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The integration of China and India into the world economy : a comparison

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1 Introduction

The rapid economic rise of China, followed by that of India, is leading to a new balance of power in the world economy. The emergence of these new big players is challenging the supremacy of the old economic powers (US, Europe and Japan), which used to dominate international trade of goods and services and control financial resources.

The consequences are all the more far-reaching that their rise has driven attention to other developing and transition economies which also have a high actual or potential growth, based on cheap labour, opening up to foreign technology and capital, economic liberalisation and market regulation.

The paper first proposes a definition of emerging economies and sketches out China's and India's rise against this backdrop. The second section provides a detailed analysis of their integration in international trade of goods and services, allowing for a qualified assessment of the technological and quality levels of their exports and imports. Finally, the third section presents the debate over the sustainability of their growth strategies and on the expected changes in their future growth pattern.

2 The come-back of giants

2.1 Who are the "Emerging economies"?

In the last fifteen years, several developing countries, which used to be considered as the "periphery" of the world economy, have taken a leading part in world economy and international trade (World Bank, 2007a). Emerging economies have become a hot topic in economic literature, media, business circles. Reports, papers and articles emphasise the importance of this turning point in the world economy, but they do not provide a clear-cut and common definition of this category of new players.

The term "emerging economies" is used sometimes to point out the four "BRICs" (Brazil, Russia, India and China) or a group of "fast growing economies", and sometimes it even refers to all developing countries. To make things more confusing, the category of "developing economies" corresponds to various groupings. The World Bank (2007b) sets a threshold of income per capita (11 100 current US

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dollars in 2006) to distinguish rich countries from others but according to UNCTAD classification, for instance, the group "developing countries" includes economies which are above this threshold: Asian new industrialized economies (Taiwan, Hongkong, Singapore and South-Korea) and the oil exporting countries, which all have now an income per capita well above the threshold (Appendix 1)

The dividing line between emerging and non emerging economies is quite imprecise and emerging countries present characteristics which widely differ from one country to another. The term of "emerging economies", as vague as it is, implies not only a rapid growth of GDP per capita or increasing presence in world markets, but also entails several important ingredients of political economy. Analysing this concept, J.Sgard (2008) puts forwards the key factors which have been at the source of the success of emerging economies since the 1990s, ensuring them a more stable and high growth. These countries have pursued a process of economic liberalisation, promoting market orientation and opening up to international flows of goods, services and capital and this process has been associated with the building up of institutions and the search for strong State regulation. This model of "emerging economies", which is aimed at combining private interests and market economy with a strong public policy, profoundly differs from that of countries which can be considered as "rentiers" as their economic rise is based on exports of natural resources.

2.2 Emerging economies and Rentiers

This paper proposes a classification of countries into four categories, based on two criteria: the level of income per capita and the increased participation in international trade. The classification is as follows:

A. *Emerging economies* are the countries which 1) have a level of income below the threshold set by the World bank (11 100 US dollars in 2006), i.e. are outside the rich country club 2) have been able to increase their share in world markets of manufactured goods or services over the last ten years, i.e. between 1995 and 2005, by at least 0.05 percent point. This criteria, which corresponds to a substantial increase, is meant to select the countries which have been able to integrate successfully into the world economy and which play a significant part in international trade (excluding dynamic but very small exporters).

B. *Rentiers* are countries which have enlarged their share in world exports of primary goods (by more than 0.05 percentage point) and which have more than 40% of their exports made of primary products. This group includes countries irrespectively of their level of income. In fact most Rentiers are rich countries.

C. *Rich countries* are countries which have an income per capita above the World Bank threshold and which are not rentiers.

D. The rest of the world encompasses countries which are not emerging nor rentiers and are not rich countries.

According to these criteria, there are 25 emerging economies, located in different regions: eleven in Europe, seven in Asia, five in America and one in Africa (Cf. Appendix 2). This group of countries has enlarged its share in world exports from 12% in 1995 to 21% in 2006. In world imports, its share increased from 12% to 18%. Table 1.

The group of emerging economies has experienced an above average economic growth rate. From 1995 to in 2005, its share rose from 13% to 16% of world GDP in constant US$, and from 23% to 28% of world GDP in PPP. In the same period, the contribution of the group to global economic growth stands between 39% (in US constant $) and 67% (PPP).

There are 23 countries defined as Rentiers (Cf. Appendix 2). From 1995 to 2006, the group has enlarged its share in world exports from 8% to 13% and in world imports from 5% to 6%. Table 1.

Taken together, Emerging economies and Rentiers account for about one third of world exports in 2006, against less than one fifth in 1995; they account for 23% of world imports in 2006 against 17% in 1995.

2.3 Large emerging economies

Within the group of emerging economies, the present analysis identifies "large emerging economies" (LEEs) as those accounting for more than 1% of world GDP (in current dollars). Four countries stand out: China, India, Brazil and Mexico. This group of LEEs thus differ from the "BRICs", as it does not include Russia, which accounts for 2% of world GDP, but is classified as a Rentier and not as an emerging economy. South Africa is an emerging economy but not included in the group of LEEs, as it accounts for less than 1% of world GDP.

India and China differ from the two other large emerging economies in several ways. They are demographic giants (Table 2) and their huge population has helped them to become big economic powers long before getting rich. This is quite an unprecedented phenomenon in the recent world economy. In the 1960s, when Japan emerged as a major economic power (Japanese GDP in current dollars overtook German GDP in 1969), it was already a high-income country, where the major structural changes associated with take-off, especially in employment, had already taken place. The New Asian Industrialised Economies (Taiwan, Hongkong, Singapore, South-Korea) which emerged in the seventies and eighties were too small to destabilise the world economy and they were easily absorbed.

In fact China and India are by far the two poorest large emerging economies (Table 3). China already stands in the category of countries with an "intermediate" level of income per capita, while India is still in the low-income category, according to the World Bank classification (World Bank 2007b). As noted by Eichengreen (2006), closing the gap will take more time in the case of China and India than in the cases of previous latecomers.

China stands apart among LEEs: it has by far the largest GDP, which is almost at least twice bigger than that of any other emerging economy in 2006; it has also the fastest economic growth. Since 1995, both India and China have outperformed the other large emerging economy growth while Mexico and Brazil recorded a pace of economic growth slightly below world average. Between 1995 to 2006, LEEs' share in world GDP rose from 8% to 11% in world GDP in constant dollars and from 14% to 19% in world GDP in PPP. China accounted for 2/3 of the increase in constant dollars and for 4/5 of the increase in PPP. India was responsible for the rest of the increase. Table 3.

3 Integration in international trade

3.1 Trade in goods and services

Comparing China's and India's integration in international trade shows that India lags far behind China. Their respective shares in world exports of goods and services was 1.2% and 7% in 2005. The contrast comes from their performance in exports of manufactured goods (Figure1 and Figure 2). India's share in world exports of *manufactured* goods has only slightly increased and is still below 1%, while China' share has more than trebled from 1995 to 2005 and reached almost 12% in 2006 . In services exports India, with 2.7% of world exports in 2006, is catching up China (3.3%).

On the import side, Figure 2 shows the rapid increase of their demand for primary products since the end of the 1990s. From 1995 to 2005, China's imports of primary products rose from about 2% of the world total to 6.4% in 2005; India's imports rose from 1% to 3.4 %. Taken together they accounted for 10% of world imports of primary products in 2005 (against less than 3% in 1995). Their imports of raw materials and energy, linked to their rapid economic growth, have contributed to the

change the world balance between supply and demand, although factors have also contributed to world price rise. In 2006, China was the 3rd oil importer (after the US and Japan) and India the 7th.

China's outstanding participation in international trade is based on its large and dynamic manufacturing industry. As an exporter of manufactured industrial goods China stands far ahead all other large emerging economies. Table 4. Foreign trade (exports + imports) accounts for more than two thirds of Chinese GDP in 2005, a ratio which is exceptionally high for a large developing economy and which is directly linked to the involvement of China's industry in the international division of labour. Processing trade contributes to more than half of China's trade, which tends to overstate China's openness as it implies double counting and large import content (intermediate goods, parts and components) (Li, 2006). As shown in Figure 3, the ratio of industrial exports to manufacturing value added has jumped since 2001, when China entered WTO, and reached 90% in 2005. The dependence of China's industry on external markets tends to catch up that of Mexico, which is also characterised by large-scale assembly industry (Maquilladoras).

India's economy has opened up recently and compared to China is still a relatively closed economy. However the ratio of trade (exports+imports) in goods and services accounts for 40% of GDP that is more than for Japan (27%) or Brazil (27%). Indian manufacturing industry has opened up progressively. The ratio of exports to manufacturing value added rose from 20% in 1980 to 40% in 1995 and to 60% in 2006. The Indian manufacturing industry is now more export-oriented than the Brazilian (46%) industrit (Figure3). However the size of Indian manufacturing output is still too small to allow a strong presence in world markets (Chauvin and Lemoine, 2005).

Considering services exports, India's performance is almost at par with China's (Table 4). India' share in world exports of services reached 2.7% in 2006, against 3.3% for China. The two countries are well ahead the other large emerging economies. In contrast with China where manufacturing industry has been the engine of growth and of international trade, in India, the services sector has led domestic growth and opening up. India has rapidly developed its exports of services which now represent 17% of the value added of the sector, twice as much as in China. Table 5. International trade in services is relatively more important for India (it represents 6% of GDP in 2005) than for China's (4% of GDP). For India, exports of services are larger than exports of manufactured industrial goods (US$ 75 bn against US$ 71 bn in 2006).

Balance of payments statistics show that a large part of China's payments for services are linked to merchandise trade (transport, insurance, royalties). Table 6. In 2006, China accounts for 5% of international payments for transport services and for 8% of payments for insurance services. India's payments for transport services have also increased (to 3.7% of world total in 2006). India has taken a very strong position in Computer and information services exports (almost one fifth of world exports).

3.2. Specialisation: from textile to new technology

China's export pattern has undergone far-reaching changes in the last fifteen years. Changes in India's export pattern have been less outstanding as far as goods as concerned but services have come to the front. The importance of traditional exports such as textile and clothing has diminished as both countries have developed new export sectors.

The indicator used here to measure specialisation is based on trade balance in order to neutralise the effect of intra-industry trade flows and assembly trade which tends to inflate exports and imports. Trade balance is calculated at the level of individual product and service categories and weighted by overall trade in goods and services (Xi-Mi/X+M). The indicator has been calculated for 1995, 2000, 2005 and 2006. The index shows that China and India still share similar specialisation in traditional industries. Textile, clothing, and footwear are still among the sectors which display the largest

positive trade balance but the relative importance of these trade surpluses has considerably declined over time (Table 7)

China's outstanding performance in international trade has been based on a rapid diversification of its manufactured exports. From 1995 to 2006, the relative importance of textile and clothing shrunked (from 35% to 18% of total exports) while that of machinery climbed from 27% to 53%. China has built up strong export capacities in industries related to new technologies and its top comparative advantages now lie in computers and telecommunication equipment. It has also considerably increased its trade surplus of consumer electronics, electrical equipment, household electrical appliances. Table 7.

In India's exports, the share of textile and clothing also decreased (from 35% in 1995 to 18% in 2006) while machinery and chemicals have taken a larger part. The textile sector has ceased to be at the top of India's comparative advantage and the largest trade surplus now comes from computer and information services; communication services also show a strong positive trade balance. In manufacturing, India has also built up comparative advantage in chemical industries: pharmaceutical industry and, more recently in oil refining, organic chemicals. Although the position of India in world markets for industrial products is still weak, it has improved its specialisation in some of the most dynamic sectors of world trade (Alessandrini *et alii*, 2007).

The two countries have thus in common the fact that, in the last ten years, they have developed their strongest specialisation in sectors linked to information and communication technology (ICT): China in electronic goods, India in ICT services. Both electronic goods and computer & information services are very dynamic segments in international trade (World Bank, 2006). Between 1995 and 2005, world trade increased at an annual rate of 7.8% in electronic goods and of 23.9% in computer and information services against 7.1% for overall goods and services. Both India and China have been strongly involved in this expansion of international demand.

3.2 Outward oriented sectors, offshoring and outsourcing

These new sectors are outward-oriented and their contribution to exports by far exceeds their share in GDP. in 2006, for China, electronic industry (manufacturing of computers, telecommunication and other electronic equipment) accounted for 8% of total industrial value added or for 3.3% of GDP and for 29% of exports of goods and services. In India, Information technology and business services represented between 1.8% of GDP in 2004 (according to Fernandez and Gupta, 2006) and 5.2% in 2007 (according to NASCOM-Deloitte, 2008), depending on the definition of the sector; the share of computer services reached 15% of Indian exports of goods and services in 2006, exports of other business services accounting for another 12%.

Firms from advanced economies have been actively involved in the rise of these new competitive sectors in China and India, through outsourcing and offshoring. If one refers to the distinction between outsourcing as "contracting out parts of the production process to foreign suppliers" and offshoring as "moving production abroad by setting foreign subsidiaries" (Denis *et alii*, 2006), it stands out that offshoring has been at the core of China's exports of electronic goods; India's success in services exports has been initially based mainly on outsourcing but is now based on diversified firms' strategies, from outsourcing to offshoring (OECD, 2006a).

China has become a world manufacturing platform of electronic goods and is now the world leading exporter of these products, accounting for around one-fifth of world exports (Winters and Yusuf, 2006). This outstanding performance has been built on large foreign direct investment inflows which have created huge assembly lines of electronic products in Chinese coastal provinces. In early 2000s, firms with foreign capital were responsible for more than half of China's total exports and for 80% of China's exports of electronic products (computer and telecommunication equipment), most of which resulted from assembly of imported components from Asia. For instance, In 2007, China produced

more than half of the world output of mobile phones (600 out of 1200 million units) and exported two-thirds of its output, most of which consisted of foreign brands (Nokia, Motorola, Samsung, Ericsson, etc.)

India's new specialisation in services is based on its emergence as a global centre for outsourcing information technology and other enabling services. India has become the leading world exporter of IT services with more than one fifth of world exports in 2006. This sector derives 80% of its income from exports. In the 1980s, MNCs have begun outsourcing computer services from Indian firms, and this movement has accelerated in the 1990, favouring the development of large Indian firms (Infosys, Wipro). More and more, MNCs are setting affiliates in India to provide these services (insourcing). FDI has played an increasing part in the development of the most dynamic business services and firms with foreign capital are now responsible for 1/3 of India exports of computer services and for 2/3 of its exports of other IT services (OECD, 2006b; World Bank 2004).

Globalisation has thus provided the two countries a shortcircuit towards economic modernisation. The leap from traditional industries to sectors incorporating advanced technology shows that it proved less difficult and more rapid to create production capacities in new sectors than to renovate traditional industries burdened with old capital equipment and often located in highly regulated sectors. In China, FDI has provided local entrepreneurs the financing means they needed, together with technologies and export markets (Huang, 2003; Hericourt and Poncet, 2007); in India local entrepreneurs chose to develop activities in sectors with relatively low financial requirements and which were less constrained than manufacturing by infrastructure bottlenecks and labour laws (Rakshit, 2007, OECD 2007).

At the core of China's and India's successes in these sectors lie the availability of labour force at low wages and the search for high productivity. In China, since the late 1990s labour productivity in manufacturing industry has increased at an accelerated pace, by more than 20% a year, and in electronic consumer goods by over 30% a year. In that sector, labour productivity stood at one fourth of that of South-Korea and at par with that of Mexico already in 2000 (McKinsey 2003). In India, the labour productivity in software companies was then estimated at 44% of the US levels (McKinsey, 2001).

Both countries have proved their capacity to adopt and efficiently use new technology. This explains why their comparative advantages are so strong in this sector and why they are so attractive for MNCs and foreign capital. Their success as world leading exporters of ICT goods and services may illustrate Gerschenkron's argument on the "advantages of backwardness", according to which "the greater the distance to the technological frontier, the greater the innovation" (Aghion 2005). However, further catch up will require continuous investment to adopt foreign technology or to develop their own innovation capacities. As mentioned by Aghion (2005), imitation and innovation do not require the same institutions.

3.3 Technological-catch up: is India so far behind?

The comparison of the technological level of countries' exports generally focuses on exports of manufactured goods and shows that, in this respect, India lags far behind China. Considering that ICT services involve the use of new technology, it makes sense to take these services into account when assessing the technological level of India's and China's exports. In this case, the gap between China and India is not so large. The share of high-tech (HT) exports in India's exports of goods and services was 14 percent in 2005, a share which is close to the corresponding share for China, which was 18 percent. Table 8.

Considering trade in manufactured goods only, the two countries display indeed contrasted performance, and also different strategies. China's exports of manufactured products incorporate an increased proportion of HT goods (17% in 2004), and China has become the world major exporter of

HT products, having overtaken the US since 2004 (WDI). In contrast, India's performance in exports of HT goods has stagnated. The share of HT goods in Indian exports hardly increased over ten years (and is still around 5%). As analysed, by Alessandrini et alii, (2007), from this point of view, India's export pattern has made little improvement. (Figure 4)

China now records a trade surplus in HT goods. This outstanding performance was achieved through an increased dependence on foreign affiliates, which accounted for 80% of these exports in 2003 (Lemoine and Unal-Kesenci 2005). If foreign firms' exports are excluded, the HT content of China's exports is only 7% and not so different from that of India. Most China's high-tech exports are located in electronic exports and their technological content reflects their large import content in HT parts and components. China's dependence on foreign technology is further illustrated by the fact that China now ranks the third in world net payments of royalties. These payments still represent a small fraction of China's high-tech exports (less than 5%) but explain the efforts made by the Chinese government to develop China's own standards. Although HT exports are still dominated by foreign affiliates, Chinese firms are enlarging their position in the domestic market at the expense of foreign firms, taking advantage of the growing presence foreign suppliers and sourcing their inputs from these global supply chains.

Indian HT exports are concentrated in pharmaceutical goods. In the wake of legislation passed in the 1970s, which ended the application of international legislation on patent replacing it by a legislation aimed at facilitating the acquisition of foreign technology, India has developed powerful domestic companies in pharmaceutical sector, with a strong presence on both domestic and foreign markets. India's pharmaceutical industry ranks 4th in the world in terms of volume and 13th in terms of value (FICCI, 2005) Although Indian pharmaceutical exports still account for only 1% of global exports, India has become the world's top exporter of generic medicines. The pharmaceutical industry is based on highly-qualified personnel integrated into international networks, high quality public research institutions and benefits from the large domestic market. The local pharmaceutical industry (including both national and foreign companies) exports about 40% of its production.

In 2005, Indian patent law was revised and put into line to the TRIPs agreement, which obliges pharmaceutical firms to change their business model. Indian industry has now to switch from imitation to innovation. The new legislation is expected to stimulate the development of R&D and innovation in Indian firms, to spur their acquisition of foreign firms and laboratories with the aim to enlarge their patent resources. It also increases the attractiveness of India for foreign pharmaceutical firms (investment, subcontracting).

Despite China' and India' progress in exporting new technology goods and services, both countries still stand far behind advanced economies in terms of invention patents. The number of patent applications by China is rising but still low: in 2005, it represented less than 1% of the total triadic patents (0,2% in 2000) and India is even farther behind. China has considerably increased its R&D expenses, from 0,9% of GDP in 2000 to 1,3% in 2005 and targets 2% in 2010. In India this proportion is still under 1%.

3.4 New challenge: quality upgrading

In order to better understand their respective positions in international competition, it is helpful to analyse China's and India's manufactured exports according to their composition by price-quality range. The analysis relies on CEPII data base BACI which makes it possible to calculate the unit values of traded goods at the most detailed level of classification.

China is heavily specialised in low-price/quality goods. Table 9 shows that 70% of China's exports of manufactured goods belong to the low-price/quality range, 16% to the medium-price/quality range and 11% to the high range. Interestingly this distribution has not changed since the mid 1990s, thus indicating that China has not succeeded in upgrading its position on the quality ladder. Among other

emerging economies, only Mexico has such a strong concentration of manufactured exports on low-price/quality range in 2004 (73%) (Lemoine and Unal-Kesenci, 2007).

The low unit values of Chinese exports can be explained in several ways. The lower quality level is only one of the possible explanations; another reason is that prices are indeed lower (for similar products) due to low production costs and fierce competition between producing firms. Outward-oriented industries are likely to put strong downward pressures on prices, as the cost of switching away to another supplier may be relatively low in the case of standardised or modular products (Dimaranan, 2007). Finally, Chinese exports may be concentrated in the less sophisticated varieties of goods. China's exports of high-price/quality products are especially small compared to any other emerging economies, and especially India.

India's export distribution by quality range is less biased towards down-market products. Less than half Indian exports of manufactured goods (45%) belongs to low-price/quality range, 21% to medium-price/quality range and 14% to the high range, that is relatively more than China. In contrast with China, India has followed a strategy aimed at supplying higher quality goods or "customised" products and services.

The distribution of imports are less contrasted as the largest part of both countries' imports (more than two thirds) belongs to the middle- and upper-price/quality ranges. As a result, China's expanding trade surplus is more and more dependent on exports of low quality/price goods, while its deficit in upper and middle range products has climbed rapidly since early 2000. India's trade balance shows less marked trends and a trade deficit which is more evenly distributed between middle- and upper-price/quality ranges. Table 8.

It is interesting to note that in high-tech exports, the specialisation of both countries in down-market products is even stronger than in non-high-tech exports. About 77% of China's HT exports belong to low-price/quality level (against 72% for other exports), and 71% of India's HT exports (against 55% for other exports) (Lemoine and Unal-Kesenci, 2007). The technological upgrading of China's exports observed above has been quite dissociated from the evolution of its position on price-quality ladder. The most plausible explanation is that in this high-tech category, the Chinese exports are concentrated in the less sophisticated varieties (Gaulier *et alii*, 2006b). This suggests that foreign affiliates which play a dominant part in high-tech good exports confine their local production to the less sophisticated varieties. The relatively low unit value of India's and China's high-tech exports has several implications. It shows that to enter the world markets for such products, new-comers have to rely on an especially strong price competitiveness; but also that they do not export the same varieties as advanced countries do. They are specialised in lower quality level (no brand name, standard varieties, etc.). As China and India remain positioned in price/quality segments different from that of advanced economies, their technological upgrading would not imply an increased direct competition with advanced economies (Fontagne *et alii*, 2007).

Since 2004, China has recorded a trade China in HT goods but this surplus is entirely located in the down market segment. China seems to have succeeded in improving its position in high-tech trade but at the cost of an adverse performance in price/quality ladder. Table 10. India records a trade surplus only in non high-tech goods and its deficit is relatively evenly distributed among other categories of goods.

4 Convergence and competition?

China and India have based their economic take-off on very different production structures which explain their contrasted specialisation. Industry has been the engine of China's growth and account for more than half of GDP. In India this role has been taken by the services sector. According to long term scenarios (Wilson and Purushothaman, 2003; World Bank, 2007a; Poncet, 2006), the two economies are expected to continue to grow at an above average pace and to raise their influence in

the world economy. But, this leaves open the question of the strategy they should follow to make economic growth sustainable in the long run. In the two countries there is a debate about the growth strategy and necessary changes in their development pattern. Both countries have succeeded in reducing extreme poverty at home and have enhanced their influence in international trade negotiations. But they still face the major challenges posed by rising inequality, large unemployment and underemployment. They have to shift to a job-intensive, "inclusive" economic growth.

4.1 Can India skip the industrialisation phase?

In India, the debate is whether the country can skip the industrialisation phase (Banga, 2005; Rakshit, 2007; World Bank, 2004, Alessandrini *et alli*, 2007, Dasgupta and Singh 2005 and 2006).

Indian economic growth has been driven by services and there is still an enormous growth potential for services, as domestic and international demand is increasing, coming both from households (upper income groups) and from firms which develop subcontracting and outsourcing. According to OECD estimations, the share of employment in developed country services sector which could be potentially affected by offshoring is large. It represents more than two-thirds of employment in financial services in OECD countries (OECD 2006c).

However, the growth pattern India has followed in the last twenty years shows serious shortcomings as the modern sector of the economy has not been able to create enough jobs. After a decade of almost jobless growth in the nineties, employment has increased substantially since the beginning of the new century but jobs have been created only outside the organised sector of the economy (small firms and individual enterprises) which is characterised by low labour productivity. The development of the modern, organised sector, which still employs a small fraction of labour force (about 10%) , has been based on capital investment and productivity gains.

The general opinion is that India cannot afford bypassing mass manufacturing production, for several reasons. It has to create a large number of jobs for low skilled workers in the coming years, as the working-age population is going to increase up to 2035, and as workers have to move out of agriculture. Moreover, there is a window of opportunity for India in the next decade: China is going to lose its comparative advantage labour intensive industries, as its the working age population will begin to shrink in 2015 which will push up the cost of labour. Figure 5.

A strong manufacturing sector is also necessary for India to cater the domestic market and avoid the risk of inflation and of balance of payment deficit. At India's low level of per capita income, the income elasticity of demand for manufactured products is high and will remain high for a long time. For such a large country, domestic manufacturing has to contribute to meet domestic demand and support balance of payment (Dasgupta and Singh, 2005).

The Indian 11th five-year plan (2007-2012) considers that "India cannot afford to neglect manufacturing" and targets an average growth industry of 12 % for manufacturing , a faster pace faster than for services (9.9) and GDP (9%)(Planning Commission,2006). To alleviate the obstacles to industrial growth, the Plan emphasises the need to phase out the reservation of many labour-intensive industries to small-scale sector, to improve skill formation and physical infrastructures, which is the condition for an industry-led growth (Rakshit, 2007). The investment rate, which has risen from 24% in 2000 to 35% in 2006 and has boosted industrial growth, is expected to stabilise at this level and a large share of investment (more than one fifth) should be devoted to infrastructures (road, rail, and water transport, power generation and distribution, telecommunication, water supply).

Nevertheless, it is doubtful that India will transform itself into a hub of mass manufacturing", given the low level of R&D, the lack of skilled personnel (as high wage of skilled labour may impede the development of the labour intensive sector itself) and the relatively low level of FDI (Kumar and Gupta, 2008; Kochhar *et alii*, 2006). Moreover, this model is associated with heavy energy and

environmental costs as well as with social strains, which may be incompatible with the Indian democratic system.

In fact, industry and services should be viewed as complementary in Indian economic development. Services cannot replace industry and there is evidence that industry (informal and formal) has played and will play an important part in Indian growth (Dasgupta and Singh 2006). The outsourcing of services by manufacturing firms is one of the reasons of the rapid growth of services in India. According to Rakshit (2007) and to Gordon and Gupta (2003), "splintering" of industrial activities has resulted in an increase of input demand for services and in the services sector growing faster than the other sectors.

4.2 Can China succeed to rebalance growth?

In China the adverse effects of an outward-oriented and extensive growth strategy are now fully recognised. Chinese and foreign experts have underlined the need to shift to a more balanced economic growth (Yu, 2007; Blanchard and Giavazzi, 2005). Manufacturing industry has been the driver of economic growth over the last 20 years, but this growth has been costly and there are now clear concerns about its sustainability.

Industry-led growth seems now to have reached its limits. The boom of industrial production has been associated with a rapid increase in energy intensity and has caused severe damages to environment. Moreover, cost competition has led to downward pressures on the wages of unskilled labour and has contributed to aggravate income inequality and create social tensions (Gaulier *et alii*, 2006b). Since the end of the 1990s, investment and net exports have been the most powerful engine of China's growth, while the contribution of household consumption has tended to decline. China's export drive has resulted in trade tensions with major partners and induced protectionist reactions. Finally, the decline in working age population after 2015 will play in favour of an increase in real wages and will reduce China's comparative advantage in labour-intensive production.

The deterioration of China's terms of trade reveals the hidden weakness of China's position in international trade. This seems to illustrate the analysis made by Acemoglu and Ventura (2001) according to which "countries which accumulate faster than average supply more of the goods they specialised in to the world and experience worsening terms of trade". According to our calculations, based on CEPII database BACI, from 1997 to 2002, China experienced a sharp decline of its export prices (-13%) and its terms of trade deteriorated by 12%. Table 11. More recently, according to data published by the PBOC, owing to the rise of world prices of raw materials and oil, terms of trade further deteriorated by about 13% from 2003 to 2007 (Export prices increased by 19% but import prices by 37%)(PBOC, 2008).

The Chinese 11th five-year plan reckons the need to rebalance the economy in favour of services, of higher value added production and of domestic consumption. The shift in favour of services should help China to control pollution, to reduce energy intensity, and lower export dependence. The target to lower energy intensity by 20% between 2005 and 2010 can be achieved only if the structure of production is shifted in favour of services, as savings from technological changes are rather limited.

Since 2003, the measures taken to raise wages, to reduce the tax burden on peasants, to extend the social security system, are meant to increase household consumption. The phasing out of preferential tax treatment to foreign invested firms, effective since January 1rst 2008, also indicates that export-oriented production at any cost is no longer on the agenda. Nevertheless, economic trends up to early 2008 show that a shift away from labour-intensive industry and a turn to services sector and more value-added sectors is still to come and that the rebalancing will take time and can only be a long-term target.

In most East Asian economies, growth is currently driven by exports rather than by domestic consumption (ADB, 2005; IMF, 2006), and in this respect, China represents a quite extreme case.

Household consumption represents only 23% of China's GDP in 2005 and 36% of India's GDP. While the per capita income (at PPP) is almost twice higher in China than in India, household consumption per capita is only 23% higher in China.

4.3 Complementarity and competition

Due to their respective specialisation, China and India are presently not in competition in world markets. Considering the product composition of their exports, it stands out that they are more and more dissimilar from one another (Batra 2007). The Finger index calculated at the level of 72 categories of products (Chelem database) declined from 62 in 1990 to 46 in 2006. Moreover even in the textile sector, where they could be expected to compete, their position in quality ladder is quite different and softens competition. China's exports are concentrated in down market products (73%) and have shown no upgrading in price/quality ladder. In contrast India's exports encompasse an increasing proportion of medium- and high-price/quality products.

As underlined by Tarun Khanna (2007), "What China is good at, India is not and vice versa. The countries are inverted mirror of each other". He puts forwards the term "Mutualism" to suggest " the very real possibility that China and India will in time learn to capitalise on each other'strengths and compensate for each other's weaknesses".

Bilateral trade which has grown rapidly over recent years confirms the complementarity between the two countries. China's exports to India rose tenfold from 2000 to 2006, and India's exports to China by a factor of 6. Given the very different sizes of their global external trade, bilateral trade is asymmetric: China has become a major trade partner for India (7% of its exports and 10% of its imports) but India is still a marginal partner for China (2% of its exports and 1% of its imports). Trade flows are heavily imbalanced, with China's surplus climbing to almost US7bn in 2006. India's exports to China are heavily dependent on China's demand of raw materials and iron makes up the bulk of its exports. China's exports to India are diversified and include intermediate and semi-finished products as well as electronic equipment goods.

India feels the threat of Chinese firms' competition in its domestic market. India is one of the largest user of antidumping suits, and directs most of these actions against China, which reflects the weakness of Indian firms in their domestic market (Kumar & Gupta 2008).

According to long-term scenarios, even if in China and India continuously enlarge their share in world GDP, their average income per capita will remain far below that of "rich" countries in 2030 and even 2050. Indeed, in both countries, the "middle class" is expected to become larger and to enhance onsumption as an engine of domestic growth. This "middle class" corresponds in fact to the highest categories of income in the two countries. Their level of income is relatively high in purchasing power parity but still modest at current exchange rate. Even if their currencies appreciate, the consumer demand will be mostly addressed to relatively low-price consumer goods, coming from local producers and/or low-cost suppliers. This is likely to increase trade potential between these demographic giants and to attract direct investment by multinational firms eager to serve these rapidly expanding domestic markets. Besides this wealthy category of population, the rest of the population, including the "base of the pyramid" (those with less than $2 a day) will also represent an expanding demand for low-price goods (IFC, 2007).

There are also areas of potential competition. China could thus challenge India in its most successful sectors, services, as China is striving to develop its software industry, as well as in pharmaceutical industry. Their demand for energy and raw materials will also put them in competition, as they are both more and more dependent on imported oil.

5 Conclusion

India and China have different economic sizes and levels of income and contrasted international specialisation. During the last two decades, both have successfully integrated the world economy. They have changed the balance of international supply and demand in primary products, manufactured goods and services. The development of their new specialisation has enhanced their positions in international trade negotiations

However they have still to face domestic challenges posed by rising inequality, large unemployment and underemployment. They will be affected by the soaring prices of energy and the slow-down of the world economy. Although they contribute more and more to global growth they are not (yet) able to impulse the economy of the rest of the world.

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APPENDIX 1

From Developing countries to Emerging economies

Institution/publication	Term	Grouping	Number of countries
World Bank WDI	Developing countries	Countries with GDP pc below $11 000 in 2006	
World Bank Global economic prospects 2007	Emerging economies	"China, India and Other"	
UNCTAD, World Investment Report	"Developing & transition economies"	All countries excluding EU27 and other Western Europe, North America and other developed	
IMF World economic outlook 2007	"Other emerging markets and developing countries"	Countries outside the group of advanced economies (G7 and Euro area, Asian NIEs, ANZ)	143
Ernst & Young 2008	Emerging countries	Brazil, Russia, India, China Saudi Arabia, Mexico, South Korea, Argentina	8
Boston Consulting Group, 2007	Fast growing economies	Argentine, Brazil, Chile, China, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Poland, Russia, Thailand, Turkey	14
Goldman Sachs 2005	BRICS and the Next Eleven "large developing economies"	BRIC+, Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, Turkey, Vietnam	15
Price Waterhouse Coopers 2008	BRICs+13 other emerging markets		17

APPENDIX 2 : PROPOSED COUNTRY CLASSIFICATION (FOR CRITERIA, SEE THE TEXT)

EMERGING ECONOMIES	**RENTIERS**
Bulgaria	Algeria
Belarus	Angola
Brazil	Azerbaijan
Chile	Chad
China	Congo
Costa Rica	Equatorial Guinea
Estonia	Iran (Islamic republic of)
Croatia	Iraq
Indonesia	Kazakhstan
India	Kuwait
Liban	Libyan Arab Jamahiriya
Lituania	Myanmar
Morocco	Nigeria
Mexico	Norway, Oman
Pakistan	Qatar
Peru	Russian federation
Philippines	Saudi Arabia
Poland	Sudan
Roumania	Turkmenistan
Slovakia	United Arab emirates
South Africa (inc. Botswana, Lesotho, Namibia, Swaziland)	Venezuela
Thailand	Yemen
Turkey	
Ukraina	
Viet Nam	

Table 1.
Emerging economies and Rentiers: share in world GDP and trade (in %)

	1995	2005	2006
Emerging economies			
Share in world total exports	12	19	21
Share in world exports of manufactured products	12	22	22
Share in world exports of services	10	13	13
Share in world imports	12	17	18
Share in world GDP (constant US dollars)	13	15	16
Rentiers			
Share in world total exports	*8*	*13*	*13*
Share in world exports of primary products	33	54	
Share in world imports	5	5	6
Share in world GDP (constant US dollars)	5	5	6

Source: CEPII, CHELEM-INT-GDP databases.

Table 2.
Labour force in 2004-2005 (millions)

Sector	Primary	Secondary	Tertiary	All
China	340	181	238	758
India	228	83	123	434
Brazil	16	14	45	75
Mexico	4	14	24	42
OECD	30	129	359	518

Note: Secondary sector includes industry and construction.
Source: ILO, 2006.

Table 3.
Emerging economies*: share in world GDP and GDP per capita

	GDP Constant US$ (%)		GDP PPP (%)		GDP per capita, 2006	
	1995	2006	1995	2006	Current US$	PPP Intern. $
World	100	100	100	100		
Emerging economies, of which:	13	16	23	28		
China	3	5	6	10	2 000	4 500
India	1	2	3	4	800	2 300
Brazil	2	2	3	3	5 600	8 700
Mexico	2	2	2	2	7 700	11 300
Four large emergingeconomies	8	11	14	19		
Other emerging economies	5	5	8	9		
Rentiers, of which	5	6	8	9		
Russia	2	2	3	3	6900	12800

Source: CEPII, CHELEM-GDP database.
*For definition, see the text

Table 4.
Large emerging economies* (LEE) in world exports (in %)

Manufactured goods	1995	2006	Services	1995	2006
Mexico	1.6	2.3	Mexico	0.8	0.6
Brazil	0.7	0.9	Brazil	0.5	0.7
India	0.5	0.9	India	0.6	2.7
China	3.6	11.7	China	1.6	3.3
4 LEE	6.4	15.7	4 LEE	3.5	7.4
Russia	0.9.	0.9	Russia	0.9	1.1
World	100.0	100.0	World	100	100

Source: CEPII, CHELEM-INT-BOP databases.

*For definition, see the text

Table 5
China and India: degree of economic openness

	China		India	
In percent	1995	2006	1995	2006
Exports of goods and services/GDP	23	40	11	23
Exports of goods/GDP	18	37	9	14
Manufactured exports/manufacturing value added	51	93	39	60
Services exports/services value added	8	9	5	17
FDI inflows/GDP	5	3	1	2
FDI outflows/GDP	0	1	0	1

Source: World Bank, WDI

Table 6.
China and India: trade in services
Share in percent of world services

	DEBIT		CREDIT	
	1995	2006	1995	2006
CHINA				
Goods	**2.2**	**6.6**	**2.5**	**8.5**
Total services	**2.0**	**3.8**	**1.6**	**3.3**
Transportation services	2.6	5.0	1.1	3.8
Travel	1.0	3.9	2.2	4.9
Other services	2.3	3.2	1.4	2.5
which				
Communication services	*0.9*	*1.4*	*3.4*	*1.1*
Construction services	*0.0*	*4.5*	*0.0*	*5.0*
Insurance services	*11.6*	*8.0*	*8.0*	*0.9*
Financial services	*0.0*	*1.1*	*0.0*	*0.1*
Computer and Information services	*0.0*	*3.1*	*0.0*	*2.4*
Royalties	*0.0*	*4.4*	*0.0*	*0.2*
Other business services	*2.7*	*3.6*	*1.4*	*4.6*
Government services	*1.0*	*0.5*	*1.5*	*0.9*
INDIA				
Goods	**0.8**	**1.5**	**0.6**	**1.1**
Total services	**0.8**	**2.4**	**0.6**	**2.7**
Transportation services	1.6	3.7	0.6	1.4
Travel	0.3	1.2	0.7	1.3
Other services	0.7	2.3	0.4	3.9
which				
Communication services	*0.0*	*1.6*	*0.0*	*3.4*
Construction services	*0.0*	*2.0*	*0.0*	*0.7*
Insurance services	*1.5*	*2.4*	*0.7*	*1.9*
Financial services	*0.0*	*1.6*	*0.0*	*1.1*
Computer and Information services	*0.0*	*4.0*	*0.0*	*23.3*
Royalties	*0.2*	*0.6*	*0.0*	*0.1*
Other business services	*1.0*	*3.7*	*0.8*	*3.7*
Government services	*0.4*	*0.5*	*0.0*	*0.5*

Source: CEPII, CHELEM-BOP database.

Table 7.
China and India: changes in comparative advantage (a), 1995-2006

CHINA	1995	2000	2005	2006
Computer equipment	1.9	5.6	11.9	11.8
Telecommunications equipment	-2.1	1.2	5.3	6.4
Miscellaneous manuf. articles	8.6	9.1	5.9	5.4
Leather articles	10.7	9.1	6.0	5.4
Clothing	9.1	6.6	4.9	4.6
Consumer electronics	2.5	3.7	4.7	4.4
Knitwear	5.7	5.3	4.0	3.9
Electrical apparatus	1.3	3.8	3.3	3.3
Metallic structures	1.3	2.7	2.9	3.0
Furniture	1.3	2.6	3.0	2.9
Domestic electrical appliances	1.6	2.1	2.2	2.1
Carpets	2.3	1.7	1.7	1.7
Yarn fabrics	-1.6	-0.5	1.4	1.5
Electrical equipment	0.3	1.3	1.2	1.2
Other business services	-2.3	0.3	0.9	0.9

INDIA	1995	2000	2005	2006
Computer & information services	0.0	6.2	12.0	12.6
Refined petroleum products	-8.0	0.4	1.3	5.1
Jewellery, works of art	3.1	3.9	2.9	3.2
Clothing	6.7	5.1	3.1	2.7
Knitwear	2.4	2.6	2.0	1.9
Carpets	3.1	2.9	2.0	1.7
Iron ores	0.7	0.6	1.9	1.5
Yarn fabrics	5.5	4.6	1.5	1.4
Leather articles	4.4	2.7	1.6	1.4
Pharmaceuticals	0.5	0.8	1.1	1.0
Meat & fish	2.7	2.2	1.0	0.9
Other business services	-1.4	-0.3	0.2	0.8
Basic organic chemicals	-1.2	0.7	0.4	0.6
Communication services	0.0	0.7	0.8	0.6
Cars & cycles	0.6	0.4	0.7	0.6

a) Sectoral trade balance/1/2 (total exports + imports)
Source: CEPII, CHELEM-INT-BOP databases, authors' calculations.

Table 8.
Share of high-tech products and of computer & information services in exports of goods and services (% of total exports)

	2000	2001	2002	2003	2004	2005
China	13	14	15	16	18	18
India	10	14	14	16	15	14
World	11	10	10	10	10	10

Source: CEPII, CHELEM-INT-BOP databases, authors' calculations.

Table 9.
China's and India's trade by price/quality range
(% and million US$)

	1995	2000	2001	2002	2003
			CHINA		
Exports (%)					
High	10	14	14	12	11
Medium	19	18	18	17	16
Low	67	64	65	68	70
Unspecified tech	4	3	3	3	4
Total trade	100	100	100	100	100
Trade balance					
High	-7 829	-7 637	-11 151	-19 914	-43 976
Medium	5 677	14 416	11 972	3 492	-10 190
Low	68 462	130 442	138 294	173 555	232 444
Unspecified	1 552	845	-1 516	-5 702	-18 771
Total trade	67 862	138 066	137 599	151 431	159 506
			INDIA		
Exports (%)					
High	12	17	16	16	14
Medium	23	26	24	23	21
Low	44	38	41	41	45
Unspecified	20	19	19	20	20
Total trade	100	100	100	100	100
Trade balance					
High	-2 949	-181	-4 369	-718	-3 123
Medium	-1 297	-436	2 659	190	-3 973
Low	5 312	6 883	7 183	7 454	10 371
Unspecified	4 934	6 309	5 928	7 617	8 374
Total trade	6 001	12 575	11 400	14 544	11 649

Source: CEPII, BACI database

Table 10.
China's and India's trade balance by technological level and price/quality range
2004 (billion US$)

	Low	Medium	High	All
CHINA				
High-tech	66	-4	-19	43
non high-tech	280	9	-56	234
All products	346	5	-74	276
INDIA				
High-tech	-3	-1	-2	-6
non high-tech	15	-5	-6	4
All products	13	-6	-8	-1

Source: CEPII, BACI database.

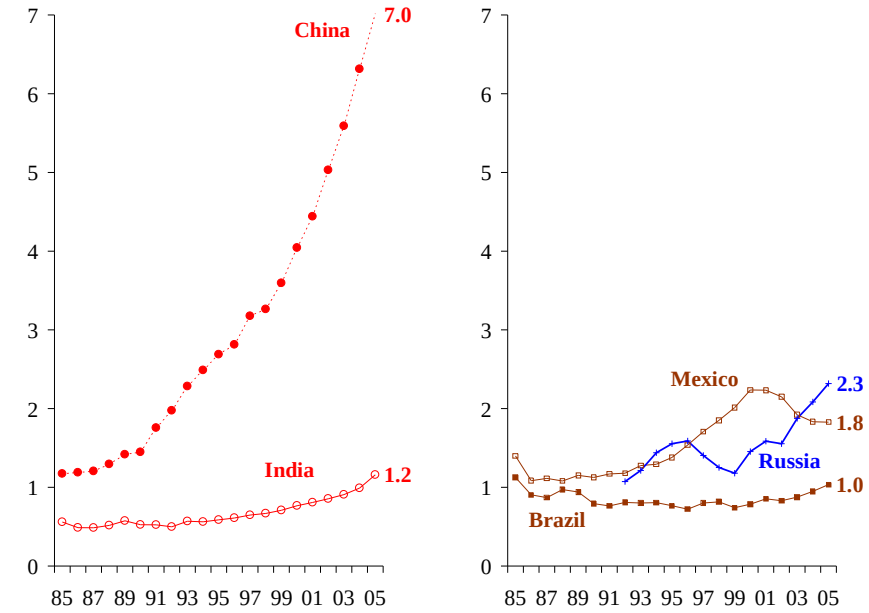
Table 11.
China and India: evolution of terms of trade
(index, 1995=1)

	95	96	97	98	99	00	01	02	03	04
CHINA										
Exports UV	1.00	1.03	1.01	0.97	0.92	0.91	0.89	0.87	0.90	0.96
Imports UV	1.00	0.99	0.96	0.93	0.92	1.01	0.98	0.99	1.10	1.33
Terms of trade	1.00	1.03	1.04	1.04	1.00	0.90	0.91	0.88	0.81	0.72
INDIA										
Exports UV	1.00	0.97	0.95	0.92	0.87	0.85	0.81	0.78	0.84	0.92
Imports UV	1.00	0.99	0.85	0.78	0.76	0.74	0.66	0.72	0.81	0.94
Terms of trade	1.00	0.97	1.12	1.17	1.14	1.14	1.23	1.08	1.04	0.99

Note: Exports and imports unit ratios (UV) are in US$.
Source: CEPII, BACI database.

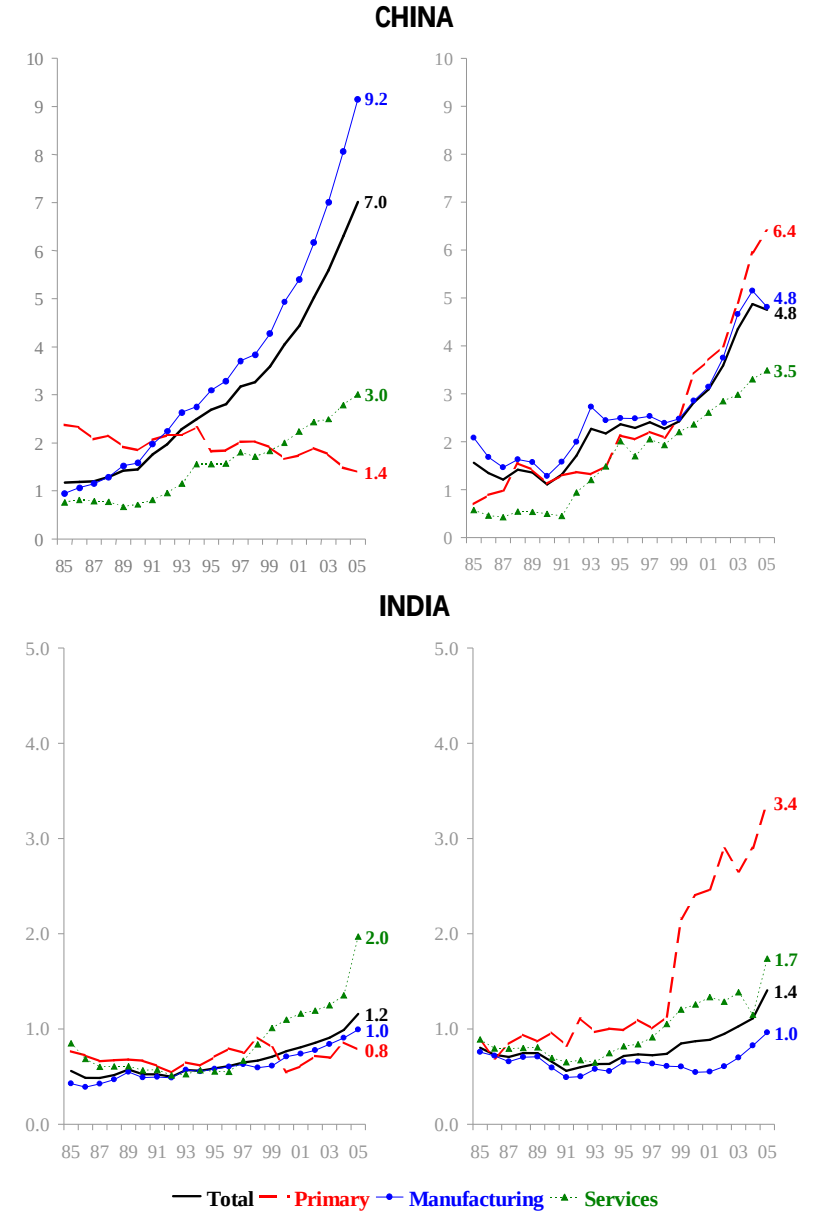
FIGURES

Figure 1
Large emerging economies: share in world exports of goods and services
(in % of world trade)



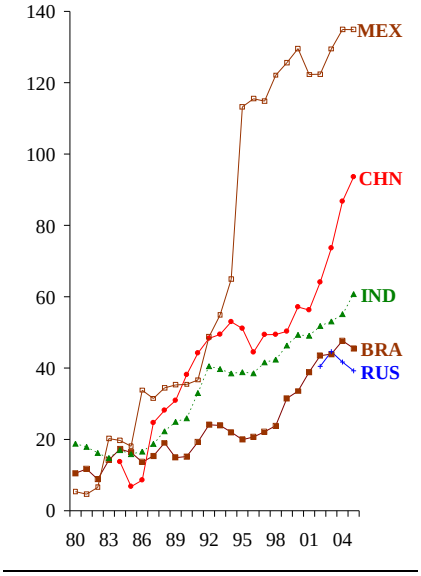
Source: CEPII, CHELEM-INT-BOP, July 2007.

Figure 2
China and India: share in world trade:
primary goods / manufactured goods / services
(in % of sector's world trade)



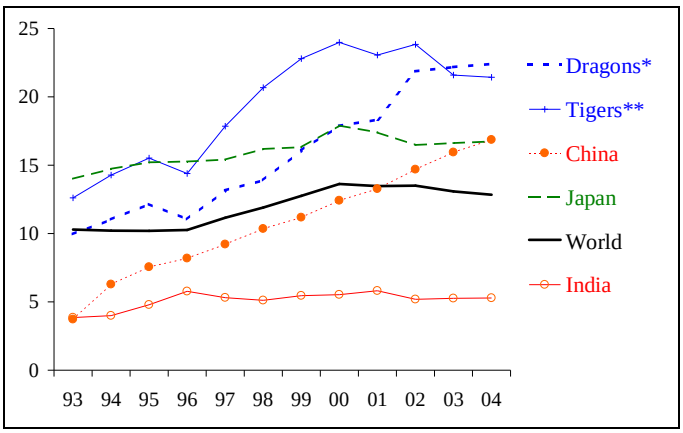
Source: CEPII, CHELEM-INT-BOP, May 2007.

Figure 3
Large emerging economies:
Manufactured exports in percent of manufacturing value added, (1980-2005)



Source: World Bank – WDI, July 2007.

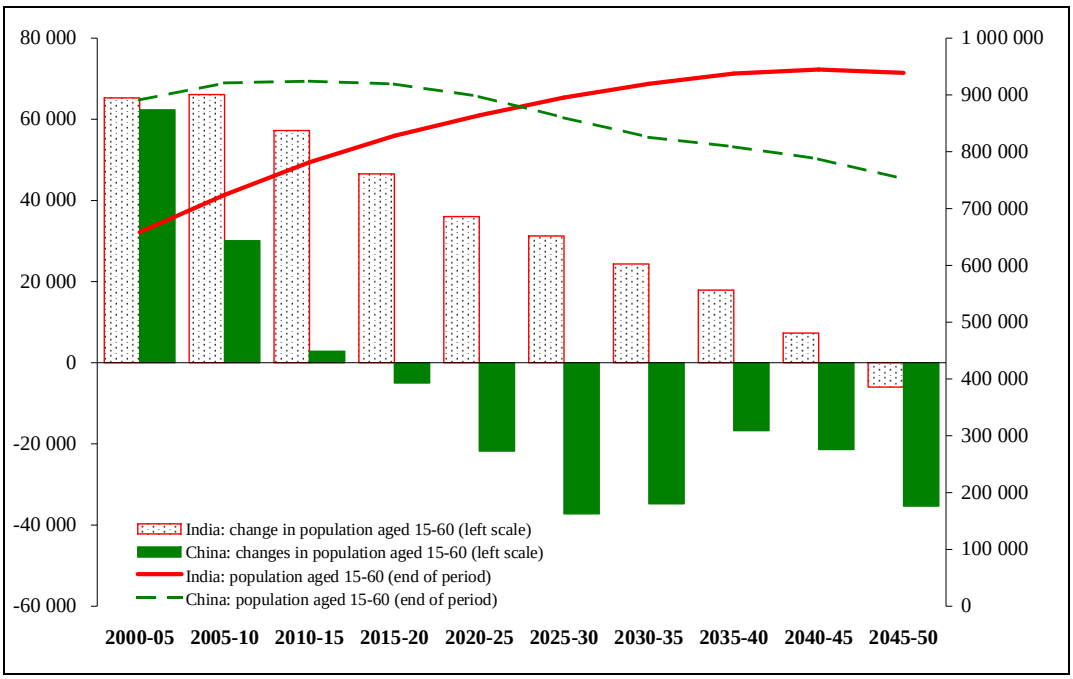
Figure 4
Share of high-tech products in manufactured exports
(in % of manufactured exports of the country)



*Hongkong, South Korea, Singapore & Taiwan.
**Malaysia, Philippines and Thailand.

Source: CEPII, BACI database, September 2006.

Figure 5
China and India, size of working age population, 2000-2050



Source: United Nations.