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HOW INDIA IS DOING: INDUSTRIAL GROWTH AND POLICY INTERVENTIONS IN THE 1980s¹

Abstract

This paper analyses the long term experience of industrial growth in India, spanning the period from the First Five Year Plan to the new policy of the 1980s. Since the early 1950s the objective of public policy has been the promotion of balanced and rapid economic development with equity and justice. The main question in the 1950s was raising the rate of savings and thus the rate of investment within the framework of extensive planning. The new economic policy pursued during the 1980s, characterised by liberalisation and an elitist orientation on demand by the top two deciles as the engine of growth, has brought about various structural changes. Among others the industrial sector has become less and less sensitive to the performance of the agricultural sector. Concluding that it may still be too early to say whether the growth rate of industry can be raised in a sustainable way, the paper sees "immiserisation" of the poor as one possible disturbing outcome of present policies.

An Overview

Sometime back, Prof. Amartya Sen, in his assessment of how India is doing, identified a basic dichotomy: "the strengths and weaknesses of the Indian system are clear enough. It permits endemic malnutrition and hunger that is not acute, so long as these happen quietly; it does not permit a famine both because it is too acute because it cannot happen quietly ... Moreover, if this recent quickening of growth rate is true, it is not in itself a great social achievement, given the 'persistent inequities', including unabated endemic malnutrition and if false, it adds little to severe indictment of Indian economy that is in any case due".²

In this paper, we study Indian industrial growth experience, along with various policy interventions by the state during the 1980s, before the background of planned development since the First Five Year Plan. Looking back, we find that industrial target setting and the use of the policy variables in the economy took place within the framework of extensive planning. Since the early 1950s the objective of public policy

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² Amartya Sen, How India is doing? *New York Review of Books*, Vol. 29 (Christmas Number, 1982, pp. 41 — 45).

has been the promotion of balanced and rapid economic development with equity and justice. The main question in the 1950s related to raising the rate of savings and also to convert savings into capital goods, thus raising the investment rate in the economy.

The experience of the 1950s showed that the acceptance of the premise of self-reliance led to the use of import substitution measures, with a view to use 'any' amount of domestic resources to save the given amount of foreign exchange. The intuitive idea was that the production of capital goods could ensure an increase in the investment ratio in the economy, since machines could not be consumed by the people. The Mahalanobis model provided the rationale for a shift in industrial investments towards building up capital goods industries.

As it turned out during the 1950s, the overall effect of allocating a high level of investment to the capital goods sector resulted in excess capacity. In several cases this excess capacity also acted as a catalyst for exports. But it led to a lop-sided pattern of growth. The Mahalanobis model's intuitive belief was that the savings rate was a reflection of behavioural features, a rigid function of several structural features, e.g. the capacity of the domestic capital goods industry, the capital-output ratio of the capital goods and consumer goods sectors.³

The Mahalanobis model led to significant shifts in the industrial structure. The limits of this type of strategy became obvious during the 1960s when the economy faced various structural constraints, e.g., regarding food supply and the balance of payments. We could also say that the experience of more than a decade since 1965 rather disproves Chakravarty's optimism that "if a country's balance of payments situation is such that it could import the necessary machines by increasing its export earnings, without depressing its terms of trade excessively, in operational terms, the need for building up a capital goods producing sector could be insignificantly obviated".⁴ While there is a lot of controversy about the speed and pattern of industrial growth in India over the last three decades, there is now some consensus that there was no significant deceleration in industrial growth during the first decade of green revolution. Various explanations were offered for the economy's industrial stagnation since 1964 — 65 that continued even during the early 1980s. Some located the causes in periodic shocks to the economy — war in 1965 and 1971, first oil crisis in 1973 and the droughts during 1965 — 66, 1967 and 1971 — 72 that reduced the demand for industrial goods from the agricultural sector, also reducing the supply of raw materials. There were various supply constraints as observed in the late 1960s, e.g. bottle-necks of infrastructure (transport, power and other services). Since industrial growth till the mid-1960s was subject to various supply constraints, it was natural to think in terms of 'supply' constrained models e.g. savings, foreign exchange, agricultural output etc.

What is more important here is not cyclical fluctuations in industrial growth but a consistently 'low' rate of industrial growth for more than two decades. The rate came down from 9 p.c. in 1960 — 65 to 3.7 in 1965 — 70, as well as 1970 — 75. This deceleration can be explained by several factors. Table 1 shows sectoral growth rates of industrial output during 1951 — 79.

3 Mahalanobis, P. C., *The Approach of Operational Research to Planning in India*, *Sankhya*, December 1955, pp. 3 — 130.

4 Chakravarty, S. *On the Question of Home Market and Prospects for Indian Growth*, *Economic and Political Weekly*, Special Number 1979, p. 1229.

Table 1: Sectoral Growth Rates of Industrial Output (Percent per year)

	1951 — 55	1955 — 60	1960 — 65	1965 — 70	1970 — 75	1975 — 79
General Index	5.7	7.2	9.0	3.7	3.7	5.7
Capital goods	15.1	13.7	19.7	-1.9	5.1	5.9
Intermediate goods	6.4	6.3	7.0	2.6	2.7	5.5
Non-durable consumer goods	3.7	3.8	3.9	2.9	1.8	5.6
Durable consumer goods	12.3	25.7	10.9	8.6	2.4	8.5
Agriculture based	3.6	3.7	3.9	1.7	1.4	3.9
Metal based	10.9	14.0	18.6	0.5	4.6	6.7
Chemical based	8.1	9.7	9.2	9.7	5.2	9.2
Transport equipment	11.1	10.5	14.2	2.6	3.0	3.7
Electricity etc.	8.6	16.0	14.6	11.9	5.7	10.3

Source: Central Statistical Organisation (1965)

Reserve Bank of India (1970: p. 992 — 995; 1977: p. 32 — 33, 1980: p. 5266 — 6267).

Hence from 1965 onwards there was a severe decline in the rate of industrial growth that led to stagnation of industrial output during the 1970s. Moreover rates of domestic saving, growth and investment did not show any marked increase. Also there was very little structural change observed in the economy. This relative stagnation was accompanied by rapid price increases across sectors. With 1961 — 62 as the base, the wholesale price index of all commodities went up from 94.4 in 1951 — 52 to 122.5 in 1964 — 65.

But the evidence for the 1970s and 1980s is different, since the official index of industrial production (base 1970 — 71 = 100) showed continuing deceleration in industrial growth. Moreover between 1966 and 1975, the rate of growth of this index declined to 4 p.c. Looking at the data for manufacturing, there was sharp decline to 3.8 p.c. during 1966 — 75 and 4.7 p.c. during 1976 — 88 (Table 2).

Table 2: Rate of Growth of the Index of Industrial Production

Period	Industry	Manufacturing	Mining + Quarrying	Electricity
1951 — 65	7.4	7.2	6.3	13.9
1966 — 75	4.5	3.8	3.5	9.4
1976 — 88	4.8	4.7	7.9	7.7

Source: Calculated from figures from Govt. of India, Ministry of Finance, *Economic Survey*, Various Issues.

Notes: Growth rates (r) in Tables 2 and 3 are calculated by fitting an equation of the form $\log Y = \log A + Bt$ where $B = \log(1 + r)$.

Since the earlier index of industrial production (base: 1970 — 71) did not take into consideration several structural changes in the economy over several years, the government revised the index to consider growth of industries like chemicals, gem cutting, petro-chemicals, electronics, as well as the small scale sector. We look into these recent changes based on 1980 value-added shares and also the revision of national income series by CSO in February 1988 (base: 1980 — 81). Some major changes have been made relating to the service sector and depreciation. The index of industrial production (base 1980 — 81 = 100) shows a growth rate of 7.6 p.c. per year for 1981 — 88, while earlier indices rendered lower rates.

A rather modest recovery in industrial growth during the recent years was widely acknowledged, as the earlier index (with base 1970) could not capture recent trends highlighted for the registered manufacturing sector in Table 3.

Several studies also underlined that the recent recovery is helped in a significant manner by the growth of the small scale sector. Nevertheless the recent trend rate is still below the industrial growth of the 1950s and early 1960s.

Table 3: Rate of Growth of Value Added in the Registered Manufacturing Sector (By Industry)

Industry	1951 — 52 to 1964 — 65	1964 — 66 to 1974 — 75	1974 — 75 to 1987 — 88
Food	5.42	4.21	4.21
Beverages + Tobacco	7.65	1.25	5.25
Textiles	2.73	1.97	2.75
Wood and Wood products	14.6	2.25	9.35
Paper and Paper products; Printing	8.75	4.35	7.65
Leather and Leather products except footwear	6.3	-6.65	1.25
Rubber, Petroleum and coal products	14.6	6.25	11.62
Chemicals etc.	10.3	8.35	9.75
Non-metallic mineral products except petroleum	10.9	5.65	8.75
Basic metal industries	12.4	5.52	8.92
Metal products except	10.3	2.75	5.61
Machinery and Transport equipment	23.5	5.25	16.6
Machinery except electrical machinery	17.65	10.65	14.25
Elec. Machinery Apparatus and appliances Transport equipment	11.97	-3.65	4.76
Miscellaneous Manufactures	12.6	4.65	10.92
Net Manufactures Value added	7.87	3.9	6.75

Source: Calculated from data available in Govt. of India, Central Statistical Organisation, *National Accounts Statistics*, Various Issues.

Growth of the Agricultural Sector

The importance of agriculture for a continental-type economy like India is obvious due to its major share in production and consumption. Its overall performance sets the pace of industrialisation through various mechanisms and linkages, e.g., supply of agricultural goods, demand for industrial goods and surplus of various wage goods.

Chakravarty, Vaidyanathan and Raj⁵ explain industrial decline in terms of poor agricultural performance. Past experience shows that the movement of inter-sectoral terms of trade in favour of agriculture, working through a squeeze on profits, adversely affected industrial growth. Chakravarty mentions this point, but he ascribes the shift in relative prices to declining growth of industrial output.

While Mitra⁶ pursued the possibility of "immiserizing growth" conditions in agriculture, improved agricultural growth would not ensure industrial growth.

Mitra suggested that under a skewed income distribution pattern in the agricultural sector, rising farm incomes could give rise to growth in mechanical technology. Also the terms of trade could go against the agricultural sector leading to a fall in the level of real farm income.

While there has been no continuous improvement in agriculture's terms of trade against industry, we find that there has been a long-term upward trend in both prices received and prices paid by agriculture. The rates of growth in prices received by agriculture were greater than in the prices paid by agriculture (both during period 1951 — 52 to 1962 — 65 covered in Thamarajakshi's study,⁷ as also during the period 1964 — 65 to 1974 — 75).

As the series in Table 4 show, agricultural terms of trade declined in the early 1950s, improved in the 1960s, worsened again in the early 1970s and were about the same at the beginning and at the end of the thirty year period. Those who believe that the farmers' lobby raised agricultural prices, should also hold that other counter-vailing factors emerged during the 1970s. Moreover data now available for the entire last three decades made it possible to ensure a broader perspective of the pattern of growth and fluctuations in the economy⁸ and also to replace the earlier supposition on deceleration with a more plausible hypothesis, consistent with even the possibility of some improvement in overall growth since the middle of the 1970s.⁹

5 Chakravarty, S. *Reflections on Growth Process in the Indian Economy*, Hyderabad, 1974. Vaidyanathan, A., Constraints on Growth and Policy Options, *Economic and Political Weekly*, 1977, pp. 1643 — 50.

Raj, K. N., Growth and Stagnation in Indian Industrial Development, *Economic and Political Weekly*, 1976, pp. 1987 — 89.

6 Mitra, Ashok, *Terms of Trade and Class Relations*, Frank Cass, London, 1977.

7 Thamarajakshi, R., Terms of Trade and Marketed Surpluses of Agricultural Produce 1951 — 52 to 1965 — 66, *Economic and Political Weekly*, 1969.

8 The sectorwise estimates of gross and net value added at 1960 — 61 prices are available for the period 1950 — 51 to 1970 — 71 in the CSO *National Accounts Statistics* 1960 — 61 to 1972 — 73, Disaggregated tables, March 1975. For recent data see CSO, *New Series on National Accounts Statistics*, 1980 — 81 to 1985 — 86, with 1980 — 81 as base year (February 1988).

For a critical exposition of New Series, see Uma Datta and Roy Choudhury, *Economic and Political Weekly*, 23rd July 1988.

9 See here Raj, K. N., Some Observations on Economic Growth in India over Period 1952 — 53 to 1982 — 83, *Economic and Political Weekly*, 13th October 1984, p. 1801.

Table 4: Some Price Index Ratios, 1951 — 1979

Year	Agr/Mfg	Rice/Wheat	Cotton/Agr	Jute/Agr
1951	94.6	94.7	109.3	151.4
1952	87.7	94.0	109.0	108.5
1953	87.6	99.0	104.2	86.3
1954	82.1	98.1	107.3	99.2
1955	80.1	97.8	107.1	131.9
1956	82.9	97.1	170.7	116.0
1957	85.8	103.2	109.4	120.7
1958	86.0	100.4	98.4	104.0
1959	86.6	89.4	96.6	97.2
1960	83.4	107.5	101.6	141.4
1961	73.2	105.1	107.7	181.3
1962	82.8	111.2	96.1	94.4
1963	80.3	119.9	99.6	97.0
1964	89.1	101.3	89.9	95.0
1965	94.9	89.2	82.2	1.116.2
1966	97.0	102.8	75.6	139.2
1967	84.6	95.2	84.7	108.9
1968	97.1	110.3	81.5	107.5
1969	102.4	96.1	84.0	118.3
1970	101.9	97.3	91.8	99.9
1971	92.7	105.6	111.4	94.9
1972	87.2	106.5	84.5	99.1
1973	97.9	121.9	83.8	80.8
1974	101.2	106.6	98.5	59.8
1975	94.4	111.2	84.5	67.9
1976	88.9	102.9	117.9	81.5
1977	96.9	104.9	115.5	83.5
1978	96.9	102.7	100.4	86.8
1979	89.7	110.4	89.9	96.1

Source: Calculated from Chandhok, H. L. (1978); Ministry of Industry (1980).

We could also estimate the average annual rates of growth of GDP and of gross value added in agriculture and manufacturing industry in each of the eight year periods identified (namely, 1952 — 53 to 1959 — 60, 1960 — 61 to 1967 — 68, 1968 — 69 to 1975 — 76 and 1976 — 77 to 1983 — 84). The results are shown along with year-to-year estimates in Table 5.

When the growth record of three decades is analysed in this manner, there is not only no evidence of decline in the growth rate of GDP, but one can perceive even some slight improvement in the average rate estimated for each of the sub-periods.

Recently K. N. Raj suggested that there has possibly been some increase in the rate of growth of industrial output since the mid-1970s, raising it close to the level achieved in the 1950s and 1960s. "Even if rate of growth of agricultural output had declined slightly, the overall rate of growth could have increased somewhat on account of increasing weightage of the non-agricultural sector, higher rates of growth in this sector and the possibility of underestimation of growth of output from manufacturing from mid-1970s. I would venture to place it now at not less than 4.25 p.c. p. a. certainly above the so called 'Hindu rate' of growth".¹⁰

Table 5: Percentage increases in GDP and in Gross Value added in agriculture and allied activities and in manufacture (estimated at factor cost and at constant prices)

	Gross Value Added		
	Agriculture and Allied Activities	Manufacturing (in Registered and Unregistered enterprises	
	(at 1960 — 61 prices up to 1970 — 71 and at 1970 — 71 prices from then on)		
1951 — 52	1.98	1.64	—
1952 — 53	3.54	5.47	2.80
1953 — 54	6.32	8.09	7.10
1954 — 55	2.77	0.29	7.78
1955 — 56	3.15	-0.18	8.18
1956 — 57	5.48	5.00	8.04
1957 — 58	-1.74	-5.13	1.03
1958 — 59	8.48	11.17	1.44
1959 — 60	1.83	-1.71	6.88
Average (1952 — 53 to 1959 — 60)	3.73	2.87	5.78
1960 — 61	6.86	6.10	8.72
1961 — 62	3.55	0.84	9.58
1962 — 63	2.13	-2.48	9.84
1963 — 64	5.10	2.67	8.21
1964 — 65	7.88	9.19	7.89
1965 — 66	-5.21	-14.29	1.25
1966 — 67	0.97	-1.77	-1.34
Average (1960 — 61 to 1976 — 68)	3.75	2.17	5.74
1968 — 69	2.70	1.36	4.28
1969 — 70	6.34	6.39	10.70
1970 — 71	5.56	7.75	3.50

¹⁰ Raj, K. N. op. cit., 1984, p. 1802.

1971 — 72	1.57	-0.70	2.76
1972 — 73	-1.08	-6.36	4.16
1973 — 74	4.70	7.72	4.85
1974 — 75	0.86	-2.14	2.35
1975 — 76	9.45	13.18	2.15
Average (1968 — 69 to 1975 — 76)	3.76	3.40	4.34
1976 — 77	0.76	-6.59	8.81
1977 — 78	8.81	12.63	6.48
1978 — 79	5.75	2.86	11.10
1979 — 80	-5.27	-13.27	-1.85
1980 — 81	7.84	12.82	1.69
1981 — 82	5.35	3.34	5.11
1982 — 83	1.80	3.00	3.90
1983 — 84	7.00	9.00	4.80
Average (1976 — 77 to 1983 — 84)	4.01	2.22	5.00

Source of data: Central Statistical Organisation, *National Accounts Statistics*. For gross value added in agriculture and manufacturing from 1952 — 52 to 1970 — 71 at 1960 — 61 prices, see the *Disaggregated Table*, published along with the series for 1960 — 61 to 1972 — 73 in March 1975.

Source: K. N. Raj, op. cit.

On the production of foodgrains, there has been a controversy between Vaidyanathan and Srinivasan.¹¹ The conclusion was that the growth rate of foodgrains production rose between 1950 — 65 and 1965 — 66 / 1977 — 78 and fell between the 1st period and 1967 — 68 / 1977 — 78 and the difference in either case was statistically insignificant. We find per capita foodgrain output was 5 percent higher in 1966 — 1978 and 9 percent higher in 1968 — 1978 than it was in 1950 — 65, but the year-to-year fluctuations were such that the increase was not statistically significant.

Now we can say that over the 35 year period 1954 — 88, per capita gross consumption of foodgrains has remained unchanged at about 190 kg per year and all that the green revolution has done in this respect is to relieve India from the burden of partial dependence on imports for domestic food supply.¹² Not because per capita output has not risen, but because output rose rapidly enough, not only to replace imports, but also to occasion a shift in terms of trade against agriculture in the 1970s.

The fact is that the green revolution era has not seen any perceptible expansion in per capita foodgrains consumption. To put it differently, the 'subsistence fund', on

¹¹ Vaidyanathan, A. Constraints on Growth and Policy Options, *Economic and Political Weekly*, 1977.

Vaidyanathan, A., Performance and Prospects of Crop Production in India, *Economic and Political Weekly*, 1977.

Srinivasan, T. N., Constraints on Growth and Resource Options, *Economic and Political Weekly*, 1978.

¹² Dandekar, V. M., Agriculture, Employment and Poverty, *Economic and Political Weekly*, 20th September 1986.

which classical economists put so much emphasis as a means for capital accumulation, did not record any noteworthy rise on a per capita basis.¹³

Income Distribution and the Demand Factor

The evidence based on NSS data showed that real income of the poor declined, but the consumption of luxury goods grew faster than that of necessities. Bagchi, Mitra and K. N. Raj made out the case based on consumer demand and income distribution as possible factors for stagnation. The linkages of the industrial sector to the rest of the economy are so strong that the overall performance of the economy is determined by its growth. Raj made the point that the regions showing moderately high and stable rates of agricultural growth, have also experienced high growth rates in industry. While looking at the aggregate demand pattern, income distribution is very crucial, as it determines the consumer expenditure pattern and consumption of industrial output. Bagchi's¹⁴ premise here is as follows: the existing unequal income distribution gets support from the process of growth, since the private sector appropriates increments to income. Bagchi also argued that the failure of the capitalist class to sustain high rates of saving was the basic cause of 'low' industrial growth. This low growth made it vulnerable to

- (i) faltering demand in particular sectors
- (ii) fluctuations in agricultural output
- (iii) fluctuations in the availability of foreign exchange.

In the Indian case the rate of growth of industrial production could not occur on a sustained basis, because neither the home market nor foreign markets could absorb it and a narrow demand base proved a major constraint.

Ahluwalia¹⁵ fitted trend equations to indexes of poverty for the country and for the states from 1956 — 57 to 1973 — 74, the proportion of people with real consumption levels below Rs. 15 per head at 1960 — 61 prices and the Sen index of relative inequality. He found no trend in either index for India as a whole. Ahluwalia also showed that growth of agricultural productivity is associated with a reduction in the proportion of the poor as well as relative inequality, but this conclusion goes against the Lewis model that would lead us to expect that a rise in the productivity in a labour-surplus economy would accrue to profits.

Another implication of the Lewis model that the overall saving ratio should increase, was borne out in the 1970s. This does not establish its validity, but Chakravarty's explanation of its failure is both unnecessary and depends on the fiction of terms of trade turning in favour of agriculture.

What has happened to the per capita NDP in the agricultural sector during three decades 1954 — 83? It has remained unchanged at about Rs. 415 at 1970 — 71 prices per year over the cycle of good and bad harvests. In fact, it dropped a little to Rs. 400 during the early days of the green revolution 1968 — 75.¹⁶

13 See here Sau, Ranjit, "The Green Revolution and Industrial Growth in India, A Tale of Two Paradoxes and A Half, *Economic and Political Weekly*, 16th April, 1988.

14 Bagchi, A. K., Long-term Constraints on India's Industrial Growth 1951 — 68, in Robinson and Kidron (ed.), *Economic Development in South Asia*, 1970.

15 Ahluwalia, M. S., Rural Poverty and Agricultural Performance in India, *Journal of Development Studies*, 1978.

The Level of Investment in the Economy

During the decade 1955 — 65 real investment in the economy increased sharply, but the following stagnation was responsible for decline in the growth of the capital goods industry.¹⁷ The increase in real investment fell from the average of 8 p.c. between 1960 — 66 to less than 2 p.c. for the next several years. The share of gross domestic capital formation in GDP, which had a peak level of 19.7 p.c. in 1966 — 67, fluctuated around an average level of 17 p.c. over the period 1966 — 67 to 1974 — 75.¹⁸

But given the small fraction of total GDP derived from these activities, their slow-down is unlikely to have been a significant factor in deceleration. This slackening is likely to have had a much bigger impact on overall growth by slowing down the rate of growth of productive capacity.¹⁹ Moreover the growth rate of total GDP fell from 3.9 p.c. in the 1950s to 3.5 p.c. in the 1960s. The greater fall in public investment led Srinivasan to conclude that this was the main cause for deceleration. Hence to overcome this crisis there should be a vigorous increase in public investment.

Patnaik and Rao²⁰ explained the decrease in public and the loss of stimulus for private investment. Import substitution was just a temporary stimulus that lasted as long as the domestic market was available. So the level of investment stagnated, since the government failed to mobilize resources for the public sector. More recent data showed the hiatus in machinery purchases to have been short-lived. In the late 1960s the share of investment in machinery to GNP was slightly lower than in the early 1960s. In the 1970s it rose until it reached 10.3 p.c. in 1978 — 79 when industrial value added was 22 p.c. of GNP.

The deceleration of growth in capital-goods industries was more strongly linked to a deceleration in public investment. The recent rise in public investment was facilitated by large transfers of household savings through growth of financial intermediation by banks and insurance companies and by the recent rise in the prices of petroleum and other public sector products. The rate of growth of private investment moved in sympathy with that of public investment. A recent study of the investment time series from 1951 — 52 to 1980 — 81 suggests that the stimulation effect of public investment on private corporate investment tends to dominate any possible negative effect through competing for investible funds. The elasticity of private corporate investment with respect to public investment (of the previous year) is estimated to be as high as 0.73.²¹

16 Dandekar, V. M., *op. cit.*, 1986, Table 5.

17 Srinivasan, T. N. and N. S. Narayana, *Economic Performance since the Third Plan and Its Implication for Policy*, *Economic and Political Weekly*, 1977, pp. 225 — 239.

18 Government of India, *National Account Statistics 1960 — 61 to 1974 — 75*, CSO, New Delhi, 1976, p. 30.

19 Vaidyanathan, A., *op. cit.*, p. 1643.

20 Patnaik, P. and S. K. Rao, 1975 — 76, *Beginning of the End of the Stagnation*, *Social Scientist*, 1977, pp. 120 — 138.

21 See here Bradhan, Pranab, *The Political Economy of Development in India*, Blackwell, 1984, Ch. 4.

High Capital-Output Ratios

While international comparisons of ICOR are tricky, they have been generally high in India. While productivity growth in the Indian economy was 1.8 p.c. between 1950 — 51 and 1970 — 71, the total growth rate was 3.7 p.c. So during these two decades of planning, India obtained about 50 p.c. of its growth from productivity growth, but between 1970 — 71 and 1980 — 81, the productivity growth rate was nil.²² The capital-output ratio was 2.8: 1 during 1950 — 51 and 1960 — 61. In the following 10 years, it went up to 9 and during 1970 — 71 to 1980 — 81, ICOR was 6.2. In public utilities (power and railways), it was never below 15 and after the mid — 1960s it was about 20. The unit input costs per unit of output in the economy rose from 100 in 1950 — 51 to 139 in 1970 — 71 and to 196 in 1981. So the relative share of material and depreciation costs per unit of output have doubled over these three decades.

We can say that excessive private investment in luxury consumer goods led to excess capacity and high capital intensity. The capital cost of public sector steel plants, fertilizers, aluminium were generally higher than those of the private sector and this was due to their higher social responsibilities. The average capital-output ratios in government and public limited companies are shown in Table 6. Brahmananda observed that in the commercial sector of the economy the growth rate of productivity has been slightly negative during 1970 — 71 to 1980 — 81. In the first decade 1950 — 51 to 1960 — 61 more than 12 of the 14 sectors had positive and high productivity growth. But between 1970 — 71 and 1980 — 81 12 sectors out of 14 showed negative productivity growth. This also shows why despite a rise in the savings-income ratio from 8 p.c. in 1950 — 51 to 19 p.c. in 1980 — 81, we still find the growth rate hovering around 3.5 p.c.

Recently K. N. Raj suggested that the most important factor for the apparent increase in ICOR is that, while prices of commodities and services going into fixed capital formation rose at the same rate as prices of commodities and services going into GDP (as reflected in the respective CSO deflators) from the middle of the 1950s up to the middle of the 1970s, the former have risen much more rapidly since then.²³ After looking into available estimates the Working Group appointed by the Government of India, observed: even though the rate of gross capital formation in the economy would appear to have risen by 2.5 times over the quarter century (by the end of the 1970s) the order of increase has been much lower when year-to-year fluctuations are smoothened out. The rate of gross fixed capital formation at the end of the 1970s (about 18 p.c. of GDP) turns out to be no higher than in the middle of the 1960s and only about two-thirds higher than in the middle of the 1950s (when it was 11 p.c. of GDP).²⁴

22 See here, Brahmananda, P. R., *Productivity in the Indian Economy: Rising Inputs and Falling Output*, Bombay, 1982.

23 Raj, K. N., *op. cit.*, 1984.

24 *Capital Formation and Saving in India 1950 — 51 to 1979 — 80* (Report of the Working Group on Savings, Appointed by Department of Statistics, Ministry of Planning, Govt. of India) published by Reserve Bank of India, February 1982, p. 44.

Table 6: Average Capital-Output Ratios in Government and in Public Limited Companies, 1960 — 61 to 1975 — 76

	Government				Public Ltd. Company			
	19 60	19 65	19 70	19 75	19 60	19 65	19 70	19 75
	— 61	— 66	— 71	— 76	— 61	— 66	— 71	— 76
Agriculture + Allied activities	—	—	—	—	2.70	2.91	2.22	1.67
Mining and Quarrying	—	3.01	7.42	3.40	1.94	1.80	1.74	1.26
Processing + Manufactured food-stuffs, textiles, tobacco, leather etc.	—	—	—	—	2.65	2.84	2.73	2.31
Processing and manufacture engineering metals, chemicals etc.	—	5.91	7.77	7.72	3.98	3.68	3.84	3.31
Engineering	3.55	3.20	5.64	3.22	2.71	2.73	2.96	2.60
Transport Equipment	—	—	—	—	3.04	3.35	3.65	3.46
Electrical machinery	—	—	—	—	2.35	2.43	2.37	2.11
Non-electrical machinery	—	—	—	—	2.46	2.88	2.42	2.12
Foundries and Engineering Workshop	—	—	—	—	2.07	2.26	4.70	4.67
Ferrous/Non-ferrous metal products	—	—	—	—	3.30	2.98	2.94	2.72
Chemicals	7.47	3.00	12.25	14.48	4.02	4.23	4.44	3.95
Processing and manufacturing not elsewhere specified	—	—	—	—	5.52	5.15	4.66	3.59
Cement	—	—	—	—	6.16	5.84	10.48	4.91
Other industries	—	12.92	8.32	9.02	5.16	4.85	4.77	5.58
Construction	—	—	—	—	1.54	1.53	1.88	1.77
Electricity generation and supply	—	—	—	—	16.19	14.95	13.39	12.89
Miscellaneous	—	1.72	6.34	6.71	—	—	—	—

Source: RBI (1963, 1967, 1968, 1973, 1975, 1979, 1980)

A recent disaggregated industry study²⁵ also suggested that a rise in capital-output ratio characterizes almost all of the industry groups individually and is not just the outcome of a change in the composition of the aggregate industrial sector. Available evidence showed that the contribution to the rise in ICOR from across-the-board increases in individual industry groups dominates that from the change in the industrial output-mix.

The rising ICORs are not simply due to shifts in the pattern of industrial investment: there was also an implicit suggestion that they are not really important. The relative share of the energy sector in total public sector outlay has in fact risen sharply over the last decade from around 11 p.c. in the First and Second Plan Period to between

²⁵ Ahluwalia, Isher Judge, *Industrial Growth in India, Stagnation since the Mid-sixties*, 1985, Oxford University Press.

17 and 20 p.c. in the Third and Fourth Plan periods and 30 p.c. in the Sixth Plan period.

In the economy where the domestic market is so crucial steady industrial growth requires increasing mass consumer demand. Even accelerated investment in the private sector could not have sustained vigorous industrial growth. Dependence on the domestic market was the result of the earlier import substitution strategy even in the 1970s, making industry's dependence on the level of capital formation in the economy all the more vulnerable.²⁶ Import substitution pursued through various tariff measures also reinforced domestic demand. Hence growth in industrial production was sustained by a high level of investment and various measures of intervention by the Government.

The New Economic Policy and the 1980s Recovery

In view of several important shifts in economic policy during the 1980s it is crucial to see how the economy responded to these policy interventions. There has been a recovery in the rate of growth of industry during the 1980s, in spite of a decline in the agricultural sector. Table 7 shows various changes in the GDP estimates for 1980 — 81, following old and new methods. There is a 7.5 p.c. increase in GDP, but there is no overall upward revision of annual growth rates due to adopting new series.

While the agricultural sector showed a compound annual growth rate of 1.5 p.c. only, there were negative growth rates in three out of six years and positive growth rates in two years (between 1980 — 81 and 1981 — 82 and between 1982 — 83 and 1983 — 84). The *Economic Survey* in 1987 — 88 observed that the fall in the agricultural product in 1987 — 88 over 1986 — 87 was about 7 to 10 p.c. Hence the most disturbing aspect of the 1980s is the poor performance of agriculture after 1983 — 84. The *Mid-term Appraisal* of the 7th Plan also warned that "the decline in foodgrain production from the peak levels attained in 1983 — 84 is a cause for concern. Adverse weather is partly responsible for this. But a part of the problem is also slow-down in the spread of the HYV area, in fertiliser consumption and in expansion of net irrigated area. The attainability of the growth target for the 7th Plan depends crucially on determined efforts to reverse these trends."²⁷ Hence the recovery during the 1980s underlines the break in the linkage between agriculture and industry. Stimulation did not come from public sector units, but rather from the service sector that showed significant growth in the 1980s. Its share in NDP shot up from 36 p.c. in 1980 — 81 to 39 p.c., as observed both by V. K. R. V. Rao and Sundrum. According to Rao the NDP share of the tertiary sector went up from 26.62 p.c. in 1950 — 51 to 38.88 p.c. in 1979 — 80. The growth rate of NDP rose in the third decade, and "this is entirely due to rise in the growth rate of tertiary sector that was high enough to offset the fall in the growth rates of the secondary and primary sectors."²⁸

26 See Tandon, Rameshwar and Neelambar Hatti: *Exports and Development, The Indian Experience*, Ashish Publishers, New Delhi, 1987, Ch. 9.

27 Planning Commission, *Seventh Five Year Plan 1985 — 90 Mid-Term Appraisal*.

28 Rao, V. K. R. V., *India's National Income 1950 — 80, An Analysis of Economic Growth and Change*, Sage Publications, New Delhi, 1983.

Table 7: Estimates of Gross Domestic Product at Factor Cost by Economic Activities 1980 — 81, According to Old and New Series

Economic Activity	Old series	New series	Difference
1. Agriculture, forestry and fishing	42,788	46,479	3,691
1.1 Agriculture	40,838	42,466	1,628
1.2 Forestry + Logging	1,041	3,092	2,052
1.3 Fishing	909	921	12
2. Mining + Quarrying	1,843	1,887	44
3. Manufacturing	18,963	21,644	2,681
3.1 Registered	12,306	12,281	-25
3.2 Unregistered	6,657	9,363	2,706
4. Electricity, gas + water supply	1,970	1,989	19
5. Construction	5,671	6,114	443
6. Trade, hotels + restaurants	17,023	14,713	-2,310
6.1 Trade	15,837	13,839	-1,998
6.2 Hotels + restaurants	1,186	874	-312
7. Transport, storage + communication	6,238	5,724	-514
7.1 Railways	1,124	1,124	—
7.2 Transport by other means	4,167	3,680	-487
7.3 Storage	157	122	-35
7.4 Communication	790	798	8
8. Financing, insurance, real estate + business services	7,860	10,841	2,981
8.1 Banking + insurance	3,461	3,458	-3
8.2 Real estate, ownership of dwellings + business services	4,399	7,383	2,984
9. Community, Social + Personal services	11,192	12,835	1,643
9.1 Pub. admn. + defence	5,414	5,794	380
9.2 Other services	5,778	7,041	1,263
10. Total gross domestic product at factor cost	113,548	122,226	8,678

Source: CSO, *New Series on National Accounts Statistics* with 1980 — 81 as Base Year (Feb. 1988). Table 3.

But Sundrum calculated the sectoral contributions to GDP for each of three decades between 1951 — 52 and 1981 — 82 in a rather exotic manner. While GDP increased by Rs. 83.47 billion during 1951 — 52 to 1961 — 62 in 1970 — 71 prices, the contributions of agriculture were 38.3, of industry 28.5, and of services 33.2 p.c. In the next decade the share of agriculture in the rise in GDP (Rs. 106.60 billion) was 30 p.c., of industry 29.7 p.c. and of services 40.3 p.c. In the third decade (1971 — 72 to 1981 — 82) the shares of agriculture were 23.7, of industry 24.4, and of services 51.9 p.c. of an increase of Rs. 157.42 billion.²⁹

A new Industrial Policy statement was issued by the government in July 1980. During the past few years several policy measures have been adopted with a view to give greater buoyancy to the private sector,³⁰ such as dismantling controls over prices, production, capacity creation, foreign collaboration, and also by opening up reserved areas for the private sector. The Sixth Plan also claimed for several "directional" changes in industrial policy: "This accords particular emphasis on improving efficiency and productivity in the industrial sector through optimum utilization of existing capacity. To this end, it is proposed to grant recognition to increased capacities arising from technical improvements and labour productivity, by endorsing industrial licenses selectively on basis of such capacities and to permit automatic growth in core sector industries or those which have a direct linkage with core sector or with long-term exports".³¹

All these directional changes were considered necessary to remove the lingering constraints to industrial production and also act as a catalyst for faster growth. Moreover the Sixth Plan envisaged an average annual rate of growth of industrial production of 7 p.c. during the plan period. In March 1985 the Government announced delicensing of 25 broad categories of industries and 85 bulk drugs were also added. Also, the definition of MRTP was changed to cover only those units with assets of Rs. 1 billion or more, as compared with Rs. 0.2 billion before. In May 1985 MRTP companies were exempted in 27 industries from sections 21 and 33 of the Act allowing them to seek directly licence under the IDRA. In December 1985 delicensing was extended to 22 of these 27 industries, provided these units were located in 'backward' areas.

Some more changes were brought about recently, e.g. broad-banding of several industry groups (at present 29) with a view to diversify in the production of similar products without new licences (e.g. synthetic fibres), simplified procedures for cases where modernization or renovation leads to increases in capacity by up to 49 p.c. of original licences, expansion (for 30 industry groups) of the list of Appendix I industries where MRTP and FERA companies are allowed to set up capacities, a modified capacity endorsement scheme for units achieving 80 p.c. capacity utilization during any one of the five years preceding March 1985, liberalized conditions allowing FERA and MRTP companies to set up non-Appendix I industries. The companies (dominant undertakings) were freed from industrial licensing policy restrictions, thus reducing the total of about 1730 corporate units under the MRTP by 69. Also the lower bound for investment to be licensed in regulated industries was raised from Rs. 50 million to Rs. 150 million in non-backward areas (Rs. 500 million in backward areas).

After the Sixth Plan was over, an RBI study of trends in industrial production clearly revealed the continuing deceleration of output growth during successive plans. While due to new economic policy the orientation of industrial structure was towards production of luxury consumer durables, this study noted that the average annual rate of growth of industrial output was 5.5 p.c. It fell significantly short of the revised Sixth Plan target of 7 p.c. The target originally envisaged was 8 p.c. This growth rate was also marginally lower than the trend growth rate of 5.8 p.c. per annum registered

29 See here Sundrum, R. M., *Growth and Income Distribution in India, policy and performance since independence*, New Delhi, Sage, 1987, p. 108.

30 For more details, see here Centre for Monitoring Indian Economy, *The Liberalization Process*, July 1986.

31 Planning Commission, *Sixth Five Year Plan 1980 — 85*, p. 262.

during 1951 to 1971, or the Fifth Plan (1974 — 79) growth rate of 6.1 p.c., which in itself was sluggish in relation to the planned 7 p.c.³²

Really lack-lustre performances of industries are not peculiar to the Sixth Plan. Industrial growth was lower than the target in the earlier plans too. During the Sixth Plan mining and quarrying showed a growth rate of 10 p.c., electricity and manufacturing of 8.4 and 4.5 p.c., but short of the targets of 11 p.c. and 8 p.c.

Moreover, there was decline in all the major sub-groups if one follows use-based classification. The basic goods sector, fertilizers, organic chemicals, iron and steel, electricity, and various consumer and capital goods industries showed lower growth rates. In consumer durables there was a sharp improvement in the production of motor cars and motor cycles, but a decline in the production of fans, telecommunications and office equipments (Table 8).

Looking back we can say that the growth rate during the 1980s is much higher than the trend growth rate of 6 p.c. in the earlier three decades. The sectoral growth profile reveals an improvement in growth performance during 1980 — 81 to 1986 — 87, as compared to 1971 — 72 to 1979 — 80 in all sectors.

Table 8: Industrial Production: Rates of Growth

	Major Groups				Input based Classification		
	General Index 100.00	Mining + Quarrying 9.69	Electricity 9.23	Manufacturing 81.08	Agro-based 33.68	Metal based 21.93	Chemical based 12.86
Fifth Plan average (1974 — 79)	6.1	6.2	9.9	5.7	3.9	5.9	7.9
1979 — 80	-1.4	0.7	2.1	-2.1	-3.8	-1.0	-0.4
1980 — 81	4.0	4.3	5.8	3.7	6.0	4.1	1.7
1981 — 82	8.6	15.8	10.2	7.5	6.1	5.7	13.4
1982 — 83	3.9	10.8	7.1	2.5	2.7	-1.0	3.1
1983 — 84	5.5	11.5	6.8	4.5	1.9	8.6	5.5
1984 — 85	5.6	8.4	11.4	4.1	2.0	4.4	7.8
Sixth Plan average	5.5	10.2	8.3	4.5	3.7	4.4	6.3

Source: *Reserve Bank of India Bulletin*, May 1986, "Trends in Industrial Production during the Sixth Five Year Plan: A Review", from Table 1.

The new economic policy pursued during the 1980s is based on the premise that it is the demand for consumer durables of the top two deciles of population, which will stimulate overall growth. Problems facing the economy stem from the 'supply' rather than the 'demand' side. The *Economy Survey* 1986 — 87 also claimed that

³² *Reserve Bank of India Bulletin*, "Trends in Industrial Production during the Sixth Five Year Plan, A Review", May 1986.

the Indian economy is now on a new growth path. In this scenario the industrial sector should emerge as a resilient and dynamic sector of the economy.

While various structural changes have been observed in the economy during the 1980s, the industrial economy has become less and less sensitive to the performance of the agricultural sector. Over the years there has been a persistent dilution of government intervention, partly due to the emerging resource crisis. It is rather too early to say whether industry has responded to these changes; whether it will be possible to raise the growth rate of industry on a fairly sustained basis. In the Approach to the Fifth Plan (1974 — 79), it was underlined that the luxury goods³³ sector must not be allowed to grow fast, but the about-turn in the new policies has disturbing implications due to the elitist orientation of various policies and it is just possible that it may lead to an "immiserisation" of the poor, unless countervailing measures are taken.³⁴

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33 See Chakravarty, S., *Development Planning, The Indian Experience*, Oxford: Clarendon Press, 1987.

Raj, K. N., *New Economic Policy*, Oxford University Press, Delhi, 1986.

Planning Commission, *A Technical Note on the Approach to the 5th Plan, 1974 — 79*, New Delhi, 1973.

34 See Sau, Ranjit, The Green Revolution and Industrial Growth in India. A Tale of Two Paradoxes and a Half, *Economic and Political Weekly*, 16th April, 1988

