importance of their different degrees of integration into regional and global economies, focusing on potential complementarities and competition with other developing countries.

Jenkins, Dussel Peters, and Moreira assess the impact of the Asian Drivers on Latin America. The rapid growth of China, in particular, and its increased integration with the global economy is having both direct and indirect effects on the Latin American and Caribbean region. This paper identifies the main channels through which China's growth is affecting the region and undertakes a preliminary analysis of the impacts that it is having on development. The growth of China represents both opportunities and challenges for the Latin American and Caribbean economies and the paper suggests where, in terms of both countries and sectors, these are concentrated. Finally, the paper discusses the challenges facing policy makers both in the region and in China.

Kaplinsky and Morris focus on the impact of China's surge in manufactured exports on export-oriented industrialization strategies. They do this through an analysis of SSA's manufactured exports. Excluding South Africa, more than one-half of all SSA's manufactured exports comprise clothing and textiles, and most of these are destined for the United States under the preferential AGOA scheme. Although AGOA continues to provide preferential tariff incentives to SSA exporters, as well as allowing the least developed countries to utilize low-cost Chinese fabrics, clothing exports to the United States fell by 26% once quotas on China's clothing and textile exports to the United States were removed. Kaplinsky and Morris argue that this sectoral experience is suggestive of the wider—indirect—impact of the Asian Drivers on other low-income economies and argue that a level playing field in global trade will be deleterious to export-oriented industrialization strategies in low-income economies. This discussion reinforces the conclusions reached by Jenkins, Dussel Peters and Moreira for Latin America. It also has a bearing on the wider discussion of terms of trade reversal (Kaplinsky, 2006a, 2006b).

Three papers focus on the impact of the Asian Drivers on institutions of global governance. Gu, Humphrey, and Messner argue that the rise of China and India in the world economy and as an important actor in global governance arenas may result in an emerging tectonic shift in institutions of global governance. What China and India choose to do or not to do has very often profound consequences for many other actors globally. Therefore, the current global governance architecture, with its quasi-unilateralist (i.e., United States) bias, is unlikely to last more than a brief historical moment. A multipolar power constellation is emerging, with the United States, China, India, and possibly Europe as significant poles. The authors focus on the changing role of China in global politics and discuss challenges in three dimensions. Firstly, they summarize the western and the Chinese debates on the impacts of the rise of China as global governance actors. It is clear that the main question for global governance processes is how the power shift toward China will be handled. The answer to this question is not trivial, given that it is historically unprecedented for a developing country to become a significant global governance actor, threatening the hitherto unrivaled power of the most developed countries in the global economy. Secondly, their analysis of China's strategies within the WTO and in the field of developing policies in Africa demonstrate that China has not yet defined a comprehensive global governance strategy. Chinese actors are still learning (albeit, rapidly) how to build up governance capabilities in many global governance arenas, and how to balance national interests with regional and global challenges and responsibilities. The authors argue, that Western and Chinese proactive political strategies toward a peaceful global power transition are needed to avoid global turbulences. Thirdly, Gu, Humphrey, and Messner underline that developing countries will have to adapt to these significant shifts in the world economy and in global governance arenas and make strategic decisions about how to align themselves with China and other emerging powerful actors in Asia.

Cooper and Fues address the roles played by China and India in the United Nations as an overarching structure of global governance. Commensurate to their ascension in the world economy the foreign policies and diplomatic styles of both countries are undergoing a rapid transformation. While China demonstrates a new sense of assertiveness in the multilateral

context, for example, in exercising its privileged position as the permanent member in the Security Council, India has moved from a steadfast supporter of Third World solidarity in the Nehruvian tradition to a more narrow pursuit of national interests through the accumulation of hard power resources in military and economic terms. In the past, both countries have demonstrated only limited commitment to the UN reform process except for the contested issue of Security Council enlargement where Indian efforts to assume a leadership position in the international hierarchy have been frustrated. It remains unclear at this point whether China and India will concentrate on the universal UN system in their quest for global voice and reach or rather be drawn into a concert of great powers with the United States.

Scholz and Richerzhagen focus on the role played by China in the governance of climate change. China is rapidly becoming the largest global emitter of greenhouse gases. Due to its dynamic economic growth, emissions are increasing rapidly, despite the country's efforts to increase energy efficiency and the growing use of renewables. At the same time, China is also likely to suffer severely under the impacts of climate change. Therefore, pressures are rising, both domestically and externally, for China to address the problem of climate change. This paper analyzes the efforts made by China to reduce greenhouse gas emissions through climate-relevant sectoral policies (predominantly energy and transport) and with regard to environmental policies. The authors conclude that hitherto, China's climate-relevant actions have not been induced by climate considerations but rather are a by-product of measures embedded in energy and transport policies aiming to decrease costs, to enhance energy security and to promote growth. An optimistic perspective is that there is considerable scope for significant resource efficiency gains. By contrast, a pessimistic view is that

there are parallels to the US climate strategy which puts growth and national interests first.

In the final paper, Altenburg, Schmitz, and Stamm address the question of whether the Asian Drivers will be able to build up significant innovation capabilities in the foreseeable future. Both China and India have become major producers of products and services for global markets. It is less clear, however, to what extent and in which sectors they will be able to build innovation capabilities that challenge the current technological leaders. The consequences of such a transition from production to innovation could be significant for both developed and developing regions. Drawing on a combination of approaches—innovation systems, global value chains, and professional networks—the article analyzes four of the most technologically dynamic industries in China and India. It suggests that, although China's and India's technological efforts have rarely materialized in cutting-edge innovations at this stage, they have created conditions to attract the key elements of first-class innovation systems. The prospects for making the transition from production to innovation capabilities seem good, provided growth and capital accumulation continue at a high pace. On the basis of this analysis, the article sets out possible scenarios for technologically advanced and developing countries and identifies questions for future research. It argues that advanced countries could be challenged in their core competencies and markets, whereas developing countries could benefit from rising wage levels in China and India, easing their global competitive pressure in labor-intensive industries. Access to more appropriate technologies at lower prices might be another positive outcome. However, developing countries may find it even more difficult to upgrade into the markets for technology-intensive goods if China and India successfully combine cutting-edge technological capabilities and low-cost production.

## NOTES

1. Of course we could also compare direct competitive with indirect complementary impacts, but for the

moment this is only a notional exercise to illuminate the taxonomy which we are using.

## REFERENCES

- Bergsten, F. (Ed.) (2006). *China. The balance sheet*. Washington: Public Affairs.
- Chan, G. (2006). *China's compliance in global affairs*. New Jersey/London: Scientific World.

- Cooper, A. F., & Fues, T. (2008). Do the Asian drivers pull their diplomatic weight? China, India, and the United Nations. *World Development*, 36(2), 293–307.
- Evans, D., Kaplinsky, R., & Robinson, S. (2006). Deep and shallow integration in Asia: Towards a holistic account. In: R. Kaplinsky (Ed.). *Asian Drivers: Opportunities and threats*. *IDS Bulletin*, 37(1).
- Feenstra, R. C. (1998). Integration of trade and disintegration of production in the global economy. *Journal of Economic Perspectives*, 12(4), 31–50.
- Gereffi, G., Wadhwa, V., & Rissing, B. (2006). Framing the engineering outsourcing debate: Comparing the quantity and quality of engineering graduates in the United States, India and China. Paper presented to *SASE 2006 conference constituting globalisation: Actors, arenas, and outcomes*, Trier, Germany.
- Gu, J., Humphrey, J., & Messner, D. (2008). Global governance and developing countries: The implications of the rise of China. *World Development*, 36(2), 274–292.
- Haass, R. N. (2005). *The opportunity. America's moment to alter history's course*. New York: Public Affairs.
- Heberer, T., & Senz, A. (2007). The role of China in global governance arenas. DIE Discussion Paper, German Development Institute, Bonn.
- Hummels, D., Rapoport, D., & Yi, K. M. (1998). Vertical specialization and the changing nature of world trade. *FRBNY Economic Policy Review*, 79–99.
- Humphrey, J., Kaplinsky, R., & Saraph, P. (1998). *Corporate restructuring: Crompton greaves and the challenge of globalisation*. New Delhi: Sage Publications Ltd.
- Humphrey, J., & Messner, D. (2006). China and India as emerging global governance actors. In: R. Kaplinsky (Ed.). *Asian Drivers: Opportunities and threats*. *IDS Bulletin*, 37(1), 107–114.
- Johnston, A. J. (2003). China and international institutions: Perspective from outside China. In Wang Yizhou (Ed.), *Construction within Contradiction: Multiple perspectives on the relationship between China and international organizations*. Beijing: China Development Publishing House.
- Kaplinsky, R. (2005). *Globalization, poverty and inequality: Between a rock and a hard place*. Cambridge: Policy Press.
- Kaplinsky, R. (Ed.). (2006a). *Asian Drivers: Opportunities and threats*. *IDS Bulletin*, 37(1).
- Kaplinsky, R. (2006b). Revisiting the terms of trade revisited: Will China make a difference? *World Development*, 34(6), 981–995.
- Kaplinsky, R., McCormick, D., & Morris, M. (2006). The impact of China on SSA, agenda-setting. Paper prepared for DFID, Brighton, Institute of Development Studies.
- Kaplinsky, R., & Morris, M. (2008). Do the Asian drivers undermine export-oriented industrialization in SSA. *World Development*, 36(2), 254–273.
- Kennedy, P., Messner, D., & Nuscheler, F. (2002). *Global trends and global governance*. London: Pluto Press.
- Kumar, N. (2005). Towards a broader Asian community: Agenda for the East Asia summit. RIS-DP 100, New Delhi, RIS—Research and Information System for Developing Countries.
- Messner, D. (2006). Instabile Multipolarität. Global Governance im Schatten des Aufstiegs von China und Indien. In T. Debiel, D. Messner, & F. Nuscheler (Eds.), *Globale Trends 2007/08*. Frankfurt: Fischer Verlag.
- Nolan, P. (2005). *Transforming China: Globalization, transition and development*. London: Anthem Press.
- Nye, J., & Donahue, J. (Eds.) (2000). *Managing Globalization*. Washington: Brookings Institution Press.
- Polaski, S. (2006). The future of the WTO. Policy Outlook 28. Carnegie Endowment, Washington.
- Ramo, J. C. (2004). *The Beijing consensus*. London: Foreign Policy Centre.
- Richerzhagen, C., & Scholz, I. (2008). China's capacities for mitigating climate change. *World Development*, 36(2), 308–324.
- Rodrik, D. (2002). After neoliberalism, what? Paper presented at *Alternatives to neoliberalism conference, coalition for new rules for global finance*, Washington, May 22–23, Washington, DC.
- Saxenian, A. (2006). *The new Argonauts: Regional advantage in a global economy*. Cambridge, MA: Harvard University Press.
- Shenkar, R. O. (2005). *The Chinese century*. Upper Saddle River: Wharton School Publishing.
- Stern, N. (2006). *The economics of climate change*. London: HM Treasury.
- Tull, D. M. (2006). China's engagement in Africa: Scope, significance and consequences. *Journal of Modern African Studies*, 44(3), 459–479.
- Umbach, F. (2005). Global energy security and its geopolitical consequences to EU–Asian relations. In W. van der Geest (Ed.), *Expert analyses of East Asian cooperation, China's role and EU policy. The European Union's strategic interests in East Asia* (vol. 2, pp. 194–223). Brussels/Bologna: European Institute for Asian Studies and NOMISMA <<http://www.asia2015conference.org/>>.
- UNCTAD (2005). World Investment Report. United Nations, Geneva.
- Wang, Y. (Ed.) (2003). *Construction within contradiction: Multiple perspectives on the relationship between China and international organisations*. Beijing: China Development Publishing House.
- WBGU (German Council on Global Change) (2007). *Climate change as a security risk*. Berlin: Earthscan.
- Wilhem, J. (2005). The Chinese communities in South Africa. In S. Buhlungu, J. Daniel, R. Southall, & J. Lutchnan (Eds.), *State of the nation: South Africa 2005–2006*. Cape Town: HSRC Press.
- Winters, L. A., & Yusuf, S. (2007). Introduction: Dancing with giants. In L. A. Winters, & S. Yusuf (Eds.), *Competing with giants: Who wins, who loses?* (pp. 1–25). Washington, DC: World Bank.
- World Watch Institute (2005). *State of the world 2006. The challenge of global sustainability*. London: Earthscan Publications, XXX.