



Stanford

Center for International
Development

Working Paper No. 286

China, India and the World Economy

by

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July 2006



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Keywords: growth, global markets, China, India

JEL Codes: O40, O53

I. Introduction

Among countries with at least 10 million people in 2003, China and India have been growing very rapidly since 1980. The World Bank (2005, Table 4.1) reports that China's GDP grew the fastest at an average rate of 10.3% per year during 1980-90, while India's grew at 5.7%. Of the five countries that grew faster than India during this decade, none did so subsequently during 1990-2000 and 2000-04. In the latter two periods, China's GDP again grew fastest at the rate of 10.6% and 9.4% respectively on an average per year, while India's growth at 6.0 and 6.2% per year, respectively were exceeded by those of five countries during 1990-2000 and by four countries in 2000-2003. (World Bank, 2006a, Table 4.1. Only one country, Vietnam, grew faster than India in both periods. Thus only China's and India's rapid growth has been sustained for two and a half decades since 1980.

In 2003-04, India's GDP growth rate jumped to 8.5%, fueled by recovery from a severe drought in the pervious year. The estimated growth rate for 2004-05 is 7.5% and the projected rate for 2005-06 is 8.4% (CSO, 2006). The projection for 2006-07 by various agencies including the Asian Development Bank, the IMF, the Planning Commission and others range from a low of 7.4% to a high of 8.2% (RBI, 2006, Table 10). China's GDP growth rates, based on revised data, were 10.1% and 9.9% respectively in 2004 and 2005 and

* Samuel C. Park, Jr. Professor Economics, Yale University and Visiting Senior Fellow, Stanford Center for International Development. I thank Nicholas Hope, Kaoru Nabeshima and Shahid Yusuf for their comments on an earlier version which was prepared with support from the World Bank as a background paper for its ongoing study of the impact of China's and India's development on the rest of the world.

the projected rates for 2006 and 2007 respectively are 9.1% and 8.5% (World Bank, 2006b, Table 1). Thus both countries are expected to continue to grow rapidly.

In terms of absolute level of Gross National Income (GNI) at Purchasing Power Parity (PPP) exchange rates in 2004, China, with \$7.6 trillion was second largest in the World, second only to the United States at \$11.7 trillion. India with \$3.4 trillion in GNI was fourth after the U.S., China and Japan (3.8 trillion) (World Bank, 2006, Table 1.1). It is likely that by 2007, India would have replaced Japan as the country with the third largest GNI. IMF (2005, Box 1.4) estimates India's share in global output at PPP exchange rates to have risen from 4.3% in 1990 to 5.8% in 2004, and India's growth during 2003 and 2004 to have accounted for one-fifth of Asian growth and one-tenth of World growth, as compared to China's contribution respectively of 53% and 28%. It should cause no surprise then that the rapid growth of China and India has had significant impact on the World economy, though, not unsurprisingly, to the same extent.

In what follows, Section 2 describes the two basic channels, namely import demand and export supply, through which the growth of a country influences growth of the rest of the world and vice versa. Section 3, the main section of the paper, is on growth of China and India and its influence on the World economy. It begins with indicators of the extent of integration of China and India with global markets for goods and services (Subsection 3.1). Subsection 3.2 focuses on Global GDP Growth and Shares of China and India. Subsection 3.3 is devoted to sources and sustainability of growth using conventional decomposition of growth, in an accounting sense, into its components of factor accumulation (Subsection 3.3.1) and total factor productivity (Subsection 3.3.2). Subsection 3.4 is devoted to foreign capital flows to China and India. Section 4 looks at the place of, and competition between, the two

countries in global markets from a disaggregated perspective. Section 5 concludes with some brief remarks on how public policy could influence the emerging growth scenarios and their impacts.

2. Interdependence of Growth Among Trading Nations

It is trivially obvious that if the World consists of autarkic economies, there cannot be any interdependence in growth across countries. Thus, the greater is the integration of an economy with the rest of the World in trade in goods and services, investment and finances, the greater is likely to be interdependence in growth.¹ More specifically:

- i. The sources of demand for the output of any good or service in the home economy are essentially two, namely, domestic and foreign. To the extent foreign demand accounts for a significant share of total demand, clearly growth in foreign income, ceteris paribus, will lead to growth in foreign demand for home exports and hence to growth in home income. This is the export-led growth channel for the domestic economy. A substitution of home exports by domestic supply abroad could be source of growth for the rest of the world. This is the home export substitution abroad (equivalently, foreign import substitution) channel for the foreign economy.
- ii. Analogously, the sources of supply for meeting the domestic demand for any good in the home economy are again two, namely, domestic and foreign. To the extent foreign supply accounts for a significant share of total supply,

¹ Whether opening to trade by an autarkic economy has only a once-and-for all efficiency effect or also a dynamic growth effect, and if there is a growth effect, whether it is purely transitional or it is sustained along the steady state path are issues that have been explored in the literature. Of course, even static and transitional effects could affect growth over a long time if the process of trade liberation takes place over an extended period. Besides there could be other channels, such as diffusion of knowledge, associated with external sector liberalization that can generate growth effects and their interdependence across countries (Srinivasan, 2001). I will not discuss these issues in this paper which is focused on the medium term.

growth in home incomes, ceteris paribus, will lead to growth in home demand for foreign exports. This is the home import-led growth channel for the global economy. By the same token, substituting foreign with domestic supply could be a source of growth for the home economy, for a limited time, until all of importing (i.e. foreign supply) is eliminated. This is the home import-substitution channel for home growth.

The ceteris paribus phrase, in (i) and (ii), covers many things including: that prices faced at the border by exporters and importers are unaffected, public policies that create a wedge between border and domestic prices remain the same, and more broadly, supply and demand conditions including technology, tastes, market structure, exchange rate policy regime, etc. remain the same as growth takes place. Clearly these are strong assumptions. For example, there is an on-going debate about whether global macroeconomic imbalances will be reduced or eliminated and about alternative adjustment policies for doing so². The exchange rate and macroeconomic outcomes of alternative adjustment policies will have implications for global growth and in particular, whether China and India or any other country will replace the U.S. as global growth engines (Williamson, 2005). Though relevant, this topic and other implications of changes in macroeconomic policies (e.g. monetary and fiscal) for macroeconomic stability and growth will not be covered in this paper. However, changes in policy regimes leading to trade and investment liberalization as well as technological changes (e.g. information technology revolution) could have significant impacts both on the growth of individual countries and industries and on growth of the world economy. I will attempt to account for such changes to the extent possible given what is known or projected.

² See papers and comments (including one by me) on this issue in Brookings Papers on Economic Activity, 1, 2005.

3. Growth of China and India and its Influence on the World Economy

3.1 Indicators of the Extent of Integration in World Markets for Goods and Services

An overall indicator of integration is the extent of international trade in the domestic economy as measured by the share of exports and imports in GDP and in the global economy as measured by the share of a country's exports and imports in global exports and imports. The relevant data are in Table 1 below.

TABLE 1

Measures of Integration with the World Economy				
		<u>Percent of Total</u>		
		<u>1983</u>	<u>1994</u>	<u>2004</u>
Share in GDP of Exports of Goods and Services	China	n.a.	18 ¹	34 ³
	India	n.a.	7 ¹	19 ²
Share in GDP of Imports of Goods and Services	China	n.a.	16 ¹	31 ³
	India	n.a.	9 ¹	23 ²
Share in World Merchandise Exports	China	1.2	2.8	6.7
	India	0.5	0.6	0.8
Share in World Merchandise Imports	China	1.1	2.6	6.1
	India	0.7	0.6	1.1
Country Share in World Exports of Commercial Services	China	n.a.	1.6	2.9
	India	n.a.	0.6	1.9
Country Share in World Imports of Commercial Services	China	n.a.	1.5	3.4
	India	n.a.	0.8	2.0

¹ Shares are for 1990

² The figures for India for 2004 do not seem plausible as compared to those in World Bank (2005), Table 4.9) for 2003. National data for fiscal year 2005-06 suggest the shares of exports and imports in GDP at current market prices (factor cost) were respectively 13% (14%) and 18% (19%).

³ The shares of exports and imports were respectively 34% and 31% in 2006 and 38% and 32% in 2006 (Nicholas lardy, private communication, July 14, 2006).

Sources: (1) For shares in GDP, World Bank (2006a), Table 4.8

(2) For shares in World Trade, WTO (2005), Tables I.5 and I.7

It is clear from Table 1 that although both countries have become increasingly integrated with the World Economy, China has gone much farther, even allowing for the fact that China started the process of integration at least a decade earlier. Thus with twice as much or more share of exports and imports in GDP, more than seven times (five times) the share in World merchandise exports (imports), China was better positioned in 2004 for influencing (and also being influenced) by growth of the World economy. Interestingly, during the period 1990-2004 while the share of exports and imports in India's GDP almost doubled, the increase in India's share in its World merchandise exports, proportionately, was far less. Thanks to its success in the IT service sector, India's share in World exports of commercial services tripled during the same period. It would seem that in India's case, with the possible exception of services, the effect of greater integration is largely one-way and domestic, in the sense of its raising the rate of GDP growth and the share of trade in domestic GDP, rather than India's more rapid GDP growth influencing global GDP growth significantly.

3.2 Shares of China and India in Global GDP and its Growth

The measures of integration in Table 1 in effect proxy the potential for the growth of China and India to contribute to growth in the World Economy - put another way, if these measures were zero, so that China and India were autarkic, then obviously their growth would have no effect on the growth of the other countries of the World. But on the other hand, even if positive, the measures do not necessarily imply that the growth of the two countries had or would have, significant impact on global GDP growth or on the growth of low and middle income countries (or alternatively to the growth of developing Asia). Table 2, based on

World Bank data³, quantifies the impact in an accounting (not to be confused with causal) sense. Table 3 is from Jorgenson and Vu (2005) who use purchasing power parity based exchange rates.

TABLE 2

	<u>Share in Global GDP (%)</u>		<u>Share in GDP of Low and Middle Income Countries (%)</u>		<u>Growth Rate of GDP (%)</u>		<u>Share in Growth of World GDP¹ (%)</u>		<u>Share in Growth Rate of Low and Middle Income Countries (%)</u>	
	1990	2004	1990	2004	1990-2000	2000-2004	1990-2000	2000-2004	1990-2000	2000-2004
CHINA	1.63	4.68	8.87	23.01	10.6	9.4	17.72 (6.17)	17.60 (6.13)	62.54 (24.11)	45.06 (17.37)
INDIA	1.46	1.67	7.92	8.23	6.0	6.2	3.58 (3.12)	4.14 (3.62)	12.66 (12.18)	10.63 (10.23)
CHINA AND INDIA	3.09	6.35	16.79	31.24			21.30 (9.30)	21.73 (9.75)	72.50 (36.29)	55.69 (27.60)
WORLD	100.00	100.00	2.9	2.5						

SOURCE: World Bank (2006a), Tables 4.1 and 4.2

1 Using shares of the two countries in global and low and middle income countries' GDP of 2004 respectively as weights. Figures in parenthesis use corresponding shares in GDP of 1990 as weights.

2 The rates of growth of global and low and middle income countries were:

	1990-2000	2000-2004
Global	2.9	2.5
Low and Middle Income	3.9	4.8

³ These data use exchange rates put together (using the so called Atlas method) by the World Bank and do not make adjustments for differences in purchasing power parity.

TABLE 3

	<u>Share in GDP of World (110 Economies) (%)</u>		<u>Share in GDP of Developing Asia (16 Economies) (%)</u>		<u>Growth Rate of GDP (%)</u>		<u>Share in GDP Growth of World (%)</u>		<u>Share in GDP Growth of Developing Asia (%)</u>	
	1989-95	1995-03	1989-95	1995-03	1989-95	1995-03	1989-95	1995-03	1989-95	1995-03
CHINA	7.64	10.91	36.37	41.68	9.94	7.13	30.30	22.58	49.17	52.86
INDIA	4.95	5.97	24.10	22.89	5.03	6.15	9.95	10.66	16.49	25.04
CHINA AND INDIA	12.59	16.88	50.47	64.57			40.25	33.24	65.66	77.90

SOURCE: Jorgenson and Vu (2005) Appendix Table 1

A comparison of Tables 2 and 3 establishes that adjusting for purchasing power parities makes a substantial difference to the shares of the two countries in global GDP and growth. Still the two tables agree on the following:

- i. The shares of the two countries (in global and low income countries' GDP) have been increasing over time, although more so in the case of China than India, because of its more rapid growth. The two together accounted for more than a fifth of global growth if 2004 GDP shares are used as weights and slightly less than a tenth if 1990 shares are used as weights during 1990-2004 (Table 2). Given the rapid growth of GDP in both countries during 1990-2004 it is no surprise that the use of 1990 GDP weights lowers the contribution of the two to global growth. The two accounted for as high as two fifths of global growth during 1989-1995 and a third during 1985-2003 (Table 3) once adjustment for PPP is made. The shares of the two in the GDP of low income countries is naturally higher than in global GDP and their contribution to GDP growth in low and middle income countries is even higher (Table 2).

- ii. The relative share of China's growth in global growth compared to India's seems to have decreased over time regardless of the weights used in Table 2 or when adjustment is made for PPP in Table 3. However, the decrease in the relative share of China seems to be greater when PP adjustment is made. This suggests that relative to India, prices in China seem to be moving closer over time to world prices, confirming once again the findings of Table 1 that China is integrating with the World economy faster than India.

The IMF (2005) recognizes that policy makers in India are actively seeking to strengthen India's global linkages and to accelerate its integration with the World economy. Success in these efforts would increase the role of India in the World economy. The report explicitly refers to one of the mechanisms, India's import demand, through which this would come about. To wit,

A dynamic and open Indian economy would have an important impact on the world economy. If India continues to embrace globalization and reform, Indian imports could increasingly operate as a driver of global growth as it is one of a handful of economies forecast to have a growing working-age population over the next 40 years. Some 75-110 million will enter the labor force in the next decade, which should-provided these entrants are employed - fuel an increase in savings and investment given the higher propensity for workers to save.

3.3 Sources and Sustainability of Growth

3.3.1 Factor Accumulation

China is already well integrated with the world economy. Indeed the share of international trade (exports and imports of good and services) in its GDP at 65% (Table 1) in 2004 and 70% in 2006 is very high for an economy of China's continental size and level of per capita income. It would be surprising indeed if the share will rise to much higher levels in

the future. In China the share in population of persons in the prime working age (15-59), already at 67.7% in 2005, is projected to fall to 53.3% by 2050 (UN, 2006, Table VI.10). This in large part reflects the effects of the draconian and coercive one-child policy instituted in 1979 and also the decline in fertility in the decade before. The dependency ratio is projected to rise, from 57% to 88% by 2050. Its savings and investment rates at 42% and 39% of GDP (unrevised data)(World Bank, 2006b, Table 4.8) respectively in 2004 are also unlikely to be sustained indefinitely into the future. These two facts suggest that from the input (labour and capital) side there will be a downward pressure on China's growth from a slow down in growth of labor and capital inputs. On the other hand, as Perkins (2005) notes, China still has more than half of people of working age employed in agriculture and rural activities, with lower productivity than non-farm workers. He estimates that China's non-farm workforce could increase by another 70 to 100 million in the next decade depending on assumptions about expansion of senior secondary and university education. Thus, productivity gains from the intersectoral shift of labour as well as other changes that increase total factor productivity including technological improvement, could more than offset the downward pressure on growth so that aggregate GDP growth could be sustained in the ranges of 8% to 10% a year for the next couple of decades.

In India's case, demographic trends are more favorable than China's. It is true that some of the Indian states (mainly in the South but also in the West) have already achieved fertility rates at or below replacement level (without the use of an abhorrent and coercive one-child policy as in China) and more will soon do so. Hence, these states will also experience an increasing old-age dependency ratio as in China. However in the rest of the states, which account for more than half of India's population, fertility rates, though declining, are above

replacement. Hence, India's population in the age group 15-59 is projected to rise slightly as a share of total population from 60% in 2005, 61% in 2050 and dependency will fall slightly from 67% to 64% (UN 2006, Table VII.10). India lags behind China in the educational attainment of its workforce and hence its catch-up with China on human capital accumulation will also contribute to growth. Moreover, with a much larger share of the workforce employed in agriculture and other low productivity activities, India has greater potential than China to experience significant productivity gains from intersectoral shift of labour. Also India's saving and investment rates were around 30% in 2004-05 (CSO, 2006) according to Indian official data. World Bank reports lower rates respectively of 23% and 24% for 2004 (World Bank, 2006a, Table 4.8) are likely to increase further for life-cycle as well as other reasons. In brief, India can sustain, and in fact increase, the contribution of accumulation of human and physical capital in its growth.

The GDP weighted average of the rates of gross capital formation in 1990 and 2004 were respectively 38% and 24% of GDP in China and India. Their growth rates of GDP during 1990-04 were around 10% and 6% in China and India (World Bank, 2006a, Tables 4.1 and 4.2) respectively. The crude incremental capital-output ratios, as measured by the ratio of growth rates to investment rates, were 3.8 (i.e. $38/10$) in China and 4 (i.e. $24/6$) in India, suggesting that India is using capital somewhat less efficiently than China. Put another way, China is able to achieve a 4% higher rate of growth than India with 14% higher investments, while India with nearly 1.7 times (i.e. $24/14$) higher total investment rate gets only 1.5 (i.e. $6/4$) times higher growth rate. Revisions of China's and India's GDP data are unlikely to change these conclusions. Prima facie this would lead one to conclude that China is using capital somewhat more efficiently, and two facts support such a conclusion. First, the

composition of China's GDP with its far higher share of more capital intensive industry (manufacturing) at 46% (39%) compared to India's 27% (16%), and lower share of less capital intensive services at 41% compared to 52% (World Bank 2006a, Table 4.2), and second, China seems to have invested more in capital intensive infrastructure including housing. Indeed, services have been the driving force behind India's recent growth. There is some recent evidence that growth of India's manufacturing sector is accelerating. If sustained, and if growth in services (and agriculture) does not slacken, aggregate growth rate will rise.

3.3.2 Growth in Total Factor Productivity

It is conventional wisdom, dating back to the analysis of components of the then rapid growth in the Soviet Union in the fifties, that growth, if it depends largely on factor accumulation, is unlikely to be sustainable since factor accumulation cannot continue forever. On the other hand, growth that is driven largely by total factor productivity (TFP) growth can. I already noted in the previous section that there is some evidence to suggest that China may be unable to sustain its investment in physical capital and its labour force growth. It is therefore of interest to look at available evidence on TFP growth.

As is well known, TFP growth estimates are highly sensitive to the data used and above all to the methodology of estimation. Extreme caution is called for in interpreting them and using them for policy analysis⁴. With this caveat, let me refer to available TFP growth estimates, based on different methodologies, data series, and time periods, for China and India. I will be selective in reporting only some, but not all, available estimates. Jorgenson and Vu (2005) focus on the possible impact on growth of the information and communication technology (ICT) revolution, by breaking up capital into ICT and non-ICT capital. They also

⁴ Some skeptics would reject TFP estimates altogether for these reasons.

account for human capital accumulation by distinguishing between growth in labour hours and labour quality. Their decomposition of growth is shown in Table 4

TABLE 4
Sources of Output Growth in China and India (% Per Year)

	Period 1989 - 1995					Period 1995 - 2003						
	GDP Growth	Capital		Labour		TFP	GDP Growth (%)	Capital		Labour		TFP
		ICT	Non-ICT	hours	quality			ICT	Non-ICT	hours	quality	
China	9.94	0.17	2.12	0.87	0.45	6.33	7.13	0.63	3.17	0.45	0.39	2.49
India	5.03	.09	1.18	1.27	0.43	2.06	6.15	0.26	1.77	1.22	0.41	2.49

SOURCE: Jorgenson and Vu (2005), Appendix Table 2

Table 4 suggests that while India experienced an increase in TFP growth from 2.06% to 2.49% per year between the two periods, China's TFP growth declined from an astonishing 6.33% per year to a reasonable 2.49% between the same two periods. The contribution of TFP growth to GDP growth remained virtually unchanged at 41.0% and 40.0% in the two periods in India, while it declined from 64.3% to 34.9% between the two periods in China. The revision of GDP growth upward by about 0.5% per year on an average in this period in the new data will reduce the fall in TFP growth rate by that amount without reversing it.

A recent and detailed estimate (Table 5) of TFP growth for India is by Virmani (2002) who breaks down the period 1950-51 to 2003-04 into four sub-periods roughly corresponding to the prime-ministerships of Nehru, Indira Gandhi, Rajiv Gandhi and the period after the systemic reforms of 1990-91.

TABLE 5

Period	TFP Growth (% per year)	Contribution to Growth of NDP Per Worker (%)
1950-51 – 1964-65	1.9	41
1965-66 – 1979-80	0.1	4
1980-81 – 1991-92	2.5	46
1991-92 – 2003-04	3.6	59

Source: Virmani (2002)

The acceleration of TFP growth since the initiation of reforms, hesitantly during 1980-90 and systemically since 1991, is evident. It is also striking that in the second period when the economy was very much insulated from the world economy and state controls on the economy were not only intrusive and extensive but also intensified, TFP growth fell to almost zero.

Table 6 displays TFP growth rates for China and India by various other authors. They confirm that reforms in China since 1978 and in India in the 80s and 90s increased TFP growth.

TABLE 6

China (Hu and Khan)		India (IMF)		India (World Bank)		India (Ahluwalia)	
1953-78	1.1	1960s	-1.0 to 1.1			1960-80	-0.5 ^a
1979-94	3.9	1970s	-2.1 to 0.3	1979-80 to 1997-98	1.3 to 1.5	1980's	2.8 ^a
		Mid- 1990s	1.5 to 3.4	1994-95 to 1996-97	2.4 to 2.8		
		Late 1990s	0.3 to 2.9				

a – Figures for manufacturing sector only

SOURCES: Srinivasan (2005) and references cited therein.

In contrast to the estimates to the TFP growth in Tables 4-6 based on aggregate data, C. Hsieh and Klernow (2006) use microdata on manufacturing industries in China and India.

They find sizable gaps in marginal products of labor and capital across plants within narrowly defined industries. Their preliminary results suggest TFP gains of around 2 in both countries if the gaps in marginal products across establishments are eliminated.

3.3 External Capital Inflows

The role of external capital inflows, particularly foreign direct (FDI) and portfolio investments (FPI) in the growth and global integration of these two countries has captured the attention of analysts. China has attracted and continues to attract far more FDI than India. The difference in FPI flows is smaller, but in terms of net private capital inflows China is far ahead.

TABLE 7

	1990		2004	
	CHINA	INDIA	CHINA	INDIA
Private Capital Flows (\$ Millions)	8107	1843	73,829	17,852
<u>of which:</u> FDI	3487	237	54,936	5,335
Portfolio, Bonds	-48	147	3,690	3,722
Portfolio Equity	0	0	10,923	8,835
Banking and Trade Related	4668	1459	4,280	-40
Gross Private Capital Flows as % of GDP	2.5	0.8	10.0	5.9
Net FDI Inflows as % of GDP	1.0	0.1	2.8	0.8
Net FDI Outflows	0.2	0.0	0.1	0.2

SOURCE: World Bank (20056b), Tables 6.1 and 6.8

A significant part of FDI inflows to China are from the Chinese Diaspora (including residents of Hong Kong and Taiwan). In India also FDI inflows from Mauritius, a country with a large number of Indian residents of Indian origin accounts for a significant part of total inflows. Also, China's policy of creating special economic zones (SEZs) to attract foreign investment by exempting investors from regulations applicable elsewhere in China (particularly relating to hiring and firing and foreign ownership) and also providing excellent infrastructure (power and communications) was highly successful⁵. India is only now creating SEZs like China's. But limits to foreign ownership apply to different entrants in different sectors and restrictive labour laws continue. Lastly, China's FDI was export oriented and also directed in part to investment in infrastructure. Given the significantly larger shares compared to India's of private capital flows in China's GDP and investment and its tilt towards exports and growth promoting infrastructure, it is clear that greater integration of China in world capital flows contributed to its faster growth and at the same time, their export orientation increased integration in goods markets as well.

Taken together, the likely evolution of factor accumulation and total factor productivity in the medium term, it is very likely that China would be able to sustain its average growth in the range of 8% - 10% per year. India would be able to raise its growth from around 6% of the last two and a half decades to 8% or more. China's integration with the world economy is already high. India's integration will continue to increase so that it will play a larger role in influencing the growth of the world economy than in has done until now. Also, China's policies towards external private capital flows were successful in attracting

⁵ In both countries and more so in the case of China, some of the FDI inflows could be due to "round-tripping", i.e. of domestic capital flowing out and flowing back as FDI to take advantage of the concessions. Still, the substantial difference in FDI flows to the two countries cannot be explained away by round-tripping and differences in the methodology of compilation of data.

substantial flows and their use in export oriented and infrastructural activities not only contributed to growth but also increased China's integration in goods markets. This trend is likely to continue in the medium term. India is only now instituting Chinese- like policies towards capital inflows and their impact is as yet uncertain. But based on evidence from surveys of investor intentions there are reasons to be hopeful.

Let me now turn to the likely impact of greater integration of India and China with the world economy from a disaggregated perspective.

4. A Disaggregated Perspective

As noted earlier, rapid income growth in China and India, *ceteris paribus*, will obviously increase demand for goods and services for final and intermediate use. Part of this increase in demand will be met by imports. It is likely that the increase in demand would be matched in part by increase in domestic and foreign supply and in part by increases in relative prices. The increase in supplies would itself be a response to price increases and also any induced technical changes and search for alternative sources of supply. Obviously without building and estimating a well specified, disaggregated, dynamic, multi-country global model in which policy variables are also represented, it is impossible to make projections of increases in demand, supply and their equilibrium price consequences.⁶ This understood, I will explore how export supplies currently match global import demand. This will at least give an indication of where the pressures on demand and supply are likely to emerge with global economic growth, and indirectly, the implications of rapid growth of China and India.

Table 8 gives the relevant data.

⁶ However, whether the parameter estimates from such a model based on past data are useful for projections for the future is controversial. The so-called "Lucas critique" argues that only deep parameters relating to tastes and technology are stable and all others are dependent, *inter alia*, on policy regimes in place.

TABLE 8
Share of China and India in World Trade (Percent)

WORLD EXPORTS	1980		1990		2004	
	China	India	China	India	China	India
<u>I. Manufacturing</u>	0.8	0.5	1.9	0.5	8.3	0.9
1. Iron & Steel	0.3	0.1	1.2	0.2	5.2	1.6
2. Chemicals	0.8	0.3	1.3	0.4	2.7	0.7
2.1 Pharmaceuticals			1.6 ^a	1.2 ^a	1.3	1.0 ^b
3 Office machines & telecom equip.	0.1	n.a.	1.0	0.8	15.2	0.6
4. Auto parts	0.0	0.0	0.1	0.1	0.7	0.1
5. Textiles	4.6	2.4	6.9	2.1	17.2	4.0
6. Clothing	4.0	1.7	8.9	2.3	24.0	2.9
<u>II. Commercial Services</u>					2.9	1.9
1. Transports					n.a.	n.a.
2. Travel					4.1	n.a.
3. Other					2.4	3.1

WORLD IMPORTS	1980		1990		2004	
	China	India	China	India	China	India
<u>I. Manufacturing</u>	1.1	0.5	1.7	0.5	6.3	0.8
1. Iron & Steel	2.7	1.0	2.5	1.0	8.2	1.0
2. Chemicals	2.0	n.a.	2.2	n.a.	6.5	n.a.
2.1 Pharmaceuticals			0.9 ^a	n.a.	0.8 ^a	n.a.
3 Office machines & telecom equip.	0.6	0.2	1.3	0.3	11.2	0.5
4. Auto parts	0.6	0.0	0.6	0.1	1.7	0.3
5. Textiles	1.9	n.a.	4.9	0.2	7.4	0.6 ^b
6. Clothing	0.1	0.0	0.0	0.0	0.6	0.0
<u>II. Commercial Services</u>			2.5 ^a	2.1 ^a	3.4	2.0
1. Transports					4.2	2.2
2. Travel					3.3	2.4
3. Other					3.5	2.1

Notes: n.a. =not available, ^a=pertains to 2000, ^b = pertains to 2003

Source: WTO (2005) Tables I.7, IV.26, IV.27, IV.28, IV.34, IV.39, IV.40, IV.46, IV.47, IV.48, IV.67, IV.68, IV.74, IV.76, IV.83, IV.84, IV.87, IV.90, IV.93

Several interesting facts emerge from Table 8. First, China has emerged as a major exporter of manufactures since 1990 with a global share of 8.3% in 2004. India is not yet a major exporter to the world. Within manufacturing, China has a significant share of world markets for iron and steel, office machines and telecommunications equipment and, not surprisingly, in textiles and clothing. Except for textiles and clothing, where India's share has grown modestly to 4.0% and 2.9% respectively of global exports and less so to 1.6% in iron and steel exports, India's shares are very small and not growing.

Textiles and Clothing:

It is well known that as quotas under the Multifibre Arrangement (MFA) were being eliminated in a phased manner from 1995, China took advantage of the elimination of quota markets in the USA and the EU markets and rapidly increased its share in the two markets. After the MFA was completely eliminated (in fact, in anticipation of it) on January 1, 2006, Chinese exports in both markets increased rapidly, triggering safeguard actions by USA and EU. India did not, and in fact could not, take full advantage of the gradual phase-out because of domestic constraints, including in particular, the reservation of garments for production by small scale enterprises (the reservation was lifted only three years ago) and restriction on textile imports. In the post MFA scenario, given appropriate policy changes, India could do better and indeed gain global market shares, although perhaps not as much as China.

A study by Nordas (2004) use a multi-country global general equilibrium model to project shares of various countries in the markets for textiles and clothing in the US and the EU markets. His results are in Table 9. China is estimated to capture as high as half of the clothing market in the US and a little less than a third of the EU market once MFA quotas are

eliminated. India's gains are much more modest. Unsurprisingly, the gains in the share of markets for textiles, in segments of both EU and US are competitive are not large for either country.

Table 9
Equilibrium Shares of China and India
In EU and US Markets

		Textiles		Clothing	
		EU	US	EU	US
Pre-elimination of MFA quotas	China	18%	11%	18%	16%
	India	9%	5%	6%	4%
Post Elimination of MFA Quotas	China	12%	18%	29%	50%
	India	11%	5%	9%	15%

Source: Nordas (2004)

The simulations of Ananthkrishnan and Jain-Chandra (2005) of the effects of MFA quota elimination using an applied general equilibrium model of the Global Trade Analysis Project (GTAP Version 6), and taking into account the current safeguard restrictions of China's exports to US and EU, are not optimistic for India. While India's exports will grow, with the expiration of safeguards on Chinese exports in 2008, growth will decline. Largely because of adverse terms of trade change (i.e. falling export prices due to competition) the welfare effect of the expiration of MFA is negative for India, with the welfare loss being smaller, with safeguards on China in place. The authors note the initiation of domestic reforms in Indian textile and apparel industry in 2004 and expect their beneficial effects to emerge after a lag. They end their paper with the banal note, "India could emerge much

stronger and expand its trade in textiles and apparel at a much faster pace if some of the key weaknesses are overcome” (p29)!

In an interesting review of the role of price and cost comparativeness in apparel exports in the post MFA scenario, Tewari (2005) takes note of these detailed studies of the Indian situation and concluded that with, the removal of impediments such as the high cost of imports like energy, dyes and chemicals, and by raising the scale of production and improving productivity (particularly of labour), India can compete with China. She points out, as the authors of the studies she surveyed themselves recognized, a limitation of their studies is that they partly neglect the fundamental ways in which the structure of apparel production sourcing and trade have changed in recent years. She concludes that in the new environment, ample opportunities still exist for building lasting competitive advantage based on creativity in production, skill formation, technological innovation in marketing and distribution, and the creation of supporting institutions to help firms and workers adapt continually to volatile markets. This is a tall agenda that in principle is relevant for other industries besides textiles and apparel. However the benefits from and costs of its implementation are unknown. In any case it is not clear whether India is capable of implementing it.

Automobiles and Parts

Both China and India have tripled their share of global auto parts market between 1990 and 2004 (Table 8), though the shares are still small in both countries, and much smaller in India than in China. However, there are reasons to believe that both can emerge as significant players in the global market. There were only three private firms producing passenger cars in India and their capacity was heavily constrained by the government through licensing until the

early eighties when a new public sector firm with Suzuki motors as collaborator was allowed entry into the market. It began a transformation of not only of India's passenger car components but also the entire auto industry including its auto parts component. As IMF's Raghuram Rajan (2006) noted, once entry barriers against foreign producers were removed and capacity licensing doubled with the reforms of 1991, not only foreign producers entered the market, but soon found out that it did not make sense for them:

... to continue sourcing their sub assemblies from outside India. Instead, they started developing local ancillary manufacturers, and gave them the technological assistance for them to become world-class. Soon India started exporting ancillary automotive products to the developed world.

The story does not end here. Telco [a domestic enterprise], capitalizing on the existence of world-class suppliers of ancillaries in India, started producing a state-of-the-art, indigenously-designed car, the Indica. The car had teething problems at first and was rejected by a now-discriminating public. But Telco engineers went back to the drawing board, fixed the flaws, and brought out a new version that swept the market in its category. From about 50,000 cars in the early 1980s, India produced over 1,200,000 in 2004, and exported 160,000 cars, many to the developed world. (Rajan, 2006, p4).

Sutton (2005) examined the extent to which Chinese and Indian auto component producers have advanced towards international best practice levels of productivity and quality through a survey of nine car manufacturers in China and six in India and a range of general component suppliers in both countries with detailed bench-marking of six seat producers and six exhaust suppliers in each country. The main finding of the study is that "the development of the auto industry supply chain in both China and India has proceeded very rapidly at the level of car makers and their first-tier suppliers: here current standards of supplier quality are at, or close to, world standards. The main weakness of the supply chain lies in the fact that best practice techniques are permeating down to second tier suppliers in a very slow and

uneven manner. The similarity in the pattern across both countries is striking” (Sutton, 2005, Executive Summary). He found also that “While the development of the local supply chain in both countries has in large part been driven by the presence of multinational car makers, component exports are driven equally by multinational and domestic firms. Both India and China have a substantial body of purely domestic firms that have achieved major successes in export markets; of the top ten component exporters in China, six are domestic firms; of India’s top 10, half are domestic firms (and three of these belong to a single domestic industrial group” (ibid). It would seem that the prospects for both China and India to play a major role in the evolution of global auto and parts market are bright. This will intensify the competitive pressure on established auto (particularly auto parts) firms in industrial countries. This is already evident from the bankruptcy of the component makers Delphi in the US. Apparently, the Indian government has come to recognize the growth potential of the automobile industry. According to a report in The Hindu of March 11, 2006, the Finance Minister P. Chidambaram said that “We will become a global manufacturing hub for small cars in the next 3 to 5 years... we will emulate this success story in other sectors to be among the top global manufacturing centres” (<http://www.hindu.com/2006/03/11/stories/2006031106491200htm>).

It has been argued that in India employment elasticity of GDP growth in general and manufacturing in particular is low and falling (PC, 2002), which in turn implies that growth rates of output would have to be very high for demand for labour to grow significantly. Further if the sources of such high output growth are to be either high growth in domestic demand or export demand, either or both likely?

I would argue (Srinivasan, 2006a) that the employment elasticity and inferences based on it have no analytical foundations whatsoever. Elementary economics would suggest that the observed employment in any period represents an equilibrium between labor supply and labor demand. In principle, both supply and demand functions could shift over time. For example, GDP growth, *ceteris paribus*, would shift the labour demand function outward. Similarly, growth of the number of individuals in the prime working ages due to population growth, *ceteris paribus*, shift the supply curve outward. Depending on the relative strengths of these shifts almost any trend (up, down or no change) in equilibrium employment is possible. In other words, the employment elasticity is not a deep behavioral parameter in the sense of Lucas and can take on any value, positive or negative. It is what econometricians would deem a “reduced form” rather than a “structural parameter”.

Even if one were to treat the aggregate demand elasticity as economically meaningful, there is no reason to assume its past low value will prevail in the future as well since it would depend on the composition of demand and on policies that influence it. In fact, three are reasons to suggest that the elasticity will rise due to changes in composition of demand. First, there is evidence the rural demand for manufactured products, particularly labor-intensive consumer goods (durable and non-durable), has begun to grow rapidly, so that rural share of aggregate demand will rise. Second, with enabling reforms, such as elimination of reservation products for exclusive production by small scale industries, improvements in infrastructure (power, transportation and ports) India could increase its low share of exports of labour intensive manufactures as China has done. This would mean that the share of export demand in total demand would increase. Indeed, if India were to move quickly to let FDI into

retailing, not only domestic demand for various manufacture products will rise, so will export demand. There is no reason to be unduly pessimistic about growth in demand.⁷

India's Parliament approved legislation in 2005 for establishing special economic zones (SEZs). Export processing zones established in the past had not been very successful. The creation of the SEZs was surely inspired by the success of similar zones in China, particularly in attracting FDI. However, some of the crucial features of China's zones, such as allowing 100% foreign ownership, freedom of enterprise managers to hire and fire workers as they see fit for due cause, and the provision of excellent transport and communications infrastructure, are missing in India's zones. There are still sectoral caps for FDI. Exemption from draconian labour laws has been left to the states. Although efficient infrastructure has been promised, it remains to be seen whether it will be delivered. I would argue that the only rationale for setting up such zones would be that political and administrative constraints prevent turning the entire country into such a zone in one fell swoop. If that is indeed the case, while establishing such zones, a policy of extending them to cover the entire country soon has to be announced at the same time. This has not been done. While I do not expect the zones to be spectacularly successful, I do expect some modest success, particularly in attracting FDI to emerging manufactured exports and exports of IT services.

In China, the rapid creation of urban and infrastructure in the coastal cities (Shanghai, and Guangzhou) and zones is reported to have spurred industrial development driven by agglomeration/urbanization economies and weak labour laws. I have already mentioned the reluctance in India to reform labour laws⁸. However, metropolitan cities, the hubs of

⁷ To some extent demand pessimism is a holdover of the preform era when "demand constraints" were believed to constrain growth. It did not make sense then and it certainly does not now.

⁸ There are some studies (Nagaraj, 2004, Standing and Deshpande, 1998) claiming that India's labour laws have not adversely affected growth. These are not entirely persuasive for the reason that the expected adverse effects

manufacturing in the colonial era, such as Ahmedabad, Chennai, Kolkata and Mumbai are reasserting themselves as centres of industrial development. Also, other large cities (e.g. Coimbatore, Pune, the national capital region surrounding Delhi and others) are also emerging as industrial centres. Of course, because of early investment (particularly private investment) in engineering education in the states of Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu, information technology centres came to be established in their cities (respectively, Hyderabad, Bangalore, Mumbai-Pune corridor and Chennai). However, the pace of the development manufacturing hubs would be dependent on whether the reform process will be accelerated, deepened and extended. The reform agenda has to include labour and bankruptcy laws but also land right/land market issues in urban areas. Certainly making India's court system to function more efficiently and speedily in resolving commercial disputes has to be part of the reform, although China has not been hurt particularly by its having no conventionally defined legal system. It can be argued that in the long run the creation of a dispute settlement system outside of the traditional judicial system (e.g. special tribunals, lok adalats, etc.), even if it does alleviate the problem of inefficiency of the traditional system in the short run, will simply postpone undertaking the hard task of the reform of the judicial system. Long term benefits of the reform of the judicial system, which could be substantial, should not be lost sight of.

are largely on entry and exit of firms. Without taking into account that the establishments in existence at ∞ point in time are the consequences of past ending and exit and further, future entrants and exitants would in turn be determined whether they expect to be able to cope with the laws if they enter. Such studies have limited value in assessing the effects of labour laws. Other studies (Berlig and Bungeen, 2004) purport to show the adverse effects of labour laws also are subject to the same limitations.

Pharmaceuticals and Chemicals

India emerged as a major producer of generics by the mid 1990s in large part because India's patent laws of the period did not offer patents to producers but only to processes. As long as the process used by the Indian generics producers differed from the process used by the producers of the corresponding branded drug under patent protection elsewhere, they were free to produce and market the generic product at home and also export it to those countries where the branded drug was not under patent protection. Alas, this has changed with India's signing of on the Uruguay Round agreement of 1994, including Trade Related Intellectual Property Rights (TRIPS). After the period of 10 years from 1995 allowed to bring its patent laws into conformity with TRIPS, India amended its law in 2005 and now has to offer product protections as well. It would take too much afar here to discuss the merits of TRIPS and its possible consequences for developing countries. It suffices to say that the recent clarification of the compulsory licensing (and public health) provision of TRIPS has opened the door for India's highly competitive generic producers of life saving drugs, including retroviral for HIV/AIDS, to expand their markets abroad. More generally, with India emerging as an inexpensive and attractive place for trials of new drugs, and also the rising confidence of major Indian pharmaceutical companies in their ability to innovate and compete in the post TRIPS era, India could emerge as a significant pharmaceutical hub. The potential growth of China and India as suppliers of industrial chemicals is also high, with both having nearly doubled their share in global exports of chemicals.

Services

Service sector has been the most dynamic in India's economy in recent years, with a growth rate exceeding 7% per year during the last five years (MOF, 2006, Table 1.2). This sector accounted for as high as 54% real GDP in 2005-06. Business and commercial services together with finance, insurance and real estate services accounted for 13.5% of real GDP in 2005-06, trade, hotels, transport, communication and storage services accounted for another 26.2% and community, social and personal services accounting for the remaining 14.3% of GDP. In 2004-05 and 2005-06, the growth rate of services sector were 9.9% and 9.8% respectively, with the component trade, hotels, transport and communication services growing at 10.6% and 11.1% respectively in the two years. Clearly, the widely noted software services, though rapidly growing, is only a relatively small component of the vast service sector. Domestic demand is a crucial contributor of growth in transport and trade, transport, storage, community, social and personal services and to some extent in communications, hotels and financial services. Software has a dominant export demand component. Hotels, communications and financial services depend also on foreign sources of demand from tourists and foreign investors. With demand for many of these services being income elastic, it is very likely both domestic and foreign demand growth will enable India's service sector to sustain its recent rapid growth.

Labour intensive services are another potential source of growth for the two economies as well as the impact of their growth for the world economy. Realizing this potential depends to a significant extent on the outcome of service sector negotiations in the Doha round. In the unlikely scenario of considerable liberalization of service supply by Mode

4 (supply of services by temporary movement of natural persons), India and China could expand their supply of labour intensive services to the world markets.

The heated debate on outsourcing and the plethora of protective legislation that has been proposed to contain it in the United States relate to supply by Mode 1 (trade in services in which the supplies and the user remain in their respective locations). Again, the potential growth of these service sectors and their impact on growth in India have been discussed in the literature (Srinivasan 2006b). The data on Table 8 show that India had a 3.1% share (one of the very few commodities or services in which China's share was smaller than India's) in the global market for other commercial services, of which the outsourced services form a large part. The export of these services from India has been growing rapidly. Net exports of software services at \$16.5 billion accounted for more than half of India's total service exports (net) of \$31.2 billion in 2004-05. In the first nine months (April-December) of fiscal year 2005-06 software exports totaled \$15.1 billion, a growth of 29% over the corresponding period in 2004-05 (RBI, 2006, Table 51). An industry study group estimates that remote (such as exports) and in situ provision (such as tourism, healthcare and education) of services can add 0.6% - 1% to annual GDP growth, and generate additional employment of between 20 and 72 million by 2020 (Srinivasan, 2006b). The growth and quality upgrading (i.e. moving up from call centers to software or technology development and research centers) has been so fast that there are fears of an emerging talent crunch. The latest report from India's National Association of Software and Services Companies (NASSCOM) foresees a "potential shortage of skilled workers in the next decade or so, particularly in the BPO industry, [as] currently only 25 percent of technical graduates and 10-15 percent of general graduates are

suitable for employment in offshore IT/BPO industries (<http://www.hindu.com/2006/02/02/stories/2006020206230400>).

MGI (2001) finds that the labour productivity of India software companies is at 44% of U.S. levels and individual service companies have the potential to reach 100% of U.S. levels. In fact, best practice companies in India already match the U.S. average. MGI (2001) points out that the software industry grew at a rate of over 50% a year for five years to reach an output of \$2.2 billion in 1999. With the worldwide IT services market growing at 8% a year and set to reach \$910 billion by 2010, and demand from domestic end user industry expecting to grow at 30% a year for a decade, MGI (2001) sees a potential output of \$46 billion by 2000 (more than 20 times its level in 1999) with exports absorbing \$25 billion and domestic sales absorbing the remaining \$21 billion. Like NASSCOM, it also recognized that the biggest bottleneck to future growth is the availability of good software talent.

Interestingly, India's success in software and China's success in hardware have generated interest at the highest policy making levels in a collaborative effort to capture a sizeable share of the global market for both. Former Chinese Prime Minister Zhu Rongji first pointed out this possibility during his visit to India in 2002. During current Prime Minister Wen Jiabao's Indian visit in 2005, a similar view was expressed in a report to the Prime Ministers of China and India by the India-China Joint Study Group (Srinivasan, 2006b).

5. Policy Implications and Conclusions

Not so long ago, in the 1950s and 1960s, Japanese GDP grew at a rate of about 9% a year for nearly 25 years. Chinese GDP growth since 1980 has also averaged over 9% and this rate of growth could be sustained for another decade or two. India is following behind

China, with an average growth rate of close of 6% a year since 1980, with some evidence that growth is accelerating and can be sustained at 8% a year in the coming decades. With populations of 1.3 and 1.1 billion respectively in 2003, the two giant economies of China and India, on the one hand, present a huge and fast growing domestic market for a range of goods and services, and thus export opportunities for producers in the rest of the world. On the other hand, many in the already rich and established industrial nations view their increasing competition for the world's raw materials and their increasing shares in the global markets for a range of goods and services, as a threat to their prosperity and growth.

Large and growing market opportunities in China and India are widely seen and understood as evidenced by the large flows of foreign direct investment to China, both for production for the domestic market, but also to use exports to the rest of the World, with China as a low cost export platform. Although India has attracted far less FDI, it is not because of the lack of potential opportunities in India, but largely because of policy hurdles and other constraints on investment. This restrictive environment is expected to change – recognition by policy makers of the need for change has resulted in the recently enacted legislation for the creation of Special Economic Zones in which the incentives for profitable investment are expected to be higher. This is not to say that with the establishment of SEZs the flow of FDI will sharply increase in the very near term, but that with their establishment and the adoption of other essential policy reforms, such an increase can be expected in the medium term.

Turning to the competition from China for raw materials (and India, though it has not attracted as much attention), Anthony Poole (2004) cites Deutsche Bank for the finding that China's vast manufacturing industry has consumed 20% - 30% of world trade in aluminum,

copper, iron ore, stainless steel and zinc in 2003 and these percentages are expected to rise in the future, assuming of course, China's rapid growth is not a bubble but will be sustained. It is widely noted in news media that China and India are competing aggressively and with each other to secure energy supplies from central Asia, Africa and Latin America. While the growth of world demand represents rising opportunities for foreign raw material suppliers, to the large extent it is driven by China also means greater dependence on Chinese demand. Any disruption in Chinese demand in the short run can be costly for suppliers. Similarly, foreign users who depend on China's exports for a sizeable share of their total use, could be faced with the prospect of having to search for alternative supply sources if Chinese exports are disrupted for whatever reason. Of course, shocks to China's import demand (and export supply) are sources of risk for foreigners. However, as long as shocks to foreign export supply (import demand) are not too highly correlated with China's shocks, dependency on China could be a source of insurance for foreigners. More generally, whether greater dependence on external trade will increase volatility or provide insurance depends on the nature of shocks. Since by definition trade is beneficial though it has some risk as well, it could be (and is more likely to be) the case, that the gain in expected benefits would far outweigh the loss due to increased volatility, if any.

From a welfare perspective, acceleration of global growth and trade fueled in a significant part by the greater integration of fast growing China and India would increase the demand for transport and shipping. Already constraints of port capacities and rise of shipping fleets are seen in the rise of cargo rates. But this will be a short-run problem, if the rate increases elicit investment in shipping and port capacities. Also archaic restrictions on cabotage and the opposition of entrenched and strong labour unions in part could pose

problems for increasing supply of shipping services. Indeed, the continuing failure since the conclusion of the Uruguay Round to agree on liberalizing maritime services trade is a scandal.

The protectionist response to China's emergence as the third largest trader in the world is seen in the complaints that China does not play by the rules of global trade and manipulates its currency to keep it undervalued. Recent restraints through safeguard actions on Chinese apparel exports in the EU and the US is one example of a blatantly protectionist response. Other examples are the creation of an agency within the office US Trade Representative to monitor China's trade practices, and the pending bill in the Senate that would impose an across the board 20% tariff on imports from China, if it does not revalue the renminbi significantly. The potent protectionist tool of anti-dumping can always be invoked as it has been in the past to respond to increased import competition in particular industries. In the case of India, the protectionist response is seen in the spate of legislation in various states in the US that have been adopted or are pending that prohibit off-shoring of services by government agencies.

To contain and forestall the rise of protectionism in the rich countries, the importance of successfully concluding the Doha round cannot be overstated. China and India are members of the Group of Twenty-plus (G-20) developing countries that was formed at the failed ministerial meeting of the WTO at Cancun, Mexico in 2003. Since a successful outcome of the Doha round depends on mutual exchange of market access expansions, to the extent China and India are able to persuade the G-20 and the larger group of developing countries to be more forthcoming in reducing barriers to their markets, the probability of a successful Doha outcome will be increased. There is some evidence that both are attempting to do so. Still the prospects of a successful completion of the Doha round by the end of 2006

do not seem bright (Evenett, 2006). This gloomy assessment is reinforced by the fact as of mid July 2006 the Doha negotiations seem to be at an impasse.

Turning to implications for domestic policy in China and India, there are several studies documenting various barriers to greater integration in India. It is clear that one policy that has no merit is the so called “industrial policy” that ostensibly picks potential industries that will be winners in the global markets and targets policy support to ensure their success. Contrary to the continuing belief in “industrial policy” as the source of successful growth and development in Japan and other East Asian countries, the empirical evidence underlying this belief is not entirely persuasive (Noland and Pack, 2003). Moreover there is evidence that China has failed in its attempt to pick and nurture winners and still has not abandoned such attempts. For these reasons, attempts to discern future winners from the past performance described in the previous sections and to consider policies that are targeted at particular sectors and industries are futile. What is far more relevant is the general incentive structure or climate that is supportive of and not an impediment to innovation, risk taking and efficient resource allocation in the economy.

In India, the IMF (2005, Box 1.4) correctly notes that:

Various factors have hindered India’s integration. Despite substantial tariff reductions in recent years, India remains a relatively protected economy, with tariffs averaging 22 percent (18 percent in trade-weighted terms)-above the average emerging Asia and global tariff rates of 9 ½ percent and 11 ½ percent respectively-and significant nontrade barriers remain. Moreover, a range of structural; impediments-including restrictive labor laws and onerous red tape-have retarded the growth of manufacturing, which has been the main driver of export-oriented growth in Asia. Reflecting this, the contribution of industry to GDP and employment, at 27 percent and 34 percent respectively, remains well below that of Asia as a whole. Foreign direct investment (FDI) has been hindered by a difficult business climate as well as by caps on FDI in certain sectors (Jain-Chandra, 2005). And the growing inadequacy of

India's infrastructure constitutes a major obstacle to private investment and export potential.

The World Bank collaborated in two investment surveys carried out by the Confederation of Indian Industry (CII) in 2000 and 2003. McKinsey Global Institute (MGI, 2001) came out with its report based on a fifteen-month long project on India's economic performance. It examined 13 sectors in detail, two in agriculture, five in manufacturing and six in services, accounting in all for about a quarter of India's GDP.

The World Bank (2004) report begins with the assertion that differences in investment climate explain variations in competitiveness, growth and prosperity across countries or across sub national units within countries. The constituents of investment climate are institutional and policy variables that have a crucial bearing on business performance, but on which firms have no control individually. The major determinants of investment climate included: functioning of product and factor markets, industry spill-overs and externalities, governance indicators relating to law and order, regulation and public goods provision, cost of credit, inflation, exchange rate regime, as well as physical and social infrastructure. Fiscal, monetary and exchange rate policies, and some governance indicators influence some of the other critical determinants. The report assesses the investment climate from the perspective of India's industrial growth and global competitiveness, in particular in relation to China. Without reproducing the details of the assessment and the recommendation, let me quote:

... the performance gap between Indian industry and its international rivals – particularly Chinese industry – has a great deal to do with investment climate. So does that between high-FDI or high-growth states in India and less successful regions ... [although] specific policy measures cannot be inferred, at least directly, from a diagnostic analysis ... [it is clear] that at least two interrelated sets of regulatory and institutional reforms are needed in order to improve India's investment climate. The first comprises a set of regulatory reforms, including reducing entry and exit barriers to manufacturing industries, addressing

impediments to the smooth functioning of labor, land, and product markets, and streamlining the regulation of business startups, bankruptcy procedures, and industrial and trade routines. The second reform set would address institutional and regulatory impediments, physical infrastructure and financial and other business services. (p.v)

The report of the McKinsey Global Institute in many ways comes to a similar conclusion as the report of the World Bank. It finds that (MGI, 2001, pp.2-5):

- i. Product market barriers and the rules and policies governing different sectors of the economy impede GDP growth by 2.3 percent a year.
- ii. Particularly damaging features of the current regulatory regime are: inequitable and ill-conceived regulation, uneven enforcement, reservation of products for small-scale enterprises, restrictions on FDI, and licensing and quasi-licensing requirements.
- iii. Unrecognized land market distortion accounts for close to 1.3 percent of lost growth per year. These distortions include unclear ownership, counter-productive taxation, and inflexible zoning, rent and tenancy laws.
- iv. Government-controlled entities, accounting for 43% of capital stock and 15% of employment outside agriculture have lower productivity of capital and labour compared to their private competitors. Their suppression of potential competition and productivity improvements result in the loss of 0.7 percent GDP growth per year.
- v. Contrary to common belief, inflexible labour laws and poor transport infrastructure are minor barriers to growth and together account for less than 0.5 percent of lost GDP growth.

The numerical estimates of lost growth in the McKinsey report are best viewed as illustrative. For reasons discussed earlier, its conclusion that labour laws and infrastructure are minor barriers is not sound. Most of the thirteen policy recommendations in the report (it is interesting that, unlike the World Bank (2004), McKinsey Institute does not hesitate to draw policy conclusions from a diagnostic survey) are evidently sensible. They include removing reservations on products to small scale manufacturers; rationalizing taxes and excise duties; establishing effective, pro-competition regulation and powerful, independent regulators; removing restrictions on foreign investment, reforming property and tenancy laws; and widespread privatization (MGI, 2001, p7). The report concludes that the implementation of the recommendations over two to three years will boost growth to 10% per year.

In a paper for the Deutsche Bank Research, Teresita Schaffer and Primit Mitra conclude that it is too early to deem India a global power, although “Its stable democratic political system, huge middle-class population, immense military clout in South Asia, rising economic fortunes and global ambitions make it a potential power that could (if things go well) play a very important role in world affairs.” In their view,

To become an economic powerhouse and catch up with its bigger rival [China], India will have to sustain at least 8% growth, over a long period of time. Its first challenge will be to address some structural issues in the economy. These include reining in the runaway fiscal deficit, freeing its manufacturing sector from antiquated labour laws, selling state-owned assets and using the freed-up cash for investments in physical infrastructure ... India’s growing HIV/AIDS epidemic could seriously slow down its economic growth and threatened the country’s public health structure. Ironically, AIDS has had its most severe effect on some of the most prosperous parts of the country. Unless they take vigorous action soon, it could erode a major economic advantage: a large pool of inexpensive and skilled labour.

Their analysis, except for their drawing attention rightly and importantly to HIV/AIDS, overlaps that of the World Bank and McKinsey Institute.

Last, and in many ways a disappointment, is the report of the Indian government's National Manufacturing Competitiveness Council (NMCC, 2005). It also recognizes some of the same constraints that the other reports do. Its final chapter of thirteen pages consists of its conclusions and key recommendations. It follows the pattern of many government reports and appraisals (such as the ritualistic mid-term appraisals of various Five Year Plans), by including many goals and aspirations, and a laundry list of what should be done with no any sense of priority among them nor a time frame and assignment of responsibilities to specific agencies for doing them.

It can be argued that even without further major policy reforms, China could (and most likely would) sustain its current growth, certainly in the next decade, and possibly longer. However, whether the political tensions and distributional conflicts that sustained rapid growth of the last 25 years have generated, and their possible exacerbation if growth is sustained for another 20 years, without political reforms, would lead to a violent collapse of the government, is an open question. Although the ruling party appears to be firmly in control, and has enough muscle to put down forcibly the growing number of localized protests, and prevent them from escalating into an organized nation-wide opposition to communist party rule, without political reforms towards a participatory democracy, force alone cannot stop such an opposition from emerging.

Even leaving aside the political problem of its non-transparent, authoritarian, central political control, China lacks some of the key institutional foundations of a market economy. Perkins (2005, p25) argues and rightly, "China should move away from an industrial policy

that targets particular industries and firms and requires all manner of regulatory interventions, and instead move steadily toward an industrial policy that concentrates on general support investments for industry such as improvements and expansion of the education system,” and asks whether China has the institutions that such a market oriented approach requires. One needed institution is a well-functioning and efficient financial sector consisting of commercial banks, markets for debt, equity and insurance and a strong regulatory agency. He finds China lacks one. Another is a legal system, with a competent, efficient, independent and powerful judiciary. In his view, the absence of such a system in China, “makes it impossible to efficiently carry out other important changes in the economic structure through the decentralized processes of the market. Instead decisions have to be pushed up to higher level government bureaucrats in the ministries or elsewhere” (Perkins, 2005, p31).

India has much stronger political and institutional foundations than China. Although India is also experiencing distributional conflicts arising from its sustained growth for 25 years, its vibrant participatory democracy offers non-violent means for resolving them through political compromises. Certainly, political compromises take time to bring about⁹ and the very fact that they are compromises often means that some desirable economic reforms are politically infeasible to implement. On the other hand, it also means that the implemented reforms would be far more sustainable.

⁹ Also the fact that currently India is governed by a coalition of parties with diverse economic perspectives and the government depends on the support of allies (prominently the Communist parties) outside the governing coalition to stay in power makes the task even more difficult: compromises have to be acceptable to both the parties in the government and those supporting it from the outside. The announcement first to disinvest a 10% stake in Neyveli Lignite Corporation, (a public sector enterprise) and then to put it and other disinvestment proposals on hold is the latest illustration of this difficulty (<http://www.hindu.com/2006/07/07/stories/2006070711990100.htm>).

India's commercial banking system resembles China's in that it is still dominated by public ownership of nearly three quarters of its assets. Nevertheless it has become more efficient with increasing competition from dynamic new domestic private banks and also foreign banks. India's National Stock Exchange is becoming one of the world's most efficient (comparable to the New York Stock Exchange) in terms of transaction costs and transparency. Indeed, the large inflow of portfolio investments, particularly from foreign institutional investors in response to higher returns in India is in part a testimony to the vibrancy of India's stock market. India's legal system, though by no means efficient, has been functioning for a long time. Its independence and power are respected by the other branches of government. Thus India, unlike China, does not have to create a legal system de novo, an enterprise, which as Perkins (2005) rightly notes, will take at least a generation, if not longer.

To say that India's institutional foundations, political and economic, are stronger than China's does not mean that unfavorable comparisons with Chinese economic performance "were irrelevant because China was a dictatorship and India, a democracy," an excuse that Martin Feldstein (2006) says he once heard from Indian policy officials a few years ago, but no longer does. He concludes,

The optimistic mood in India's business community, the desire for reforms by the top leadership of the government, and the growing number of relatively middle-class households provide a force for change and a source of support for new entrepreneurial activities. If the political leaders can now persuade the traditional opponents of reform that growth can benefit their constituents and that better new jobs will replace the old, India will see decades of remarkable achievement (Feldstein, 2006)

The debate whether China's communist dictatorship or India's democratic system will deliver and sustain rapid and equitable economic growth in the long run dates back to the

early fifties, soon after India's independence in 1947 and China's communist victory in 1949. Interestingly, with China having outperformed India since Deng Tsiao Peng opened and liberalized the Chinese economy, and India having grown more rapidly since it began moving away from its inward-oriented, state-directed, development strategy, the current debate is on whether stronger institutional foundations of India would enable India to catch up and overtake China. In two very interesting articles, Huang and Khanna (2003) and Huang (*Financial Times* January 23, 2006) address this issue. The first article articulated the view that although India was not outperforming China overall it is doing better in key areas and that success may enable it to catch up with and perhaps overtake China. The key areas in which India performed better included (1) the spawning of internationally competitive homegrown small companies. Out of Forbes 200 of the World's best small companies in 2002, there were 13 Indian firms as compared to China's four (2). India's stronger and far more efficient and transparent capital markets support private enterprise so that entrepreneurship and free enterprise are flourishing. In a survey of leading Asian companies through polling of 2500 executives and professionals in a dozen countries by the Far Eastern Economic Review, only two Chinese firms had high enough scores to qualify for being rated among India's top 10. In the second article, Huang points to the booming stock market in India in contrast to market collapse in Shanghai, and the better functioning of India's financial system despite its many faults in not discriminating as much against innovative small enterprises as compared to China's system.

Wolf (2006) also notes some of India's institutional advantages over China noted earlier: a well-developed private sector; a relatively entrenched legal system; a stable democracy and freedom of speech; a modestly better score on corruption and rule of law in

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World Bank's governance indicators. He concludes that India's prospects for overtaking China depend on implementing difficult reforms in five pivotal areas: deregulation of labour markets and an end to the small-scale sector; revitalization of agricultural growth; increased investment in infrastructure; elimination of fiscal deficits; and, finally, across-the-board privatization and further trade liberalization

Whether or not India overtakes China in the next two decades, it is clear that both countries will be economic powerhouses in the medium term. Undoubtedly, their growth will have significant impacts on the World economy.

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