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Comparing India and China's Economic Performance since 1991

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Comparing India and China's Economic Performance since 1991

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Foreword

It is now universally acknowledged that since the closing decades of the twentieth century, the spotlight of global attention has been shifting to the economies of the Asia-Pacific. By the time the twentieth century had drawn to a close, this possibility had acquired a measure of certainty with the rise of China and as we begin the second decade of the twenty first century, international relations discourse is also increasingly replete with the added dimension of a rising India. All these developments have considerably accelerated the momentum towards the realization of the Asian century.

There is little doubt that while current Asian dynamics are increasingly being moulded around the centrality of the Chinese economic and political power, India, the dominant power of South Asia has also been recording impressive growth rates and is by and large seen in competition and conflict with the People's Republic of China. In the Asian context, there is a great deal of concern and interest regarding the rise of two big powers, consecutively, if not simultaneously. Even as debates on the eventual outcomes of this rise is being hotly debated in power terms, there is also much interest in the strategies of economic development that have been adopted in both countries and in the reforms and liberalization policies adopted by the two countries. Most of the smaller Asian countries have attempted to learn from the policies adopted by both and much research and investigation has been undertaken into the outcomes of market reforms in India and China in an era of economic globalization.

As Manmohan Agarwal points out, there is considerable analytical work comparing the economic performance of China and India to understand the growth processes in these economies. Analysts have also sought to examine the effect of their rapid growth on the world economy as well as on other developing economies. We observe a tendency to make broad generalisations that are very often not backed up by systematic empirical and analytical analysis. We hope that this paper would throw up some crucial differences but more importantly, some amazing similarities in the trajectories of the reforms and their consequences for the destinies of the two most populated countries in the world. It will certainly open up new avenues for research and investigation into the dominant story of our times.

Alka Acharya
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Section I

Introduction

There is considerable analytical work comparing the economic performance of China and India to understand the growth processes in these economies. Analysts have also sought to examine the effect of their rapid growth on the world economy as well as on other developing economies, particularly those in Africa.¹ We do not discuss the reforms themselves which have been extensively studied.²

How the two economies compare with each other depends on how the comparison is made. For instance, in every year during the period 1979-2010, exports were a larger share in Chinese GDP than in Indian GDP and China invested a larger share of its GDP. But if the comparison is made in terms of the number of years since the reforms and taking into account the initial starting values then a different picture emerges.

The general perception is that China is a more open economy that has depended more on exports of goods for its growth (Friedman and Gilley, 2005, Kotwal, Ramaswami and Wadhwa, 2011). India's success has been less dependent on exports and more dependent on domestic demand. In addition, India is believed to have done better in exports of services while China has depended more on exports of manufactures and this export has resulted in very rapid growth of the manufacturing sector. China also has had much higher rates of investment than has India. Foreign direct investment (FDI) has played an important role in the growth of China's manufacturing sector and in its export success. FDI has played no particular role in India's growth story.

We first argue in Section II that the 1991 reforms marked a break in the development strategy and policies in India that earlier policy changes had not been. We argue against claim of some analysts that reforms started in the mid-eighties and that is why growth started accelerating in the 1980s (Panagariya, 2008, Rodrik and Subramaniam, 2005).

We examine the relative economic performance of China and India in Section III paying particular attention to the India experience in order to see whether the perceptions that Indian growth has been fuelled more by domestic demand and by the services sector hold. Our conclusion is that this perception is not accurate. What the reforms achieved was improved performance in a number of economic indicators—we examine 12 of them. This improved performance was not only that the level of these indicators was better, e.g. higher share of exports of goods and services in GDP or of gross fixed capital formation in GDP, but also lower fluctuations in the values of the indicators. The analysis also bears out the above story of differences in Chinese and Indian performance when the comparison is for the same years.

¹ See for instance Winters and Shahid Yusuf (2007), Broadman (2007), Brautigam (2009), Cheru and Obi (2010)

² See Jikun Huang, Keijiro Otsuka and Scott Rozelle (2008) for agricultural reforms, Byrd (1992) and Brandt, Rawski and Sutton (2008) for industrial sector reforms, Bahl and Wallich (1992), Ma Jun (1995) and Wong and Bird (2008) for fiscal reforms, Allen, Qian and Qian (2008), Geiger (2006), Green (2005) for reforms in the financial sector and the conduct of monetary policy, and World Bank (2004) and the Trade Policy Reports of the WTO for the trade system and changes in it. Also see Agarwal (2010) for an analysis of Chinese reforms. See Bhagwati (1993) and Panagariya(2008) for an analysis of Indian reforms. The reforms are described in the Economic Survey published every year by the Ministry of Finance before the budget is presented to parliament.

But we believe a better comparison is to compare the performance since the economic reforms as these are held to have initiated the periods of rapid of growth and resulted in other changes in the economies. So, we compare India economic performance since the 1991 reforms with that of China since the 1979 reforms. Year 1 in China would be 1979 when the reforms started, year 2 would be 1980 etc. In the case of India year 1 would be 1992 once the reforms started, year 2 would be 1993 and so on. Also, we form an index with a base year value of 100 for the first year of the reform. We then find that a number of indicators show a similar pattern of change. Investment is a larger share of GDP in China when we compare the values for the same year during the period 1979-2010. But when we examine how this share changed after the reforms we find that the pattern of change in China after 1979 is the same as in India after 1992. Similarly, a number of other indicators such as exports of goods and services as share of GDP, share of manufactures in GDP or of services in GDP, show a similar pattern of change in China and India if we compare them from the time of the respective reforms. We undertake this analysis in Section IV and find more similarities than differences, and the perceptions noted above do not generally hold.

Section II

Significance of the 1991 Policy Reform

The 1991 reforms resulted in a fundamental re-orientation of Indian policy unlike what had usually happened in previous crises. Policy adjustments had been made after previous crises but the broad strategy had remained the same. The broad strategy that had been adopted was one of import substituting industrialization strategy in which the state would play a prominent part through its almost total monopoly of production of capital goods and important intermediate goods.^{3,4} Policy changed as the relative importance of the different objectives varied and when the constraints facing the economy changed.⁵ One of the consequences of a crisis was usually a drop in the investment ratio, which recovered only after a considerable lag. For instance, after gross fixed capital formation (GFCF) as a percentage of gross domestic product (GDP) reached a peak of 15.9 per cent in 1957--58 it fell after the 1957-58 BOP crisis and did not recover to the earlier ratio till 1963--64 (RBI 2012). The fall in the GFCF ratio after the 1965--67 crisis was particularly severe ---from 20.4 per cent to 16.7 per cent---and it did not recover till 1977--78.

One of the consequences of the many travails the economy faced since the mid-1960s, droughts in 1965-1967, cut-off of aid by the US and the World Bank in 1968, the influx of refugees in 1971 from then East Pakistan and the ensuing war and later the oil and food price increases in 1973, was lower public sector investment resulting in considerable excess capacity in

³ Most development analysts in the 1950s e.g. Rosenstein-Rodan (1943), Prebisch (1950), Nurkse (1953), Arthur Lewis (1954), argued for an import substituting industrialization strategy For a discussion of their views see Agarwal (1991).

⁴ India differed from most other countries who adopted an import substitution industrialization in that Indian import substitution was in capital goods whereas in others it was in consumer goods. Growth depends on investment and in a closed economy the rate of investment equals the output of the capital goods sector. So concentrating on the capital goods sector would lead to higher investment and growth (Bhagwati and Chakravarty, 1969 , Chakravarty, 1969). One of the reasons for the state to control these important sectors was to establish a more equitable income distribution.

⁵ For instance, self-sufficiency became more important after the cut off of aid because of disagreements over India's policy over Viet Nam (Bowles, 1971) and over the events leading to the creation of Bangladesh. For a discussion of the varying constraints and their effect on policy see Agarwal, 1997.

the capital goods sector and very high capital output ratios.⁶ Once the structural adjustment was complete and the savings rate of both households and the government rose because of bank nationalization and changes in fiscal policies, the government raised its investments. The higher investments reduced the imbalance between the structure of demand and the structure of production, as recommended by many analysts (Chakravarty, 1979). The government also moved away from a very conservative fiscal policy of avoiding deficits; since then budget deficits have been the rule and usually have been large.

Rodrik and Subramaniam, 2005, do not believe that these higher government expenditures can explain the improved economic performance in the 1980s. They argue while larger expenditures may raise GDP they would not have resulted in the higher growth of TFP observed in this period. But if the higher growth is because of better capacity utilization then one can expect higher TFP growth unless capacity utilization is taken into account in the measurement of capital. The incremental capital output ratio which was over 6 during the period 1966-73, a period of low growth and considerable excess capacity, dropped to 4 in the 1980s, a figure similar to that in the East Asian region. So we believe that the improved economic performance in the 1980s was because of higher government expenditures.

In a country with fixed exchange rates and no capital flows increased government expenditures would raise income, however, at the expense of increased current account deficits and higher interest rates (Kenen, 2000). The adverse effect of higher interest rates on private investment was sought to be neutralized by fiscal incentives such as accelerated depreciation and many incentives were provided to exporters. The government was able to prevent a sharp drop in corporate investment as a share of GDP; but there was no increase in the 1980s. The increase in investment was almost entirely in the public sector. Also, despite providing a number of incentives to exporters the share of exports in GDP stagnated, and there was an increasing current account deficit which ultimately resulted in the 1991 BOP crisis.

Some analysts believe that liberalization in the 1980s contributed to the improved performance in that period. There was some easing of import licensing for capital goods and some intermediate goods and also for expansion of capacity by large enterprises (Bhagwati, 1993, Panagariya, 2008). But the overall trade regime remained severely protectionist. Tariffs remained high and the effective rates of protection did not fall in the 1980s (Kotwal, Ramaswami and Wadhwa, 2011). Also there was no drop in the percent of manufactured imports subject to non-tariff barriers (Kotwal, Ramaswami and Wadhwa, 2011). There undoubtedly was some liberalization. The open general license (OGL) list, which was begun in 1976 with only 79 capital goods, covered almost 30 percent imports by 1990 (Panagariya, 2008). But we believe that this liberalization was very modest and more in the nature of policy adjustments that are often undertaken by governments. Tariff revenues as a percent of imports remained high. Furthermore, the almost constant share of corporate investment in GDP casts doubt on the effect of loosening capacity expansion restrictions on raising growth rates. Rodrik and Subramaniam (2005) ascribe the improvement in the 1980s not to specific policy changes but to the adoption by the government of a more pro-business attitude, which encouraged private sector growth. But since corporate investment did not rise as a share of GDP, which it has since 1991, it is difficult to identify the mechanism through which the government's pro-business policy resulted in higher growth.

Statistical analyses to identify a structural break in GDP growth do not find a break in the mid 1980s. Wallack (2003) finds a break in 1980, Rodrik and Subramaniam (2004) in 1979,

⁶ The low growth during 1966-1973 in what was essentially a period of structural adjustment implied a low growth over the period 1951-and the mid 1970s and has been dubbed as the 'Hindu rate of growth' despite higher growth in the period from the early 1950s to the mid 1960s.

Balakrishnan and Parameswaran (2007) in 1979-80, Basu (2008) and Sen (2007) find it in 1975-76. All show a break before the liberalization of the 1980s. There has been gradual acceleration in growth since the mid 1970s after the adjustment to the various crises beginning in 1965 was completed. The growth of GDP which had fallen to 3.4 percent a year during the Fourth Plan, 1969-73, rose to 5 percent in the Fifth Plan (1974-78) and further to 5.5 percent in the Sixth Plan (1980-84) and 5.6 percent in the Seventh (1985-89) and has continued to accelerate. It is difficult to identify this acceleration with specific policies.

The development strategy was retained till 1991 as the economy showed considerable resilience in the face of difficulties. The effect of the BOP crises on growth was usually short-lived, despite the slowdown in investment as noted above. The growth rate of GDP fell to -1.2 per cent in 1957--58 before it recovered to 7.6 per cent in the following year. Similarly, the growth rate declined from 4.7 per cent in 1973-74 to 1.3 per cent in 1974-75 before recovering to 9.1 per cent in 1975--76, and declined from 5.5 per cent in 1978--79 to -5 per cent in 1979--80 before increasing to 7.2 per cent in 1980--81.⁷ The exception was the crisis during the years 1965--67 when the interruption in growth was much more substantial, and had resulted in a much greater adjustment of policies than was usually the case.

However, mounting evidence of the harmful effects had convinced policymakers that the prevailing model needed to be changed. Research abroad (Little, Scitovsky and Scott, 1970, Bhagwati, 1978, Krueger, 1978) had shown import substitution policies to be inefficient, as also quantitative controls on imports and licensing. Commissions (Abid Hussain, Narasimham) set up by the Government of India had also documented the inefficiencies engendered by the high tariff regime and by the system of licensing that went with it.⁸ Policy makers were convinced that the basic model of import substitution needed a change.⁹ The rationale for a large public sector producing capital goods no longer held since in an open economy there was no equivalence between the size of the capital goods sector and the investment rate.¹⁰

The 1991 crisis provided the opportunity to bring about a fundamental change in development strategy, an abandonment of the import substitution model, reducing sharply the role of the public sector and much less importance being given to the objective of reducing income disparities. Reliance on the public sector lessened and more importance was accorded to the private sector. This shift coincided with a change in the concern about income distribution. Concern shifted from income distribution as such to reducing poverty and improving the condition of the poor. Consequently, the Rural Employment Guarantee Scheme that provided 100 days of employment to each poor rural family was implemented; the Right to Education Act was passed. In 2011, the National Food Security Act 2011, which guarantees subsidised food to 50 % of the urban population and 75 % of the rural population, was proposed. Disputes about its provisions have prevented its enactment as yet.

⁷ The large variation in growth rates was due to the effects of the BOP position as well as fluctuations in agricultural output caused by variations in rainfall.

⁸ The inefficiencies had been identified and analyzed earlier (Bhagwati and Desai, 1970, and Bhagwati and Srinivasan, 1975)

⁹ The high growth rates achieved by China another large economy were more difficult to brush aside than the success of smaller countries such as Korea, Taiwan, Singapore and Hong Kong.

¹⁰ The Second Plan's analytical basis was the Mahalanobis model which was of a closed economy and where therefore the savings and investment rate equaled the share of the capital goods sector in total output. The greater the investment in the capital goods sector the larger its share in total output and the higher the savings and investment ratios and higher the growth rate. For a discussion of the Mahalanobis model see Bhagwati and Chakravarty (1969). Also there is a difference depending on whether one assumes that capital is shiftable namely can be used at any time in either the consumer goods sector or the capital goods sector or that it is non-shiftable, namely, once it is allocated to the consumer goods or the capital goods sector it cannot be shifted to the other sector. see Chakravarty (1969).

Tariffs on manufactures were reduced from an average of about 100 percent and a peak of almost 400 percent first to an average of about 30 percent. Currently, the average is under 10 percent. Peaks have also been reduced. Furthermore, QRs which were ubiquitous have been almost eliminated. On agriculture they were converted to tariffs as part of the Uruguay Round Agreement on Agriculture; the remaining QRs had to be eliminated when India lost the dispute brought by the US to the WTO. Licensing has been eliminated; the number of industries reserved for the small scale sector which prevented the setting up of plants of optimal size has been reduced and large enterprises can enter even those reserved for the small scale if at least 50 percent of the output is exported. FDI and portfolio inflows have been liberalized; outward FDI had also been liberalized leading to large outflows by private industry.¹¹

Section III

Growth of the Indian Economy

The Indian economy has been on an accelerating growth path since the mid 1970s for over the last three decades (Table 1). The financial crisis of 2008 has resulted in the growth rate becoming more variable. While the crisis lowered the growth rate from 9.7 % in 2007-08 to 6.5 % in 2008-09, the economy recovered quickly to grow at 7.9 % in 2009-10 and 8.3 % in 2010-11. But the high rate of growth has not been sustained and declined to 7 percent in 2011-12.

Table 1: Growth Rate of GDP and Major Sectors

Plans	GDP	Agriculture	Manufacturing	Services
6Th (80-84)	5.4	5.7	5.1	5.4
7Th (85-89)	5.6	2.8	6.0	6.1
8Th (92-96)	6.6	4.7	9.4	6.8
9Th (97-01)	5.7	2.4	3.3	7.8
10Th (02-06)	7.6	2.4	9.3	10.1
11th (07-10)	7.9	3.2	7.9	10.0

Source Reserve Bank of India 2012.

The acceleration in the rate of growth is partly because of the greater weight that faster growing sectors have achieved over the years because of their faster growth. For instance if we apply the growth rates for the sectors during the 11th Plan to the sector shares during the 6th Plan the overall growth rate would be 6.7%. But if we apply the same growth rates to the sector shares in the 11th Plan the overall growth rate is 8.2% a full 1.5% greater. The share of the slow growing agricultural sector has been declining (Table 2). But another important feature of the growth acceleration is the higher growth rate of the services sector. There has been a sharp acceleration in

¹¹ Changes in policies are described in the Annual Economic Survey published by the Ministry of Finance every year just before the budget is presented to parliament.

the rate of growth of value added in services from the eighties to the nineties and further in this century (table 1). This has resulted in an increase in the share of services in GDP (Table 2).

Is this acceleration in growth of GDP and the faster growth of the services sector significant? The annual rates of growth of output in the agriculture, manufacturing and services sectors were calculated and then the mean growth rates and the standard deviation in growth rates for the periods 1981-90, 1992-2000 and 2001-10 were calculated. A comparison of the sector growth rates for the periods 1981-90 and 1992-2000 shows that the difference in average growth rates over the two periods is significant only for services at the 10 % level when a two-tailed t-test is applied. A comparison of sector growth between 1992-2000 and 2000-2010 shows no differences in sector growth rates were significant, the difference in the growth rates for services was just under the 10% significance level. When, however, the difference in mean growth rates between the 1981-1990 and 2001-10 periods is tested the difference in the growth rates for services is significant at the 1% level; the other sector growth rates are not significantly different. So there is an acceleration in the rate of growth of services though this does not happen for the other sectors.

What about the growth rates of the manufacturing and service sectors? The average growth rate for services during the period 1980-1996 is 6.4 percent, not statistically different from the 6.3 percent growth rate for manufacturing during that period. Again the average growth rates for the two sectors are not significantly different for the period 2002-10, except for the year 2008. The significant difference is during the Ninth Plan (Table 1). The large reduction in tariff rates for imports of manufactures could have resulted in a shrinking of the sector as happened in many Latin American countries where the share of manufactures in GDP has declined. In India, seemingly the devaluation of the rupee has compensated for the reduction in protection. The importance of exports has increased for the manufacturing sector. The percent of value of exports of manufactures to value added in manufacturing increased from 16.4 percent in the 6th Plan (1980-84) to almost 60 percent in the period 2007-10. The devaluation of the rupee has had an even stronger effect on exports of services and this has contributed to a higher rate of growth of the services sector.

Table 2: Structure of the Economy (% of GDP)

Plans	Agriculture	Manufacturing	Services
6Th (80-84)	41.0	14.6	37.1
7Th (85-89)	36.6	15.9	40.1
8Th (92-96)	32.3	17.1	43.1
9Th (97-01)	27.5	17.1	47.9
10Th (02-06)	19.6	15.5	52.9
11th (07-10)	18.1	15.1	54.2

Source: Reserve Bank of India 2012.

Despite this acceleration, the share of services in GDP in India, defined as a low middle income country by the World Bank, while higher than the average is not very exceptional. The average for low income countries is 50 percent and for low middle income countries is 48 percent. Where India deviates significantly from other low middle income countries is in the share of manufacturing which averages 26 percent for low middle income countries as against India's 15 percent, and this share has come down in the past decade in India (Table 2). Furthermore, the share

of services in GDP increased between 1974-82 and 2001-10 by 85.3 percent in China whereas it increased by only 32 percent in India. In Korea it increased by over 33 percent in this period. In Malaysia and Indonesia in South East Asia it hardly increased and in Thailand it fell.¹² Also, the share of manufacturing in GDP fell from 38.0 percent to 32.1 percent in China during this period and in India it fell from 16 percent to 15.2 percent. The growth acceleration has been accompanied by a shift in the pattern of demand from household consumption to capital formation, which has increased as a share of GDP by about 50 percent since the 1991 crisis and to exports of goods and services (Table 3).

Table 3: Structure of Demand (% of GDP)

Plans	Household Consumption	Government Consumption	Gross Fixed Capital Formation	Exports of G&S
6Th (80-84)	76.9	10.5	19.8	6.2
7Th (85-89)	71.7	12.0	22.7	5.9
8Th (92-96)	65.4	11.0	24.3	10.2
9Th (97-01)	65.0	12.3	24.3	12.1
10Th (02-06)	59.9	11.0	27.8	17.4
11th (07-10)	57.2	11.2	31.3	21.4

Source: World Bank Databank <http://databank.worldbank.org/ddp/home.do>

Correspondingly, the share of household consumption in GDP has decreased. The really big change has been in the share of exports in GDP; exports of goods, non-factor services and of labour services have all increased significantly (Table 4). The share of merchandise exports in GDP which had stagnated in the 1980s¹³ increased rapidly since 1991, more than tripling. Remittances from migrant workers, which usually comes under the heading of private transfers, and therefore export of labour services have quadrupled between the 7th and 11th Plans. But the really spectacular increase has been in the share of exports of non-factor services (NFS) in GDP which has more than quintupled. Most of this export has been of phone and internet related services.

Table 4: Exports (% of GDP)

Plans	Goods	Non-Factor Services	Net Income	Private Transfers
6Th (80-84)	4.7	1.5	0.5	1.3
7Th (85-89)	4.7	1.4	0.4	0.9
8Th (92-96)	8.3	1.9	0.4	2.3
9Th (97-01)	8.9	3.2	0.9	2.8
10Th (02-06)	12.1	5.9	2.2	3.3
11th (07-10)	14.2	7.6	1.0	3.6

Source: Reserve Bank of India 2012.

¹² Section V contains a broader analysis of the similarities and differences in economic performance in China and India since the reforms).

¹³ The averages in this case hide the actual pattern which was one of slight decline in the early part of the eighties and some increase in later years.

However, the share of imports of goods as a share of GDP has risen even more so the deficit in the balance on merchandise trade has increased considerably (Table 5). The deficit on merchandise trade has been increasing since the Eighth Plan and has increased particularly rapidly in the 11th Plan, namely since mainly the financial crisis. But the huge increase in remittances since the Eighth Plan and later the surplus in trade in non-factor services had resulted in a declining current account deficit and even a surplus during some years in the 9th Plan. But the sharp deterioration in the balance on merchandise trade in the Eleventh Plan has resulted in the current account deficit reaching levels it had reached just before the crisis in 1991. The liberalization has not resulted in a permanent

Table 5: Balances of Trade (% of GDP)

Plans	Goods	Non-factor Services	Net Income	Private Transfers	CAB
6th (80-84)	-3.4	0.6	-0.1	1.3	-1.5
7th (85-89)	-3.0	0.3	-0.6	0.9	-2.2
8th (92-96)	-2.8	0.2	-1.1	2.3	-1.1
9th (97-01)	-3.2	0.6	-0.9	2.8	-0.9
10th (02-06)	-4.4	2.1	-0.7	3.2	0.2
11th (07-10)	-8.3	3.2	-0.5	3.5	-2.2

Source: Reserve Bank of India 2012.

Improvement in the balance on goods trade; it has, however, resulted in an increasing surplus on trade in non-factor services and in remittances. The size of capital flows has also been increasing. Capital flows were negligible before the 1991 crisis. Since then, FDI inflows have increased from 0.35 percent of GDP in the 8th Plan (1992-96) to 2.41 percent in the 11th Plan (2007-10) and portfolio flows increased from .75 percent of GDP to 1.76 percent during this period. FDI flows have been increasing faster than portfolio flows; however, the latter have important implications for policy as discussed below. What is also important is that FDI flows are not a one-way street. Outward FDI has increased from a negligible amount in the 1990s to 1.23 percent in the 11th Plan. Increasing capital flows are an indication of the ongoing overall integration of the Indian economy with the world economy.

Since the mid-1990s when the exchange rate became market determined the economy has gone through a number of phases. Initially a flexible exchange rate was combined with limited capital mobility. Then capital mobility increased. In the first phase of limited capital mobility a high fiscal deficit still resulted in higher interest rates and a higher current account deficit. But since there was limited capital mobility the higher current account deficit translated into a higher balance of payments (BOP) deficit and an exchange rate depreciation which increased exports and so resulted in a still further increase in GDP and growth accelerated. But in the second phase the increase in capital inflows because of the higher interest rates¹⁴ actually resulted in an appreciation of the

¹⁴ The inflows were on account of portfolio investments by foreign investors as well as foreign borrowings by Indian companies as foreign rates of interest rates were lower.

exchange rate which slowed the growth of exports and of GDP. Portfolio flows which respond to interest rates are the relevant flows in the above analysis. We see below how portfolio flows separate India from many other developing countries and makes its links more similar to those among developed economies. More recently doubts raised by the large fiscal and current account deficits¹⁵ have slowed the inflow of portfolio capital and have resulted in a large depreciation of the exchange rate.

An expansionary monetary policy in the US operates on other countries through two channels, the real and financial ones. In the real effect, the expansionary monetary policy raises income in the US and increases its imports so that exports of partner countries increase leading to an appreciation of the foreign currency. The financial effect is that the expansionary monetary policy lowers the interest rate in the US leading to capital outflows and an appreciation of the foreign currency which negatively affects exports. The inflow into the other country also lowers its interest rate. So overall there is an appreciation of the currency, a lower interest rate, but the effect on exports is uncertain. Interrelations among the G7 are dominated by the financial effect so interest rates in other G7 countries fall and their exchange rates appreciate following an expansionary US monetary policy. But the response of developing country members is different (Agarwal and Essid, 2012). In the case of emerging economies such as China, Korea and Mexico the exchange rate usually depreciated and there was a weak tendency for the interest rate and for exports to rise. This is because financial linkages are weak in the case of these developing countries and the real effect dominates. Also developing countries are generally adopting an export oriented growth model and so seek to prevent an exchange rate appreciation and actually bring about a depreciation. The depreciation and the increased GDP seem to raise inflation and the interest rate is raised to control the inflation; there is apparently no fear that the higher interest rate would lead to capital inflows. The Indian economy behaves more like the developed economies and not these developing economies, in that the currency appreciates, and the interest rate and exports do not change. The different result is most probably because of the importance of interest sensitive portfolio flows.

The increase in exports raises GDP and with a fixed money supply this would tend to raise the interest rate. In current circumstances policy makers face a difficult choice because of the circularity of processes. Successful economic management results in confidence in the economy and an inflow of capital. This leads to an appreciation of the rupee and a slowdown in exports. This reduces the rate of growth of GDP and increases the current account deficit. These erode confidence and lead to a depreciation of the exchange rate. Policy makers struggle to provide a more stable growth process.

The current account balance (CAB) reflects the changing savings investment balance of the economy. In general the household sector has a surplus of savings over investment while the corporate sector and the government have deficits (Table 6). The surplus of household savings had been increasing till the 9th Plan and since has declined. The decline during the 10th Plan was due to a sharp increase in household investment (Table 7); but in the 11th Plan period the rate of savings declined marginally.

¹⁵ The needs of institutional investors for funds in their home markets may have limited their investments in India.

Table 6: Excess of Savings over Investment by Groups

(% of GDP, unweighted Annual Average)

Plans	Household	Corporate	Government
6 Th (80-84)	5.9	-2.9	-5.9
7 Th (85-89)	6.8	-2.7	-8.1
8 Th (92-96)	9.8	-4.3	-6.3
9 Th (97-01)	10.7	-3.0	-7.2
10 Th (02-06)	8.9	-5.6	-5.9
11 th (07-10)	8.7	-8.7	-6.2

Source: Reserve Bank of India 2012.

Whereas the crisis in 1991 had been preceded by a large deterioration of the government's saving investment balance because of a combination of higher investment (Table 6) and lower savings, the worsening overall savings investment balance in more recent years has been because of the worsening balance of the corporate sector (Table 6) because of a very sharp increase in investment by the corporate sector (Table 7) which has outpaced the increase in corporate savings. The picture may not look as bleak from the prospect of longer term growth despite the slowdown since the middle of 2011. The higher rates of investment might lead to high rates of growth in the future. But this would require that the CAB be successfully managed in the short run which would require higher savings by both the household and government sectors.

Table 7: Investment by Groups

Plan	Households	Corporate	Public
6 Th (80-84)	5.8	4.4	10.3
7 Th (85-89)	7.8	4.6	11.2
8 Th (92-96)	6.9	8.0	8.8
9 Th (97-01)	10.1	6.9	6.9
10 Th (02-06)	14.3	11.7	7.1
11 th (07-09)	14.3	16.9	8.2

Source: Reserve Bank of India 2012.

It is also important to note that the share of corporate investment in GDP did not increase in the 1980s, so even if government attitude was more pro-business in the 1980s as claimed by Rodrik and Subramaniam, 2005, it is not reflected in higher investment by the corporate sector. It is therefore, difficult to isolate the mechanism by which the pro-business policy raised the growth rate.¹⁶ What difference have the reforms made on economic performance? We try to answer this

¹⁶ At that time there was discussion that Mrs Gandhi's government was favouring the new business groups such as Ambanis as against the traditional groups such as the Tatas and the Birlas so Rodrik and Subramaniam's claim that existing large businesses were favoured and benefitted may not be true.

question by studying the behavior of a number of indicators during the three decades, of the 1980s, the 1990s and the first decade of the new century.

Table 8: Average Performance and its Variability

	Average			Standard Deviation		
	1981-90	1992-2000	2000-10	1981-90	1992-2000	2000-10
PC GDP Growth Rate	3.25	4.13**	5.87**	2.35	2.19	2.23
XGS (% of GDP)	5.92	10.49	18.60	2.77	1.05	3.61
XGS Growth Rate	5.40	13.01*	14.68**	6.96	8.96	9.88
Remittances (% of GDP)	0.99	1.96	3.15	0.78	0.55	0.43
CA Balance (% of GDP)	-1.67	-1.08	-0.72**	0.49	0.46	1.45
GFCF (% of GDP)	20.98	23.08**	29.11	8.17	0.88	3.23
GFCF Growth Rate	6.95	6.8**	11.34**	5.14	6.17	6.82
GDS (% of GDP)	21.01	22.85**	29.42	8.09	1.25	3.62
Private Capital (% of GDP)		1.03	1.95		0.61	0.83
FDI (% of GDP)	0.04	0.49	1.64	0.55	0.27	0.88
ODA (% of GNI)	0.72	0.49**	0.19	0.68	0.23	0.08
ODA (% of GCF)	3.49	2.00	0.64	1.36	1.10	0.39

** t-test Significant at 10% * Not Significant

The rate of growth of per capita GDP was higher in the decade of the 1990s as compared to that in the 1980s and further increased in the first decade of the 2000s. This growth acceleration was accompanied by a higher investment rate financed to a large extent by a higher rate of domestic saving as the current account deficit (CAD), except more recently, decreased as a percent of GDP. The improvement in the current account balance (CAB) was because of a rapid increase in exports of goods and services and in remittances. Furthermore, the smaller CAD was financed more by private capital inflows, including FDI, rather than aid. The importance of aid declined so if self-sufficiency was an objective of the government it was successful in achieving its goal. The standard deviation of most of the series increased (Table 8); but this was mainly because these indicators had an increasing trend. The coefficient of variation decreased for most of the indicators except for the current account balance as a percentage of GDP and for ODA as a percentage of gross capital formation (Table 9). The decrease in the latter case was because of a sharp fall in the average of gross capital financed by aid as the standard deviation actually decreased.

Table 9: Coefficient of Variation

	1981-90	1992-2000	2000-10
PC GDP Growth Rate	0.72	0.53	0.38
XGS (% of GDP)	0.47	0.10	0.19
XGS Growth Rate	1.29	0.69	0.67
Remittances (% of GDP)	0.78	0.28	0.14
CA Balance (% of GDP)	-0.29	-0.42	-2.02

GFCF (% of GDP)	0.39	0.04	0.11
GFCF Growth Rate	0.74	0.89	0.60
GDS (% of GDP)	0.38	0.05	0.12
Private Capital (% of GDP)	--	0.59	0.42
FDI (% of GDP)	12.37	0.55	0.54
ODA (% of GNI)	0.94	0.48	0.44
ODA (% of GCF)	0.39	0.55	0.61

The means of most of the variables show an increase from the period 1981-90 to 1992-2000 and a further increase in the period 2001-2010. We next examine whether these increases in the means are significant. When the period 1992-2000 is compared to the period 1981-90 we find that for 6 of the indicators the difference in means is significant at the 5% level using a two-tailed t-test, in one case the difference is significant at the 10 % level and in 5 cases it is not significant (Table 8). When we examine the difference in means between 1992-2000 and 2001-10, the difference is significant for 8 of the indicators at the 5 % level, and for 4 it is not significant. Surprisingly, the difference in growth rates of per capita GDP is not significant either for the period 1992-200 when compared to 1981-90 or when compared to 2001-10. We also find that the improvement in the CAB was significant between the 1980s and the 1990s but when the 1990s are compared to the 2000s. So the improvement in the CAB was short lived.

We then compared the means for the period 1981-90 to the means in the period 2001-10. The difference in means is now significant at the 5 % level for almost all the variables except the current account balance which is significant at the 10 % level. The only variable which shows no significant difference in means is the rate of growth in gross fixed capital formation. This suggests that in many cases the effect of the policy change was slow acting so that there is less change between consecutive decades than over a longer period. Also since there seemed to be change in more variables in the second decade after the reforms than in the first decade there may be an accelerating effect of policy change.

We find that the Indian economy has been increasingly integrated with the world economy since the reforms started in 1991. The importance of exports of goods, non-factor services and labour services has increased. There are increasing capital inflows as well as outward FDI. Closer integration of financial markets has important implications for the conduct of economic policy in India.

The behaviour of 12 economic indicators shows that the economy has done better after the reforms, in terms of the level of these indicators and also their reduced variability so that the economy seems to have become stable. While the growth rate of the services sector has increased after the reforms the growth rates of the manufacturing and service sectors are very similar except for the period of the 9th Plan (1997-2001).

Section IV

Relative Economic Performance in China and India

We compare the economic performance of China and India in the context of the global and regional economies paying particular attention to performance in developing country regions.¹⁷ Both China and India have been growing rapidly in recent years, and are narrowing the difference in per capita incomes with the developed countries though in many other developing countries the difference in per capita incomes with the developed economies has increased (Table 10). Per capita incomes in Sub-Saharan Africa (SSA) have barely grown over the past thirty years, increasing by an average of merely 0.3% a year between 1980 and 2009; growth in per capita incomes in Latin America averaged only about 1 per cent a year during this period. As per capita incomes in the high income countries grew at 1.9 percent a year the gap with incomes in SSA and LAC increased. The Chinese and Indian economies have grown considerably faster – about two to three times the average world rate.

Table 10: Rates of Growth of Per Capita GDP (% Average Annual)

	1980-90	1991-2000	2000-09
EAP	6.5	6.0	8.4
LAC	0.3	1.7	2.4
SSA	-1.0	-0.4	2.5
SA	3.8	3.2	7.3
China	9.5	9.8	10.1
India	4.1	4.3	6.3

Note : The regions are those used by the World Bank. EAP is East Asia and Pacific, LAC is Latin America and Caribbean, SSA is Sub-Saharan Africa and SA is South Asia.

Source: World Bank World Development Indicators

Growth in developing countries in the 4 regions accelerated during 2000-2009 compared to 1990-2000 in all sectors, agriculture, manufacturing and services, (Table 11); only growth of manufacturing decelerated in EAP and of agriculture in SA. Furthermore there was significant acceleration in the rate of growth of value-added in services in EAP, SSA and SA.¹⁸

¹⁷ Bardhan (2010) compares China and India on a different basis. He stresses the issue of democracy and authoritarianism and economic performance, distributive conflicts, and the role of government policies regarding skill formation and technological development in the two economies. He also emphasizes the importance of the decentralized experimental basis of reform in China. Also see Friedman and Gilley (2005) and Winters and Shahid Yusuf (2007)

¹⁸ This acceleration of growth has meant that the increasing gap in per capita incomes between the high income countries and countries in LAC and SSA has been reversed for this period; though as noted above the gap increases for the entire period 1980-2009 despite this improvement during 2000-09.

Table 11: Sector Rates of Growth
(Average Annual)

	Agriculture			Manufacturing			Services		
	80-90	91-00	01-09	80-90	91-00	01-09	80-90	91-00	01-09
EAP	4.6	3.4	4.1	9.0	10.9	10.2	8.6	8.6	10.0
LAC	--	2.0	3.0	--	2.9	3.5	--	3.5	3.9
SSA	--	3.2	3.2	--	2.2	3.4	--	2.6	4.8
S A	--	3.3	3.0	--	6.4	8.5	--	6.9	8.7
China	5.9	4.1	4.4	10.8	12.9	11.4	13.5	11.0	11.6
India	3.1	3.2	2.9	7.4	6.7	8.7	6.9	7.7	9.5

Source: World Bank World Development Indicators

Comparing China and India, very clearly China has posted much higher rates of growth in all the three sectors than India has. But the significant acceleration in India in the rates of growth of manufacturing and services output during the period 2000-2009 compared to the earlier period suggests that the gap in performance between China and India may be narrowing¹⁹.

What is particularly striking about the production structure resulting from the differential sector growth rates is that the share of manufacturing in GDP is much higher in EAP than in the other regions (Table 12). Furthermore, this share has declined in regions other than EAP. Also share of agriculture in GDP has dropped sharply in Asia, despite rapid growth of agricultural output in EAP as other sectors have grown faster, whereas in SA growth of agricultural output has been almost the lowest among the different regions (Table 12).

Table 12: Structure of Output (% age Share in GDP)

	Agriculture		Manufacturing		Services	
	1990	2009	1990	2009	1990	2009
EAP	24	11	29	32	32	55
LAC	9	6	23	17	55	63
SSA	18	13	17	13	48	57
S A	31	18	17	15	43	55
China	27	20	33	34	31	43
India	31	8	17	15	41	55

Source: World Bank World Development Indicators

A panel regression analysis of 109 developed and developing countries for the period 1980-2009 shows significant differences between Asian and Latin American countries, and also between China and India (Lele, Agarwal, Timmer and Goswami, 2012). In Latin America actual share of

¹⁹ In another context this is the conclusion reached by Bosworth and Collins (2007) that the gap in growth of total factor productivity between China and India has narrowed. Also see Bosworth, Collins, Virmani (2008)

agricultural value-added in GDP is larger than predicted and agriculture's share in employment is less than predicted. The major difference in Asia is that share of agriculture in employment is larger than predicted, and the positive residuals have been increasing over time. This is true for both China and India, and the residuals are much larger for China than for India.²⁰ This contrasts, for instance, with Brazil where the residuals for employment are negative and have been becoming more negative. So, whereas there has been a rapid decline in agriculture's share of employment in LAC this has not occurred in Asia.²¹

The share of services in GDP is the lowest in Asia. While the share of agriculture in GDP is larger in India (18%) than in China (15%), it has been falling more rapidly in India where agricultural productivity has grown more slowly than in China.²² The share of manufacturing in GDP was already much higher in China in 1979 than in India and has remained much higher. However, the services sector is much larger in India. But it has been increasing more rapidly in EAP.

Economic performance in Asia and within it of China and India has been propelled by investment. Investment ratios in East Asia are almost twice those in Africa and Latin America (Table 13). Investment rates in SA have been increasing, and though still considerably lower than in EAP may soon approach those levels. China invests even more than other countries in its region, almost half its GDP; India in recent years has invested about a third of its GDP slightly more than other countries in its region. Also, the investment ratio is more similar between China and India than it is for either country with the ratio in LAC or SSA.

Table 13: Structure of Demand, 1990 and 2009
(% age of GDP)

	Household Consumption		Government Consumption		Gross Capital Formation		Exports of Goods & Services	
	1990	2009	1990	2009	1990	2009	1990	2009
EAP	54	42	11	15	40	40	29	35
LAC	66	64	15	15	20	20	18	21
SSA	67	67	15	16	18	21	28	30
S A	69	61	10	10	25	33	12	19
China	42	35	14	13	42	48	23	27
India	64	56	11	11	27	36	11	20

Source: World Bank Development Indicators 2007 for 1990 data and 2011 for 2009 data.

But not only are investment levels in Asia higher than other developing country regions, there is greater efficiency in the use of capital as measured by the incremental capital output ratio (ICOR).

²⁰ Kotwal, Ramaswami and Wadhwa (2011) compare behaviour employment in agriculture to that in the now developed countries but not to other developing countries. Our analysis suggests that the behavior in India is typical of land scarce Asian countries

²¹ Questions have been raised about China's employment data; some believe that the extent of rural employment is over stated because many workers lack permission to live and work in cities

²² The conclusion holds whether productivity is measured per hectare or per worker or whether measures of total factor productivity are used (Lele, Agarwal, Timmer and Goswami, 2012).

After the oil price rise of 1973 the capital output doubled in the rest of the world and it is has remained high since (Agarwal, 2008). But it increased considerably less in East Asia and it actually declined in South Asia so that since the early 1980s it has been the same in East and South Asia. The incremental capital output ratio was considerably lower in China than in India till 1998.²³ Since then the ICOR in the two countries has been roughly the same, about 4.

The share of exports of goods and services in GDP has increased in all the developing country regions and the most in SA. The share of exports of goods and services has also increased in India but remains less than in China so that it remains less export oriented. But again the ratios are becoming more similar between China and India than of either country with LAC or SSA.

Trade in services has increased faster than trade in goods in recent years though from a much lower level. World exports of goods increased from US\$3468.4 billion in 1990 to US\$6429.5 billion in 2000, an increase of 85 %, and to US\$12228.0 billion in 2009, an increase of 90 %. Meanwhile world exports of services increased from US\$876.7 billion in 1990 to US\$1566.5 billion in 2000, an increase of 79 % and to US\$3517.4 billion in 2009, an increase of 124 %. However, developing countries in general have not fared as well in exports of services as they have in exports of goods as their share is considerably lower. The share of developing countries in world exports of good increased from 23.6 % in 1990 to 30.4 % in 2009. During this period the share of developing countries in world exports of services increased from 13.6 % in 1990 to 19.3 % in 2009. Share of most developing country regions except Asia in world exports of services has declined. China and India have both participated in the increase in exports of goods and services, and separately in goods and services. China's share in world exports of goods increased from 1.6 % in 1990 to 9.6 % in 2009 while its share of exports of services increased from 0.7 % in 1990 to 3.8 % in 2009. On the other hand India's share of world exports of goods increased from 0.5 % in 1990 to 1.3 % in 2009 while its share of services exports increased from 0.6 % in 1990 to 2.6 % in 2009. This shows that China increased its exports of services faster than India. But China has larger earnings from tourism. Its share of world exports of computer, information and other commercial services increased from 1.4 percent to 4.1 percent between 1990 and 2009 whereas India's increased from 0.4 percent to 4.1 percent.

Despite the success of the two economies in increasing exports the behavior of the current account has been different for the two economies. China has usually had a surplus on the current account and at times this surplus has been very large and China has accumulated large reserves. India, on the other hand, has usually run deficits and in recent years these deficits have become very large raising the question of the sustainability of the growth process.

Section V

How Different is India's Experience with liberalization Compared to China

The general perception is that China is a more open economy that has depended more on exports of goods for its growth. India's success has been less dependent on exports and more dependent on domestic demand. India, however, has done better in exports of services while China has depended more on exports of manufactures and this export has resulted in very rapid growth of the manufacturing sector. China also has had much higher rates of investment than has India. This

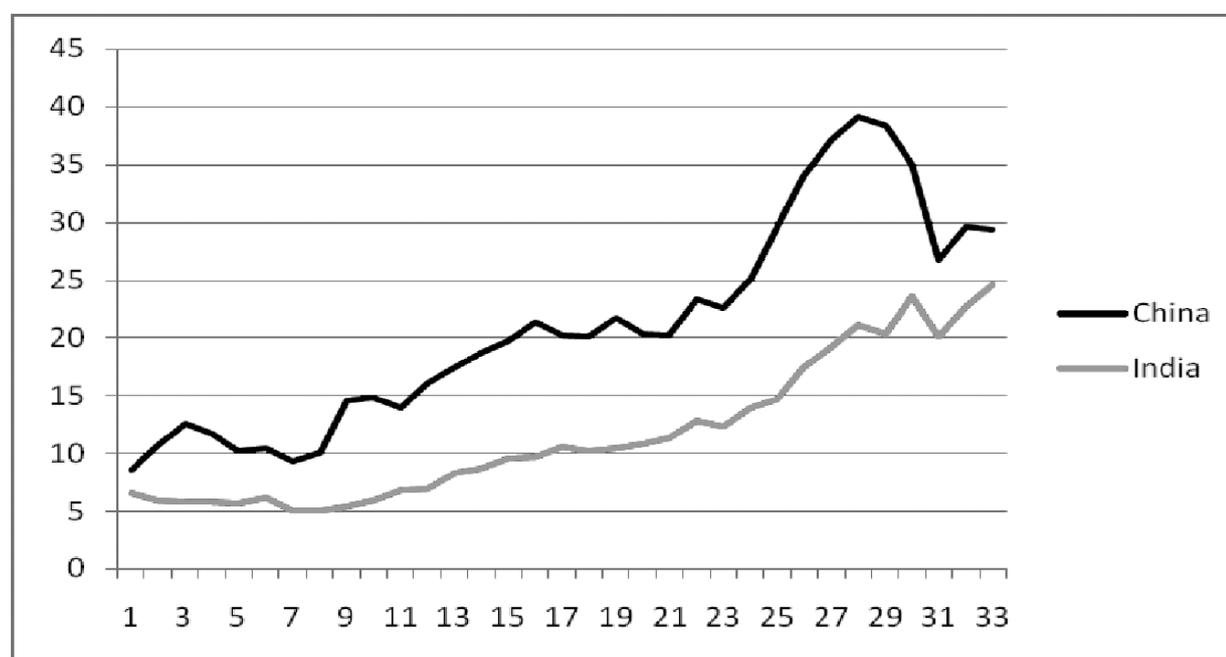
²³ The capital output ratio is calculated as the moving average of the sum of investment over 5 years divided by the increase in income during this period with a one year lag, i.e., $\sum_{i=1}^5 I_t / (Y_t - Y_{t-1})$

general perception is borne out by the data about the performance of the two economies presented above. But there is another way and we believe a more fruitful way of analyzing the performance of the two economies. Since the performance of the two economies has, it is believed, been propelled by liberalization, we measure performances since the start of the liberalization. So, for China, 1979 would be year 1, 1980 year 2 and so on. For India, year 1 would be 1992, year 2 would be 1993 and so on. Also we calculate the changes since the reform as the countries had very different starting positions. When we do this we get a very different picture. China grows considerably faster than India with a widening gap in per capita incomes. 19 years after reform per capita income in China was 450 percent of that in the initial year whereas it was only 250 percent in India. But the difference in growth rates was larger in the first ten years of the reform and has narrowed since then. Furthermore the variability of the growth rate was higher in China. The average annual growth rate of per capita income was 8.7 percent in China and 5.1 percent in India. But the variance of this growth rate was 10.8 in China and 4.5 in India.

There is, however, considerable similarity in the behavior of some of the other indicators.

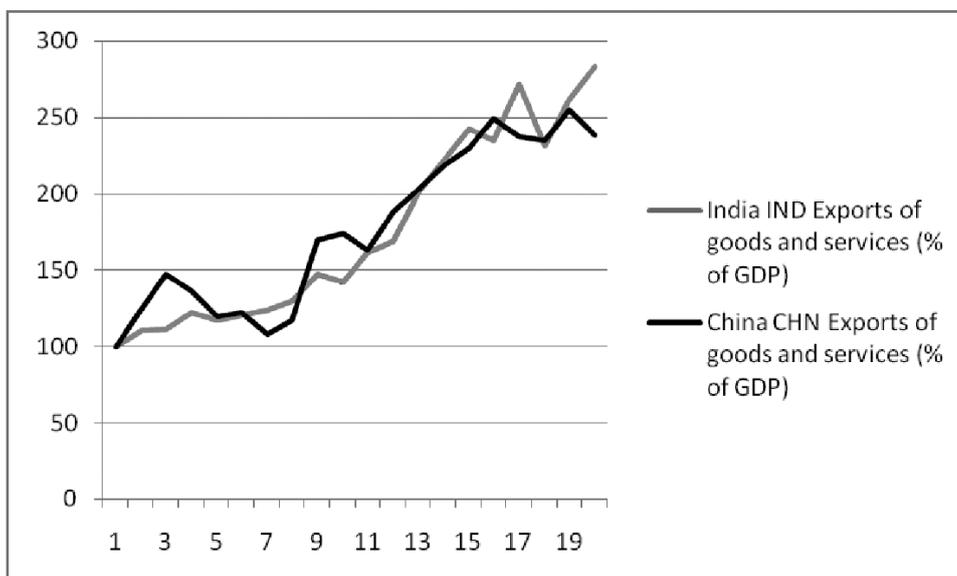
China is believed to have been much more successful in exporting than India. Undoubtedly, the share of exports of goods and services (XGS) in GDP has been higher in China throughout the period 1979-2011 (Figure 1). But we note that the difference which had grown from about 2 percent in 1979 to 12 percent in 1994 was then narrowing gradually till 2002 when it grew once again rapidly to 18 percent in 2006. Since then it dropped to only 4 percent in 2011.

Figure 1 : Exports of Goods and Services, 1979-2011
(% of GDP)



But the similarity in the behavior of share of XGS in GDP is very striking if we compare its evolution since the respective reforms (Figure 2).

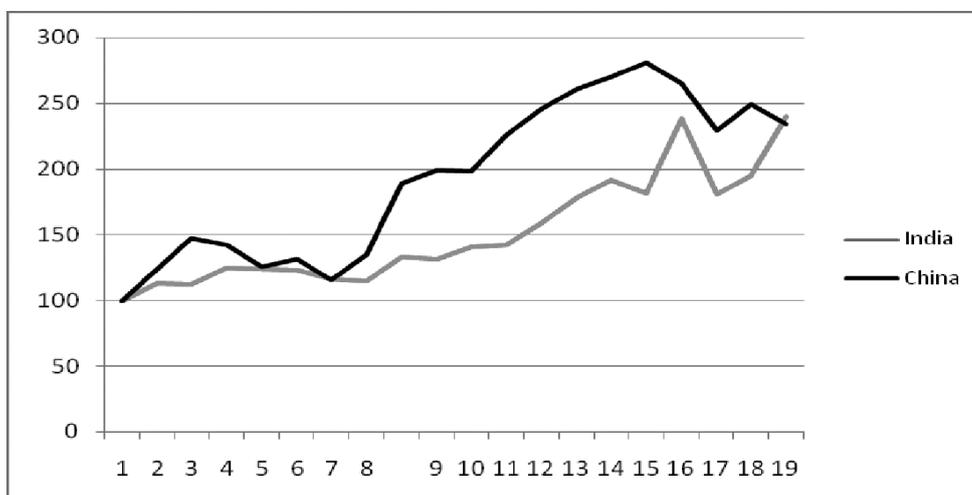
**Figure 2 Exports of Goods and Services Since the Reforms
(% of GDP)**



The increase in the share of exports from the base year seems higher in India in the last three or four years. The increase in share of exports of goods and services was 239 percent for China, but 283 percent for India. Furthermore, this is not because of a sudden spurt at the end of the period. The shares track well throughout the 20 year period since the respective reforms. There is no evidence that India has depended more on domestic demand for growth while China has depended more on exports for growth.

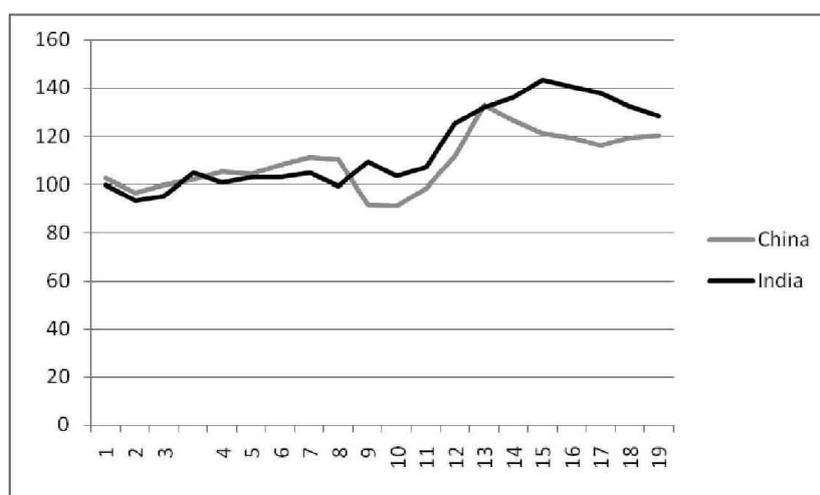
China is considered to have been more successful in exports of manufactures and India in exports of services. But the share of exports in GDP expressed as an index with the base year of the reform having a value of 100 we get a slightly different picture. We see that exports of goods as percent of GDP have increased equally rapidly in the two countries over the entire period (Figure3).

Figure 3: Exports of goods (% of GDP)



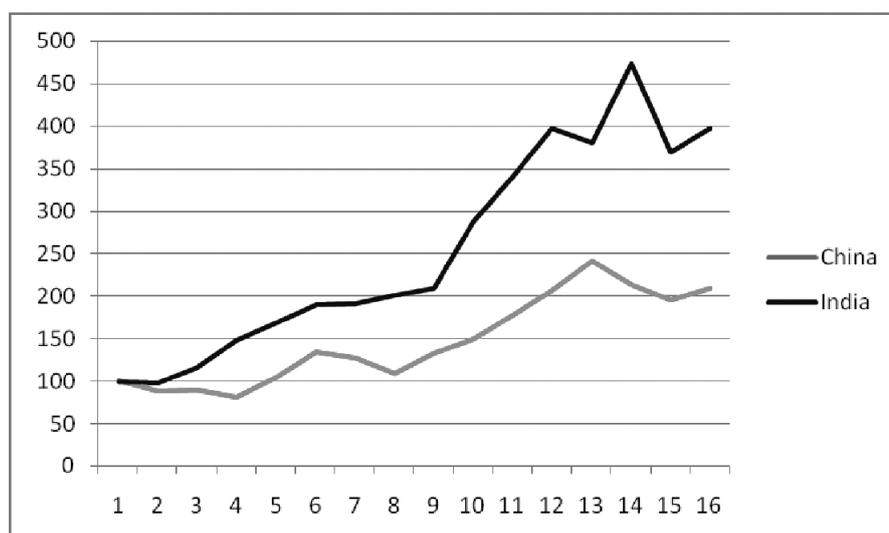
However, the pattern over the period has been very different. For most of the period the share has been much greater for China. The gap between China's share and India's share grew rapidly between 1998 and 2007. It now seems to be disappearing, though because of fluctuations there is no clear trend. Exports of goods responded more quickly to the reforms in China than in India, as also the growth rate. Also, the large increases occurred a number of years after the start of the reforms, so that initially domestic demand seems to have been the basis of the growth. However, the share of trade in goods in GDP has increased more in India than in China (Figure 4). This is a reflection of the deficit on goods trade that India has run whereas china has usually had a surplus. Relative to its GDP India's importance as a demander in the world market has been growing when compared to China.

Figure 4: Trade in Goods (% of GDP)



The share of exports of services (XS) in GDP (Figure 5) and in value added in the services sector has increased more rapidly in India.

Figure 5: Exports of Services (% of GDP)



The difference in the export performance of the two sectors does not translate into the behavior of value added in the two sectors. Share of manufacturing value added in GDP has been declining in both the economies and more rapidly in China (Figure 6). Share of value added in services has been increasing in both the economies and surprisingly more rapidly in China (Figure 7).

Figure 6: Value added in Manufacturing (% of GDP)

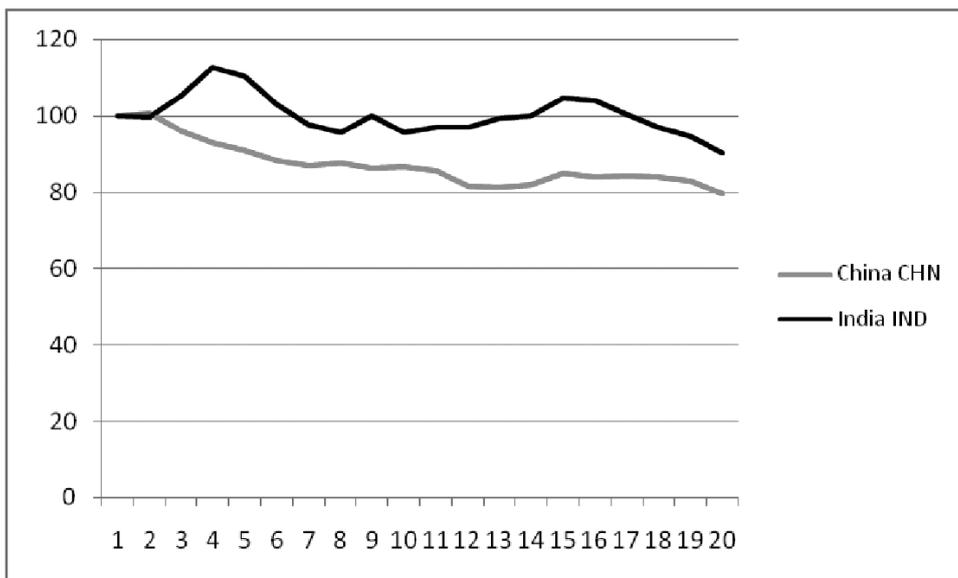
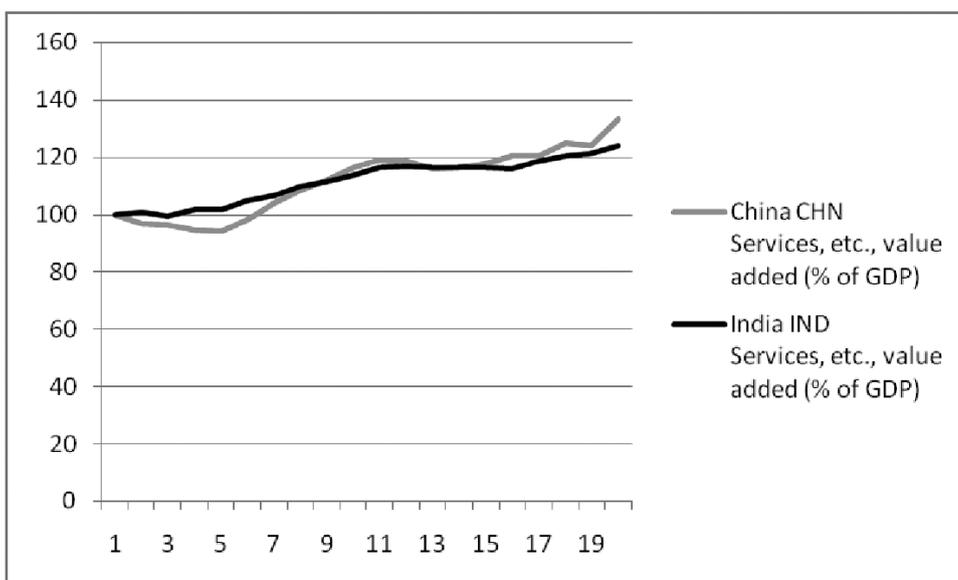
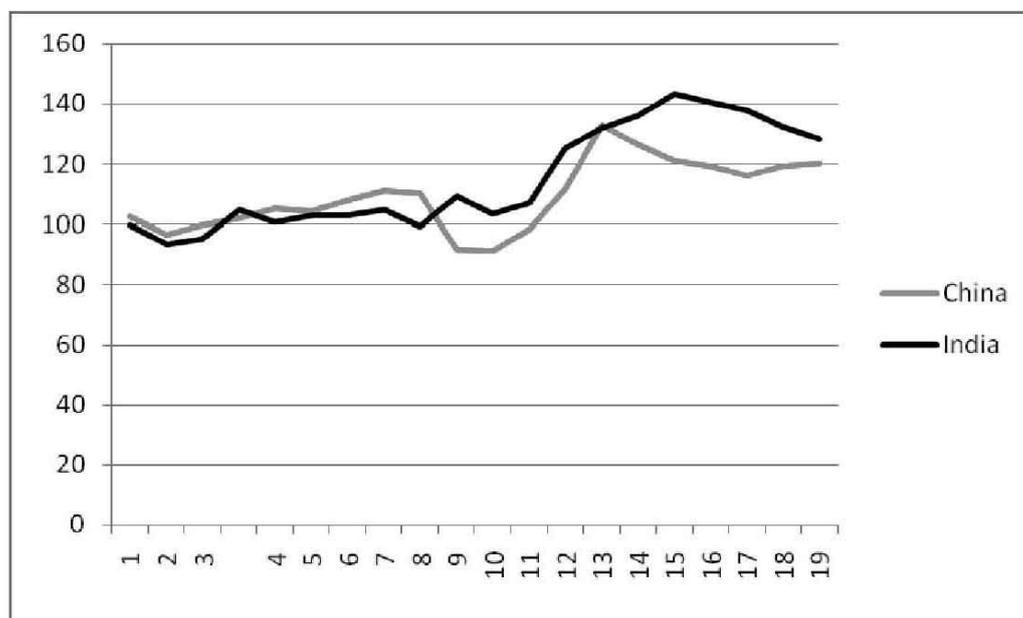


Figure 7 Value added on Services (% of GDP)



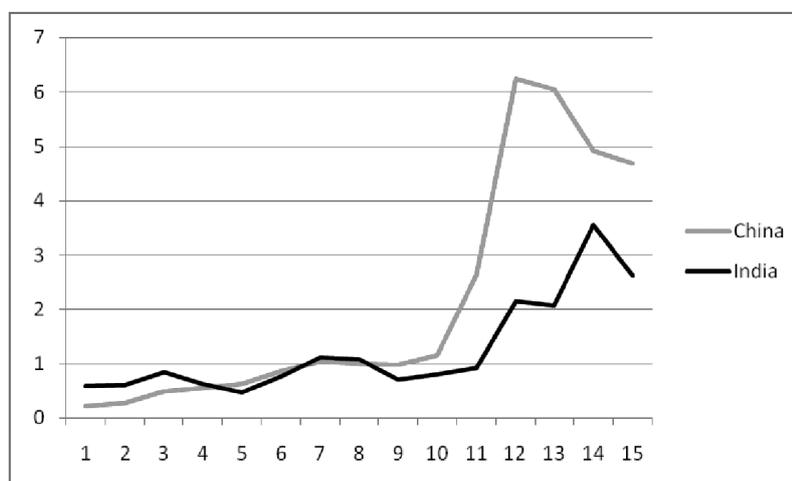
Another difference usually mentioned is that the ratio of investment to GDP has been higher in China. Again, while this is true at the absolute level, the path of change is very similar in the two economies, with the share increasing slightly more in India (Figure 8).

Figure 8: Gross Fixed Capital Formation (% of GDP)



FDI inflows are held to have been very important in China for its manufacturing sector and for its manufacturing exports. India has not been able to attract anyway near as much FDI. But again the picture is more complex. For almost the first decade after the reforms were initiated in each economy FDI as a percent of GDP behaved similarly in the two economies (Figure 9). Then in year 10 and 11 there was a surge in FDI to China. So FDI seems to have contributed little to the initial spurt in growth.²⁴ But since then share of FDI in GDP has fallen in China whereas it has risen in India so the gap is again narrowing.

Figure 9: FDI (% of GDP)



²⁴ Bardhan (2010) also notes that the large increases in exports and FDI occurred later than the growth acceleration.

Section VI

Conclusions

The integration of the Indian economy with the world economy has been growing since the reforms started in 1991. The importance of exports of goods, non-factor services and labour services has risen. There are increasing capital inflows as well as outward FDI. Closer integration of financial markets affects conduct of macro-economic policy in India.

The behaviour of 12 economic indicators shows that the Indian economy has done better after the reforms, in terms of the level of these indicators and also their reduced variability. While the growth rate of the services sector has increased after the reforms the growth rates of the manufacturing and service sectors are very similar except for the period of the 9th Plan (1997-2001).

Per capita GDP has grown more rapidly in China than in India; however, growth has fluctuated more in China than in India. The rate of increase in exports of goods and services and of gross fixed capital formation has been the same in the two economies since their respective reforms. But exports of manufactures have grown more rapidly in China and of services in India; however the differential growth of exports did not translate into very different rates of growth of the two sectors. The changes in the shares of value-added in the two sectors are very similar with the share of services increasing slightly faster in China, but also the share of manufacturing declining slightly faster in China.

Rapid growth of the Chinese economy and its exports has forced considerable adjustment in other countries. It has also raised the profile of China and along with it of other developing countries in the international economic governance system. For instance, the G8 was not expanded to merely admit China. Initially the Heiligendamm process was initiated when consultations were held between the G8 and 5 other large developing countries, Brazil, China, India, Mexico and South Africa. Later after the onset of the financial crisis of 2008 the G8 was expanded to the G20.

It is difficult to predict the future path for the Indian economy. There is the temptation to project that the Indian economy will continue tracking the Chinese economy. In that case further substantial changes will occur in the international economy. Projections suggest that the share of the Indian economy in the world economy will increase substantially though less than that of China (Agarwal, 2008). China had thirty years of a prosperous international economy before the onset of the crisis of 2008. For twenty years the Indian economy has tracked well the path of the Chinese economy. But now it is difficult to see how in the changed international environment the Indian economy can continue to track the Chinese economy for the third decade after reform.

References

Agarwal, Manmohan (1991) "Trade and Development : A Review of the Issues" in D.Banerji (ed.) *Essays in Economic Analysis and Policy : Essays in Honour of B.Datta*, Delhi, OUP.

----- (1997) "Liberalization of the Indian Economy" in P.Desai (ed.) *Going Global*, Camb. Mass., M.I.T. Press.

----- (2008) *The BRICSAM Countries and Changing Economic Power : Scenarios to 2050*, CIGI Working paper No. 39, October, Waterloo, Canada.

----- (2010) "Reforms in the People's Republic of China : Achieving growth with price stability", in Klaus Gerhaeusser, Yoshiro Iwasaki and V.B. Tulasidhar (eds.) *Resurging Asian Giants : Lessons from the People's Republic of China and India*, Asian Development Bank, Manila.

Allen Franklin, Jun Qian and Meijun Qian (2008) "China's Financial System: Past, Present and Future", in Brandt and Rawski (ed.) (2008) *China's Great Economic Transition*, Camb, U.K., N.Y., Cambridge University Press.

Bahl Roy and Christine Wallich (1992) *Intergovernmental Fiscal relations in China Policy*, Research Working Paper WPS 863, World Bank, Washington D.C.

Bardhan, Pranab (2010) *Awakening Giants, Feet of Clay: Assessing the Economic Rise of China and India*, Princeton University Press.

Balakrishnan, Pulapre and M. Parameswaran (2007) "Understanding Economic growth in India : A Pre-requisite", *Economic and Political Weekly*, Vol. 42 Nos. 27-28, pp. 2915-22.

Basu, Kaushik (2008) "The Enigma of India's Arrival : A review of Arvind Virmani's *Propelling India : From Socialist Stagnation to Global Power*", *Journal of Economic Literature*, Vol. 46:2, pp. 396-406.

Bhagwati, Jagdish (1978) *Anatomy and Consequences of Exchange Control Regimes*, Camb. Mass. Ballinger Publishing Company.

----- (1993) *India in Ttransition : Freeing the Economy*, Oxford, Clarendon Press.

Bhagwati, Jagdish and Sukhamoy Chakravarty (1969) "Contributions to Indian Economic Analysis", *American Economic Review*, Vol. 59:4.

Bhagwati, Jagdish and Padma Desai (1970) *India : Planning for Industrialization*, London, Oxford University Press.

Bhagwati, Jagdish and T.N.Srinivasan (1975) *Foreign Trade Regimes and Economic Development : India*. New York, Columbia University Press.

Bosworth, Barry and Susan Collins (2007) *Accounting for Growth: Comparing China and India*, NBER Working Paper No. 12943.

Bosworth, Barry, Susan Collins and Arvind Virmani (2007) *Sources of Growth in the Indian Economy*, NBER WP 12901.

Bowles, Chester (1971) *Promises to Keep : My Years in Public Life*, New York, Harper Row.

Brandt, L, T.G. Rawski and J.Sutton (2008) "China's Industrial Development", in Brandt and

Rawski (ed.) (2008) *China's Great Economic Transition*, Camb, U.K., N.Y., Cambridge University Press.

Brautigam, Deborah (2009) *The Dragon's Gift*, Oxford, Oxford University Press.

Broadman, Harry G. (2007) *Africa's Silk Road : China and India's New Economic Frontier*, Washington D.C. World Bank.

Byrd, William A (1992) *Chinese Industrial Firms Under Reform*, Oxford University Press, New York.

Chakravarty, Sukhamoy (1969) *Capital and Development Planning*, Camb. Mass. MIT Press.

----- (1979) "On the Question of Home Market and Prospects for Indian Growth", *Economic and Political Weekly*, Vol. 14 No. 30/32, August 1979.

Cheru, Fantu and Cyril Obi, eds. (2010) *The Rise of China and India in Africa : Challenges, Opportunities and Critical Interventions*, London, Zed Books.

Friedman, Edward and Bruce Gilley (eds.) (2005) *Asia's Giants: Comparing China and India*, Palgrave Macmillan, New York.

Geiger, Michael (2006) *Monetary Policy in China (1994-2004): Targets, Instruments and Their Effectiveness*, Wurzburg Economic Papers No. 68, Wurzburg.

Green, Stephen (2005) *Making Monetary Policy Work in China: A Report from the Money Market Front Line*, Stanford Center for International Development, Working Paper No. 245.

Huang, Jikun, Keijiro Otsuka and Scott Rozelle (2008) *Agriculture in China's Development : Past Disappointments, Recent Success and Future Challenges*, in Brandt and Rawski (eds.)

Kenen, Peter (2000) *The International Economy*, Camb. Cambridge University Press.

Kotwal, Ashok, Bharat Ramaswami and Wilima Wadhwa (2011) "Economic Liberalization and Indian Economic Growth: What's the Evidence?", *Journal of Economic Literature*, Vol. 49:4, pp. 1152-1199.

Krueger, Anne (1978) *Liberalization Attempts and Consequences*, Camb. Mass. Ballinger Publishing Company.

Lele, Uma, Manmohan Agarwal, Peter Timmer and Sambuddha Goswami (2011) "Patterns of Agriculture and Structural Transformation in 109 Developed and Developing Countries with Special Focus on Brazil, China, India and Indonesia", presented at a Conference on 'Policy Options and Investment priorities for Accelerating Agricultural Productivity Growth', organized by the Indira Gandhi Institute for Development Research, 9-11 Nov 2011, New Delhi

Lewis, W. Arthur (1954) "Economic Development with Unlimited Supplies of Labour", *Manchester School of Economics and Social Studies*, Vol. 22, pp. 139-91.

Little, Ian, Tibor Scitovsky and Maurice Scott (1970) *Industry and Trade in Some Developing Countries*, London, Oxford University Press for the O.E.C.D. Development Center.

Ma, Jun (1995) *Macroeconomic Management and Intergovernmental Relations in China*, Policy Research Paper No. 1408, Jan 1995, World Bank, Washington D.C.

Nurkse, Ragnar (1953) *Problems of Capital Formation in Underdeveloped Countries*, Clarendon Press. Oxford.

Panagariya, Arvind (2008) *India the Emerging Giant* Oxford and New York, Oxford University Press.

Prebisch, Raul (1950) *The Economic Development of Latin America and its Principal Problem*, N.Y. United Nations.

Reserve Bank of India (2012) *Handbook of Statistics on Indian Economy 2011-12*, Mumbai.

Rodrik, Dani and Arvind Subramaniam (2004) "Why India can Grow at 7 percent a Year or More : Projections and Reflections", *Economic and Political Weekly* Vol. 39 No. 16, pp. 1519-26.
----- (2005) *From 'Hindu Growth' to Productivity Surge : The Mystery of the Indian Growth Transition*, IMF Staff Papers, Vol. 52:2, pp. 193-228.

Rosenstein-Rodan, Paul (1943) "Problems of industrialisation of eastern and south-eastern Europe", *Economic Journal*, Vol 53, Vol. 210/11, pp. 202-11.

Sen, Kunal (2007) "Why Did the Elephant start to Trot? India's Growth Acceleration Re-Examined", *Economic and Political Weekly*, Vol. 42 No. 43, pp. 37-47.

Wallack, Jessica Seddon (2003) "Structural Breaks in Indian Macroeconomic Data", *Economic and Political Weekly*, Vol. 38, No. 41, pp. 4312-15.

Winters, Alan A. and Shahid Yusuf (eds.) *China, India and the World Economy: Dancing with the Giants*, World Bank, Washington D.C.

Wong, Christine P. and Richard Bird (2008) "China's Fiscal system: A Work in Progress", in Brandt and Rawski (ed.)

World Bank (2004) *China: Foreign Trade Reform*, World Bank, Washington D.C.

World Bank (2007) *World Development Indicators*, World Bank, Washington D.C.

World Bank (2011) *World Development Indicators*, World Bank, Washington D.C.

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