

ISID Foundation Day Lecture

**IS GROWTH SANS
INDUSTRIALISATION SUSTAINABLE?**

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Introduction

I feel honoured to have been invited to deliver the foundation day lecture at the Institute for Studies in Industrial Development this year.

It is significant that the Foundation day of ISID falls each year on May 1, which is observed as Labour Day by workers all over the World. May I take this opportunity to express my felicitations to the working class on this occasion and my solidarity with them in their struggle for protecting their hard-earned rights, which are under serious threat in the era of globalisation!

Indian economy entered the path of rapid development since the beginning of 1980's and continued on this path during the 1990's. Although the growth rates during the 1980's and 1990's are almost similar with growth being a shade higher during the 1990's, but the sectoral composition of growth is quite different during the two periods (Tables 1A and 1B).

Table 1A
Growth of GDP and Major Sectors

	1951/52- 1980/81	1981/82- 1990/91	1990/91- 2000/01	1992/93- 1996/97	1997/98- 2001/02	2002/03	2003/04
GDP	3.5	5.6	6.1	6.7	5.5	4.0	8.1
Agriculture	2.5	3.6	3.3	4.7	1.9	-5.2	9.1
Industry	5.3	7.1	6.6	7.6	4.5	6.4	6.5
Services	4.5	6.7	8.0	7.6	8.1	7.1	8.4

Source: National Accounts Statistics, 2001 and 2002.

Table 1B
Growth Rates of GDP and Per Capita Income
(1980-81 Prices)

Years	GDP	Share of GDP			
		GDP.Agr	Secondary	Tertiary Income	Per Capita
1950-51 to 1964-65	4.00	2.65	7.73	4.61	1.69
1967-68 to 1979-80	3.45	2.10	4.43	4.49	1.11
1980-81 to 1990-91	5.46	3.94	6.86	6.58	3.01
1990-91 to 1998-99	6.23	1.95	7.45	8.24	4.30

Source: National Accounts Statistics, 2001 and 2002.

It would be noticed that there is a visible change in the source of growth since the early 1990. Up to 1990, the highest growth rate was recorded by the secondary sector followed by the tertiary and the agricultural sector. During the eighties, even when the growth rate of the economy accelerated significantly compared with the earlier period, the secondary sector still held its primacy as the fastest growing sector of the economy. But this picture underwent a change during the nineties when the growth rate of GDP accelerated to above 6 % pa, and, simultaneously the secondary sector ceased to be the leading sector of the economy. Instead the tertiary (Services) sector emerged as the fastest growing sector of the economy. Not only that, by the year 2000 the Services sector had also become the dominant sector of the economy accounting for nearly half of the GDP. Although its share in employment was significantly lower than that of agriculture, nevertheless it accounted for 23.7 % of the total employment during 1999-00. The fact that over the years its relative contribution to GDP is higher than its contribution to employment, it indicates that labour productivity in services is increasing over time (Table 2).

Table 2
Sectoral Shares in GDP and Employment

Year	Sectoral Share in GDP				Sectoral Share in Employment (UPSS)			
	Agri-culture	Manu-facturing	Seco-n-dary	Terti-ary	Agri-culture	Manu-facturing	Seco-n-dary	Terti-ary
1972-73	42.9	13.5	22.9	34.1	73.9	8.8	11.3	14.7
1977-78	42.3	13.6	23.3	34.4	71.0	10.2	12.6	16.3
1983-84	38.7	14.9	24.4	37.7	68.3	10.7	13.8	17.6
1987-88	32.9	16.1	26.1	41.1	64.8	11.1	15.9	19.1
1993-94	31.0	16.1	26.3	42.8	63.9	10.7	15.0	21.1
1999-00	25.2	16.8	26.7	48.1	60.2	11.0	16.2	23.7

Source: National Accounts Statistics and Survey on Employment and Unemployment – Various rounds

It is notable that this growth pattern is quite distinct from the historical pattern of growth where it was industrialisation that led the entire growth process. Services came in primarily to service commodity production and to some extent to cater to the final demand of the consumers.

A question that has been raised in this context is whether India's pattern of growth sans industrialisation sustainable? Or alternatively, is it possible for India to charter a new course in economic history by following the path of service led growth? If so, what are the consequences for growth, for income distribution and for employment? If not, what ought to be the strategy of growth that is most appropriate to its development in the era of globalization? And of course the most important, what is the role and place of industrialisation in this process?

I will make an attempt to answer these questions briefly.

I start by briefly reviewing the views of various development economists on these issues. This is then followed by analysing a little more in detail the experience of the post-

liberalisation period of 1990's in India in terms of sectoral pattern of growth, income distribution and employment. A brief attempt is then made to compare India's experience with that of China. India's strategy turns out to be completely different from the one pursued by China. India's experience brings to light a whole gamut of complex issues including deceleration in industrial growth during the late 1990's. An attempt is made to analyse why industrial growth decelerated during the 1990's in particular after 1997-98? Finally, some suggestions are given for accelerating industrial growth in India.

Classical Views on Sectoral Pattern of Growth

In the literature on economic growth, there was a universal consensus on the crucial role of industrialisation in the growth process. Early economic development theory was but merely an extension of conventional economic theory, which equated "development" with growth and industrialization.¹ The argument was that because of the introduction of machines and new technology, the productivity levels (labour productivity) in manufacturing were, in general, much higher than in agriculture. Hence, any diversification of labour force away from agriculture into manufacturing would lead to an increase in the incomes of the migrants.

Till recently there was almost a universal consensus with Kuznets' classic work on Economic Growth wherein he postulated that the process of growth consisted of rapid

¹ By equating development with output growth, early development theorists, prompted by Ragnar Nurkse (1952), identified capital formation as the crucial component to accelerate development. The early work on the "dual economy" by Arthur Lewis (1954, 1955) stressed the role of savings in development. Early Keynesians, such as Kaldor and Robinson, attempted to call attention to the issue of income distribution as a determinant of savings and growth. Even modern Marxians such as Maurice Dobb (1951, 1960) focused on the issue of savings-capital formation.

industrialisation of the economy. This implied a rapid increase in the share of manufacturing in GDP and a shift of labour force from agriculture to industry. But the precondition was that the countryside should not only be able to feed itself, but also the remaining population including the new migrants to the cities with fewer remaining hands. Thus according to Kuznets, a significant rise in both land and more so in labour productivity was a *sine-qua-non* for any diversification of labour force.

In the scenario developed by Kuznets, the service sector grew in response to the needs of the industry and also to cater to the final demand of the consumers. It may be noted here that the importance of services in both employment and output was underlined by most of the writers. Kuznets, for example, pointed to a number of structural changes that would shift employment to service industries as distinct from commodities (Commodities are defined as storable physical objects). “These included the effect of economies of plant scale in concentrating production in a limited number of localities and thus increasing the need for distributive services, the increase in financial services with growing personal wealth, the expansion of government services (police, sanitation, education) necessitated by the shift away from family and rural production to production by units employing wage earners concentrated in urban areas, and the increase in military expenditures” (Kuznets 1966, p. 150).

But this expansion in services was primarily in response to the demands made by industrial growth and to some extent as stated earlier to meet the final demand of the consumers. But, it was manufacturing and commodity production that was to become the leading sector of the economy. One very cogent argument given by Kuznets was that the economies of scale are enjoyed by the industrial sector, unlike the agricultural sector,

where diseconomies are inherent and also the service sector where economies of scale can only be of a limited nature.

Kaldor (1966), in one of his important contribution on sources of growth came to the conclusion that in the developed economies the explanatory variable for the growth of GDP was growth of manufacturing. He attributed it to what he called the Vardoor's Law (Vardoor, 1949), that is, the economies of scale enjoyed by the manufacturing sector. He argued that because of the economies of scale, there was a tendency for output to grow cumulatively, simultaneously resulting in a rapid growth of productivity.

This notwithstanding, it is still pertinent to ask if service led growth is sustainable. For this it is important to discuss the substantive issue of relationship between commodity producing sectors and services. There is considerable literature both in India and abroad where this issue has been discussed.

There are three main explanations for fast growth of services. These are growth in response to fast growth of commodity producing sectors²; changes in technology and organisation of production (Laurence, 1992 and Dutta, 2001), and finally high income elasticity of demand for certain services. It is sometimes argued that growth of some new services like tourism, health centres, consulting services, and, computer related services is not only faster, but also independent of the commodity sector. But this phenomenon may have only a marginal impact on independent growth of services in India since services account for less than 20 per cent of the consumer expenditure, and, nearly four-fifths of the

² Some authors have rejected the first explanation and point out that except in the trade group, commodity output has a poor relationship with service sector income in India (Bhattacharya and Mitra, 1990).

consumer expenditure is still accounted for by commodities. Growth of incomes would, therefore, continue to generate a high demand for commodities (Bhattacharya and Mitra, 1990).

Kravis, Heston and Summers (1991), on the basis of a detailed cross sectional study also come to the same conclusion. They do not find any evidence of elasticity being higher for services than that for commodities. According to them, the driving force behind the expansion of service employment associated with higher per capita incomes in both cross-national and inter-temporal data is the evolution of technology rather than the change in wants associated with rising income. They conclude that services primarily grow in response to fast expansion of commodity producing sectors.

But be it as may, the pertinent question is to analyse if service led growth is sustainable over a long period?

To recapitulate, of late the services sector in India has not only grown at a faster rate than the commodity producing sectors of the economy, but also occupies a dominant share of the total GDP. Simultaneously, the growth of employment in services is much slower than the growth of income.

According to some scholars, these trends have serious implications for sustainability of growth, stability of the economy and income distribution. *First*, growth in income from services is attributed to a large extent to nominal rather than real increase in its output. During the 'nineties, it simply reflects the higher pay scales resulting from the decisions of the Fifth Pay Commission (Acharya, 2003). *Second*, rise in nominal incomes in this sector is bound to increase the demand for commodities and given the slow growth in commodity production, it is likely to create inflation and/or increase in imports. *Third*, increasing income without significant increase in employment in services accompanied by the reverse trend in

commodity producing sectors, particularly in the unorganised manufacturing sector is, likely to result in increasing inequality in incomes (Papola, 2004). Above all, it is found difficult to sustain service sector led growth in the absence of similar growth of industry since a major part of the demand for services is linked with the expansion of the industry and growth-inducing effects of manufacturing sector, which are much larger than that of the services (Dutta, 2001).

Growth Pattern during the 1990's: Implications for Employment and Productivity

This brings us to another issue, namely the inability of the Indian pattern of growth to provide adequate employment.

The employment situation in the country seriously deteriorated during the 1990's as a consequence of service led growth pattern followed during this period.

First, the share of agriculture in GDP declined from 44.8 per cent in 1977/78 to only 27.6 per cent in 1999/2000 at constant 1993-94 prices, but the share of employment in agriculture (UPSS) declined only from 73.9 per cent in 1972/73 to 60.2 percent by 1999/00 (Table 3). With 60 per cent of the national workforce producing a little more than a quarter of GDP, the relative productivity of workers in agriculture is less than one fourth of that in non-agricultural occupations. This is the most important reason for skewed income distribution between the countryside and the urban areas.

Table 3
Share of Agriculture in GDP and Employment

Year	% Share of Agriculture in GDP at 1993-94 Prices	% Share of Agriculture in Employment (UPSS)
1972-73	44.8	73.9
1993-94	33.5	63.9
1999-00	27.6	60.2

Source: National Accounts Statistics and Survey on Employment and Unemployment – Various rounds.

Second, as per the various definitions used by the National Sample Survey Organisation (NSSO) in India, the incidence of open unemployment remains relatively low. During the entire period 1973-74 to 1999-00 for which NSS data are available, employment (defined in terms of UPSS) grew at an annual rate of 1.94 % as against a growth rate of 1.96 % in the labour force. But during the recent period 1993-94 to 1999-00, the growth rate of employment decelerated sharply to only 1.03 % p.a. (Table 4) and despite a slow-down in the growth in the labour force, there was some increase in open unemployment during 1993-94 to 1999-00.

According to NSS, there were 3.98 million unemployed in India in 1973-74 and their number had increased to 7.49 million by 1993-94 to as much as 9.15 million by 1999-00. In the meantime, the incidence of unemployment (defined as the ratio of unemployed persons to the labour force) increased from 1.64 % in 1973-74 to 1.96 % in 1993-94 and to 2.25 % in 1991-00 (Table 5).

Table 4
Growth of Workers (Employment) 1973-74 to 1999-00
(Rural plus Urban)

	1973-74 1993-94	1973-74 1999-00	1987-88 1993-94	1993-94 1999-00
Agriculture etc. & Allied	1.49	1.16	2.18	0.02
Mining	4.74	3.01	2.37	-2.77
Manufacturing	3.12	2.77	1.68	1.56
Electricity	6.33	3.73	3.11	-4.76
Construction	4.96	5.30	-0.11	6.49
Secondary	3.60	3.34	1.34	2.43
Trade	4.19	4.65	3.50	6.22
Transport	4.62	4.79	3.67	5.36
Services	3.70	2.76	4.66	-0.42
Tertiary	3.99	3.77	4.09	3.01
All UPSS Workers	2.40	1.94	1.67	1.03

Source: NSSO Surveys – various rounds.

Table 5
Number of Unemployed and the Incidence of
Unemployment, 1973/74 to 1999/00

	1973-74	1978	1983-84	1987-88	1993-94	1999-00
No. Unemployed (mn)	3.98	7.14	5.95	9.14	7.49	9.15
Incidence of Unemployment (%)	1.64	2.58	1.93	2.74	1.96	2.25

Source: NSSO, Survey on Employment and Unemployment, Various Issues

Even so, it needs to be underlined that although open unemployment registered an increase during 1993-94 to 1999-00, both the rate and number of open unemployment are not very large in relation to the work-force. The real problem in India is not so much open unemployment but employment at very low levels of productivity (Planning Commission, 2001).

Third, of all the sectors of the economy, the highest deceleration in growth of employment during the 1990's has

been in agriculture (Table 4). Thus, while the growth rates in the secondary and tertiary sectors decelerated from 3.62 % and 4.02 % p.a. during 1972-73 to 1993-94 to 2.43 % and 3.01 % p.a. respectively, during 1993-94 to 1999-00 the growth rate in agricultural employment decelerated from 1.49 % p.a. to only 0.01 % p.a.

The main reason for the near collapse of employment growth in agriculture was a sharp deceleration in the growth rate of agriculture in general and crop production in particular. Although because of statistical jugglery, the GDP in agriculture did not show a big decline, there was a steep deceleration in the rate of growth of output of the crop sector during the nineties compared with the eighties. The growth rate of all crops taken together -- the dominant component of agricultural sector -- decelerated from 3.46 % p.a. during 1980-81 to 1990-91 to only 2.38 % p.a. during 1990-91 to 1999-00. This sharp decline in the growth of crop output adversely affected employment growth in agriculture during the nineties. A decline in the growth rate of infrastructure investment in agriculture over a prolonged period of time, declining efficiency of input use, technological stagnation, and surplus cereals production and falling prices have all contributed to the deceleration of the agricultural growth in India.

The second reason for decline in employment in agriculture is the increasing capitalisation of agriculture over the years. The phenomenon of slowing employment growth relative to income growth in various sectors is reflected in a secular decline in their employment elasticities over time (Table 6). The employment elasticity for the economy as a whole declined from 0.473 during 1973-74 to 1993-94 to 0.156 during 1993-94 to 1999-00. But recent data show that the employment elasticity in agriculture fell sharply from 0.49 during the 1973-74 to 1993-94 to only 0.005 during 1993-94 to 1999-00. Some recent data show that in a few states the

employment elasticity in agriculture has even become negative (for example, -0.13, -0.92, -0.13 in AP, Kerala and UP, respectively, during 1993-94 to 1999-00).³

Table 6
Elasticity of Employment
with respect to Net Value Added

	1983/78	1994/88	2000/94
Agriculture etc. & Allied	0.490	0.443	0.005
Mining	1.362	0.379	-0.534
Manufacturing	0.537	0.298	0.226
Electricity	0.746	0.312	-0.509
Construction	3.427	-0.022	1.095
Secondary	0.791	0.233	0.365
Trade	0.608	0.583	0.697
Transport	0.891	0.652	0.540
Services	0.750	0.642	-0.052
Tertiary	0.734	0.616	0.350
All Sectors	0.542	0.413	0.156

Source: Calculated from National Accounts and NSSO Surveys – various Years.

As a result of declining employment elasticities despite higher GDP growth, employment growth decelerated in almost all the sectors of the economy (Table 4). The only significant exception is construction. However, in this case there are large inter-temporal variations and per worker productivity is very low.

In one of the detailed exercises by Hazell and me, we worked out the implications of providing productive employment along with gradual rise in wages to the entire labour force by 2020. It came out that it is possible to achieve this goal only by accelerating the growth rate to a secular level

³ Calculated by the author from NSSO, *Survey on Employment*, Various Rounds, and CSO, *National Income Accounts*, Various Issues.

Also see: Sheila, Bhalla (1997), where she brought out that the employment elasticity had turned negative in Haryana during 1987-88 to 1993-94.

of 8-9 % p.a. This in turn implied raising the investment levels in the economy from the current level of 22-23 % of GDP to nearly 35-40 % of GDP along with a big increase in TFP through technological innovations. This is just not possible without a huge public investment in infrastructure.

In this context, I may also refer to the two important reports, namely the Ahluwalia (2001) and Gupta (2001) reports on creation of 10 million jobs per year brought out by the Planning Commission. This is not the occasion to go into a critical examination of these reports, save it to say that both reports candidly admit that the pattern of growth during the nineties has seriously affected employment situation in the country. Whereas, the Ahluwalia Report stressed the need for accelerating growth rate as a pre-condition for achieving the goal, the Gupta report pinned its hopes on achieving high employment with much lesser growth rate by a strategy that gives importance to unorganised sector development. There is no doubt a large scope for increasing employment in agriculture by accelerating its growth in hitherto-neglected rainfed areas of the country. For this it is necessary to get a technological break through in rainfed crops like coarse cereals, pulses and oilseeds. However, I have serious reservation about the suggested strategy of achieving higher growth of employment through expansion of unorganised manufacturing and other sectors of the economy. These would be coexisting with very highly paid high-tech workers in modern industry and services. I believe that such a strategy would only tend to perpetuate low productivity employment and accentuate the already existing large income disparities between the organised and the un-organised sectors of the economy. I grant that it is unfair to make generalisations on such a substantive issue. I can only suggest that ISID may think of organising a seminar on this important matter.

These differences about future strategy for employment growth notwithstanding, all the scholars recognise the adverse employment consequences of the development pattern followed during the 1990's.

Increasing Income Disparity

Another important adverse consequence of the present strategy of development is very large accentuation of both interpersonal and inter-regional inequalities during the 1990's.

We have extensively written about inter-regional variations in both the levels and growth of agriculture in India specially after the advent of green revolution. A similar situation exists with regard to the pattern of industrial development across states. Along with this there are very large differences in the levels of per worker productivity in various sectors, which gives an idea of likely variations in income across regions and across sectors. The following Table gives some details.

The coefficient of variation of per worker productivity across states was very high, being the highest for the primary sector followed by the manufacturing and the service sectors.

In agriculture for example during 1998-99, per worker productivity of Rs. 47,815 for Punjab was 3.5 times the all-India level and 7 times the level in Bihar. Again, in manufacturing during 1998-99, Maharashtra had a productivity level of Rs. 1,06,000 compared with a level of Rs. 45,000 for India as a whole and of only Rs. 22,000 for Rajasthan (Table 7). But in the case of services, the coefficient of variation across states was much lower than that of the primary and the secondary sectors.

Table 7
Per Worker (UPS) GSDP by Sectors in Rupees per year 1998-99 at Constant Prices

State	Agri- culture	Mining	Manu- facturing	Electricity	Constr- uction	Trade	Trans- port	Financial Services	Community Services	All Sector
Andhra Pradesh	9551	52988	41414	347603	27399	34618	59186	229499	28918	21470
Assam	13550	502749	48093	203464	46002	31819	25673	175661	13865	21709
Bihar	6349	100217	32804	139804	21417	31309	42953	170710	29853	15036
Gujarat	13592	213625	87799	311524	26343	48882	53886	313619	38215	37340
Haryana	41698	17737	86410	33114	27821	45445	79148	259176	37741	51232
Himachal Pradesh	12202	0	64719	101227	29768	38955	41680	370018	47058	28265
Karnataka	12710	29089	60611	327351	34486	39393	44046	183445	42107	28128
Kerala	26587	4927	28215	168834	18609	31243	49153	154176	34402	32952
Madhya Pradesh	8951	131018	52015	746491	33932	33234	62821	327036	31651	20484
Maharashtra	13748	71211	106134	283366	44325	48476	82773	324908	48460	44491
Orissa	8203	183310	24518	162693	22241	37502	63143	238244	36533	17937
Punjab	47815	0	67698	114346	39584	44162	35397	327233	39122	52759
Rajasthan	13174	32690	22612	209320	19413	39213	38001	207052	32319	22426
Tamil Nadu	12990	44295	31158	183581	31995	40391	54472	208166	36706	29727
Uttar Pradesh	11986	182307	27393	325204	24318	25373	48040	250036	31197	21503
West Bengal	18416	60085	27485	109406	32973	27150	36672	233795	34282	28177
All-India	13321	118280	45138	26501	31662	39674	54589	276408	42648	29508
C V 1999-00	69.66	125.19	51.48	70.31	27.65	19.13	30.54	26.68	22.77	38.81
C V 1993-94	58.75	85.41	44.35	44.40	46.97	35.56	55.68	37.37	33.34	34.47

Source: Calculated from National Accounts and NSSO Surveys—various Years.

Across sectors, there were wide variations in the level of per worker productivity. The levels of productivity were as high as Rs. 2,76,000 per worker for financial service compared with only Rs. 13,300 per annum for agriculture and Rs. 31,000 for trade. Thus, there are very large interregional variations in productivity levels for various sectors in the economy resulting in large variations in income.

In this connection, it is useful to evaluate the success or otherwise of the export-led (trade leads to growth) that constitutes the core of the rationale for economic liberalisation and globalisation. It is argued by the neo-classicals that this strategy is the most suited for rapid growth of developing countries (Kruger, 1998). The miraculous growth of Asian tigers is cited as an example to prove that the export-led strategy of encouraging labour intensive exports (garments and textiles etc.) not only led to rapid industrialisation, but also resulted in creating large employment opportunities.

There is no doubt that the Asian Tigers made a tremendous progress during the 1980's and early 1990's. But this was achieved not only by following export led strategy alone, but also through building a vibrant industrial sector through public sector support and sometimes direct intervention. Further, large Foreign Direct Investment (FDI) came to South Korea and other SEA countries from the US and Japan for political reasons during the cold war period. *Third*, the SEA countries followed the Washington Consensus recipes in *Toto* including freeing the domestic currency on both current and capital account. A major reason for the Asian crisis in 1997-98 was very large and sudden outflow of capital once the alarm bell started ringing. The currency outgo was very large leading to near collapse of these economies.

India initiated economic reforms in 1991, with the hope that freeing the economy from a regime of licenses and controls and steep devaluation of the currency would result in rapid growth of exports. This in turn would result in accelerating the growth rate of the economy. And since India's major advantage was supposed to be in labour intensive production and exports, this would also result in increasing employment. We have already noted that the growth rate of the economy did accelerate during the 1990's after reforms as compared with the 1980's. The exports also registered a growth. But the growth rate of exports, which was quite high during 1990-91 to 1996-97, sharply decelerated in the second half of the 1990's. In any case, exports continued to be a rather small part of the economy and made only a limited contribution to the growth of the economy; the main source of growth was domestic demand. Hence, whereas exports can be an important complimentary factor in the growth process, the basic impetus has to be provided though domestic demand led growth.

Accelerating Industrial Growth

This brings us to the real issue of how to achieve high growth along with higher employment. This, we believe, is possible only by following a strategy of rapid agriculture led strategy of growth.

It may be recapitulated that industrial growth in India started accelerating during the 1980's. On the demand side the main reason was very high and regionally balanced growth in agriculture. On the supply side, there was a significant liberalisation of the control regime and liberalisation of imports for import technology and foreign capital to modernise the manufacturing sector. Simultaneously, public investment in infrastructure and energy sector was stepped up. After the reforms in 1991, the industrial sector continued to grow rapidly despite a slow down in public investment. But the growth was

nowhere near the Asian tigers despite Uncaging the Tiger (Tables 8A and 8B).

A policy of structural adjustment generally leads to de-industrialisation of the economy.

Table 8A
Industrial Growth in Asian Perspective, 1999-2000

(Per cent per year)

Country	Growth rate
India	6.8
China	12.8
Indonesia	10.2
Korea	9.4
Malaysia	11.2
Singapore	7.7
Thailand	9.8

Source: World Development Report, 2002

Table 8B
Share of Manufacturing in GDP

Country	1980	1990	2000
Argentina	29.5	26.8	17.6
Brazil	33.5		24.0
Chile	21.5	19.5	15.9
Mexico	22.3	20.8	20.7
India	13.8	16.6	17.2

Source: World Development Report, 2002

It must be said to the credit of policy makers in India that unlike in Latin America the share of the secondary sector did not decline after the reforms, although the growth in it was not very spectacular. However, India was left far behind in the matter of industrialisation as compared with China.

Table 9
India & China: Value Added as % of GDP

Year	Agriculture		Industry		Manufacturing		Services	
	China	India	China	India	China	India	China	India
1980	30	39.7	49	23.7	41	13.8	21	36.6
1990	27	32.2	42	27.2	33	16.6	31	40.6
1998	18	26.5	49	27.7	37	17.7	33	45.8
1999	17	26.4	50	27.0	24	17.1	33	46.6
2000	16	25.0	49	26.7	-	16.7	34	48.3
2001	15	23.9	52	27.2	-	17.2	33	48.9

Source: World Development Reports various issues and GOI, National Accounts Statistics, CSO

China has clearly followed an industry led growth and during 2001 its industrial sector accounted for a about 52 % of its GDP compared to 27.2 % in India (Table 9). This brings out a basic difference in growth strategies followed by the two countries.

What has been the reason for Chinese miracle? There are several complimentary factors that can explain China's rapid industrialisation. First, of course the one, which is cited often as the sole reason is large FDI flows coming into China. But this is only a part of the story. There are two more basic reasons that promoted growth. First was a booming agriculture since 1978 reforms that transformed the rural scenario in China. Very high growth in agriculture led to high growth in land and labour productivity and rise in incomes of rural people. This in turn led to a spurt in the growth of both input supplying and output processing, and consumer goods industry. Thus, the input, output and consumption linkages all combined to push up the growth of manufacturing in the Chinese countryside.

The second reason was very high investment in rural and urban infrastructure through public investment. It is important to remember that in China, the state did not

withdraw but facilitated the development process through large scale investment in infrastructure.

An associated reason was the setting up of TVE on large scale, which promoted the process. These TVE's were owned by local authorities as well as directly by the state governments. Rapid diversification of labour force in China from agriculture to manufacturing can be traced to high per worker productivity in agriculture. In one of the seminar article, Ishikawa (1998), brought out that the rapid shift of labour force from agriculture to manufacturing in China was because of very high growth in labour productivity in agriculture after the reforms in 1978. In his model, he postulates that the percentage share of labour force in manufacturing is directly related to per worker productivity in agriculture. Thus, China did not entirely depend on FDI. It complimented it through a strategy of agriculture led growth and rapid investment in infrastructure. Incidentally, in India also the cross section data for various states brings out that there is a very significant association between per worker productivity in agriculture and the share of non-agricultural employment.

What are the lessons for India to launch a process of transformation of the economy? In our view the economy cannot be transformed except through rapid industrialisation. And in India like in China, industrialisation has to be demand led by accelerating the growth of agriculture and increasing labour productivity in agriculture. The state has to play a major role by investing in infrastructure. FDI can play an important role in complementing the process of industrialisation.

In the growth process there are no short cuts. Indian policy makers opted for strategy of hands off depending entirely on the private sector for investment. This has led to lack of infrastructural investment as a major constraint to

industrial development and to even investment by FDI's. This mind-set has to undergo a change.

As a premier research Institute in industrial development, ISID has been in the fore front of raising basic policy issues. I am confident it would continue to do so in future and would suggest an appropriate policy framework for rapid industrial growth as a part of the overall development strategy for the country.

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