CHINA, INDIA, AND AFRICAN MANUFACTURING

Framework for Understanding the Impact of Aid and Migration

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1. Introduction

This paper attempts to analyse two variables that are not regularly considered when discussing the impact of China and India on African manufacturing: Aid and migration. The two are among the channels through which China and India affect African manufacturing and, through manufacturing, development outcomes. The other channels, trade and foreign direct investment, are treated in a separate framework paper (Alemayehu 2006).

The impact of China and India on Africa’s development can be conceptualised by looking at two levels (see Figure 1). In the first level, effects flow through the four main channels of trade, FDI, aid, and migration to shape the manufacturing sector. The impact may be direct or indirect, complementary to the country’s own efforts or competing with them (Kaplinsky et al. 2006). Aid, for instance, may flow directly to the manufacturing sector, or it may help the sector indirectly by funding infrastructure improvements that allow greater efficiency or more timely deliveries. Many of these impacts also have feedback effects as, for example, when FDI boosts the manufacturing sector, which in turn creates confidence that generates additional FDI.

The centrepiece of this analysis is the manufacturing sector. In each country and in Africa as a whole, the manufacturing sector can be described by its size, structure, performance, and market orientation. Impacts flowing through a particular channel may affect all or only some of these. Impacts through trade, for example, may affect large firms positively by promoting export growth, but at the same time intensify competition in the domestic market where small firms predominate. If some of these are forced to leave the sector, the net effect of these impacts will be changes in both the overall size and the size structure of manufacturing. Infrastructural aid, by improving certain roads or ports and not others, may shift the locational distribution of manufacturing, while technical assistance may change the technology or product quality of individual firms.

1 I am grateful to Raphie Kaplinsky, Mike Morris, and Ademole Oyejide for constructive comments on earlier drafts of this paper, to Peter Ligulu and Rosalind Louth for research assistance, and to participants in the AERC Asian Drivers Framework workshop for their helpful input. All errors and omissions remain my responsibility.

2 A similar analysis could be performed using a different centrepiece. One could, for example assess the impact of China and India on agriculture, energy, mining, education, health, etc. considering the same channels. In these cases, the outcomes might be the same or might be adjusted to fit the likely outcomes of China and India’s activity in the particular sector.
The second level of the analysis is the developmental outcomes flowing from these changes in the manufacturing sector. What happens, for example, when the manufacturing sector increases in size both absolutely and relative to the rest of the economy? Four major development outcomes have been identified, though undoubtedly others are possible (Kaplinsky et al. 2006). Growth, the first of these, results from improved performance at firm level, certain types of structural shifts, overall growth of the manufacturing sector, as well as from changes in market orientation. Growth also has feedback effects into manufacturing, as a growing economy usually generates demand for manufactured goods. The second development outcome is changed distribution. As the manufacturing sector grows and/or shifts its structure, income and wealth do not necessarily grow evenly. In the example above, where large export-oriented firms grow while small ones struggle, there may be shifts in income and wealth away from small producers towards large ones. Urban export-oriented factories may attract workers from rural pursuits, thus shifting the rural-urban population distribution. Distributional changes may also have feedback effects into manufacturing. An obvious example is the change in demand for manufactures caused by increased urbanisation. The third outcome is governance. Changes in the manufacturing sector may place new demands on the institutions of government. A larger flow of FDI that brings with it increased requests for expatriate managers may require a more finely tuned immigration system than was previously thought necessary. Manufacturing sector growth and shifts may also require government to update its labour laws and regulations and the related institutions for managing labour relations and conflicts. Finally, the fourth outcome is the environment. Change and/or expansion of the manufacturing sector often brings with it environmental challenges in the form of increased pollution, the need for better waste management systems, and so forth. Policy implications can be drawn from the four outcomes, taken singly and together.

With this general framework in place, we now turn to a more detailed presentation of two of the channels: aid and migration. We consider the two separately, while at the same time recognising their linkages, both with each other and with the other two channels. In both cases, we first provide some general background before taking up the specific impacts of China and India on African manufacturing and the outcomes associated with those impacts.

2. Aid

Country-to-country development aid\(^3\) is a fairly recent phenomenon. Most histories begin with what is probably considered to be one of the most successful efforts, the Marshall Plan in which the US Government assisted European countries to reconstruct after the devastation of World War II. Aid to Africa began later, but by the 1980s was already a significant factor in the budgets of many countries. The nature of this aid appears to have been shaped by two key considerations: first, prevailing (and changing) understandings of the development processes and second, the strategic concerns of the donors.

\(^3\) Development aid can be distinguished from disaster relief because it usually has a goal of creating conditions for longer-term development, rather than simply helping victims (governments and individuals) to survive the immediate difficulties caused by a natural or human-made catastrophe. A third category of aid is military aid, which is assistance toward the procurement of weapons or the training of military personnel.
Since the end of the Cold War in 1989, the rich countries of Europe and North America, together with Japan, Australia, and New Zealand have been the main bilateral donors. Recipients were the countries of Africa, Latin America, the Middle East, and the poorer parts of Asia. The direction of aid was, in other words, rich country to poor country and mainly North to South. The first decade of the 21st century is, however, witnessing a change in the composition of the donor group. Both China and India have entered the ranks of donors and early observations suggest that their presence may have an impact on the development of African economies in general and on manufacturing in particular (Kaplinsky et al. 2006).

2.1 Aid and Development
The Human Development Report for 2005 pointed out that aid is both a moral imperative and a self-interested response to the threat posed by a very unequal world (UNDP 2005: 78-79). Over its history, aid has been directed at both development and non-development aims. The main examples of the latter are disaster relief and military aid. Even development aid is extremely varied. Some efforts address capacity constraints such as poor infrastructure, lack of basic health and education facilities, and inadequate human resources in government. Others support programme needs either directly or by financing the recipient country’s budget.

The discussion of aid would be incomplete without making a clear distinction between programme aid in general, which includes budgetary support, and other forms of non-project specific grants and concessional loans. Originally the International Monetary Fund (IMF) was supposed to do programme aid and the World Bank, project aid, but the Bank now spans both. Bilateral institutions also do both, often in tandem, and often linked by conditionality. The clear conceptual distinction between project and programme aid is, of course, blurred in reality because aid can be fungible. By freeing resources that would otherwise have been used for a particular purpose, project aid can in fact become programme aid.

The notion of “aid conditionalities” is also essential for understanding the practice of both bilateral and multilateral aid. The World Bank, in the 1980s began requiring African countries to develop what came to be called Structural Adjustment Programmes (SAPs) to remedy imbalances that had arisen in their macro-economic frameworks. Structural adjustment includes policy changes affecting both the internal operations of a country and its relations with the rest of the world. Among the most common internal measures were cutting social expenditures, requiring user fees for basic services such as health and education, deregulating domestic markets, privatising state-owned enterprises, removing price controls and state subsidies, and reducing public employment. External measures included devaluing overvalued currencies, promoting exports, encouraging foreign investment, reducing tariffs, and removing import restrictions.

Two important criticisms of SAPs emerged from what proved to be a long and heated debate. The first is that they were often implemented hastily and without sufficient consideration for their likely consequences for vulnerable groups. The World Bank itself began to recognise that Africa’s large proportion of poor people made adjustment prone to inflict hardship on the poor (World Bank 1994: 168). This realisation led to a new emphasis on poverty and the development of Poverty
Reduction Strategy Plans. Critics, however, saw these as simply a new means for imposing old conditions. The second is that by being imposed from the outside, they further weakened the authority and capacity of African states. One of the more thoughtful critics of SAPs addresses the latter issue, arguing that while “market and private-sector initiatives should no doubt be the fulcrum of economic activities, the transformation of most developing countries to higher levels of economic performance cannot occur without a relatively efficient, capable, and willing state (Mkandawire and Soludo 1999: 128).

2.2 Aid to Sub-Saharan Africa

For nearly a decade after independence, many African countries recorded fairly respectable growth records before beginning to decline after the oil crisis of the mid-1970s (Mkandawire and Soludo 1999). By the 1980s average growth rates were negative. Moreover severe droughts, persistent conflicts in several countries, and poor governance wrought havoc on the economic and social conditions of the Continent. These conditions, combined with the relative improvement of living standards in Asia and Latin America, led donors to focus increasing attention on Africa.
Table 1: OFFICIAL DEVELOPMENT ASSISTANCE (ODA) RECEIVED
(Net Disbursements to Selected Countries)

<table>
<thead>
<tr>
<th>HDI Rank</th>
<th>COUNTRY</th>
<th>Total (US$ Millions)</th>
<th>Per Capita (US$)</th>
<th>As % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>South Africa</td>
<td>624.90</td>
<td>13.80</td>
<td>..</td>
</tr>
<tr>
<td>131</td>
<td>Botswana</td>
<td>30.10</td>
<td>17.50</td>
<td>3.90</td>
</tr>
<tr>
<td>138</td>
<td>Ghana</td>
<td>906.70</td>
<td>44.40</td>
<td>9.60</td>
</tr>
<tr>
<td>141</td>
<td>Sudan</td>
<td>621.3</td>
<td>18.5</td>
<td>6.2</td>
</tr>
<tr>
<td>144</td>
<td>Uganda</td>
<td>959.40</td>
<td>38.00</td>
<td>15.50</td>
</tr>
<tr>
<td>146</td>
<td>Madagascar</td>
<td>539.50</td>
<td>31.90</td>
<td>12.90</td>
</tr>
<tr>
<td>149</td>
<td>Lesotho</td>
<td>79.00</td>
<td>44.10</td>
<td>23.00</td>
</tr>
<tr>
<td>154</td>
<td>Kenya</td>
<td>483.50</td>
<td>15.20</td>
<td>13.90</td>
</tr>
<tr>
<td>158</td>
<td>Nigeria</td>
<td>317.60</td>
<td>2.30</td>
<td>0.90</td>
</tr>
<tr>
<td>160</td>
<td>Angola</td>
<td>498.70</td>
<td>36.90</td>
<td>2.60</td>
</tr>
<tr>
<td>164</td>
<td>Tanzania, U. Rep. of</td>
<td>1669.30</td>
<td>46.50</td>
<td>27.50</td>
</tr>
<tr>
<td>166</td>
<td>Zambia</td>
<td>560.10</td>
<td>53.80</td>
<td>14.60</td>
</tr>
<tr>
<td>167</td>
<td>Congo, D.R</td>
<td>5381.00</td>
<td>101.20</td>
<td>9.60</td>
</tr>
<tr>
<td>168</td>
<td>Mozambique</td>
<td>1032.80</td>
<td>55.00</td>
<td>40.70</td>
</tr>
<tr>
<td>170</td>
<td>Ethiopia</td>
<td>1504.40</td>
<td>21.90</td>
<td>11.80</td>
</tr>
<tr>
<td>171</td>
<td>Central Africa Republic</td>
<td>49.90</td>
<td>12.90</td>
<td>16.80</td>
</tr>
<tr>
<td>172</td>
<td>Guinea Bissau</td>
<td>145.20</td>
<td>97.50</td>
<td>52.70</td>
</tr>
<tr>
<td>173</td>
<td>Chad</td>
<td>246.90</td>
<td>28.80</td>
<td>18.00</td>
</tr>
<tr>
<td>174</td>
<td>Mali</td>
<td>527.60</td>
<td>45.30</td>
<td>19.90</td>
</tr>
<tr>
<td>175</td>
<td>Burkina Faso</td>
<td>451.10</td>
<td>37.30</td>
<td>10.60</td>
</tr>
<tr>
<td>176</td>
<td>Sierra Leone</td>
<td>297.40</td>
<td>55.70</td>
<td>9.40</td>
</tr>
<tr>
<td>177</td>
<td>Niger</td>
<td>453.30</td>
<td>38.50</td>
<td>16.00</td>
</tr>
<tr>
<td></td>
<td>Sub-Saharan Africa</td>
<td>22,691.8T</td>
<td>32.90</td>
<td>12.00</td>
</tr>
</tbody>
</table>

Source: UNDP 2005:282-83

Most Sub Saharan African countries receive some aid, but the size of the aid and its relative importance in countries’ economies varies considerably. Table 1 provides details on official development assistance to 22 countries in Sub Saharan Africa. The countries are listed according to their ranking on the Human Development Index (HDI) of the United Nations Development Programme (UNDP). This gives a rough guide to the countries’ relative living standards. The ordering suggests that, although in general countries with a better HDI receive smaller amounts of aid per capita, the negative correlation between aid and human well-being is far from perfect.

Examination of Table 1 suggests that other factors are at play in the determination of aid amounts. The Democratic Republic of Congo received the highest amount of aid, in total (US$5.4 billion in 2003), per capita (US$ 101), and as a percentage of GDP (95%). The Congolese figure is probably an overstatement. Nevertheless the country is highly dependent on aid as a result of persistent conflicts that have ruined the economy over the last decade. Botswana received the least total aid (US$ 30 million), but Nigeria’s aid was smallest in per capita terms (US$2.30). On average, aid per capita in Sub Saharan Africa was $33 in 2003. Aid as a proportion of GDP ranged from negligible in South Africa and Botswana to almost total in the DRC. Dependence on aid decreased in 12 of the 23 countries listed in the table, and
increased in 8. On average, however, the ratio of aid to GDP increased from 12% in 1990 to 18.6% in 2003, no doubt reflecting the major increases in the aid ratio in the DRC and Sierra Leone.

### 2.3 Impact of Aid

Understanding the impact of aid on recipient countries depends on the answers to five basic questions:

1. Why do they give?
2. What form does the aid take?
3. What do they support?
4. On what conditions?
5. What are the recipients’ other options for support of this or similar needs?

The questions point to five key variables to be investigated: Motives for aid, forms of aid, areas of support, terms and conditions, and recipient countries’ other options. Table 2 lists these variables together with the possible responses to the questions, which in turn can be used as secondary variables.

In theory, the motives for aid can run the gamut from a self-centred aim of promoting the strategic or political interests of the donor to pure altruism. The reality tends to be a mix of motives. The goals of aid programmes are often stated in altruistic terms, including the language of poverty eradication, helping poor countries to industrialise, etc. Elements of donor self-interest are sometimes couched in phrases such as “mutual benefit” or may be implicit in the terms and conditions or programme design. Political and strategic concerns and history seem to be particularly important. A major study of the giving patterns of Western donors suggests that colonial past and political alliances were major aid determinants in the last quarter of the 20th century (Alesina and Dollar 2000). For example, the three biggest donors – US, Japan, and France – had noticeable biases in their patterns of aid. The US targeted about one-third of its aid budget to Egypt and Israel; France gave overwhelmingly to its former colonies; and Japan’s aid favoured countries that voted with it in the UN.

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4 There was no data for South Africa in 1990.
Aid takes two main forms, monetary and non-monetary. Monetary aid includes grants and concessionary loans. Non-monetary aid includes debt relief, ‘free’ or low-cost technical assistance, access to scholarships or training programmes, tariff exemptions, and outright gifts of buildings, equipment, or other capital goods. The line between monetary and non-monetary aid is blurred in categories such as debt relief and tariff exemptions, where money that might have been collected is foregone.

Much has been said about donor conditionalities. Most of this rightly focuses on the areas of macro-economic reform, poverty reduction strategy papers (PRSPs), and the current “good governance” agenda of both bi-lateral and multi-lateral donors. SAPs undermined industrial policy by forcing through a range of policies that are in the industrial policy agenda, including tariff liberalisation, privatisation, removal of sectoral incentives, and export promotion. By pre-empting the industrial development planning process, the donors forced governments into a responsive mode that has undoubtedly had an adverse effect on state capacity and may also have slowed or skewed the growth of the manufacturing sector (Mkandawire and Soludu 1999; Chang 2002).

SAPs and the Poverty Reduction Strategy Papers of the 1990s are not, however, the only terms and conditions donors place on their aid. Nearly all, if not all, aid agreements include major sections on requirements for financial and technical accountability. At a broader level, countries continue to select their partners based on strategic and political interests and, in many cases, make support for these an explicit condition for giving aid. Aid tying is another condition placed on aid that, according to most analyses, represents a cost to the recipient country (UNDP 2005: 102-03; Osei 2005). The full extent of tied aid is not known because of unclear or incomplete reporting by donors. Donors vary in the extent to which they tie their aid. The United

<table>
<thead>
<tr>
<th>Key Variable</th>
<th>Secondary Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motives for aid</td>
<td>• Strategic or political interests</td>
</tr>
<tr>
<td></td>
<td>• History</td>
</tr>
<tr>
<td></td>
<td>• Mutual benefit</td>
</tr>
<tr>
<td></td>
<td>• Altruism</td>
</tr>
<tr>
<td>Forms of aid</td>
<td>• Monetary, fully or partly tied</td>
</tr>
<tr>
<td></td>
<td>• Monetary, not tied</td>
</tr>
<tr>
<td></td>
<td>• Non-monetary</td>
</tr>
<tr>
<td>Areas of support</td>
<td>• Country budget</td>
</tr>
<tr>
<td></td>
<td>• Projects or programmes</td>
</tr>
<tr>
<td></td>
<td>• Financial assistance for key investments</td>
</tr>
<tr>
<td></td>
<td>• Debt relief</td>
</tr>
<tr>
<td></td>
<td>• Training</td>
</tr>
<tr>
<td></td>
<td>• Technical assistance</td>
</tr>
<tr>
<td></td>
<td>• Tariff exemptions</td>
</tr>
<tr>
<td>Terms and conditions</td>
<td>• Financial and technical accountability</td>
</tr>
<tr>
<td></td>
<td>• Support for donor’s strategic and/or political interests</td>
</tr>
<tr>
<td></td>
<td>• Macro-economic reform</td>
</tr>
<tr>
<td></td>
<td>• Progress towards “good governance” and/or “good management”</td>
</tr>
<tr>
<td></td>
<td>• Purchases of goods and services from donor country (Tied aid)</td>
</tr>
<tr>
<td></td>
<td>• Other</td>
</tr>
<tr>
<td>Other options</td>
<td>• Own resources (taxes, borrowing)</td>
</tr>
<tr>
<td></td>
<td>• Other donors, especially those with whom they have an existing relationship</td>
</tr>
</tbody>
</table>
States tops the list, with Italy, Germany, and Japan tying significant portions of their aid (UNDP 2005: 102). Ireland, Norway, and the UK, on the other hand, rarely use tied aid. Other conditions on aid vary considerably from one country to another.

Finally, understanding the impact of aid requires a careful look at the options that a country has. Countries that can finance development out of their own resources are in a much stronger position than those that cannot. The poorest, most aid-dependent countries may feel forced to accept aid packages that would be refused or renegotiated, were they in a stronger bargaining position. Their acceptance may be influenced by their belief that it is the only way to get aid for some badly under funded sector – even if it does not need what is being offered -- or because they cannot risk alienating an important donor.

Studies of sources of aid are also beginning to look at the twin issues of donor proliferation and coordination, raising questions about their effects on the capacity of states to set and follow their own development objectives (Morss 1984, Whittington and Calhoun 1988, Knack and Rahman 2004).

### 2.4 Patterns of Chinese and Indian Aid

China and India have different histories of development and aid that have given rise to different aid patterns. First of all, both China and India have seen sustained rates of growth exceeding 7 per cent per year. Between 1985 and 2000, China’s share of global manufacturing added grew from 1.4 to 7.0 per cent (Asian Drivers Team 2006). India’s growth, while less spectacular has also been impressive. In terms of human development, China now ranks no. 85 in the world, placing it well above all of the countries of Sub Saharan Africa. India, however, ranks below South Africa (no. 127 compared to no 120 for SA).

Both countries have recently been recipients of aid. China’s aid as a proportion of GDP dropped from 0.6% in 1990 to 0.1% in 2003, while India’s dropped from 0.4% to 0.2% over the same period. In both countries 2003 aid averaged approximately US$ 1 per capita (UNDP 2005: 281). Both are now making the transition from aid recipient to aid donor, and both have stated policies that favour aid to Africa.

Formal links between China and Sub-Saharan Africa go back to the Bandung Conference in 1955. Until the mid-1990s, much of this aid went towards liberation movements and the attempts to isolate Taiwan. Since the 1990s, this appears to have changed, with aid being increasingly directed towards broader strategic goals, especially the development of links with resource-rich SSA economies (Kaplinsky et al. 2006; Muekalia 2004; Brookes and Shin 2006; Pan 2006). In October 2000, the China-Africa Cooperation Forum, which was held in Beijing, emphasised the need to enhance co-operation between China and financial institutions in Africa. During the Forum, China also expressed willingness to reduce Africa’s debt burden, promote investment, and assist in the development of human resources in Africa (Muekalia 2004). China’s Africa Policy, adopted in early 2006, states that China-Africa relations are to be based on five principles: Sincerity, equality, mutual benefit, solidarity, and common development. The policy also reiterates that the one-China principle is the
political foundation for the establishment and development of China’s relations with African countries and regional organisations (China 2006).

Although trade, migration, and other contacts have linked India to Africa, especially Eastern Africa, for several centuries, formal relations were formed only as both emerged from colonialism in the 1950s and 1960s. Gandhi’s message of non-violence and passive resistance inspired many black leaders in Africa and, as the Cold War began, Nehru’s principle of non-alignment appealed to Africans (Beri 2003). India’s “Focus Africa Policy”, which has involved high level visits, economic and technical cooperation, and an Indian contribution to peacekeeping operations in several African countries (www.indianembassy.org).

The aid practices of China and India differ in some important and inter-related respects both from one another and from the traditional Western donors. Both countries appear to be motivated by a combination of altruism, mutual benefit, and strategic interests. As in the case of Western donors, India and China emphasise motives like altruism and mutual benefit in public statements, but these can be difficult to disentangle from the more pragmatic strategic and economic interests. China’s quest for natural resources, especially oil, is well documented (Economy 2004, Pan 2005, Lyman 2005). India’s need for oil receives less attention, yet India imports some 75 per cent of its oil needs, compared to 33 per cent for China (Pan 2006). Both countries are growing rapidly and apparently recognise that, despite some traditional suspicions, they can benefit from collaboration. One concrete example of such collaboration is the landmark energy cooperation deal reached in January 2006 that attempted to contain energy prices by preventing the two giants from bidding against each other for energy resources (Pan 2006, Varadarajan 2006). The two countries are also planning to cooperate in related areas, such as oil recovery technology, IT-enabled exploration and production, and new energy transport mechanisms (Varadarajan 2006).

Important as it is, oil is not the only motivation for China and India to establish stronger relations with Africa. Both countries appear to have aspirations to become major political and economic forces in the world. Stronger economic and political relations with Africa appear to be part of their strategy. Both countries have dramatically increased trade with Africa, especially in textile products since the end of the Multi Fibre Arrangement, and in shoes and other labour intensive manufactures (Lyman 2005, Kaplinsky et al. 2006, Tegegne 2006, Alemayehu 2006). China has raised its political profile in both Asia and Africa by signing numerous cooperative agreements and making an increasing number of high-level visits (Economy 2005; Roughneen 2006). In Asia China has also put forth proposals to develop new security arrangements and has taken initiatives on issues as diverse as the environment and drug trafficking. India is also trying to raise its regional and international standing, but it is not yet as strong a force as China (Pan 2006). India’s poverty and inequality at home remain serious problems (Purfield 2006, Hallinan 2006). Nevertheless India has an active Africa policy and appears to be trying to build its technical assistance programmes around its strength in information and communications technology.

China gives both monetary and non-monetary aid. China expects to increase its level of aid to Africa. It pledges in its Africa Policy (China 2006) to “provide and gradually increase assistance to African nations.” China typically comes to an African country
India, on the other hand, does not see itself as able to offer grants-in-aid (Indian Technical and Economic Cooperation Division, 2006). Rather India confines itself to non-monetary aid, such as scholarships, technical training, and technical assistance. Overall, the two countries use the same basic types of aid as Western donors, but India chooses a more limited range of these (see Table 3).

Neither China nor India acknowledges giving loans or grants for general budget support, though China’s recent offer of a US$2 billion credit to Angola to help to rebuild the country and its infrastructure seems to fit into that category (Edinger and Roberts 2006: 9). China, however, does give debt relief, which for the recipient has a similar effect because it is usually not tied to any project or programme. In 2003 China cancelled a debt of US$ 66 million owed by Ghana and at the same time gave an interest free loan of US$ 28 million for highway construction (Edinger and Roberts 2006: 8).

China gives grants and loans for infrastructure, plant and equipment. These include railway projects in Nigeria, Ghana, and Tanzania, as well as a hydroelectric plant in the DRC and road building projects in several countries (Kaplinsky et al. 2006; Edinger and Roberts 2006: 8, 10-11; Fujita and Mochizuki 2006). Most Chinese assistance in supplying plant and equipment comes through Chinese companies. Kenya is one of the beneficiaries of such aid, but the sources of information do not indicate whether the companies are state owned corporations or private sector firms (Fujita and Mochizuki 2006).

Both China and India give Africans scholarships for academic programmes. China offered 15,600 scholarships to 52 African countries in 2005 (Kaplinsky et al. 2006). India is also host to many students from Africa. India is a favourite destination for students from English speaking Africa because of the use of English in instruction. Study programmes are discussed more fully in the next section.

India also offers technical training through the Technical and Economic Cooperation (ITEC) Division of the Ministry of Foreign Affairs. Information about specific courses is disseminated through ITEC to partner countries. Twenty-one African countries are included in the list of ITEC countries. The government of India funds the full cost of training for the selected candidates. In the 2004-2005 year,
approximately 3,400 foreign trainees benefited from these programmes, but it is not clear what proportion of these was from Africa (http://itec.nic.in/about.htm).

Both China and India also offer technical assistance in the form of consultancies and specific assistance in development activities. More than 600 Chinese teachers and 15,000 Chinese doctors have worked in SSA in recent years (Kaplinsky et al. 2006). Angola has been a major beneficiary of this type of aid. Specialists in different medical fields were sent to train and assist Angolan staff in a new hospital that was built by a Chinese firm (Edinger and Roberts 2006: 9). India cites its experience in small and medium scale industries, agriculture and financial management as particularly relevant to developing countries (http://itec.nic.in/about.htm).

One other form of aid, used only by China, is the tariff exemption. This form of aid could play a significant role in the development of manufacturing. In 2005 Beijing scrapped tariffs on 190 import items, including food, textiles, minerals, and machinery (Kaplinsky et al 2006). Although the China Monitor (2006) credits this move with responsibility for replacing Africa’s trade deficit with China with a surplus of US$900 million, it is likely that the tariff exemptions were only part of the reason, with increased oil exports accounting for the rest. China has introduced a form of trade-related aid that is not commonly used by other countries, the voluntary export restraint. In mid 2006, China cut exports to South Africa by one third in an effort to protect the South African textile industry (Edinger and Roberts 2006). Such actions suggest that Chinese aid is intertwined with trade in ways that make it difficult to separate the two.

China and India differ from Western donors on the terms and conditions imposed on aid recipients. China places only one condition on its aid: adherence to its “one China policy”. China continues to assert that there is one China that encompasses the mainland and the island of Taiwan and will not, therefore, give aid to any country that recognises Taiwan as an independent country. The general lack of conditions, combined with China’s active support for countries like Zimbabwe and Sudan that have poor human rights records, has led to concern that Chinese aid policy could have negative effects on the people in recipient countries (Kaplinsky et al. 2006; Manning 2006).

2.4 Chinese and Indian Aid and African Manufacturing

Assessing the impact of Chinese and Indian aid on African manufacturing, as distinct from the general development of SSA, requires an understanding of how aid can facilitate industrial development. Textbook development economics identifies a number of processes that lead to industrial development: General economic growth, improvements in productivity, technological development, structural transformation, development of supporting institutions, spread of global markets (Kuznets 1971, Todaro 1985, Freeman and Soete 1997, Yang 2003). While all of these will ultimately create internal resource flows, all require resources to see them through their early stages. Aid is believed to be able to substitute to some extent for insufficient local
resources by providing investment capital, human resource development, and market access.\(^5\)

Some of the specific types of aid expected to have an impact on manufacturing are the following:

*Investment in manufacturing plant and equipment:* Such aid is more likely to come from China than from India, and to be interlinked with foreign direct investment. If it is new investment, the most obvious direct effect is on the size of the output. Investment in more modern plant and equipment may also directly result in greater efficiency and higher quality products.

*Investment in infrastructure:* Infrastructure aid is also more likely to come from China than India. To the extent that such aid uses local materials such as cement, locally made equipment or parts, etc, it may boost the manufacturing sector directly. Indirect effects of aid that improves roads, ports, electricity supply, water supply, communications, and other elements of a country’s physical infrastructure indirectly will be increased output, greater production efficiency, and shorter lead times. A further indirect effect might be increased demand for manufactured goods by construction workers, transporters, and others with jobs generated by the infrastructure aid.

*Academic and technical training:* Aid that improves the human capital of government, especially but not only, in the ministry of industry, may facilitate the development policies that promote investment in manufacturing. The impact on manufacturing is indirect, but could be quite substantial. Aid that improves the human capital of industry should directly promote managerial and technological upgrading in existing industries and encourage the development of more complex and technologically sophisticated manufacturing. Although both China and India give scholarships and training, the lack of information about the types of programmes and nature of beneficiaries means that it is difficult to know whether the supposed benefits are realised in practice or are merely hypothetical.

*Tariff exemptions:* Aid that facilitates exports of manufactured goods should have a direct and positive effect on output. It should also indirectly promote further investment in manufacturing. Preliminary evidence from China’s use of such exemptions suggests that the effects on output and the trade balance are positive, but more detailed investigation is needed.

*Untied aid:* Aid to any sector that encourages the use of aid funds to purchase locally manufactured goods will increase demand for such goods and thus have a direct and positive effect on manufacturing. Aid that is tied to purchases of foreign goods and services is likely to have adverse effects on local manufacturing.

*Debt relief:* The freeing of resources that would have been spent on debt service may have either direct or indirect effects on manufacturing. The effect would be direct if government uses the released funds to achieve specific objectives to promote the manufacturing sector. The effect would be indirect if government uses the funds to invest in infrastructure, health care, education, and other areas that could have spill over effects into manufacturing.

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\(^5\) Foreign direct investment, which is also believed to play a similar role, is discussed elsewhere (see Alemayehu 2006).
General budget support: The effects of general budget support are similar to those of debt relief. The exact effects will depend on the place of the manufacturing sector in the country’s budget.

As discussed above, changes in the manufacturing sector have the potential to bring about specific development outcomes (see Figure 1). We discuss these in the four broad areas of economic growth, distribution, governance, and environment.

The main effects on economic growth will come from increased manufacturing output, resulting from greater demand, local and foreign investment, and improved infrastructure. Other sectors may contribute to growth since, as manufacturing employment grows – assuming most will be labour-intensive – there should also be growth in agriculture and services. Furthermore, the construction sector, at least in the short run, will boost GDP through the building of infrastructure.

There are many possible distributional effects arising from changes in the manufacturing sector. Increases in labour-intensive manufacturing activities may attract workers from rural areas, changing the rural-urban distribution of both population and incomes. On the other hand, improved technologies may reduce the need for unskilled workers, adversely affecting their incomes. Focus on sectors such as garments and textiles, where women workers predominate, is likely to affect the gender distribution of income. The location of new or improved infrastructure will influence investment decisions, thus affecting the geographic distribution of employment opportunities. Production for export may be accompanied by wage squeezes as producers try to survive in competitive international markets (see Kamau 2006). Aid that favours large or small firms may influence the overall distribution of income between rich and poor. India’s technical assistance, some of which focuses on small enterprises, could in theory have positive distributional effects. In practice, however, the number of beneficiaries is small so the impact is likely to also be small. In general, the actual effects on distribution are difficult to predict because of the interaction of several variables that change simultaneously.

Much has been said about the potential negative effects on governance of Chinese aid. Mostly this is general and hypothetical, making it difficult to pinpoint effects channelled through the manufacturing sector. In general, China’s aid could displace some Western aid and reduce the impact of the ‘good governance’ agenda. If that is the case, then governments may be less capable or less inclined to develop, enact, and/or implement the policies that would moderate the potential negative effects of changes in the manufacturing sector. On the other hand, Kamau (2006) points to a potential benefit of Chinese involvement in the construction industry. He notes that a Chinese construction company asserts that the operation of Chinese companies in Kenya has resulted in more efficient and timely completion of projects because the Chinese act as competitors to local firms, which had previously been colluding to overprice their contracts.

Increased manufacturing activity is likely to have negative effects on the environment, including water pollution from industrial effluent, increased solid waste, increased air pollution resulting from greater use of transport, and so forth. These are not necessarily specific to the Asian Drivers, but are the consequences of increased production in settings where environmental protection is often not high on the
government’s agenda. The precise effects will depend on the nature of the activities, their location, and each country’s own environmental policies. Neither China nor India have strong environmental records at home, so may not be inclined to consider the environment in the application of aid in Africa. The 2005 Environmental Sustainability Index ranks India number 101 and China number 133 out of 146 countries (Esty et al. 2005).

3. Human Migration

Humans have always moved from one place to another. Their movement affects the places they leave, the places they go, and sometimes the places they pass through. Migration is a vast subject and a full treatment of all its forms and impacts is far beyond the scope of this paper. Our discussion will therefore be limited to those particular forms of migration that seem likely to be channels for impacts of India and China on African manufacturing. The literature reveals at least four such channels:

1. Migrant workers
2. Refugee and/or settler populations
3. Africans who have studied in China or India
4. Chinese and/or Indian diaspora in Africa and elsewhere

Detailed discussion of these channels can be best understood in the context first, of the general relationship between migration and development and second, of the actual migration patterns between China, India, and Africa.

3.1 International Migration and Development

The United Nations considers all persons living outside their country of birth to be migrants. Out of 191 million migrants in 2005, 75 million, or nearly 40%, lived in developing countries (United Nations 2006). The UN identifies four main categories of migrants:

1. *Settler migrants* are persons who go to another country seeking permanent residence. Countries such as Australia, Canada, New Zealand, and the United States admit foreigners as immigrants, granting them the right to permanent residence and eventually, citizenship.
2. *Migrant workers* are persons who go to a foreign country for the sole purpose of exercising an economic activity. Usually they are granted temporary permission to stay and work in the receiving country, but the type of work performed may be restricted. In developed countries, these are often low-skilled migrants, but in many African countries the system of “work permits” places similar restrictions on skilled foreigners.
3. *Migrant students* are foreigners admitted to a country to pursue courses of study or training in accredited teaching institutions. The understanding is that migrant students will return to their country of origin upon completion of their course. The reality is, however, sometimes different. Some migrant students remain in the country in which they have studied, while others migrate to a third country.
4. **Refugees and asylum seekers** are those accepted by the UN and/or receiving countries as persons driven to leave their homes by political conditions in the home country. Persons granted refugee status or permitted to stay in a receiving country are usually granted social and economic rights, including the right to work, and therefore have an impact on economic outcomes similar to those of migrant workers. In some cases, they eventually become settler migrants.

Migration affects development in both the host and recipient countries. Available evidence suggests that international migration is usually positive both for countries of origin and destination. Its potential benefits may exceed those from freer international trade, especially for developing countries (United Nations 2006: 13). The exact impact of migration, however, depends on at least four factors: the personal characteristics and motivations of the migrant, conditions in the home country, conditions in the receiving country, and the extent and nature of the linkages the migrant maintains with the home country.

The migrants’ gender, education, skills, and previous experience largely determine both the economic loss to the home country and the potential gain to the country of destination. In general, it has been assumed that the migration of low skilled workers produces gains at home because first, their higher wages in developed countries generate surpluses that are transferred back in the form of remittances, and second, the departure of “surplus labour” does not negatively affect the home-country economy. Migrants’ remittances, it is argued, help developing countries. Households receiving remittances from migrant relatives are not only more likely to invest but their increased spending also helps to raise incomes elsewhere in the economy (United Nations 2006: 13). Some, however, argue that remittances only foster development when other factors are in place. Using evidence from Latin America, Portes (2006) claims that migration is much more likely to have positive effects on both the home and host countries when migration is cyclical rather than permanent. When the normative pattern is to return home after temporary stays abroad, migrants are more likely to make productive investments at home and to avoid serious social problems in the next generation.

Highly skilled migration and the migration of people for higher education or technical training affect development in different ways. “Brain drain” – the migration from developing countries of its most skilled people -- is a genuine problem, especially for small national economies (United Nations 2006: 14). There is evidence, however, that skilled migration is not always negative. The Indian software industry has, for example, exhibited patterns of temporary mobility that has actually had positive effects on the local industry (Commander et al. 2004). More generally, the migration of skilled workers has been credited with bringing new ideas, technology transfers, and other positive benefits to the home country. How widely such “brain gains” are available and in what industries and countries needs careful study.

Those who study outside of their home country usually gain beyond the academic content of their programmes. Study abroad programmes and, by extension, other foreign study, should bring about changes in students’ attitudes, skills, understanding and appreciation of the world and their place in it, and future employment opportunities (Lashbrook et al. 2002, Williams n.d.). There is, however, little research
or no on the effects of studying abroad on students going from one developing country to another, so the relative importance of these benefits to them is still unknown.

Networks are key to understanding the links between migrants and their friends and relatives elsewhere. A network is generally defined as a specific type of relation linking a defined set of persons, objects, or events (Knoke and Kukliński 1982, Mitchell 1969). Networks are categorised in various ways: by function, by membership, by origins, by geographic spread, and so forth. Social networks, for example, link migrants with their kin and communities in sending countries, and, in some cases, also link employers in receiving areas to sources of migrants (Portes 2006). Such networks are sometimes contrasted with enterprise-based networks such as a firm’s network of suppliers. Networks have long been recognised as dynamic. Individuals find their way into networks and drop out of them; the underlying environment changes; the linkages between network members become stronger, weaker, or simply different. Theoretically at least, each change creates a new network. Networks can be analysed by examining the characteristics of the nodes, the types of connections, and the overall structure of the network (Knoke and Kukliński 1981; Schensul et al. 1999).

Some migrant networks have roots in past migrations, while others are fairly recent in their origins. Relevant examples of the former are the Chinese Overseas Networks and the networks of People of Indian Origin (PIOs) (Dicken 2003, Redding 1995, Gregory 1993). Social networks are closely linked to the concept of a diaspora. Recent thinking mixes contemporary diaspora with issues of transnationalism and globalisation (Reis 2004). People who have left their country of origin can now maintain close ties with people and situations at home as well as with those who have migrated elsewhere. The influence of a diaspora is a function of both its own characteristics and those of the country of origin (Kapur 2004). For example, a highly educated diaspora that keeps in close touch with events at home is likely to exert considerable political and economic influence, provided that the home country is receptive to its ideas.

Members of a diaspora are not always well connected to each other, nor do they necessarily have common goals. A diaspora that is well linked, however, or that has significant segments that are actually or potentially in touch with one another, can influence business development by giving rise to transnational ethnic business networks. Such networks are formed as co-ethnic migrants link with one another and with relatives, friends, and acquaintances with similar interests back home to further the development of their businesses. As in the case of individual migrants, the impact of an ethnic network largely depends on the nature of the network itself as well as on conditions in its country of origin, and on the host environment.

Ethnic networks are known to give rise to business networks that enhance migrants’ business activities. In some cases, the linkage is fairly local and based in ethnic identity. For example, an empirical study of Chinese-owned computer wholesale firms in California showed that ethnic identity and ethnic relations facilitated

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6 The concept of a “diaspora” has origins in Greek history and civilisation, originally referring to Greeks who colonised Asia Minor and the Mediterranean in the Archaic period (800-600 BC). It was later applied to and became identified with the Jewish people (Reis 2004).
interactions and produced a closely-knit ethnic within the industry (Zhou 1996). In other cases, the links extend well beyond local co-ethnics to a transnational ethnic network that can support business activities on a much wider scale. Redding (1995), for instance, traces the business deals of Overseas Chinese major companies with each other and outside partners through seven East and South East Asian countries. Most of the literature on this topic concentrates on the benefits to firms of participation in such networks and on the ways that different networks reflect their cultural roots. Redding (1995) argues that understanding an ethnic network requires an understanding of the cultural legacy in which it is grounded.

For our purposes, it is also important to look at the possible negative impacts of transnational ethnic networks. One of these lies in the realm of organised crime. While organised crime is not always rooted in ethnic networks, the two are frequently linked. One particularly relevant example is that of the Chinese Triads, which are known to operate in southern Africa.

Poverty and underdevelopment facilitate the activities of organised crime, and organised crime, in turn, exacerbates poverty and underdevelopment. Organised crime readily exploits local institutional weaknesses, including porous borders, weak law enforcement capacity, inadequate labour markets, and corrupt government systems (UNODC 2005, Athanassopoulou 2004). Africa’s poverty and institutional weaknesses make it especially vulnerable to the incursions of organised crime. Furthermore, Africa’s weak statistical systems and universal problems of crime classification make detecting the presence of organised crime in Africa especially difficult. Nevertheless, it is clear that Africa has been increasingly targeted by organised crime as an ideal conduit through which to extract and/or tranship a range of illicit commodities and even human beings, and the Continent is also vulnerable to money laundering and corruption activities (UNODC 2005). The resulting violence and insecurity exacerbate poverty and further degrade institutions.

3.2 Migration Patterns Between China, India, and Africa

3.2.1 Migrations from India and China into Africa

Both Indian and Chinese peoples have migrated into Africa. The presence of peoples from the Indian sub-continent in East Africa goes back over 2,000 years, but the last 200 years are the most significant (Kamau 2006). Early migrations mostly involved trading up and down the East African coast (Gregory 1993, Seidenberg 1996). After 1840 when Seyyid Said moved from Oman to Zanzibar, many Asians resident in Oman followed and Zanzibar eventually flourished as the focal point of an extensive trade between the African mainland and the outside world. It was the European imperialist expansion during the nineteenth and twentieth centuries, however, which brought about the major migration from the Indian subcontinent (Indian Diaspora 2006). The abolition of slavery in the British colonies in 1834, which resulted in a serious shortage of plantation labour, gave rise to a system of indentured labour. The colonial government first sent Indian workers to Mauritius, Uganda, and Nigeria and at the end of the century to East Africa for the building of the railway line between Mombasa and Uganda. Overlapping with the indenture system and continuing after it ended in 1917, a pattern of free emigration of traders, skilled artisans, bankers, petty contractors, clerks and professionals emerged. In time, these Indians and their
descendents settled in different parts of their new countries, where many established small retail shops. Indians of Natal in South Africa had a similar history. They came as indentured sugar workers, but in time turned into a class of rural shopkeepers (Hart 2000). In all countries the Indian community tended to remain a distinct group, with its own languages, cultures, and social structures. Inter-marriage and other forms of social mixing were constrained by law in some places such as Kenya and South Africa, but by custom everywhere.

After independence, Indians in many places were affected by Africanisation policies, which barred them from certain economic activities and effectively pushed them either into non-regulated activities or out of the country (Himbara 1994, McCormick 1996). For example, Kenyan people of Indian origin, also known as Kenyan Asians, who were prevented by Kenyanisation policies from continuing in wholesale trade, shifted their investments into manufacturing (McCormick 1996). As a result by the early 1990s, Kenyan Asians owned 75% of large-scale manufacturing firms in the country (Himbara 1994). People of Indian Origin were also affected by the policies of India. In the 1970s and 1980s India supported liberation struggles in Africa. India’s policy towards its Diaspora, the people of Indian origin (POI) in Africa, has shifted from time to time from active engagement to disengagement. Its recent step towards cautious engagement, including the offer of dual citizenship, is confined to POIs in selected countries, none of which are in Africa.

Chinese migration also began thousands of years ago, and its early forms resulted in substantial populations of people of Chinese origin throughout Asia. Africa, which was largely unaffected by early Chinese migrations, began to receive Chinese “coolies” during the colonial period. The Chinese coolie emigration, begun after the African slave trade had been abolished, flourished throughout the British possessions. Facing a desperate shortage of manpower, European merchants were looking to replace African slaves with bonded labourers from China and India. They sold large numbers of unskilled Chinese as labourers to the colonies overseas in exchange for money to feed their families (www.answers.com/topic/overseas-chinese). The next big wave of Chinese migration occurred immediately before and after the date (1 October 1949) when the communist regime assumed command of the mainland. Between 1948 and 1951 the Overseas Chinese population in Africa grew by 20% (Poston and Yu 1990). The countries in Africa with significant Chinese minorities are Madagascar, Mauritius, Reunion, and South Africa.

Current Chinese and Indian migration into Africa fall into three main categories: migrant works, migrant business people, and criminals. The first and probably largest group is the “migrant worker” category whereby persons enter for a specific job, with their stay in most cases governed by a work permit. Some company managers, middle managers and technical personnel migrate for work in EPZs and other manufacturing firms. For example, Kenya’s EPZ apparel firms employed a total of 740 expatriates in 2005, which represented 2.2% of their total employment (Kamau 2006). Most were from China, India, and Sri Lanka, but no country breakdown was available, nor is it clear how many of these are managers and how many are factory operatives. The firms themselves are mostly those with some foreign ownership, though in the past some factories owned by Kenyan Asians were known to recruit financial managers and accountants from India.
Mauritius has had a somewhat unique problem associated with its clothing boom of the 1990s. During this period, the government allowed textile and clothing employers to recruit foreign workers to address labour shortages (Ackbarally 2006). Most came from China and India on three-year contracts. The subsequent decline in these industries has brought about a double dilemma. The workers, who live and work in poor conditions, enjoy little legal protection under Mauritian law. Those who have taken to the streets to protest have been deported, so those who want to remain tend to remain silent about their wages and working conditions. At the same time, the existence of a poorly paid foreign workforce has caused unhappiness among Mauritian workers facing rising unemployment.

Expatriate business people are also present in Africa. Some of these are employees of home-country firms, others of multinationals, while still others are self-employed. For example, Chinese have begun moving into Africa as traders and investors. The growing phenomenon of the “China shop” in larger African towns has been noted in places as diverse as Namibia, Zambia, and Cape Verde (Dobler 2005, Thompson 2005, Haughen and Carling 2005). In some cases there has been friction between local and Chinese traders (Thompson 2005). Information, however, remains scanty because apparently neither home nor receiving countries gather systematic data on current Chinese or Indian migrants. Furthermore, states are more likely to collect information about arrivals than departures, making it very difficult to know how many people of a given nationality are present in a country at any one time (United Nations 2006).

Most difficult of all to track is the migration of criminals, especially those involved in organised crime. Some of these are legal immigrants, others are local people with links to transnational crime networks, while others have entered the country illegally or remained beyond the date specified on their entry documents. Some are involved in resource smuggling, wildlife poaching, and environmental crime, while others are trafficking in drugs or human beings, and still others are providing the money laundering facilities needed for organised crime to function (UNDOC 2005). Triads, a form of secret society that first appeared in the 17th century, are active in southern Africa, with activities including drug trafficking, extortion, prostitution, gambling, and loan sharking (Curtis et al. 2003). Hong Kong is now the centre of triad activity. Top individuals in triads often have established reputations as legitimate businessmen.

3.2.2 Migrations from Africa

Two types of migration out of Africa are of concern. The first is the second-step migration of immigrants and their descendants from Africa to other destinations. The second is student migration by Africans to China and India.

The migration of PIOs from Africa to other destinations began soon after Independence, when Africanisation policies on the continent constrained job and business opportunities, thus encouraging some to leave Africa. In some cases, such as Uganda under Idi Amin, PIOs were actually expelled and had to find refuge elsewhere. Some returned to their home countries, but many resettled in Canada and Great Britain where they joined other South Asians who had migrated earlier (Skutsch 2004). A minority of POIs remained in Africa, where, especially in East Africa, they
were able to prosper in manufacturing and the professions. Their growing affluence enabled them to afford to send their children abroad for study and work, both of which led to significant levels of emigration by the next generation. Taken together, these migrations have contributed to an increase in the size and diversity of the Indian diaspora worldwide.

Information on the movements of Chinese settlers from Africa to other destinations is scanty. Some leave Africa to return home, but others move on to Europe and elsewhere. De Haas (2006) notes that some Chinese have joined the growing trans-Saharan migration route through North Africa to the EU. These, however, are not likely to have been true settlers, but rather “transit migrants” who use Africa as a stepping stone to their preferred destinations.

Current migration of Africans to China and India is not known, but is probably negligible apart from students. African students in Indian universities were estimated at 1,704 in the 2002-2003 academic year (see Table 4). Of these, the largest numbers came from Kenya (521), Mauritius (366), Ethiopia (225), Somalia (146), and Uganda (93), with smaller numbers from 25 other countries. These figures should, however, be treated with caution as different sources give widely varying figures. In the case of Kenya, for example, instead of the reported 521 students from Kenya in 2002, the Kenyan High Commission in India said that there were about 3,500 Kenyan students studying in 50 stations throughout India.7

Data on African students in Chinese universities is difficult to find. The most comprehensive report on global education (UNESCO 2006) does not include China in its table on internationally mobile students in tertiary education. During the 1970s and 1980s China launched a programme to sponsor African students at its universities. More recently it has been reported that the Chinese government is offering 10,000 scholarships to African students (www.khaleejtimes.com/Displayarticle.asp?section=opinion&xfile=data/opinion/., accessed 30 September 2006).

Table 4: International Students in India, Selected Years

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>1992/3</th>
<th>1995/6</th>
<th>1999/00</th>
<th>2000/01</th>
<th>2001/02</th>
<th>2002/03</th>
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<td>2213</td>
<td>868</td>
<td>968</td>
<td>548</td>
<td>521</td>
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<td>309</td>
<td>546</td>
<td>550</td>
<td>366</td>
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<td>369</td>
<td>301</td>
<td>281</td>
<td>225</td>
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<td>95</td>
<td>143</td>
<td>146</td>
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<td>71</td>
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<td>68</td>
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### 3.3 Impact of Migration on SSA Manufacturing

With this background, we now turn to the four channels through which China and India appear to affect African manufacturing, and through it, the development outcomes of growth, distribution, environment, and governance.

#### 3.3.1 Migrant workers

Legal migrant workers and those who overstay their work permits are likely to affect African manufacturing in different ways.
The use of Chinese and/or Indian expatriate managers and supervisors in African factories may have impacts in all four major areas: growth, distribution, environment, and governance. If the managers and supervisors are skilled and able to pass on new technologies, they impart needed skills to African co-workers, thus paving the way for improved economic growth. If, on the other hand, these personnel simply duplicate skills available in the local population, there may be adverse distributional effects. Salm (2006) notes that shortcomings in management vision, cultural misunderstanding, significant language barriers, and a reluctance to invest in the training of supervisors and workers have contributed to productivity problems in some Chinese owned factories in Lesotho. This suggests that productivity in Chinese factories in Africa may be lower than it should be, contributing to poor growth. Use of expatriates in management and supervisory positions may also have an impact on the environment. Neither China nor India is known for its strong commitment to environmental protection, though China is now beginning to talk about sustainable development. The use of Chinese and Indian managers could, therefore, either reinforce poor environmental practices in Africa or be instrumental in introducing new, sustainable ones. The impact on governance is likely to come about through expatriate managers’ attitudes towards corruption. In this regard, India and China appear to differ. India’s firms apparently behave more ethically than China’s. India’s score on the ethical behaviour of its firms stands at 4.5 or position 45, which is slightly above the mean for all firms surveyed by the World Economic Forum (Lopez-Claros et al. 2006). India’s score is above that of most of the African countries surveyed.9 China, on the other hand, scores 3.5 and stands at position 104 out of 125 countries. Only four African countries fall below China. This very sketchy analysis suggests the possibility of a neutral or even positive impact on governance resulting from Indian managers, but the likelihood of a negative impact from the presence of Chinese managers.

The second group of migrant workers consists of traders and other business people resident in Africa. Small traders such as those described by Dobler (2005) are operating in competition with local businesses. An assessment of their impact on growth would have to take into account their effect on both trade and manufacturing. Are they increasing domestic trade or are they simply substituting foreign owned firms for local ones? Are they increasing demand for locally manufactured goods or does the practice of stocking mainly Chinese goods affect local manufacturing negatively? In some places, such as South Africa, the rise of large Chinese shopping complexes may also affect overall growth. Some of the factors affecting their impact on growth and distribution are similar to those of small traders, namely, their effect on the magnitude of trade and on local manufacturing. These large complexes have an additional effect. Observers have noted that there seems to be an increase in cross-border shopping tourism, which suggests wider ripple effects for these complexes than for ordinary trading enterprises (South Africa 2006).

The final group of migrant workers who may be channels for impact on African manufacturing are construction workers and others who overstay their entry permits. These can be hypothesised to affect distribution negatively because they will be competing with low-level workers for jobs and small business opportunities.

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9 Only Tunisia, South Africa, and Botswana have a higher score.
3.3.2 Refugee and/or settler populations

We have identified two groups of refugee and/or settler populations that may channel the impact of China and India on African manufacturing. The first consists of the PIOs in Eastern Africa, and the second is the Taiwanese in Lesotho. We also mention briefly other refugee or settler populations that might be investigated.

PIOs in East Africa have played a major role in launching industrialisation, especially in countries such as Kenya. Most studies of the community’s involvement in manufacturing, however, were carried out during the import substitution period (e.g., Swainson 1980, Himbara 1994). Continued outward migration by East African Asians, the shift of the younger generations from manufacturing into the professions, and changes in national economies brought about by globalisation have undoubtedly affected their role in manufacturing and the resulting impact on growth and distribution in ways that have yet to be fully understood.

The Taiwanese in Lesotho have actively participated in the local boom in textile and apparel manufacturing that begin in the early 1990s and was fuelled by AGOA trade preferences. Taiwanese investors have brought in skilled workers and managers from mainland China (Cobbe 2004). More recently Chinese migrants have begun to move into retail trade throughout the country. The impact of these movements has not been studied, though it is likely that they have impacts on growth and distribution. Given the heavy presence of Chinese managers, there may also be both environmental and governance impacts.

Other refugee and settler communities may also be acting as channels for the impact of China and/or India on African manufacturing. For example, there is a large Somali refugee community in Nairobi, many with wholesale and retail trading businesses in the City’s Eastleigh section. Anecdotal information suggests that the goods being traded are Chinese in origin and enter Kenya via Dubai and Mogadishu.9 Many of these goods, especially the textiles, compete with African-made products. Other African countries have similar refugee or settler communities whose business activities may have an impact through local manufacturing on growth, distribution, environment, and/or governance.

3.3.3 Africans who have studied in China or India

The third channel for impact by China and India on African manufacturing is that of Africans who have studied in one of the countries. As we have seen, most of those who have gone to China have benefited from a government scholarship. Those going to India are a mixture of privately sponsored students and those participating in technical assistance programmes. The first outcome, regardless of the reason for foreign study or the source of funding, is the exposure to a different culture and ideas. Study by Africans in China or India is expected to enable returnees to relate better to others of different cultures and to be more flexible in the workplace. Whether this will in fact be the case is a matter for investigation. It will also be necessary to establish the theoretical and empirical links between such cultural flexibility and national growth and/or distribution.

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9 Private conversation with Somali refugee businessman in Nairobi.
The second expected outcome from study abroad, especially participation in technical courses or training programmes, is an increase in technical expertise. If this happens, then, the precise impact will depend on where the returning student uses this expertise. If it is in a manufacturing enterprise, then there could be a direct impact on growth as evidenced in higher output and greater productivity in that particular firm. If the returning student is in government, then the improved technical expertise may result in better industrial policies that in turn lead to improved growth.

The third expected outcome is the establishment or strengthening of networks linking the returning student with persons in the country of study. Some of these will be purely social, with little or no impact on home country manufacturing. Nevertheless, it is possible that the businessperson who has studied in China or India may be able to add contacts established while there to his/her personal entrepreneurial networks, and the government official with similar experiences may find it easier to communicate with officials in the country of study than with other foreign government representatives.

### 3.3.4 Chinese and/or Indian diaspora in Africa and elsewhere

The presence of some portion of the Chinese or Indian diaspora in an African country can potentially affect that country in one of two ways. The first is through the linking of local business people into transnational ethnically based entrepreneurial networks. The second, with clear negative effects, is through organised crime.

Linking with transnational ethnically based entrepreneurial networks is believed to benefit local business people and, through them, the local economy. We hypothesise that when members of the Chinese or Indian diaspora link with their co-ethnics in other countries they may have access to better supply and distribution channels than would otherwise be available to them. This should enhance growth because it may allow local manufacturers to expand their output and/or to move into more profitable niches. If by so doing, they also expand employment there could be positive distributional effects as well. There could also be indirect effects as, for example, when the local firm is in a non-manufacturing activity such as tourism or provision of data services. The expansion of the linked firm may have spill-over effects in the form of increased demand for local manufactures or it may be associated mainly with increased imports.

The downside of a large resident immigrant population can be the haven it offers to ethnically based organised crime. Its effects on manufacturing are mostly indirect. For example, drug trafficking may result in increased drug problems among workers that in turn increase absenteeism and/or reduce productivity. Drug trafficking is also associated with high rates of crime and insecurity that will increase the country’s general cost of doing business and reduce its attractiveness to FDI. In some countries, wildlife poaching may negatively affect tourism and, indirectly, tourism’s demand for locally manufactured goods. Finally, since organised crime usually relies on payments to police and other government officials, it is associated with negative effects on governance that are likely to have repercussions on the manufacturing sector.

### 4. Conclusions and Research Implications
By way of conclusion, we make several observations about the impact of aid and migration on manufacturing in Sub Saharan Africa. Both aid and migration are complex phenomena with the potential to affect manufacturing both directly and indirectly, and through manufacturing they influence growth, distribution, governance, and the environment. Aid in the form of direct investment in plant and equipment is more likely to come from China than from India, because of the nature of the industrial sector in the two countries. In the case of China, aid and FDI are intertwined, making it difficult to disentangle the two. Possible indirect impacts of aid on manufacturing are many. In fact, the most important is probably the support that China gives for infrastructure development. Of the other indirect forms of assistance to manufacturing, the most common are the form of academic and technical training offered by both China and India, and the tariff exemptions that China is now experimenting with.

Different types of migrants have different effects on manufacturing. We note that migrant workers can exert a positive or negative influence, depending on their own skills, their reasons be being in the country, and the host country’s institutional environment. We traced possible influences of migrant workers, refugee and settler populations, returned students, and the Chinese and Indian diaspora, and noted that through their impact on manufacturing they have the potential to affect all four of the policy outcome variables. The impact on growth and distribution appear to be the strongest, but this may simply be an indication of the lack of literature on potential governance and environmental outcomes.

Aid and human resource flows interact with each other as well as with at least two other sets of variables – trade and FDI – in important ways that have not been fully explored in this paper (See, for example, Watanabe 2003; Harms and Lutz 2006)

Empirical research on the impact of aid and migration is much less advanced than research on the impacts of trade and FDI. There is need for studies in different places using different methodologies that will capture the variables and relationships identified here as well as others that may have been missed.

4.1 Research Questions and Hypotheses

Two sets of research questions flow from the analysis on the previous pages. The first deals with the impact of foreign aid, specifically aid from China and India to African countries, on manufacturing in Sub Saharan Africa. The second deals with the impact of the movement of people between Africa and China and/or India.

Aid: At least seven sets of questions around the broad issue of the impact of aid on manufacturing can be identified.

1. To what extent does aid from China or India that flows directly into manufacturing plant and equipment in Sub Saharan Africa allow it to produce more and/or higher quality goods?
2. To what extent does aid from China or India aimed at improving physical infrastructure result in better manufacturing performance?
3. To what extent does aid in the form of access to Chinese or Indian technical or academic training programmes result in better manufacturing performance?
4. To what extent do tariff exemptions by China and India promote investment in manufacturing?
5. To what extent does Chinese or Indian aid to other sectors of the economy result in increased demand for locally manufactured products?
6. To what extent has debt relief by China or India resulted in investments that have had positive spillover effects on manufacturing?
7. To what extent has Chinese or Indian aid enabled African governments to pursue their own industrial development policies and programmes?

Each of these broad questions gives rise to a number of subsidiary questions aimed at establishing the basic facts around the question, examining direct and indirect relationships, and establishing the links to policy outcomes. For example, the first question would have subsidiary questions such as: What are the amounts and types of aid given by China/India to country x for manufacturing plant and equipment? Has the volume of manufacturing output changed? Has the quality of existing output changed as a result of this aid? Has the nature of the goods manufactured changed? To what extent can changes in volume of output, product quality, or the nature of the goods be attributed to the aid received?

*Human Resource Flows:* At least five sets of questions around the broad issue of the influence of human resource flows on African manufacturing can be identified:
1. To what extent is ownership of businesses within the country by people of Indian origin or members of the overseas Chinese community associated with differences in manufacturing output, value added, productivity, or export propensity?
2. To what extent do linkages to Indian or Chinese ethnic business networks affect manufacturing output or the markets in which products are sold?
3. To what extent is the presence of expatriate staff, especially financial managers, production managers, and line supervisors associated with differences in manufacturing output, value added, productivity, or export propensity?
4. What impact has study by employees of manufacturing firms in either China or India had on the performance of manufacturing industry?
5. What impact has study by civil servants in either China or India had on the quality of policy analysis, policy development, and/or the implementation of programmes for manufacturing industry?

A third set of resource questions could be identified. These would explore the interactions between aid and human resource flows, as well as between these variables and other variables affecting manufacturing, especially trade and foreign direct investment. An obvious example of the first interaction is the link between study in China or India in itself and as a form of aid. How does the presence of a scholarship within an aid package affect the selection of candidates, the courses taken, the likelihood of return to the country of origin, and the contribution to the manufacturing sector made once there? The second might be explored through studies that examine the three-way relationship between aid, trade, and manufacturing performance, or aid, FDI and manufacturing performance. Similar three-way relationships could be explored for human resource flows, trade, and FDI.

**4.2 Methodologies**
Methodologies must take into account both data needs and data availability. The latter will vary considerably from country to country, as well as between aid and migration
information. Nevertheless, the following rough guide may be a useful starting point for establishing an appropriate methodology for any given study.

For studies attempting to track the impact of aid on manufacturing, some or all of the following data will be needed:

i. Aid data indicating amounts and types of aid given by China and India as well as total aid by type.

ii. Information on aid conditions

iii. Country budget information showing tax revenues and other forms of budget support.

iv. Manufacturing data giving total output, value added, and productivity by manufacturing sub-sector (ISIC two-digit code or better)

v. Data on firm size

vi. Qualitative information from both China and India (donors) and recipient country concerning motives for aid, extent to which it is directed towards the manufacturing sector, nature of courses and training activities to which African partners are invited

vii. Qualitative information from the country on current policy towards manufacturing sector, processes of policy analysis and policy change, impact of aid from China and India on manufacturing, whether addition of China and/or India to list of country’s donors has been positive or negative in its impact on the country’s achievement of its objectives for the manufacturing sector.

It is likely that only some of these data will be available. Based on this review, it is expected that some relevant manufacturing data will be available in some African countries. Broad aid data such as that reported in Table 1 are available, but more detailed data by type of aid will probably not be available. Some qualitative information about aid is available on the Internet, but this is not likely to be sufficient for drawing firm conclusions. Country-level policy information is available, but good secondary data on policy analysis, policy change processes, impact of aid on manufacturing, etc. is unlikely to be available.

For studies aimed at tracking the impact of migration on manufacturing, some or all of the following data will be needed:

i. Migration data indicating country of origin, country of destination, connection (if any) to manufacturing both before and after migration, reason for migration (study, work, etc.), sponsorship in the case of study, and basic demographic information

ii. Manufacturing data giving total output, value added, and productivity by manufacturing sub-sector (ISIC two-digit code or better)

iii. Data on firm size

iv. Firm-level information about ethnicity of owners, links to domestic and international business networks, ethnicity of managerial and supervisory personnel, total output, value added, productivity, markets accessed, access to opportunities for study or training in China or India.

v. Crime and security data.
This review suggests that much of the data needed will not be available in the statistics of African countries. Some information is available from the United Nations Department of Economic and Social Affairs, Population Division, but it is unlikely to be sufficiently detailed to allow for the type of studies needed. The review also suggests that Chinese and Indian statistics are unlikely to provide complete migration data.

To bridge the data gaps, it will be necessary to carry out primary data collection. I suggest that this initially take the form of a set of exploratory country case studies designed around sets of common research questions. Once the terrain has been better understood, it may be possible to carry out a second round of data collection in a few countries in order to make country comparisons.
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