

# INDUSTRIAL GROWTH IN INDIA-PERFORMANCE AND PROSPECTS

PAST, PRESENT and FUTURE\*

By

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# INDUSTRIAL GROWTH IN INDIA—PERFORMANCE AND PROSPECTS

*By*

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I am grateful to the members of the Governing Board of the Lala Lajpatrai Institute for inviting me to deliver this year's Lala Lajpatrai Memorial Lecture. Their decision as I see it, reflects more than anything else the abundant affection in which the members of the Governing Board, most of all Dr. B. R. Rairikar, hold me, for which I am all the more grateful. I feel doubly honoured because (a) this lecture series is in the memory of a great son of India, Lala Lajpat Rai, and (b) this lecture gives me a place in the company of the illustrious lecturers who have preceded me in this series.

2. India of the late 19th century and early 20th century produced a number of great men and women. These persons put service before self and patriotism before parochialism. Lala Lajpat Rai, popularly and endearingly called Lalaji (1865-1928), belonged to that galaxy. The Lalaji was a front-rank soldier of the early struggles for our Independence. He changed the ideas of people and fought for their rights. The title 'The Punjab-Kesri' (the Lion of the Punjab) by which also the Lalaji was known, does indeed not do full justice to him, for his activities and impact were not restricted to the Punjab but embraced many other parts of the country as well. In that sense, he was a 'Bharat-Kesri' (Lion of India). Of him, Mahatma Gandhi has said : "From his youth, he made country's service his religion..... His activities were multi-farious..... It is impossible to think of a single public movement in which Lalaji was not to be found..... He suffered..... when suffering had not become customary or fashionable....." Our Independence in 1947 and our economic and social progress are founded substantially on the sufferings and sacrifices of persons like Lalaji. Indeed, India will ever be in an irredeemable debt to them.

3. The Lalaji firmly believed that no nation can have a take off and sustained development without the fulfilment of the preconditions of sound health and sound education among its citizens. In line with this belief, he devoted a large part of his life to these activities to improve upon

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the existing state of affairs in these areas. It is, therefore, in the fitness of things that this Institute, established to perpetuate Lalaji's memory, is devoted to furthering the causes of health and education in this city. I take this opportunity of congratulating the members of the Governing Board for the splendid work done by them and for earning rightfully an enviable reputation in a short time. I trust that Lalaji's memory would always inspire them in their future work as well.

4. A perusal of the scripts of lectures delivered by my predecessors suggests that their themes have varied widely and that the lectures have been of high quality. The first suggestion makes my task easy, and I have taken the liberty of making it easier by choosing a theme in which my handicap is less. The second suggestion, however, makes my task indeed very difficult. If, therefore, you find on balance this lecture falling short of that standard or of your expectations, I request you to draw upon your kindness and forgive me.

5. I have chosen to speak to you on "Industrial Growth in India-Performance and Prospects." My focus is on the recent past and the near future. I begin with India's achievements, and view them in the perspective. I then go the core i.e. to the delineation of high and low growth phases, and the factors underlying the differential performance. After this, I turn to the prospects, enumerating alongwith the conditions relevant for their materialisation. A couple of related remarks and I have done.

## II Achievements

6. India is often described as a major industrialized economy. This description is based on the absolute values of certain indicators of industrial growth. Thus, for example, in terms of value added in manufacturing with its value of U. S. \$ 15,068 million in 1978, India ranked 14th in the list of 92 countries.<sup>1</sup> In terms of employment in manufacturing, with the number of 5.8 million in 1979, it was 6th in the list of 92 countries.<sup>2</sup> And in terms of the scientific and technical manpower, with the number of 1.17 million it stood 11th in the list of 72 countries.<sup>3</sup>

7. Industrial production during the pre-independence period took place without a proper framework of policy and planning. Industrial

1 The World Bank : World Development Report, 1981, Washington 1981, Table 6, p.p. 144-45.

2 International Labour Office : Year Book of Labour Statistics, 1980, Geneva, 1980, Ch. II, Table 6A, pp. 221-19.

3 UNESCO : Statistical Year Book, 1977. Paris, 1977, Table 7.1, pp. 607-9.

production during the period 1900-46 is estimated to have grown at the poor rate of 2 per cent per annum.<sup>4</sup> At Independence, we had a slender industrial base. That base was dominated by small industry. And the limited large industry part of that base was to be found by and large in consumer goods industries, in private sector and in a few regions. The highly lopsided or unbalanced character of that base is underlined by the absence or relative unimportance of basic and capital goods industries, of public sector and of wide-spread spatial distribution. The achievements described above have, therefore, to be attributed largely to the remarkable strides India has made in the field of industry and related and supporting activities during the period of three and a half decades since Independence.

8. In the period since Independence, industrial growth and development have been guided within the broad framework of Industrial Policy Resolutions and the Five Year Plans. We had the 1948, and have currently the 1956 Industrial Policy Resolutions. We have completed the five Five-Year Plans and are in the midst of the Sixth Five-Year Plan. The policy and plans have been supported by massive efforts to raise resources and to invest them productively, by numerous rules, regulations and measures, and by the establishment of a number of new agencies, departments and institutions and the strengthening of the existing ones—all with a view to subserving the objective of rapid industrial growth and other objectives laid down in the policy and plans. Thanks to this work, the industrial scene of India today is considerably different from the one we had at the time of Independence.

9. The point may be illustrated by relevant statistics.

- (a) Industrial production grew at the trend growth rate of 6.1 per cent per annum during 1950-79 as against 2.0 per cent during 1900-46<sup>5</sup>.
- (b) This rapid growth has not only increased the importance of industry in the Indian economy, but it has also been accompanied by the narrowing of the various disparities and imbalances of the industrial structure. To put it statistically :

Industry's importance in the gross domestic product (1970-71 prices) increased from 15 per cent in 1950-51 to 23 per cent in 1978-79<sup>6</sup>.

The registered manufacturing units increased their share from 55 per cent of gross domestic product in manufacturing (1970-71 prices) in

4 Government of India, Planning Commission, Sixth Five Year Plan, 1980-85, New Delhi, 1981, Chapter 1, para 1.3, p. 1

5 Ibid., Annexure 1.1, p. 11.

6 Ibid., Annexure 1.5, p. 13.

1950-51 to 65 per cent in 1978-79. The percentage of the unregistered manufacturing units declined from 45 to 35 per cent over the same period<sup>7</sup>.

The weights of basic and of capital goods industries in the index of industrial production increased whereas those of intermediate and consumer goods industries declined over the period. Thus, for example, the weightages of the first two groups increased from 22.33 and 4.71 in 1956 to 32.28 and 15.74 in 1970, whereas those of the last two groups declined from 24.59 and 48.37 to 21.95 and 31.03 respectively over the same period<sup>8</sup>. To look at this diversification differently, consumer goods accounted for over two-thirds (68 per cent) of the value added in the Indian factory sector in 1950-51<sup>9</sup>. Their share declined to 37 per cent in 1977-78. Each of the other three groups showed a substantial increase in their shares<sup>10</sup>.

Public sector accounted for 8 per cent of value added in organized industry and mining in 1960-61. Its share increased to 29 per cent in 1977-78<sup>11</sup>.

The share of the four industrially developed states - Maharashtra, West Bengal, Gujarat and Tamil Nadu - in the value added in the factory sector in India declined from two-thirds in 1960 to 57 per cent in 1977-78.<sup>12</sup>

10. It is these achievements of rapid industrial growth coupled with diversifications in different directions that have given India the distinction of a major industrialized country in absolute terms.

11. Our pride in these achievements will be tampered when seen in the perspective. Notwithstanding these gains, India remains one of the poorest and the slowest growing countries of the world. With its present per capita gross national product (gnp) of U. S. \$ 190 (1979), India ranks

7 Central Statistical Organization, Department of Statistics, Ministry of Planning, Government of India: *National Income Statistics, 1950-71 to 1976-77, 1979, Appendix A 1.2*, p. 140 and the same for 1970-79, 1981, Statement 7, p. 21.

8 M. Y. Khan: "Trends in Industrial Production, 1951-77", Reserve Bank of India Occasional Papers, Bombay, June 1980, Table 2, p. 73.

9 J.C. Sandesara, "Industrial Economy: Objectives, Achievements and Problems" in J. C. Sandesara (Ed.), *The Indian Economy, Performance and Prospects*, Bombay, 1974, Table IX, p. 582.

10 Indian Merchants Chamber, Economic Research and Training Foundation: *Industry in the Indian Economy*, Bombay, 1980, Table 2, p. 8.

11 Government of India, *op. cit.*, p. 4.

12 Indian Merchants Chamber, *op. cit.*, Table 10, p. 25.

108th in the list of 118 countries, and with the average annual growth of gnp per capita of 1.4 per cent per annum during 1970-79, it ranks 87th in the list of same number.<sup>13</sup> The gross manufacturing output per capita in India (1976) is U. S. \$ 91, and with this figure it ranks 38th in the list of 44 countries.<sup>14</sup>

12 Indian planning, since 1956 has relied heavily on industrialisation of the Indian economy as the king - pin in its strategy for economic growth. As seen above, while the achievements in absolute terms appear to be impressive, in the perspective they are rather meagre. What is worse, the edge of that pin has blunted since some time. If industrial growth is expected to continue to play the role of the engine of economic growth in India in future—and I see no escape from this position—then it is all the more necessary to analyse statistically and substantively the industrial growth experience of the past so that after a follow-up action on the basis of the lessons suggested by the analysis, industry is reestablished to its rightful role as the growth sector of the Indian economy. It is to this analysis that I now turn.

### III Growth Performance

13. Table I gives the statistics on the index of industrial production and the rates of growth for the period 1951-80. Industrial production during this period became five-fold with the index number of 29.7 in 1951 becoming 150.7 in 1980. In 1961, the number was 59.3 and in 1975, 119.2. Thus, whereas it took a decade for the first doubling it took a decade and a half for the second doubling. To put it differently, whereas the 1951-65 period witnessed an increase in industrial production by 2.8 times, 1966-80 period witnessed an increase by only 1.8 times.

14. The point may be highlighted by the data on compound rate of growth. The rate was 5.8 per cent for the three decade period. The rates for the 1951-60, 1960-70 and 1970-80 decades were : 6.9, 6.3 and 4.2 per cent. For the 1951-65 period, it was 7.7 and for the 1965-80 it was 4.0 per cent. As compared to the respective previous years, the rate of growth was negative in 1966 and 1967, -.5 and -.4 per cent respectively. For all other years, it was positive. The growth rates are marked out by wide fluctuations. Thus, for example, of the years with positive growth rates, 1980 with .8 per cent showed the lowest rate and 1955 with 14.5 per cent the highest. The rate of growth per annum was higher in a continuous manner for each of the seven years from 1959 to 1965 than the compound rate of growth of 5.8 per cent for the period 1951-80. Of the other years

13 The World Bank. *op. cit.*, Table 1, pp. 134-35.

14 *Ibid.*, Table 6, pp. 144-45.

the rate was higher in seven years, namely 1954, 1955, 1956, 1968, 1969, 1976 and 1978. To put it differently, of the 29 years covered by the table, of the 14 years where the rate of growth was higher than 5.8, 10 fell during 1951-65 and 4 during 1965-80. Thus, the first decade and a half may be designated as the period of high growth rates, and the period since then of low growth rates.

15. Thanks to the slackening of the rate of growth during the later period, the rate for entire period has turned out to be low. First, the Indian rate is amongst the lowest in comparison with other countries. Of the 66 countries for which the average annual growth rates of industry for the decade 1960-70 are available, with its rate of 5.5 per cent India ranks 45th; and of the 91 countries for which 1970-79 data are available, with 4.4 per cent, India ranks 49th.<sup>15</sup> It is true that in view, among others, of the differences in the structures of the national economies and in the relative importance assigned to industry in the development programmes of these economies, international comparisons have to be made with a lot of caution. All the same, the statistics leave no doubt as to the fact that the Indian affinity, in terms of industrial growth, is more with the slow-growing than with the fast-growing countries. Second, the rates are low also in the sense they have fallen short of the targets, especially during the post-Third Plan period. Thus, for example, the Fourth and the Fifth Plans stipulated the rates of growth of 8 to 10 and 8 per cent respectively. As against this, the rates realised were just 4.7 and 5.9 per cent in that order.<sup>16</sup> Third, it cannot be said that Indian planners had stipulated excessively high rates of growth—well-nigh impossible to attain. The realism of these rates is underlined by the fact that of the 29 years for which the data on the rates of growth over the previous years are given in Table I, A in 9 the rate exceeded 8 per cent, of which in 6—that is 1960 through 1965—it did so continuously. It cannot therefore be said that the planners were building castles in the air.

16. I now turn to the factors underlying this differential performance.

#### **IV High Growth Period—Underlying Factors**

17. A probe into the factors underlying the slackening of industrial growth since mid-sixties may well be preceded by a probe into the factors underlying the high growth during the fifties and the early sixties. The latter may provide clues for the former.

<sup>15</sup> Ibid. Table 2, pp. 146-47.

<sup>16</sup> Government of India, op. cit., Annexure I.1, p. 11.



18. It is well-known that industrial growth, like the generic economic growth, is a result of several different types of complex, mutually interacting factors. The list will include natural, technological, social, political, psychological and other factors, along with, of course, the economic ones. Some of these factors at least in some measure (e.g. law and order, *enterprise*) are in the nature of prerequisites; but most others in varying measures (e.g. skill and discipline) would be forthcoming along with or as a consequence of growth. Then, there are some factors which are not very significant or relevant in the immediate context (e.g. research) and some which are (e.g. investment and efficiency). You do not have the time, and I do not have the competence, to go into the gamut of all these factors. In this lecture, I, therefore, propose to focus attention on the economic factors, and there too on the factors of immediate relevance. A short listing on these considerations suggests that the factors underlying the high growth rates may be examined broadly in terms of economic policy, industrialisation-patterns and objectives and investment, especially in industry.

19. Most of us who live in urban areas, especially in industrial metropolis such as Calcutta, Bombay, Madras, Kanpur, Ahmedabad, Hyderabad and Bangalore, are deeply impressed by the significance of industry to our lives. While these impressions are no doubt not without a basis, that base is narrow and limited so that when generalised thereof for the economy, the picture would turn out to be misleading. As much as *four-fifths of the total population of India lives in rural areas, leaving a balance of one-fifth in urban areas*. Agriculture engages 70 per cent of the labour-force and contributes around 45 per cent to the national income. Hence, it has long been realised that in all attempts to develop and to grow, in a country like India while agriculture would continue to be important, the emphasis would have to be on industry. This emphasis stems from a variety of considerations. Industry is a less important sector of the Indian economy. Statistically speaking, it engages about one-tenth of the labour force and contributes around one-fifth to the national income. It should, therefore, grow at a faster rate than the predominant sector that is agriculture. But more importantly, since the bulk of agriculture is nature-dependent and traditional, it has to be freed *from the vagaries of weather and has also to be modernised*. In this task, industry alongwith infrastructure stands to the fore. Inputs such as fertilisers, pesticides, insecticides, tractors, etc. as well as infrastructural facilities such as irrigation works, etc. cannot be had but for the building up of capacities in the respective products, and the supporting activities most of which are in the industrial sector. Moreover, to the extent industrial employment consequent to industrial growth is promoted



through a transfer of less productively employed workers in agriculture, it would also help increase productivity of agriculture and stimulate agricultural growth. A well-developed agriculture will in turn stimulate industrial growth further, as a feeder of raw materials and as a market of products for industry. It is in this perspective that industrialisation becomes a king-pin of economic growth and development in a country like India.

20. While the experts in general agree in regard to the role of industry as the growth sector, there are differences among them in regard to the pattern of industrial growth to begin with. One view is that the initial thrust should be to the light, consumer goods industries. Such industries have a low capital-labour ratio, and a high wage-component in value added. Through large employment and more consumption, they stimulate demand for a variety of goods catering to basic and felt needs—cereals, pulses, cloth, edible oils, housing, and so on. The prices of these products go up and profitability of the undertakings engaged in their supplies improves. This in turn stimulates more investments in these activities. These investments would in turn stimulate demand for intermediate goods—spindles, tubes, tyres, etc., and through them of capital goods—machine tools, machinery diesel engines, power transformers, etc., and through them of the products of basic industries—fertilisers, power, coal, iron, steel, other metals, etc. Thus, basic industries develop in the last stage through the waves of demand generated through the growth of the previous stage industries, the propelling force being provided by the growth of light, consumer goods industries.

21. The other view is that the initial thrust should be given to the heavy, basic goods industries. Such industries have a high capital-labour ratio and have high surplus component in value added. They thus provide funds for further investments. Some of these funds may be required for investment in basic factors, and some may be available for investment in other sectors. As to the latter, next in sequence come capital goods industries which are also high capital-involving and for which favourable climate for investment is created through the augmented supplies of their inputs which are the products of the basic industries developed during the previous stage. Basic and capital goods industries in turn transmit growth to later stages through investible resources and supplies of output—first to intermediate goods and from thence to the light, consumer goods. Thus, the consumer goods industries develop in the last stage through the waves of supplies and surpluses generated through the growth of intermediate, capital goods and basic industries in that turn – the propelling force being provided by the growth of the basic industries.

22. We may also note here some of the economic implications of these two approaches. They have different implications in terms of income, consumption and saving through time and for a given year. Under the first approach saving would be less, and income, consumption and employment more in the short-run than under the second approach. However, in view of less saving, investment would also be less, so that in the long-run income, consumption and employment would be less under the first than under the second approach. On the other hand, under the second approach, savings would be more, though income, consumption and employment would be less in the short-run than under the first approach. However, in view of more saving in the short-run, investment would also be more under the second than under the first approach. Thus, it is a question of trade-off between the concerns of the present and the future generations.

23. The above is, of course, a very simplified exposition of the basic principles of the two approaches. At any point of time, the real world situation will be far more complex. It should also be added that no nation would chalk out its path in that pure, one or the other, approach. At any point of time and in any path chalked out for industrial growth there would be an amalgam of different types of industry in varying measures. For practical purposes the approach has to be labelled as one or the other, depending upon the emphasis given to the component of a particular group/groups of industries in that mix in the early stage.

24. Beginning with 1956, Indian Planning has more or less throughout been based on the second approach, so that in the programmes of industrial growth and development, heavy industries-basic and capital goods-have occupied a pride of place.

25. It is pertinent to note that even in the sphere of that pattern of industrialisation, we have had several objectives. Among the objectives which figure prominently, mention may be made of the following : (a) rapid industrial growth with special emphasis on heavy-basic and capital goods-industries to be developed exclusively or principally in the public sector, (b) prevention of concentration of economic power in private hands, (c) reduction of regional imbalances, (d) promotion of self-reliance through export-promotion and import substitution and (e) protection and promotion of small industry. It also needs to be highlighted that these objectives often conflict with one another, at any rate in the short-run. Thus, for example, if the objective of reduction in regional imbalances is pursued as a high priority objective, more resources would have to be spared for this purpose. Building of infrastructure and adoption

of various kinds of incentives to attract industry to backward areas, restrictions on substantial expansion or establishment of large industrial undertakings in developed areas, and starting of the large propulsive industry by the state in backward areas may become necessary. The experience of promoting industrial growth in such areas indicates that the measures to be effective have to be substantial enough to make impact on the region. A good part of resources devoted for this purpose may produce tangible results only in the long-run, and to that extent provision of resources for this purpose would make for their more limited availability for the industries located in other areas which would have contributed more to the industrial growth in the short-run. Thus, reduction of regional imbalances would be accompanied by a lower rate of industrial growth.

26. It must also be clarified that while these objectives have been figuring in the government documents all along, in practice it is rapid industrial growth that seems to have been pursued more vigorously than any other objective. The implication of this is that in case of conflict, the question of priority has been settled in general in favour of that objective. This seems to be the case for almost the whole of the planning period, barring a brief interlude of three or four years beginning 1969 when the Congress party was split for a 'radical' reorientation of economic and social policies. And it must also be added that barring a brief interlude of 1977-80, the Congress party has been in power at the Centre throughout since Independence. It has been in power for the greater part of the period in most of the states also. So that the industrial growth objective can be said to have reigned supreme almost throughout the period.

27. We now turn to the third factor, namely investment. Table II gives details on this aspect. It will be seen from Table II-A that gross capital formation as a percentage of gross domestic product (gdp) (current market prices) increased from 10 per cent in 1950-51 to 14 per cent in 1955-56 to 17 per cent in 1960-61 to 18 per cent in 1965-66. Secondly, while a large bulk of this investment was financed by domestic saving, the relative share of foreign savings has increased over this period. Thus, for example, in 1950-51, gross domestic saving formed 10.2 per cent of the gdp as against the gross capital formation of 10 per cent; in 1965-66 the latter was 18.2 per cent and the former 15.6 per cent. This is also shown by the fact that net aid as a percentage of plan expenditure increased from 9 per cent during the First Plan period to 28 and 27 per cent during the second and the Third Plan periods (Table II-B). Thirdly, the shares of the household and the public sector savings in the net domestic savings have gone up over this period. The former increased its share conti-

nuously from 10 per cent in 1950-51 to 31 per cent in 1965-66, and the latter more or less so from 19 per cent to 23 per cent over the same period.

28. For a more concrete manifestation of the reflection of the priorities we have to turn to the investments in industry, aggregately and by plans. The relevant data are presented in Tables II-C through II-F.

29. Gross domestic capital formation in manufacturing as a percentage of gdp (current prices) was 4.71 per cent in 1960-61, and after showing fluctuations in the intervening years showed a rise to 5.07 per cent in 1965-66. The bulk of this formation was in the registered sector; the share of the unregistered sector varied from .33 to .58 per cent of the gdp during this period (Table II-C).

30. Public sector outlay on industry in the First Plan was 5 per cent of the total of which the outlay on the organised sector was 2.8 per cent and that on the village and small industries 2.1 per cent. The statistics for the Second and the Third Plans show a very substantial step-up, to 24 per cent and 23 per cent respectively of which the percentage for the organised industry in each plan was 20. (Table II-D). The data on investment in the private sector industry are not available for the First Plan. The data on the aggregate outlays (that is public sector outlay and private sector) for the Second and the Third Plans show a similar position. The percentage for the industrial sector for both of the Plans was 26, of which that for the organised industry was 21 in the second Plan and 22 in the Third Plan (Table II-E).

31. This tremendous shift in favour of industry, more specifically organised industry has been accompanied by substantial step-ups of investments in favour of heavy industries and public sector. Thus, for example, of the total investment (*public and private sector*) in industry in the First Plan, metallurgical, engineering and chemicals claimed 46 per cent; as against this, these three groups claimed 74 and 70 per cent during the Second and the Third Plans.<sup>17</sup> Similarly, public sector investment in industry accounted for 15 per cent of the total investment during the First Plan.<sup>18</sup> The percentages for the Second Plan was 53 and that for the Third Plan 58; the shift was more marked for the organised sector where the percentages were 56 and 62 respectively (Table II-F).

32. To sum up : the high rates of industrial growth witnessed during the first three plans are due to (a) the emphasis on industrialisation in economic policies, (b) the heavy-industry oriented strategy of industrial

17 J.C. Sandesara, op. cit., Table III, p. 578.

18 Ibid., Table IV, p. 578.

lisation, and the pursuit of industrial growth as a supreme objective in the industrial policy and planning, and (c) the substantial investments made and the capacities created in the industrial sector as a follow-up of the first two decisions. This framework also explains the various types of diversification referred to in para 9.

### **V Low Growth Period—The Same Factors?**

33. What is the relevance of these factors in explaining the slackening of the rates of growth which seem to have stabilised around the 4 per cent line after the Third Plan? The first of the three factors, namely economic policy is obviously unimportant in the explanation, as the emphasis on industrialisation has remained more or less the same almost throughout since 1966 as it was during the preceding period. The interlude of two and a half years since mid-1977 when rural development came to the fore is too brief to have been note-worthily effective for halting the on-going priorities of the early period and for initiating programmes on the new priorities on a sustainable basis for the later period.

34. As regards the second factor relating to industrialisation—pattern and objectives, it is often suggested that since 1969 the other objectives such as prevention of concentration of economic power in private hands, reduction of regional imbalances, and promotion of small industry have come to receive more emphasis than before. Further, it is often suggested that to the extent that these objectives compete with the objective of rapid industrial growth, their pursuit may have affected adversely the latter. The evidence cited in this context relates to the nationalisation of commercial banks in 1969, the MRTP Act 1969 and the establishment of the MRTP Commission in 1970, nationalisation of non-life insurance business, the directives and instructions issued by the Government to the various agencies/institutions for a favoured treatment of the groups serving the various social objectives, etc. It is difficult to say how important these factors are in explaining the slow rate of growth. But in any assessment, at least three things must be kept in mind. (a) Controls, restrictions and nationalisations were there in the earlier period also. Thus, for example, the Industries (D and R) Act came into existence in 1951. The Imperial Bank of India was nationalised in 1955 and the life insurance business in 1956. As compared to the less radical 1948 Industrial Policy Resolution and the less State-Sector First Five Year Plan, the 1956 Resolution is more radical and the Second and the Third Plans involved higher outlays in the public sector. (b) The changes referred to in the beginning of this para have occurred beginning with 1969, whereas slackening in the rates of industrial growth had commenced earlier, since 1966. Moreover, it has



to be remembered that what we are trying to explain is slackening in industrial production, and a lot of time-lag is involved between the time when a major policy decision is announced and the time when it is reflected in production. Thus, for example, as a follow-up of a U turn in a policy decision, rules and regulations have to be framed, existing institutions, agencies have to be strengthened and/or new ones created, the announcements thereof have to be made, the applications under the new schemes have to be invited, received and processed and monies thereof have to be sanctioned and disbursed. From the side of the entrepreneur, while some of the sequences may have been started prior to disbursements, most others would follow after disbursements. The stage include : purchase of land, building of factory, purchase and installation of plant and machinery, training of workers trial production. It is only then that the policy would be found reflected in production. Often the timelag between a policy decision and its percolation into production may be four or five years. Meanwhile, things go as usual, on the old policies. (c) Thirdly, since 1973 while the things, by and large, continued on paper as they were during 1969-73, in practice there does not seem to have taken place a vigorous follow-up of other objectives, so that in effect industrial growth continued to have the same high priority in industrial policy as it enjoyed during the pre-1969 period. On these considerations, the greater emphasis on objectives other than the industrial growth objective cannot explain the slackening of industrial growth, except perhaps in a marginal way.

35. Thus, of the three factors considered in the context of high growth rates, the first two, namely the emphasis on industrialisation in economic policy and the pursuit of industrial growth as a supreme objective are not helpful or not much helpful in explaining the slackening—thanks to their conspicuousness in the period of low growth rates as in the period of high growth rates. How does the third factor fare ?

36. Let us return to Tables II-A through II-F. From 18 per cent in 1965-66, gross domestic capital formation as a percentage of gdp fell to 15 per cent in 1968-69, but registered increases thereafter to 20 and 24 per cent in 1973-74 and 1978-79. Secondly, during this period, the relative share of foreign savings has declined over the period. Thus, for example, in 1968-69 gross domestic savings formed 14.1 per cent of the gdp as against the gross capital formation of 15.4 per cent, whereas the corresponding figures in 1965-66 were 15.6 and 18.2. The percentages in 1973-74 were 20.0 and 19.3 and in 1978-79, 23.7 and 23.9. This point is also underlined by the fact that net aid as a percentage of plan expenditure which increased from 27.2 per cent during the Third Plan period to 33.9 per cent during the Annual Plan periods declined to 11.2 and 8.9 per cent

during the Fourth and the Fifth Plan periods. Thirdly, for the greater part of the period the shares of the public sector savings and private corporate cooperative savings have declined. Thus, for example, the share of the former declined from 23 per cent in 1965-66 to 17 per cent in 1968-69 to 13 per cent in 1973-74; and of the latter from 4 per cent in 1965-66 under 3 per cent each in 1968-69 and 1978-79. It must be noted that the former showed a sharp increase to 19 per cent in 1978-79 and the latter to 5.7% in 1973-74. A significant point here is that in spite of this sharp increase in 1978-79 public sector savings did not reach the level of 23 per cent already reached in 1960-61 and 1965-66 (Tables II-A and B).

37. A look at Table II-C shows a relative decline in capital formation in industry for a number of years during the later period compared to 1965-66. Thus, for example, capital formation in industry was 5.07% of the gdp in 1965-66, but in 1967-68 through 1970-71, 1972-73, 1976-77 and 1977-78 it was less than this percentage – the lowest of 3.93 being in 1968-69. In the other years of the period since 1966-67, it was higher. The number of years for which, the percentage of gross capital formation in registered manufacturing was lower than the percentage in 1965-66 was more than in manufacturing – 10 and 7 respectively.

38. Public sector outlay on industry formed 23 per cent of the total outlay in the Third Plan. In the Annual Plans and the Fifth Plan, it was nearly 25 per cent of the total, but was lower in the Fourth and the *Rolling Plans* – being 20 and 22 per cent respectively. (Table II-D). For the period after the Third Plan, the data on private investment by industry are not available except for the Fourth Plan. The aggregate outlay (public sector outlay and private sector investment) for the Fourth Plan was 23 per cent as against 26 per cent in the Second and the Third Plans (Table II-E).

39. Thus, unlike the upward moving rates in capital formation aggregately and in industry during the early period, we have fluctuating and low rates for several years during the later period. While the comparable data for the later period by investments in industry and by sector are not fully available, a perusal at the available data indicates a similar position for investments in heavy industry and public sector. As Table II-F shows, the share of public sector investments in the total investments declined from 64 per cent during the Third Plan to 60, 58 and 56 per cent during the Fourth, the Fifth and the *Rolling Plans*.

40. Many different types of explanations have been offered to explain the declines or low rates of capital formation in general and public sector and industry investments in particular, witnessed during several years of



the period since mid-sixties. They are valid in varying measures at one or the other time during this period. First, the relative reduction in foreign aid has been due to several factors, some of the important ones include : Our inability to make a more efficient use of the assistance already given, our own self-reliance objective, the tighter resource position in the countries/agencies giving assistance because of respective domestic inflation problems, thanks, among others, to increased oil prices, and of course the political factors. Second, the decline in the gross domestic savings and of public sector savings is due to higher rates of inflation, poor contribution of agriculture to resource mobilisation, increase in unproductive expenditure, and less efficient use of the already invested capital. The last-named point is developed in detail later (Section VI), and the other points are dealt with here briefly.

41. Tables III-A and III-B highlight the generally higher rates of inflation during the period since mid-sixties. The compound rate of growth for 1951-79 was 5.73 per cent per annum. The rate for 1951-65 was 2.43, and for 1965-79 7.90. Decadewise, the rates for 1951-60, 1960-70 and 1970-79 were 0.70, 6.21 and 8.51. The high rates of inflation made their own cuts in domestic savings, and the concern for containing inflation also led to curtailments of investment as well. Then, there is a further fact that in a number of products, capital costs increased at a faster rate than their prices during the later period, so that more capital would be required for producing given quantities. Thus, for example, for the two years for which the data are given in Table III-C, project costs (maximum) in sugar, cement, cotton textiles and two wheeler scooters increased by 214, 5, 247 and 40 per cent, their prices increased by only 71, 2, 164 and 7 per cent respectively. Secondly, inspite of increased incomes in the agricultural sector, especially in certain areas and of the big farmers, agriculture has not contributed adequately to the raising of resources, nor has there been an appreciable reduction in the subsidies and reliefs being granted to it over the period. Finally, the unproductive expenditure of the government appears to have increased over the period, leaving to that extent less resources for productive activities. Thus, for example, the defence expenditure on revenue and capital accounts in 1950-51 was Rs. 168 crores. It increased to Rs. 281 crores in 1960-61. Expressed as percentages of **gnp**, it works out at 1.77 and 1.84 per cent in these years. It increased more sharply in later years: to Rs. 885 crores in 1965-66, Rs. 1,200 crores in 1970-71, Rs. 2,472 crores in 1975-76 and to Rs. 2845 crores in 1978-79 forming 3.70 percent of the **gnp** in 1965-66 and around 3 per cent for the later years.<sup>19</sup>

19 The data on defence expenditure are from Reserve Bank of India, Reports on Currency and Finance, Bombay for the respective years.

42. The above arguments may be summed up by saying that less foreign aid, higher rates of inflation, poor contribution of agriculture to resource mobilisation and increased unproductive expenditure during the period since mid-sixties affected adversely in varying measures the over-all rate of investment in the economy during that period. And this position is reflected in its inevitable consequences of slackenings in the rates of growth of industrial investment and industrial production during the post-Third Plan period.

43. The slackening in the growth rate of installed capacity is seen from Table IV. Of the 46 industries accounting for 46 per cent of the total weight in the index of industrial production, in 36 industries (78%) accounting for a weight of 31 (68 per cent), the annual average growth rate of installed capacity was lower during three or all the four periods (of 1966-67, 1968-72, 1973-74 and 1975-77) than that during 1959-65. In terms of number, the percentage of such industries was higher in basic goods industries, and in terms of weight, the percentages were higher in intermediate and consumer goods industries during three or all the four periods, than the respective percentages at all-industries level. This slackening in the rates of growth of installed capacity is reflected in the deceleration in the rates of growth of industrial production as well.

## VI Low Growth Period — Other Factors

44. I now turn to the other, perhaps more important factors underlying the deceleration. These factors may be broadly subsumed under the head of efficiency/inefficiency in the use of invested resources. I begin by noting the outcome of the industrial licensing system, and then highlight and explain the more important of the manifestations of and the tendencies to inefficiency.

45. Industrial licensing was supposed to operate within the framework of targets with due regard to social objectives. As revealed by the studies on this subject,<sup>20</sup> the targets themselves through most of the planning period, were fixed without any systematic attention to costs and benefits. The actual results obtained appear to be showing wide

20 See, among others, P. B. Medhora : *Industrial Growth Since 1950 : An Assessment*, Bombay, 1968; R.K. Hazari, *Industrial Planning and Licensing Policy - Final Report*, New Delhi, 1967; Lok Sabha Secretariat, *The Ninth Report of the Estimates Committee*, New Delhi, 1967; Government of India, Ministry of Industrial Development : *Report of the Industrial Licensing Policy Inquiry Committee*, New Delhi, 1969 and Jagdish N. Bhagwati and Padma Desai : *India - Planning for Industrialisation*, Oxford, 1970.

divergencies from expectations and in the absence of well-ordered priorities, nothing but adhocism seems to have reigned supreme even here. Thus, for example, a study of achievement in relation to plan targets for the various industries reveals actual production diverging either way from planned production, and actual capacities installed diverging either way from planned capacities and also from licensed capacities. In several cases, the divergences have been very wide. These indicate serious deficiencies in the administration of licensing and policies, and economic planning in India cannot be said to have succeeded in avoiding wastes of economic resources, or in bringing about a more socially rational intervention.

46. The high cost weakness of the Indian industry did not become a damper to industrial growth during the early phase of development because of the necessity of creating and maintaining captive home markets in the wake of import substituting industrial growth. However, thereafter the tempo of industrial growth could not be maintained due, among others, to the weakening in the pace of growth of these markets. An important reason of sluggishness in the growth of markets was that industry did not improve its efficiency through time. It is time we thought that efficiency and quality are as important, if not more, as sources of growth, as expansion and quantity. In view of the increased need of self-reliance, policies for efficient industrialisation would perhaps become more difficult, but it is better to begin moving on that path sooner rather than later. And here some openness coupled with a distinct bias in favour of efficient projects in granting licensing and facilities and concessions would be helpful.

The inefficiency of Indian industry is clearly seen, among others, in excess capacity and less than three shift operations, incidence of sickness, and poor performance of public sector units in industry. These three problems are of course inter-related.

47. In view of scarcity of capital in relation to labour in a poor country like India, a failure to utilise capital fully should be regarded as a matter of serious concern. The Planners, in fact, have all along given high priority to full utilisation of capital in our plans. However, this concern appears to have made little impact. The point may be illustrated by some statistics. Of the 42 industries having a weight of 31 in the index of industrial production, in case of 23 industries (55 per cent) with a weight 12 (38 per cent), the annual average capacity utilisation was lower during three or all the four periods (1966-67, 1968-72, 1973-74 and 1975-77) than that during 1959-65. In terms of number, the percentage

of such industries was higher in basic and capital goods, and in terms of weight it was so in these two and in the intermediate goods industries during three or all the four periods than the respective percentages at the all-industries level. (Table V-A). The more recent data for the years 1976-77 to 1979-80 for select important industries also show, generally speaking, a tendency of decline in capacity utilisation (Table V-B). Indeed, of the 118 product for which the data on capacity utilisation for 1979-80 are presented in the Sixth Plan document, 77 showed capacity utilisation of less than three fourths.<sup>21</sup> Another and closely related problem is the problem of multi-shift operations. It is common knowledge that multi-shift operations are far more common in the Western countries than here.

48. The reasons for under utilisation of capacity are several, but these may be grouped broadly into two: internal and external. The former includes in respect of which the trouble-spot is within the firm. Examples of this kind are: break-down of machinery, non-reporting of one or the other kind of workers, failure of the firm to marshall the flow of physical and financial resources at the right time and in the right quantity, etc. The other category includes the factors in respect of which the trouble-spot is outside the firm, and where the firm is by and large helpless. Transport bottlenecks, power cuts, delays in the granting of necessary licenses for the import critical balancing equipments or raw materials, etc. are examples in the category. While it is difficult to say how much of the idle capacity can be attributed to the former, and how much to the latter, it is widely acknowledged that the latter are responsible for a good deal of idle capacity in Indian Industry.

49. On this point, there is a sharp focus in a recent Survey, and it may well be put in its own words.

"The rough-and-ready test is whether industrial growth is constrained by price ..... or by physical limits. And the rough-and-ready answer is price does not seem to be India's problem."

"..... (it) can be explained only by physical bottlenecks to growth". In the list of physical bottleneck are electricity, coal and railways.

"In the 1970s, power cuts joined weather as standard conversational fare. Sad to relate, they did the economy more harm than anything the weather could manage. The government estimates that shortages of

21 Worked out from Government of India, Planning Commission: Sixth Five Year Plan, 1980-85. New Delhi, 1981, Annexure 16.1, pp. 272-76.

electricity have averaged 12% a year since 1975 ; on their own, they have cut gdp by more than 2% a year."

It is stated that investment in power is not the whole story.

"For 15 years, until the late 1960s, capacity grew by 10% a year, the supply of power by 12% a year. These productivity improvements have since been reversed, with capacity rising by 7% a year and output by 6%".

"The real culprits are thermal (coal-fired) stations, which provide over 60% of India's electricity. Their capacity utilisation is about a fifth lower than that of hydro plants (except for drought years, when hydro is badly hit)."

The Survey then proceeds to list the problem-areas of thermal plants. These include : poor maintenance, (trade union) politics, low prices, coal shortages and transport bottlenecks. It also describes how industry and power-boards are affected adversely by a growing share of power by agriculture. Powercuts and load-shading are relatively more for industry than for agriculture; and subsidies in tariff to agriculture and in rural electrification leave less resources for power-boards for expansion and improvement of their services. To conclude :

"To list the failings of India's infrastructure one by one is to understate their scale, because they are all connected. The coal industry needs more power to dig more coal ; the power industry needs more coal to generate more power ; they both need the railways, and the railways need both of them. By rights, cement and steel belong in that sentence as well; they are just as vital and almost as scarce."

"Nor do the links stop there ..... in subcontinental India, every infrastructure virus is contagious. And money alone is not the cure : with better management, India can squeeze a lot more from its existing infrastructure. Then industry would have a chance to run instead of hobble, and extra money to pay for more and better facilities would soon spill from its pockets."<sup>22</sup>

50. Second in the list is industrial sickness. The number of sick units, and their contributions to employment and output of the respective activities vary from industry to industry. What is worse, the incidence of sickness seem to be growing in recent years. In industries like engineering and

22 "India, Treadmill or Take-off, A Survey", The Economist, London, 28 March-3 April 1981, p. 24 and p. 28

textiles, the incidence of sickness is substantial. Also, sickness is prevalent in small as well as medium and large sized units. The number of large sick units increased from 241 to 378 and the credit outstanding for these units from Rs. 609 crores to Rs. 1,158 crores between 1976 and 1979. Engineering and textiles claimed the lion's shares in both the years : with 85 and 56 units with credit outstanding of Rs. 241 and Rs. 151 crores in 1976 and 130 and 88 with credit outstanding of Rs. 394 and Rs. 309 crores in 1979 respectively (Table VI). As to the small units, the data are more meagre. But here also, they underline the growing incidence. The number of sick units and credit outstanding were : 16,805 and Rs. 182 crores as of June 1979, and 20, 975 and Rs. 262 crores as of December 1979.<sup>23</sup>

51. Industrial sickness is sought to be explained variously : poor initial appraisal of the project, granting of licenses and financial and other facilities to the other entrepreneurs in the lines of activities of sick units in a measure which may have led to the shrinkage of the market of sick units, poor management, inadequate availability of infrastructural facilities, government policies in respect of prices, taxation, etc. In a free economy, while such sickness may continue for some time in the hope that the unit would be revived, prolonged sickness would result in the closure and liquidation of the units. While a number of units may have been closed down in India, especially in the small industry in India, this solution has not found favour as a policy matter. Here, it is thought that where promotion of employment has been listed as a high priority objective, the State is duty-bound at least to protect the existing employment. Secondly, some of the large sick units are located in or around small and medium-sized units the economies of which would be dislocated severely by the closure of such units ; in other cases there are powerful trade unions and political considerations do not permit their closures. There is, in the third place, a consideration that such closures will render infructuous capital investment and create an adverse climate for industrial growth. It is for these reasons that Government have adopted a number of measures to rehabilitate sick units to health. These measures have, however, not proved to be notable effective so that the impact of these units is writ large on the industrial performance.

52. Finally, the public sector. One has to be very careful in interpreting statistics on relative efficiencies of public and private sector industries even in comparable lines, for the basic objectives are not exactly the same. In its price and profit policies, public sector enterprises have to work

<sup>23</sup> M. S. Patwardhan "Industrial Sickness, Causes, and the Remedy", *The Economic Times* (Bombay) September 28, 1981, Table 1, p. 5.



under some additional constraints imposed upon by them to serve certain specified social and other objectives. Also, they are working in more risky, long-gestation involving, technologically complex, pioneering types of activities. On the other hand, because of these very considerations, they enjoy priority and favoured treatment in a number of ways, such as allocation of resources, sale of output, etc. On balance, however, one would be right in taking the view that a slightly lower profitability of public sector enterprises as compared to the same in comparable private sector enterprises indicates a satisfactory level of efficiency in view of the additional constraints. Even so, it would be difficult to counter the view that profitability of public enterprises in India is poor. What is worse, the position seems to have deteriorated for a number of years in a continuous manner. Thus, for example, in departmental enterprises profitability (interest plus net profits as percentage of capital invested) was 6.3 - 6.5 per cent during 1962-63 - 1963-64, and around 3 to 5 per cent during 1964-65 - 1968-70. In non-departmental enterprises, profitability was 4-5 per cent during 1960-61 to 1961-62, but was around 1 to 3 per cent during 1962-63 to 1969-70. It seems to have improved during the seventies. Welcome as this improvement is, it is inadequate (Table VII). As the Planning Commission has lamented: "The main reason for this failure (deficiency in investment) appears to lie in inadequate return from past investment by the public sector in industry, power, irrigation and transport and the shortfall in targetted levels of budgetary savings."<sup>24</sup>

53. The adverse effect of the poor performance is compounded by the fact that public sector is the sole or the predominant producer in the infrastructural activities and basic and capital goods industries, so that through their more pervasive effects they also affect for the worse output in other economic activities as well. Apart from the general factors which affect public sector as well as they affect private sector, there are special problems of public sector in India which have prevented it from giving a better account of itself. In this connection, it would be well to remember that each sector—private and public—has its basic financial setting and motivational systems which propel the work behaviour and influence the ability and willingness to work for the sector. As to the financial setting, as the private company is more dependent upon the market for its survival and growth, after the preoperative and the initial operating periods, it has to make and continue making what the market regards adequate profits so that it can continue receiving financial support from the investors. On the other hand, a public sector company may take budgetary support for granted for long.

<sup>24</sup> Government of India, op. cit., Ch. 1, para 1.11, pp. 2.



Secondly, in a private company there is at the top some body or some group which has a stake in the enterprise and this party enjoys unfettered freedom in decision-making. It is this stake and this freedom which combine to bring forth the best from this group for the service of the company. And the top management is able to inculcate this stake in, and allows freedom, to a sufficiently large number of employees at various levels, who, also in turn, work to make enterprises viable and efficient. Though pecuniary compensation plays an important part in creating such a stake, it would be a mistake to explain this stake solely in these terms, in these days of heavy rates of income and wealth taxation. Also, since these companies, especially the large ones are controlled through minority ownership or managerially, the stake does not arise primarily by virtue of ownership. The fact remains that for one or the other reason, a number of people at high level are able to identify or adapt their own individual motives to the motives or the goals of the controlling group or of the company, for which they work. Further, if they do not deliver the goods, it is not that their promotions are adversely affected or that they may be "kicked up" and moved away from the centre of things. They may even be sacked, so that there is a danger of even their material well-being adversely affected. It is this logic which regulates the working of a private company, and makes for its efficiency. On the other hand, a public sector company, on the management side, is saddled with a number of handicaps.

The accountability to parliament makes the management more cautious. The Ministers and Secretaries send feelers and informal instructions in regard to various functional areas personnel appointments, appointments of contracting parties, etc. And management is often unable to stand up to these "pressures". Also, many a public enterprise remains 'topless' for long. The best men are not selected for the jobs. There is no proper fixation or delegation of responsibilities. While a more favourable price policy would no doubt do some good to public sector enterprises, the more important sources to be tapped for efficiency gains are surely somewhere else.

54. The principal point of his section may be summed up by saying that with the weakening of the home market and with the failure to improve efficiency, Indian industry could not move at a pace during the later period as it did during the earlier period. This is reflected in low and/or declining levels of capacity utilisation, substantial and/or growing sickness and poor performance of public enterprises in industry in post-Third Plan period.

## VII Low Growth Period - Sequential Impact and Summing Up

55. Our explanation of the poor performance of Indian Industry during the period since mid-sixties has turned to two basic factors: low or slow rates of growth of installed capacities in industry and poor or declining levels of efficiency in the use of these capacities during that period. We may conclude this discussion by highlighting the key role of the sluggishness of investment and production in public sector and heavy industry and their inefficiency in initiating and accentuating sequentially the deceleration.

56. If industry has been the growth sector of the Indian economy, public investments and investments in heavy industry have been the co-leaders of that sector. And as these leaders faltered, so did their followers—private sector, intermediate and consumer goods industries and small industry. To elaborate: The decline in public savings reduced the capacity of the government to invest in the public sector industry. The 1956 Industrial Policy Resolution earmarked the development of key, basic and capital goods industries as exclusive or principal responsibility of the State. Even if, therefore, the private sector had the resources, it is by and large precluded from filling the void created by the State's shrunken resources. Furthermore, in the industrial structure that has been built-up in India, a good part of large scale private industries is dependent on the public sector through the latter's forward linkages with the former. Thus, for example, inadequate investments in iron and steel, power generation and other basic and key activities most of which are in the public sector, cannot but have adverse effects on investments in the intermediate and consumer goods industries which are mostly in the private sector. Finally, the large scale sector, both in the public as well as the private sectors, has its own linkages with the modern small scale sector, more especially with the ancilliary units and units engaged in jobbing and subcontracting. A decline in the over-all investment activity in the former would therefore lead to a decline in the same in the latter. The deceleration in the rate of growth of production has been due to the poor and/or falling efficiency of invested resources as well as it has been due to the slackening in the rate of growth of new capacity. And the reasoning offered here in the context of the latter is relevant in the context of the former as well, because the lead-sectors have not been wanting in showing poor and/or declining efficiency.

57. In this connection, the following quotations from the plan documents are of interest.

"In fact a high level of public investment in infrastructure and key industries is a pre-condition for development in the private sector. Moreover, many private enterprises depend on orders which flow from public activity and their growth and profitability depend directly on the expansion in public sector investment."<sup>25</sup>

"There does appear ..... to be a close relationship between the trends in total investment and particularly public investment and industrial growth. The period 1961-62 to 1964-65 when a 9 per cent growth rate was achieved, the slump to 1.6 per cent during 1966-69 and the recovery to about 6 per cent during the Fifth Plan period broadly follow the trends in total and public investment during the corresponding periods. As is natural, the most effective of the various components of industrial production to investment rates is capital goods and the least the consumer goods sector."<sup>26</sup>

"The organised industrial sector does.....present several disturbing features. One of the more disturbing of these features is the relative decline in the growth of the small-scale sector as compared to medium and large-scale sector ..... ASI data reveal that the share of the small-scale sector in industrial production in terms of value added fell from 19.5 per cent in 1968 to 16.1 per cent in 1975-76."<sup>27</sup>

58. The point may be illustrated by statistics. The annual average rates of growth at the all industries level was lower in all the four periods (1966-67, 1968-72, 1973-74 and 1975-77) than that of 11.8 per cent during 1959-65. The rates for basic, capital goods, intermediate and consumer goods industries for the period 1959-65 were 11.5, 26.8, 8.1 and 4.9 per cent. Capital and intermediate goods industries showed lower rates for all later periods than the respective rates of 26.8 and 8.1 per cent during 1959-65. Basic and consumer goods industries showed this feature for three and two periods 1966-67, 1968-72 and 1973-74 and 1966-67 and 1973-74 respectively (Table VIII-A). Of the 56 industries for which data for the annual average rates of growth for these years are available, 39 (70 per cent) of the total of 56 industries showed lower rates of growth for all the four periods, and 9 (16 per cent) for three periods. The percentage of industries showing lower rates of growth during three or four periods was higher in basic (87), capital goods (100) and intermediate (91) goods industries than in consumer goods (75) industries. (Table VIII-B). The

25. Ibid., Ch. 1, para 1.9, p. 2.

26. Government of India, Planning Commission : Draft Five Year Plan, 1978-83. New Delhi, 1978, Ch. 12, para 12.3, p. 184.

27. Ibid., para 12.7 p. 185.

data on small industry are scanty. Some of the available data are put together in Tables VIII-C, D, E. The tables highlight the low or negative rates of growth of a number of activities in the small-scale sector. Thus, for example, of the industries of Table VIII-C, Chemicals showed the highest rate of growth of gross value added (6 per cent) and Leather the lowest (-2 per cent) during 1961-74. Of the data presented in Tables VIII-D and VIII-E, while growth rates measured in value are not bad, when measured in physical units they are very low.

59. The impact of low investments of growth is compounded by the fact that actual capital output ratios, howsoever calculated, have turned out to be higher than anticipated in later plans, though the more recent period shows some improvements. Table IX shows the movements in the capital-output ratios. The incremental gross capital-output ratio for all activities increased from 3.2 in the First Plan to 4.1 to 5.4 in the Second and Third Plans; after showing decline to 4.9 in the Annual Plans it increased to 5.7 in the Fourth Plan but fell to 3.9 in the Fifth Plan (Table IX-A). The incremental capital-output ratios by major sector and activity show broadly a similar tendency. Thus, for example, the ratio for manufacturing was 4.0 during 1950-51-1955-56; it was 5.8, 4.9, 11.5, 12.2, and 4.7 during 1955-56, 1960-61, 1960-61 - 1965-66, 1965-66 - 1970-71, 1970-71 - 1975-76 and 1975-76 - 1977-78. The ratio for electricity was 17.2, 15.2, 18.4, 16.6, 20.9 and 23.4 in that order. (Table IX-B). The data on average capital output ratios of large public limited companies in selected industries reinforces the point. (Table IX-C). Here, the position of government companies is worse than private companies. Note in particular the higher ratios of the former for all industries and for almost all the years which figure in Table IX-D.

60. The rising capital output ratio can be attributed to a variety of factors. First, in some cases, as shown in Table III-C prices of capital costs are rising at faster rates than the prices of their products. Second, in some cases, for example, in irrigation and mining, the more difficult and therefore more costly opportunities are being exploited - thanks to the exhaustion of the easier opportunities during the early period of planning. Third, in some cases, a change in the pattern of investment, for example to chemicals from engineering, or a change in the scale of units, for example to modern small from cottage, in the later period has dictated higher capital-usage than before. Fourth, poor and in some cases declining efficiency of invested resources, documented earlier in Section VI, directly as well as through their linkages did not permit capital to stretch itself fully to output. Here, public sector has a lion's share of

the blame, partly because of its own special problems (referred to in paras 52 and 53).

### VIII Prospects

61. It is sometimes suggested that the industrial economy of India began its initial march from the wrong end, and therefore this impasse was only to be expected; and that, further, should it have started from the other end, its performance, in terms of growth rates as well as of other criteria (such as employment, etc.), would have been better. In this view, agriculture and light consumer goods industries should have been promoted and developed as leading sectors, leaving the intermediate, capital and basic goods industries, to grow sequentially in that order. Extremists of this view have even suggested that even now it is not too late – better late than still later – to begin vigorously with a sharp U-turn in that direction.

62. As a species, this is one of those issues which are discussed under the “ifs” of history. And the simple answer to that question is; they may well be right. However, there is also the other simple answer : they may well be wrong. For it could also be suggested that while we might not have encountered the same type of problems, thereon we might have encountered the other, perhaps more intractable problems and the outcome might have been as bad, if not worse. It seems to me that no useful purpose would be served at the present juncture by a discussion of the current issue in that extent. If one is already involved in a car accident, it is of no avail to think at that moment that if one had been more careful before the accident or if one would have travelled at another time, or by another car or by the other mode, say by bus, train, plane, the accident could have been avoided. Such thoughts at that moment detract one’s attention from stock-taking and assessment of the current, irreversible situation. One better begins to ask, answer and have a follow-up on these lines : How serious is the accident ? Has human life been lost or seriously injured ? How quickly can the medical and other help be ensured ? What is the nature of damage caused to the vehicle ? To come to the point from this analogy, one is to have an informed judgment in regard to whether the 4 per cent growth rate rut of industry is such as has no solution within the existing framework of the industrial structure, so that nothing short of a sharp U-turn is the solution; or is it such that with the right measures, the rate can be raised to a respectable level within the framework. With the full awareness of the task involved in getting out of the rut, I am inclined to the second view. And in line with that view I proceed to consider the prospects of

industrial growth in the near future, and to suggest the conditions relevant for their materialisation.

63. The prospects of industrial growth in the near future may best be discussed in the context of the target laid down for the Sixth Five Year Plan, 1980-1985. The Plan envisages an average annual rate of growth of 8 per cent of industrial production during the five year period, 1980-85.<sup>28</sup> Will this target be reached?

64. First, let us look at the future against the past. Admittedly, past experience does not always provide a good frame of reference. But it is also clear that it would be rash to ignore it all together. How does the 8 per cent rate compare with the past rates? Plan-wise, except during the Third Plan when the growth rate was 9 per cent, in no other plan-period did it exceed 7.3 per cent; and in the post-Third plan periods, in no plan period did it exceed 6 per cent.<sup>29</sup> Year-wise, of the 29 years, only in 9 was the rate 8 per cent or more, of which all but one (1976) years were in the early period (1954, 1955, 1960 through 1965). Thus in general 8 per cent rate appears to be out of proportion compared to the rates which have been within our reach and experience, at any rate of recent years. It may also be added here that in terms of growth rate, 1979-80, the pre-Sixth Plan year, was the worst year when output declined by 1.4 per cent.<sup>30</sup> Growth recorded on a low-base of 1979-80 will, therefore, be partly statistical and therefore not wholly substantive.

65. Second, it may be argued that higher outlays and investments provided for this sector in the Sixth Plan would contribute towards the production levels anticipated, and therefore 8 per cent rate implied therein may well be within our reach. Of the total public sector outlay in the First Plan, the outlay on organised industry and minerals formed 3 per cent, and since then upto the Fifth Plan, it varied from 17 to 23 per cent. It was 13.4 per cent in the Draft Plan-Revised (Table II-C). The outlay of Rs. 13,237 crores provided for this sector in the Sixth Plan appears to be impressive in absolute terms, but it must be noted that in absolute terms the total outlay is also large, Rs. 97,500 crores,<sup>31</sup> so that the former is only 13.6 per cent of the latter. In view of the greater importance of private investments in this sector, we may have a better idea on the relative importance on the basis of aggregate outlay, including private

<sup>28</sup> Government of India, Planning Commission, Sixth Five Year Plan, 1980-85, New Delhi, Ch. 16, para 16.14, p. 262.

<sup>29</sup> *Ibid.*, Ch. 1, Annexure 1.1, p. 11.

<sup>30</sup> *Ibid.*, Ch. 16, para 16.10, p. 260.

<sup>31</sup> *Ibid.*, Ch. 4, Annexure 4.3, pp. 57-58.

investment along with public sector outlay. Here, we could not cull together the relevant data for all the plans. A comparison is, therefore, made for the sector, inclusive of village and small industries. Here, the percentage is 26 each for the second and the Third Plans, and 23 for the Fourth Plan. (Table II-D). As against this, the Sixth Plan percentage is 26 per cent (Rs. 45,341 out of the total of Rs. 172,210 crores).<sup>32</sup> Thus, while the relative allocation of the public sector outlay on this in the Sixth Plan is marginally higher than in the Draft Plan, it is substantially lower than in the Second through the Fifth plans; and while the relative allocation of the aggregate outlay on this sector in the Sixth Plan is higher than in the Fourth Plan, it is nearly the same as in the Second and the Third plans.

66. Third, it may also be remembered in this context that the Sixth Plan statistics are targets, whereas those of other plans actuals/estimates. In the past, in real terms, the latter have fallen short of the former in varying measures. This experience is likely to be repeated during the Sixth Plan period. The Sixth Plan has been launched under difficult conditions. The wholesale price index has risen by nearly 17 per cent between 1979 and 1980.<sup>33</sup> Poor functioning of infrastructure, rise in petroleum and steel prices, shortages of other critical inputs like cement are also the facts to reckon with. While of late, there has been respite on these fronts, it has yet to be substantive and enduring. After the surplus of Rs. 72 crores in 1976-77 there has been a deficit in balance of trade; it has been growing and in 1979-80 it was 2,400 crores.<sup>34</sup> There is also the question of whether the government will be able to raise and mobilise adequate resources to finance the plan: foreign aid and domestic savings. The prospects for the former are not particularly bright. The latter is contingent, among others, upon the Government's willingness to take some of the decisions in a decisive way, such as levying more taxes on agriculture, raising tariffs prices of public sector enterprises, reducing subsidies and curtailing unproductive expenditure. Finally, one has to reckon with the well-known organizational and administrative bottlenecks and delays. In the very nature of things, even if the Government were to decide and to act quickly, it will take some time before the impact of these decisions is felt on the investments in industry. We, might therefore, have to do with less investments in industry than we would wish to have.

67. Fourth, our analysis also revealed that an important cause of slackening has been our failure to utilise fully and efficiently the invest-

32 Ibid., Ch. 3, Table 3.8, p. 37 and Ch. 4, Annexure 4.3, pp. 57-58.

33 Ibid., Ch. 3, para 3.5, p. 32.

34 Ibid., Ch. 3, para 3.5, p. 33.



ments already made in industry and in supporting and related activities. In Section VI this question was discussed concretely with reference to capacity utilisation, industrial sickness and public enterprises in industry. What are the prospects of growth from these areas during the Sixth Plan period?

68. Sixth Plan assigns high priority for securing output through greater capacity utilisation. Of the 118 and 116 industries for which comparable data on targets of capacity and production are given for 1979-80 and 1984-85, there is no industry in the latter year with less than 50% utilisation as against 13 industries in the former. The number of industries with less than 75% utilisation was 14 in 1984-85 as against 77 in 1979-80. In other words, 102 out of 116 industries in 1984-85 and only 41 out of 118 industries in 1979-80 showed capacity utilisation exceeding 75%. To put it differently, of the 116 industries, as many as 95 show higher capacity utilisation in 1984-85 than in 1979-80. Of the balance of 21 with the same or lower utilisation, the reduction in case of 7 is from over 100% in 1979-80 to 100% or less.<sup>35</sup> Closely related is the question of shift-practices. It is well-known that multi-shift operations are less common in poor countries like India than in affluent countries like the U.S. More shift operations make for more intensive utilisation of capital and other scarce resources such as key personnel in a given period, and, therefore, make less demands for fresh investment of capital and additional recruitment of this kind of personnel. Such operations also generate more employment for direct labour.

69 It has been pointed out earlier (para 49) how the infrastructural bottlenecks - bottlenecks over which industrial units have no control - have hampered full utilisation of industrial capacities in the past. A number of units, mostly the big and/or the efficient ones, have found their own solutions to some of these problems. Thus, for example, they use road instead of rail transport for transshipment. The former is, however, costlier. They install their own generating sets to overcome the power-bottlenecks. Apart from higher operating cost of such power, it also raises capital-costs. It is, however, clear that at their best such solutions are only part and temporary substitutes, and help solve the problem only at the fringe. Therefore, the basic problem of increasing the supply of infrastructural facilities and improving their dependability and efficiency remains more or less in tact. To the extent that these bottlenecks stem from inadequate investments in infrastructure, requisite investments therein must be made on a high priority basis. Here, the case is based

35 Statistics Computed from Ibid., Ch. 16, Annexure 16.1, pp. 272-75.

not merely on general developmental considerations, but even on the narrow consideration of reducing the degrees of excess capacity and of promoting multi-shift operations in the directly productive sectors of the economy such as agriculture and industry. To the extent these bottlenecks are due to organisational and other factors which impede the utilisation of the infrastructural capacities to the full, the same has to be attended to and corrected expeditiously as a matter of the highest priority. Investments in infrastructure and their full utilisation should go a long way in getting additional output to the full limits from the already existing industrial capacities, and also from the new capacities that could come up from time to time. Secondly, to the extent that under-utilisation of capacity and/or less shift operations are due to the lethargy of the units or profit are based on purely private profitability criterion, government must devise suitable steps – negative as well as positive – to alter these bases. Among the steps that can be considered in this context are : additional fiscal/financial incentives and infrastructural support to promote fuller utilisation of capacities, estimation of capacities and outputs on the basis of full capacity utilisation with multi-shift operation at the time of granting licenses and other facilities such as finance, power, water, etc. for expansion or installation of new capacities, preparation of feasibility reports on the basis of the supplies to be so estimated, etc. The need for exploiting more fully the existing capacities is all the more today when installation of new capacities has become more difficult – thanks to the resource constraints.

70. Depending upon the judgment on their viability based on the degree of sickness and the quantum of resources that can be spared for the cure, sick units may be classified into non-viable and viable. No tears need be shed on the closures/liquidations of the former. Inefficient capacities and production by such units prevent the entry of new or expansion of capacities/production by the existing, possibly more efficient entrepreneurs. The licensing authorities and development and commercial banks judge the feasibility of such proposals in the light of the present and future supply-demand balances which include capacities/production of the existing non-viable sick units also. As a result, the capacities/production in industry are rated on the higher side, implying less scope for the entry of new units or expansion of other units. This has clearly a bearing on the continuance of non-viable sick units for a longer period than warranted.

71. On the other hand, the problems of other, viable sick units should be investigated, specific, concrete solutions be suggested, and a follow-up

action at the right time be initiated and the progress thereon monitored. Such units may be expected to be restored to health and contribute to efficient production in the medium and the long-runs. It is possible that as a result of the revival of such units, some units on the border lying on the side of healthy units may tend to become sick either because the market does not expand adequately or because their market share shrinks partly in favour of the ex-sick units which have now become more efficient than these borderline units—thanks to the remedial action. Needless to add that these borderline healthy units must be taken care of by preventive measures as expeditiously as the sick units are attended to with curative measures.

72. Judged on the basis of profitability criterion, of late the performance of public sector enterprises has improved, but it is inadequate in relation to expectations. The enormity of the task involved in meeting the expectations of this sector can be seen from the fact that their gross surplus for the Sixth Plan period is estimated to be Rs. 18,245 crores after taking into account the measures envisaged in the plan, as against Rs. 9,395 crores on the basis of existing price policies.<sup>26</sup> It may be noted that the recent improvement in the performance of public sector enterprises as judged on the profitability criterion has been, by and large, due to revision of their tariffs/prices. Working expenses would also increase. It is therefore a moot point whether it would be possible to hike the tariffs/prices to the levels necessary to realise the anticipated surplus.

73. It is regrettable that there is no note-worthy discussion in the Sixth Plan of the measures to increase their efficiency by cost reduction. It is time that cost effectiveness is given greater weight as a measure of efficiency, especially in public enterprises where budgetary support is taken for granted. Also, some of the practices followed in the U. K. for its public sector enterprises such as financial target-setting and granting of greater autonomy which have proved successful there have relevance to Indian conditions as well. It is also essential that the ministers/officials of the operating ministries play their roles within the bounds of their legitimate powers, refrain from throwing their weight unduly and informally on extraneous considerations, and thus by practice cultivate respect for the autonomy principle. In their turn, in the discharge of their duties top managers of public sector enterprises may be expected not to succumb to the informal pressures/advice of the ministers/officials of the operating ministries and other quarters on matters which fall within their own domain, especially when such pressures/advice are, in their judgment, not conducive to the interests of the corporations. It is not that these psalms have not

been sung before. However, only a few practise them. This repetition here, it is hoped, will increase that number. Measures suggested here, in respect of sick units and public sector enterprise may improve the efficiency of industry in the respective areas on an enduring basis. It may, however, be too much to expect of these measures to yield industrial production during the Sixth Plan period, which together with production from other sources, would take the total to the level which would give a growth rate of 8 per cent.

74. To sum up : with the low level of industrial production in its base year (1979-80), the Sixth plan is, statistically, well-poised for a high rate of growth. Yet it seems to me that the 8 per cent rate of growth is a tall target. The past experience, especially of recent years does not hold hope for that high rate. Also, investment targets for industry are not high enough to counterbalance the past experience. Moreover, even these targets may fall short in practice in view of the government's concern to contain inflation, the difficulties of raising financial resources – domestic as well as foreign, the adverse balance of trade and the bottlenecks in securing the supplies of inputs such as cement and oil and of infra-structural inputs. Furthermore, there is inevitably some time-lag between an investment decision, and its percolation into production during the Sixth Plan period, which is what concerns us here. And at least some of the investments of the Sixth Plan period may not be relevant on that criterion. As regards the other source, namely, efficiency in production, it may be too much to expect a steep increase in efficiency on an enduring basis in the short-run. While there is no doubt that in excess capacity, sick units and public sector enterprises, the industrial economy has plentiful reservoirs that can be tapped for production. But these reservoirs have been there for years, and except for public sector which has been tapped in recent years, there is not much evidence of very fruitful results from the other two areas. Even for public enterprises the measures have been, by and large, one-handed, rooted in price increases, with little concern for cost reduction. The policies and measures in respect of the other two areas which have been tried out so far have proved to be less than adequate, and we have yet to devise new packages. In this context, the measures suggested here may be helpful.

75. Thus, we may have to scale down our expectation from the Sixth Plan target of 8% growth rate. We should feel more than satisfied even if the achievement is 6%. For after all, in none of the plan-periods after the Third Plan, we have reached the rate of growth of 6%, and of the 14 of the 30 years of planned development in which that rate was reached or exceeded, only 4 are in the later period beginning 1966.

IX Related Remarks

76. Finally, a couple of related remarks, one of which has a bearing on employment and the other on small industry. One of the major objectives of Indian economic planning has been prevention of unemployment and promotion of employment. The dismal performance of industry in the post-Third Plan period has been 'disastrous for Indian jobs'. As has been pointed out : "Factory employment increased by 3% a year from 1950 to 1965, double the rate of growth of labour force. So long as that was happening, the prospects for cutting unemployment looked good.... But then India's industrialisation started to falter : between 1965 and 1975, the labour force grew by 1.6% a year, industrial employment by only 1.9%".<sup>37</sup> The Sixth Plan has also recorded : ".....the employment opportunities have not been adequate in the recent past for the educated man-power or for the overall population. Even in terms of long-term unemployment,..... the position has not been satisfactory."<sup>38</sup> In view of the prevalence of this situation regarding this objective for long as also because of "a progressive reduction in the incidence of poverty and unemployment" being a major objective of the Sixth Plan, there is a possibility of government going vigorously in favour of activities which have high, immediate job-content. In view of such activities in the modern industry being limited, it may be compelled to promote activities in other areas in a larger measure than earlier, such as in agriculture and related activities, and cottage and small industry. In terms of the growth prospective, this is only a second-best solution.

77. As regards the role of small industry in employment promotion, the Plan says: "In the production of many goods and services, a given target can be reached by allocating production to the small scale or to medium/large scale units or to a mix of the two. In the Sixth Plan, it is proposed that wherever clear alternatives for production of goods and services are available, labour intensive technologies or processes must be preferred provided the productivity is not unduly affected."<sup>39</sup> Greater care will have to be exercised in any large-scale allocations for the small-scale sector in the short-run for at least two different types of reasons. (a) If the large-scale sector is not able to fulfil the targets, the small-scale sector may find it all the more difficult to do so in view of the proverbial-organizational, financial technological, marketing, etc. problems which have devilled its working since long. (b) The case for

37 "India.....A Survey", op. cit., p. 16.

38 Government of India, planning Commission : Sixth Five Year Plan 1980-85 New Delhi 1981, Ch. 13, para 13.2, p. 207.

39 Ibid., Ch. 13, para 13.31, p. 27.

preferential treatment for small industry is generally made on the assumption that it uses less capital than large industry, and promote more employment per unit of capital than large industry. A considerable body of evidence casts doubt on these premises, and often indicates a contrary position.<sup>40</sup> In such cases, small industry will actually be more capital-using and less employment-promoting than large industry. An indiscriminate policy for all round promotion may thus harm the very objectives the policy seeks to promote.

78. The burden of these remarks is four-fold: (a) The second-best solution is only second-best. (b) Even as such, in certain cases the outcome may leave much to be desired. (c) Since the second-best solution is suggested against the background of the slow-down in the rate of growth of industrial production in recent years, it may not find favour if industry gets out of that fixation. (d) For that, all concerned should not be found wanting in will and should work for that hard option, instead of running away to the soft or the second-best solution.

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40) See, among others, R. Sutcliffe, *Industry and underdevelopment*. London 1971 especially 5.2 and 5.5 in Ch. 5 and 6.3, 6.4 and 6.5 in Ch. 6; also the Indian Council of Social Science Research, *A Survey of Research in Economics*, Vol. V, Bombay 1975, Section IV in Ch. 1 and Sections 2 and 3 in Ch. 1.

Table I

**Index of Industrial Production and  
Rates of Growth, 1951-80 (1970=100)**

**A. Index Numbers and Rates of Growth over the Previous Year**

Year	Index Number	Percentage Increase over the previous Year	Year	Index Number	Percentage change (for decline) over the previous Year
(1)	(2)	(3)	(1)	(2)	(3)
1951	29.7	-	1966	83.1	-5
1952	31.0	4.4	1967	82.8	-4
1953	31.5	1.6	1968	88.4	6.8
1954	34.4	9.2	1969	95.1	7.6
1955	39.4	14.5	1970	100.0	5.2
1956	42.5	7.9	1971	104.4	4.2
1957	44.9	5.6	1972	110.6	5.8
1958	45.8	2.0	1973	111.1	1.6
1959	49.8	7.0	1974	113.2	2.1
1960	54.3	10.8	1975	119.2	4.7
1961	59.3	9.2	1976	133.7	9.8
1962	65.0	9.6	1977	138.3	5.3
1963	70.4	8.3	1978	147.8	6.9
1964	76.4	8.5	1979	149.5	1.2
1965	83.5	9.3	1980	150.7	0.8



Table I (contd.)

## B. Growth Rate Per Annum, Per cent

Period	Annual Average	Compound	Rough Correspondence with
(1)	(2)	(3)	(4)
1951-55	8.17	7.32	4 years of the I Plan
1955-60	7.56	6.63	5 years of the II Plan
1960-65	10.76	8.99	5 years of the III Plan
1965-68	1.96	1.92	3 years of Annual Plans
1968-73	5.14	4.68	5 years of the IV Plan
1973-77	6.80	5.63	4 years of the V Plan
1977-79	4.05	3.97	2 years of the Rolling Plan
1979-80	0.80	0.80	1st year of the VI Plan
1951-60	9.20	6.93	1st decade of Planning
1960-70	8.42	6.30	2nd decade of Planning
1970-80	5.07	4.19	3rd decade of Planning
1951-80	14.05	5.76	Three decade of Planning
1951-65	12.94	7.66	First fifteen years of Planning
1965-80	5.37	4.01	Second fifteen years of Planning
1966-80	5.81	4.34	Second fifteen years of Planning

Sources : A. Column 2, Basic sheets made available by the Reserve Bank of India, used in M.Y. Khan, "Trends in Industrial Production, 1951-77" Reserve Bank of India Occasional Papers, June 1980, Bombay, Statement I, pp. 94-95; Column (3) upto 1977, M. Y. Khan, *op. cit.* Other rates of column (3) of Table-A and of columns (2) and (3) of Table B worked out on the basis of relevant numbers of column (2) of Table-A.

**Table II**  
**Savings and Investments, 1950-51 to 1978-79**  
**A. Resource Mobilisation by Plan Periods**

Item	End of						
	Pre-plan, 1950-51	First Plan, 1955-56	Second Plan, 1960-61	Third Plan, 1965-66	Annual Plans, 1968-69	Fourth Plan, 1973-74	Fifth Plan.* 1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Percentage of GDP at current market prices</b>							
1. Gross capital formation	10.0	14.3	16.9	18.2	15.4	20.0	23.7
2. Gross domestic saving	10.2	13.9	13.5	15.6	14.1	19.3	23.9
Share in net domestic saving (percentage)							
3. Household saving in financial assets other than currency and claims on the government.	10.0	15.3	19.1	31.1	20.5	28.3	32.9
4. Public sector saving	18.9	10.6	23.3	23.1	17.3	12.9	19.0
5. Private Corporate Co-operative saving	6.8	6.2	8.8	3.9	2.6	5.7	2.8

\* The figures given are for the originally envisaged terminal year of the Fifth Plan.

Table II (contd...)

## B. Gross and Net Aid by Plan Periods

Period	Utilisation of External Assistance (Rs. in Crores)	Amortisation and Interest payment (Rs. in Crores)	Net Aid (Rs. in Crores)	Net Aid as % of Plan Expenditure	Net Aid as % of Imports
(1)	(2)	(3)	(4)	(5)	(6)
First Plan (1951-52 - 1955-56)	201.7	23.8	177.9	9.1	4.9
Second Plan (1956-57 - 1960-61)	1,430.4	119.4	1,311.0	28.1	26.9
Third Plan (1961-62 - 1965-66)	2,867.7	542.6	2,325.1	27.2	37.5
Annual Plans (1966-67 - 1968-69)	3,229.8	982.5	2,247.1	33.9	37.5
Fourth Plan (1969-70 - 1973-74)	4,183.7	2,445.0	1,738.7	11.2	17.6
Fifth Plan (1974-75 - 1978-79)	7,309.5	3,770.4	3,539.1	8.9*	12.8

\* On actual expenditure for the first four years, anticipated expenditure for 1978-79

Table II (contd.)

**C. Gross Domestic Capital Formation by Industry of Use,  
1960-61 to 1978-79**

(Rs. in crores, current prices)

Year	Manufacturing		Total (2 + 3)	Gross Domestic Product
	Registered	Unregistered		
(1)	(2)	(3)	(4)	(5)
1960-61	650 (4.33)	57 (0.38)	707 (4.71)	15,018
1961-62	561 (3.51)	65 (.41)	626 (3.92)	15,977
1962-63	768 (4.49)	56 (.33)	824 (4.82)	17,099
1963-64	577 (2.94)	97 (0.50)	674 (3.43)	19,656
1964-65	862 (3.74)	111 (.48)	973 (4.22)	23,044
1965-66	1,083 (4.49)	139 (.58)	1,222 (5.07)	24,112
1966-67	1,717 (6.20)	224 (.81)	1,941 (7.01)	27,691
1967-68	1,169 (3.62)	280 (.87)	1,449 (4.48)	32,334
1968-69	1,010 (3.02)	302 (0.90)	1,312 (3.93)	33,403
1969-70	1,189 (3.21)	378 (1.02)	1,567 (4.24)	36,999
1970-71	1,420 (3.53)	556 (1.38)	1,976 (4.91)	40,263
1971-72	1,628 (3.74)	639 (1.47)	2,267 (5.21)	43,531
1972-73	1,174 (2.45)	724 (1.51)	1,898 (3.97)	47,865
1973-74	2,156 (3.66)	1,071 (1.82)	3,227 (5.48)	58,940
1974-75	3,731 (5.36)	957 (1.38)	4,688 (6.74)	69,595
1975-76	3,470 (4.68)	646 (.87)	4,116 (5.55)	74,162
1976-77	2,424 (3.01)	1,076 (1.34)	3,500 (4.34)	80,594
1977-78	2,861 (3.17)	1,591 (1.76)	4,452 (4.94)	90,213
1978-79	4,378 (4.48)	1,747 (1.79)	6,125 (6.27)	97,704

Figures in brackets give percentages to the total in column (5).

Table II (contd.)

## D. Public Sector Outlay on Industry by Plans

(Rs. in Crores)				
Plan	Organised Industry and Mining	Village and Small-scale Industries	Total : Industry (2 + 3)	Total
(1)	(2)	(3)	(4)	(5)
(a) I plan (1951-56)	55 (2.8)	42 (2.1)	97 (4.9)	1,960
(b) II plan (1956-61)	938 (20.1)	187 (4.0)	1,125 (24.1)	4,672
(c) III plan (1961-66)	1,726 (20.1)	241 (2.8)	1,967 (22.9)	8,577
(d) Annual plans (1966-69)	1,510 (22.8)	126 (1.9)	1,636 (24.7)	6,625
(e) IV plan (1969-74)	2,824 (18.2)	243 (1.5)	3,107 (19.7)	15,779
(f) V plan (1974-79)	9,387 (23.1)	606 (1.5)	9,993 (24.6)	40,641
(g) Draft (Rolling) plan Revised (1978-83)	13,992 (19.7)	1,410 (2.0)	15,402 (21.7)	71,000

1. Actuals for the First through the Fourth plans, Estimates for the Fifth plan and targets for the Draft Plan,

2. Figures in brackets give percentages to the total in column (5)

Table II (contd.)

**E. Aggregate Outlays (Public Sector Outlay and  
Private Investment) on Industry by Plans**

(Rs. in Crores)

Plan	Organised Industry and Mining	Village and Small-Scale Industries	Total Industry (2 + 3)	Total : Plan
(1)	(2)	(3)	(4)	(5)
(a) I Plan (1951-56)	—	—	—	3,760
(b) II Plan (1956-61)	1,613 (20.8)	362 (4.7)	1,975 (25.5)	7,772
(c) III Plan (1961-66)	2,776 (21.9)	516 (4.1)	3,292 (26.0)	12,677
(d) Annual Plans (1966-69)	—	—	—	—
(e) IV Plan (1969-74)	4,864 (19.3)	803 (3.2)	5,667 (22.5)	28,181
(f) V Plan (1974-79)	—	—	—	66,351
(g) Draft (Rolling) Plan Revised (1978-83)	—	—	—	1,41,377

1. Actuals for the First through the Third plans, Estimates for the Fourth Plan and targets for the Fifth and the Draft Plans.
2. Figures in brackets give percentages to the total in column (5)



Table II (contd.)

## F. Public and Private Sector Investments in Industry by Plans

(Rs. in crores)

Plan	Organised Industry and Mining			Village and Small Scale Industries			Total Industry			Total Plan		
	Public	Private	Total (2+3)	Public	Private	Total (5+6)	Public (2+5)	Private (3+6)	Total (8+9)	Public	Private	Total (11+12)
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
a) I Plan (1951-56)	—	—	—	—	—	—	—	—	—	1,560 (46.4)	1,800 (53.6)	3,360 (100.0)
b) II Plan (1956-61)	870 (56.3)	675 (43.7)	1,545 (100.0)	90 (34.0)	175 (66.0)	265 (100.0)	960 (53.0)	850 (47.0)	1,810 (100.0)	3,731 (54.6)	3,100 (45.4)	6,831 (100.0)
c) III Plan (1961-66)	1,700 (61.8)	1,050 (38.2)	2,750 (100.0)	115 (29.5)	275 (70.5)	390 (100.0)	1,815 (57.8)	1,325 (42.2)	3,140 (100.0)	7,180 (63.7)	4,100 (36.3)	11,280 (100.0)
d) Annual Plan (1966-69)	—	—	—	—	—	—	—	—	—	—	—	—
e) IV Plan (1969-74)	3,298 (62.2)	2,000 (37.8)	5,298 (100.0)	186 (24.9)	560 (75.1)	746 (100.0)	3,484 (57.6)	2,560 (42.4)	6,044 (100.0)	13,665 (60.3)	8,980 (39.7)	22,635 (100.0)
f) V Plan (1974-79)	—	—	—	—	—	—	—	—	—	36,703 (57.6)	27,048 (42.4)	63,751 (100.0)
g) Draft (Rolling) Plan (1978-83)	—	—	—	—	—	—	—	—	—	59,130 (55.8)	46,860 (44.2)	1,05,990 (100.0)

Columns [2] to [10] : Estimates for the Second and the Third Plans, targets for the Fourth Plan.

Column [11] to [13] : Actuals for the First through the Third Plans, Estimates for the Fourth Plan and Targets for the Fifth and the Draft Plans.

- Sources : A. Government of India, Planning Commission : Sixth Five Year Plan, 1980-85, New Delhi 1981, Annexure 1-2, p. 11.
- B. Ibid; Annexure 1-8, p. 14
- C. Central Statistical Organization, Department of Statistics, Ministry of Planning, Government of India : National Account Statistics, New Delhi. Data for 1960-61 to 1969-70 from the publication relating to 1960-61 to 1973-74 Table 16, pp. 36, 37; for 1972-73 to 1978-79 from the publication relating to 1970-71 to 1978-79. Statement 16, p. 44 and for 1971-72 from the publication relating to 1970-71 to 1976-77. Statement 13 p. 34.
- D. Tata Services Ltd., Department of Economics and Statistics : Statistical Outline of India, 1980, Bombay, Table 182, pp. 180-81.
- E. For (a) to (f) : Tata Services Ltd., op. cit. 1978, Tables 169, 170 and 173, pp. 169-70, 171-72, 175; for (g) Government of India, Planning Commission : The Draft Sixth Five Year Plan, 1978-83 (Revised), New Delhi Para 5.3, p. 76.
- F. For columns (2) to (10) Tata Services Ltd., op. cit. 1980, Table 185, p. 184; for columns (11), (12) and (13), Ibid, Table 181, pp. 178-79.

Table III  
Price Statistics, 1951-80  
A. Index Numbers of Wholesale Prices and Rates  
of Growth over the Previous Year 1970-71 = 100

Year	Index Number	Percentage change (+/-) over the Previous year	Year	Index Number	Percentage change (+)/(-) over the Previous year
(1)	(2)	(3)	(1)	(2)	(3)
1951	50.9	—	1966	79.7	11.9
1952	44.8	-12.0	1967	91.7	15.1
1953	46.6	4.0	1968	91.3	-0.4
1954	44.0	-5.6	1969	93.2	2.1
1955	40.4	-8.2	1970	99.0	6.2
1956	45.3	12.1	1971	105.0	6.1
1957	48.0	6.0	1972	113.0	7.6
1958	49.0	2.1	1973	131.6	16.5
1959	51.0	4.1	1974	169.2	28.4
1960	54.2	6.3	1975	175.8	3.9
1961	55.5	2.4	1976	172.4	-2.0
1962	57.5	3.6	1977	185.4	7.5
1963	59.6	3.7	1978	185.0	-0.2
1964	65.8	10.4	1979	206.5	11.6
1965	71.2	8.2			

B. Growth Rate Per Annum, Per cent

Period	Annual Average	Compound	Rough Correspondence with
(1)	(2)	(3)	(4)
1951-55	-5.16	-5.61	4 years of the I plan
1955-60	6.83	6.05	5 years of the II plan
1960-65	6.27	5.61	5 years of the III plan
1965-68	9.41	8.64	3 years of Annual plans
1968-73	8.83	7.59	5 years of the IV plan
1973-77	10.22	8.95	4 years of the V plan
1977-79	5.60	5.54	2 years of the Rolling plan
1951-60	0.72	0.70	1st decade of planning
1960-70	8.27	6.21	2nd decade of planning
1970-79	12.07	8.51	3rd decade of planning
1951-79	10.92	5.13	3 decades of planning
1951-65	2.85	2.43	First 15 years of planning
1965-79	13.57	7.90	Second 15 years of planning
1966-79	12.24	7.60	Second 15 years of planning

Table III (contd.)

## C. Project Cost and Prices of Some Selected Products

Product	Year	Project		Cost		Price of Product
		Mini- mum (Rs.)	Maxi- mum (Rs.)	Mini- mum	Maxi- mum	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Sugar	1967-68	1,086	1,282	100	100	100
	1977-78	3,229	4,028	297	314	171
		(per tonne)	(per tonne)			(Sugar)
2. Cement	1976-77	384	549	100	100	100
	1977-78	533	578	139	105	102
		(per tonne)	(per tonne)			(Cements)
3. Cotton	1968-69	582	887	100	100	100
Textiles	1977-78	1,738	3,077	299	347	264
		(per spindle)	(per spindle)			(cotton yarn)
4. Paper	1975-76	3,706	5,050	100	100	100
Small	1977-78	3,500	4,821	94	95	100
Units		(per tonne)	(per tonne)			(Paper and paper products)
5. Two	1974-75	1,008	1,015	100	100	100
Wheeler						
Scooters	1976-77	980	1,417	97	140	107
		(per Scooter)	(per Scooter)			(Scooter & motor cycle parts)

Source : A and B column (2) of Table A : Office of the Economic Adviser, Ministry of Industry, Government of India : Revised Index Numbers of Wholesale Prices in India, Base 1970-71 = 100. Monthly Bulletin for May 1980, New Delhi, Table 1, Column 4, p. 5. Figures in column (3) of Table A and of column (2) and (3) of Table B are worked out on the basis of data in column (2) of Table-A.

C. For columns (3) and (4) : V.P. Chitale : Project Viability in Inflationary conditions New Delhi 1981, Table XIV, p. 47. Column (7), worked out on the basis of data given in H.L. Chandhok : Wholesale Price Statistics, India, 1947-78 Vol. I, New Delhi, 1978, Tables F. 1.16, 1.21, 1.23, 1.37, 1.50, p.186, p.191, p.193, 207, 220.

Table IV  
Industries where Annual Average Growth Rate of Installed  
Capacity during later Periods was lower than the same  
during 1959-65

Industry	Periods										Total	
	4		3		2		1		Nil		No. (2+4+6 +8+10)	weight (3+5+7 +9+11)
	No.	weight	No.	weight	No.	weight	No.	weight	No.	weight		
(i)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
II Basic	6 (50)	5.13 (32)	5 (42)	1.73 (11)	1 (8)	9.23 (57)	—	—	—	—	12 (100)	16.09 (100)
II Capital goods	3 (50)	.98 (19)	1 (17)	1.89 (38)	2 (33)	2.17 (43)	—	—	—	—	6 (100)	5.04 (100)
II Intermediate goods	2 (20)	1.10 (13)	5 (50)	6.57 (80)	1 (10)	.17 (2)	2 (20)	.34 (4)	—	—	10 (100)	8.17 (100)
IV Consumer goods	9 (50)	12.19 (78)	5 (28)	1.02 (6)	3 (16)	2.08 (13)	—	—	1 (6)	.61 (4)	18 (100)	16.63 (100)
Total	20 (43)	20.12 (44)	16 (35)	11.21 (24)	7 (15)	13.65 (30)	2 (4)	.34 (1)	1 (2)	.61 (1)	46 (100)	45.93 (100)

1. The four periods (other than 1959-65) are : 1966-67, 1968-72, 1973-74 and 1975-77.
2. Figures in brackets give percentages to the respective totals

Source : Prepared from M. Y. Khan : "Trends in Industrial Production, 1951-77" Reserve Bank of India Occasional Papers, Bombay, June 1980, Statement 3, pp. 98-99.

Table V

## Capacity Utilisation in Indian Industry

## A. Industries where Annual Average Capacity Utilisation Ratio during later Periods was lower than the same during 1959-64

Industry		Periods										Total	
		4		3		2		1		Nil		No. (2+4+6 (+8+10)	Weight (3+5+7 (+9+11)
		No.	Weight	No.	Weight	No.	Weight	No.	Weight	No.	Weight		
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I Basic		4 (36)	2.60 (38)	3 (27)	.58 (8)	3 (27)	3.47 (51)	—	—	1 (10)	.22 (3)	11 (100)	6.86 (100)
II Capital Goods		1 (20)	.54 (9)	3 (60)	2.52 (41)	1 (20)	3.03 (50)	—	—	—	—	5 (100)	6.09 (100)
III Intermediate goods		2 (22)	.53 (27)	2 (22)	.24 (12)	1 (11)	.09 (5)	3 (33)	.06 (3)	1 (11)	1.00 (52)	9 (100)	1.93 (100)
IV Consumer Goods		6 (35)	3.78 (24)	2 (12)	1.00 (6)	4 (24)	4.70 (29)	4 (24)	5.95 (37)	1 (5)	.61 (4)	17 (100)	16.04 (100)
Total		13 (31)	7.45 (24)	10 (24)	4.34 (14)	9 (21)	11.29 (37)	7 (17)	6.01 (19)	3 (7)	1.84 (6)	42 (100)	30.92 (100)

1. The four periods (other than 1959-60) are: 1966-67, 1968-72, 1973-74 and 1975-77

2. Figures in brackets give percentages to the respective totals.



Table V (contd.)

**B. Capacity Utilisation in Major Sector  
1976-77 to 1979-80 (percent)**

Sector	1976-77	1977-78	1978-79	1979-80
(1)	(2)	(3)	(4)	(5)
1. Saleable Steel (Integrated Plants)	91.9	90.3	81.5	69.1
2. Aluminium	83.5	61.3	66.4	58.2
3. Fertilizers (N) (Stabilished Plants)	83.6	82.3	83.3	76.6
4. Fertilisers ( $P_2O_5$ )	66.0	78.0	73.4	61.5
5. Cement	86.6	88.8	85.6	72.6
6. Newsprint	76.9	74.7	64.0	63.2
7. Paper and Paper Board	79.0	76.0	72.4	68.2
8. Power Generation Thermal (All India Average per cent capacity factor)	56.0	50.8	48.4	45.0
9. Railways (Index of Net Tonne-Kilometers Freight Traffic, 1950-51 = 100)	356	369	351	350

Source : A. prepared from M.Y. Khan : "Trends in Industrial Production, 1951-77" Reserve Bank of India Occasional Papers Bombay June 1980, Statement 6, p.103.

B. Government of India, Planning Commission : Sixth Five Year Plan 1980-85, New Delhi, 1981, Chapter 3, Table 3.1, p. 32.

Table VI

**Number of Sick Industrial Undertaking\* and credit Outstanding  
by Industry, 1976 and 1979 (as of December).**

Industry	1976*			1979		
	No. of Units	Credit	Out- standing	No. of Units	Credit	Out- standing
		Rs. in Crores	Percen- tage		Rs. in Crores	Percen- tage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Engineering and Electricals	85	241.27	39.5	130	393.82	34.0
2. Textiles	56	150.92	24.8	88	308.86	26.6
3. Jute	25	55.82	9.2	33	85.85	7.4
4. Chemicals	10	40.07	6.6	22	128.31	11.1
5. Sugar	23	18.08	3.0	46	79.62	6.9
6. Rubber	4	17.44	2.9	—	—	—
7. Cement	3	13.33	2.2	—	—	—
8. Others	35	71.80	11.8	59	162.02	14.0
<b>Total</b>	<b>241</b>	<b>608.75</b>	<b>100</b>	<b>378</b>	<b>1,158.48</b>	<b>100</b>

\* Enjoying aggregate credit limits of Rs. 1 crore and above.

+ Excludes the sick textile units taken over by the NTC.

Source : For 1976, Reserve Bank of India, Report On Currency and Finance, Vol. I 1976-77, Bombay, p. 14. For 1979, M. S. Patwardhan, "Industrial Sickness, causes and the Remedy" The Economic Times [ Bombay ], September 28, 1981, Table I, p. 5.

**Table VII**  
**Return on Capital Invested/Employed in the Running**  
**Enterprises on the Central Government, 1960-61 to 1969-70**

Year	Number of Enterprises	Departmental Enterprises			$(4) \times (100)$ (3)	Non-Departmental Enterprises			$(8) \times (100)$ (7)
		Capital (Rs. in crores)	Returns (Interest Net Profits) (Rs. in crores)			Number of Enterprises	Capital (Rs. in crores)	Returns (Interest + Net Profits Rs. in crores)	
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	
1960-61	—	—	—	—	32	234	10	4.5	
1961-62	—	—	—	—	34	304	11	3.7	
1962-63	11	2,097	133	6.3	39	1,145	14	1.2	
1963-64	12	2,390	156	6.5	43	1,301	38	2.9	
1964-65	12	2,700	127	4.7	50	1,640	44	2.7	
1965-66	11	2,984	142	4.8	54	2,168	50	2.3	
1966-67	11	3,171	129	4.1	56	2,793	44	1.6	
1967-68	12	3,332	111	3.3	65	3,348	43	1.3	
1968-69	13	3,505	160	4.6	71	3,820	71	1.8	
1969-70	19	3,725	185	5.0	80	3,991	121	2.1	
1968-69					73	3,168	67	2.1	
1969-70					73	3,281	121	3.7	
1970-71					87	3,606	122	3.4	
1971-72					93	4,089	128	3.1	
1972-73					101	4,756	180	3.8	
1973-74					114	5,376	249	4.6	
1974-75					120	6,627	431	6.5	
1975-76					121	8,824	392	4.4	
1976-77					149	10,887	791	7.3	
1977-78					155	12,130	664	5.5	
1978-79					159	14,173	850	6.0	
1979-80					154	12,428	998	8.0	

Source : For upper part : Commerce, Yearbook of Public Sector, 1971 Bombay, Tables 2 and 10, ps. 20 and 25; For lower part : Government of India, Bureau of Public Enterprises, Ministry of Finance : Public Enterprises Survey, 1978-79, Vol. I, New Delhi, Table on page 2.

Table VIII

## Production by Industry

## A. Annual Average Growth Rates in the Index of Industrial production, 1951-58 to 1975-77 (1970 = 100)

Industry/years	1951-58	1959-65	1966-67	1968-72	1973-74	1975-77
[1]	[2]	[3]	[4]	[5]	[6]	[7]
1. Basic	N.A.	11.5	3.7	8.4	0.4	11.8
2. Capital Goods	N.A.	26.8	-8.0	3.3	10.5	7.4
3. Intermediate Goods	N. A.	8.1	-0.1	5.3	0.3	4.6
4. Consumer Goods	N. A.	4.9	-0.7	6.6	0.8	4.9
General Index	7.7	11.8	-5	6.6	1.9	7.0

N.A. = Not available.

## B. Number of Industries where the Average Annual Growth Rates of Production during later periods was lower than the same during 1959-65.

Industry	Periods*					Total (2 to 6)
	4	3	2	1	Nil	
[1]	[2]	[3]	[4]	[5]	[6]	[7]
I Basic	10 [67]	3 [20]	-	1 [7]	1 [7]	15 [100]
II Capital Goods	10 [100]	-	-	-	-	10 [100]
III Intermediate Goods	6 [55]	4 [36]	1 [9]	-	-	11 [100]
IV Consumer Goods	13 [65]	2 [10]	3 [15]	2 [10]	-	20 [100]
Total	39 [70]	9 [16]	4 [7]	3 [5]	1 [Library]	56 [100]

\* The four periods (other than 1959-65) are : 1966-67, 1968-72, 1973-74 and 1975-77.

Source: Ministry of Statistics and Economics

Bombay-34,

Date:— 31/3/1983.

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Table VIII (contd.)

**C. Sectoral Growth Rates of Gross Value Added at 1960-61 Prices :  
Unregistered Manufacturing - 1961-62 to 1973-74**

Sector	Growth Rate [Compound, Per Cent per Annum]
[1]	[2]
1. Textiles, tailoring and leather footwear	2.09
2. Leather and leather products [except footwear]	[-] 1.62
3. Wood, glass, stone and ceramics	4.51
4. Metal, manufacturing and engineering	3.16
5. Chemicals and chemical products	5.98
6. Food, drink and tobacco	1.83
7. Other industries	2.89

Growth rates estimated by semi-log regressions of gross value added in 1960-61 prices on time.

**D. Production in the Specified Subsectors of Village and Small Scale Industries, 1965-66 to 1977-78**

Subsector	Unit	1965-66	1974-75	1977-78	Rates of Growth, per cent per annum (compound)	
					1965-66 to 1977-78	1974-75 to 1977-78
					[1]	[2]
1. [i] Handlooms	Million metres	-	2,290	2,300	-	0.2
[ii] Powerlooms	,,	-	1,678	1,800	-	2.4
Total	,,	3,056	3,968	4,100	2.8	1.1
2. Khadi & Village industries	Rs. in crs.	82.68	179.59	270.34	10.4	14.6
3 Raw silk	Lakh kgs.	21.50	29.12	35.40	4.2	6.7
4. Small Scale Industries	Rs. in crs.	-	4,932	6,700	-	10.8

Table VIII (contd.)

**E Production in Village and Small-scale Industries, 1965-66, 1970-71, 1974-75, and 1977-78**

Subsector	Unit	1965-66	1970-71	1974-75	1977-78) (Likely)
(1)	(2)	(3)	(4)	(5)	(6)
1. Cotton Cloth					
(i) Handlooms	Million meters	3,056	2,280	2,290	2,300
(ii) Powerlooms	"		1,412	1,678	1,800
2. Khadi					
(i) Quantity	Million Sq. metres	85	57	59	72
(ii) Value	Rs. in crores	26.81	25.85	43.28	64.10
3. Village industries	"	55.87	85.60	136.31	206.24
4. Raw silk	Lakh Kgs.	21.50	28.40	29.92	35.40
5. Small-scale industries	Rs. in crores	—	—	4,932	6,700

- Sources : A. M. Y. Khan : "Trends in Industrial Production, 1951-77" Reserve Bank of India Occasional Papers, June 1980, Bombay, Table 4, p. 76.  
 B. Prepared from Ibid., Statement 2, pp. 96-97.  
 C. Perspective Planning Division, Planning Commission, Government of India : Studies in the Structure of Indian Economy and Planning for Development, New Delhi, 1977, Table 10, p. 8.  
 D. J. C. Sandesara : "Small Industry Production in 1982-83, A Quick Comment", The Economic and Political Weekly, April 29, 1978 Bombay, Table 2. p. 731.  
 E. Ibid., Table 3, p. 732.

**Table IX**  
**Capital-Output Ratios**  
**A. Incremental Gross Capital-Output Ratios**  
**(at 1970-71 prices)**

Plan and Period	Ratio
(1)	(2)
1. First Plan (1951-52 to 1955-56)	3.2
2. Second Plan (1956-57 to 1960-61)	4.1
3. Third Plan (1961-62 to 1965-66)	5.4
4. Annual Plans (1966-67 to 1968-69)	4.9
5. Fourth Plan (1969-70 to 1973-74)	5.7
6. Fifth Plan (1974-75 to 1978-79)	3.9



Table IX contd.

**B. Sectoral Incremental Capital-output Ratios at Constant Prices, Five-Year Periods, 1950-78\***  
[1970-71 prices]

	1950-51/ 1955-56	1955-56/ 1960-61	1960-61/ 1965-66	1965-66/ 1970-71	1970-71/ 1975-76	1975-76/ 1977-78
[1]	[2]	[3]	[4]	[5]	[6]	[7]
<b>Primary</b>	<b>2.1</b>	<b>2.1</b>	<b>+</b>	<b>1.5</b>	<b>4.0</b>	<b>5.0</b>
- Agriculture	<b>2.0</b>	<b>2.1</b>	<b>+</b>	<b>1.3</b>	<b>3.9</b>	<b>4.3</b>
- Forestry and logging	<b>3.5</b>	<b>1.0</b>	<b>0.8</b>	<b>3.3</b>	<b>1.1</b>	<b>1.2</b>
- Fishing	<b>4.1</b>	<b>5.7</b>	<b>6.6</b>	<b>6.0</b>	<b>3.3</b>	<b>+</b>
- Mining and quarrying	<b>3.9</b>	<b>2.1</b>	<b>4.9</b>	<b>13.0</b>	<b>8.9</b>	<b>40.9</b>
<b>Secondary</b>	<b>4.4</b>	<b>5.3</b>	<b>5.1</b>	<b>9.4</b>	<b>12.3</b>	<b>4.7</b>
- Manufacturing	<b>4.0</b>	<b>5.8</b>	<b>4.9</b>	<b>11.5</b>	<b>12.2</b>	<b>4.7</b>
- Registered	<b>6.1</b>	<b>7.5</b>	<b>5.6</b>	<b>12.9</b>	<b>17.8</b>	<b>4.6</b>
- Unregistered	<b>1.1</b>	<b>1.9</b>	<b>2.7</b>	<b>8.3</b>	<b>6.6</b>	<b>5.4</b>
- Construction	<b>3.0</b>	<b>1.7</b>	<b>2.0</b>	<b>1.9</b>	<b>4.4</b>	<b>0.8</b>
- Electricity, gas and water supply	<b>17.2</b>	<b>15.2</b>	<b>18.4</b>	<b>16.6</b>	<b>20.9</b>	<b>23.4</b>
- Transport, storage & communication	<b>8.4</b>	<b>9.8</b>	<b>10.4</b>	<b>9.3</b>	<b>8.2</b>	<b>9.1</b>
- Railways	<b>19.6</b>	<b>16.0</b>	<b>18.4</b>	<b>22.4</b>	<b>11.6</b>	<b>5.0</b>
- Transport by other means and storage	<b>4.7</b>	<b>6.3</b>	<b>7.6</b>	<b>7.1</b>	<b>7.6</b>	<b>16.3</b>
- Communication	<b>4.2</b>	<b>4.1</b>	<b>3.9</b>	<b>6.1</b>	<b>6.3</b>	<b>5.9</b>

\* Gross capital formation cumulated for five years, divided by the rise in value added in those five years. For instance, the first column represents capital formation in 1951-52/1955-56 divided by the difference in value added.

+ Value added declined.

Table IX [contd.]

**C. Average Capital-Output Ratios for Selected  
Industries - Medium and Large Public Limited  
Companies, 1961-62 to 1977-78.**

Industry	1961-62	1966-67	1969-79	1974-75	1961-62
	to 1965-66	to 1968-69	to 1973-74	to 1977-78	to 1977-78
[1]	[2]	[3]	[4]	[5]	[6]
1. Medicinal and pharmaceutical preparations	2.5	2.4	2.2	2.4	2.3
2. Cotton textiles	2.8	3.4	3.0	3.5	3.2
3. Sugar	5.8	6.1	6.0	6.8	6.3
4. Iron and Steel	6.1	7.9	7.8	7.5	7.2
5. Basic industrial/chemicals	6.5	8.1	7.7	6.8	7.1
6. Cement	6.0	6.0	8.9	8.0	7.6

Table IX contd.

Table IX (contd.)

## D. Average Capital Output Ratios in Government and in Public Limited Companies, 1960-61 to 1975-76

Activity	Government				Public Limited			
	1960-61	1965-66	1970-71	1975-76	1960-61	1965-66	1970-71	1975-76
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Mining and Quarrying	—	3.01	7.42	3.40	1.94	1.80	1.74	1.26
2. Processing and manufacture : engineering, metals, chemicals, etc.	—	5.91	7.77	7.72	3.98	3.68	3.84	3.31
3. Engineering	3.35	3.29	5.64	3.22	2.71	2.73	2.95	2.60
4. Chemicals	7.66	3.00	12.25	14.18	4.02	4.23	4.44	3.95
5. Other industries	—	12.92	8.32	9.02	5.16	4.85	4.77	5.58

Sources : A. Government of India, Planning Commission, Sixth Five Year Plan 1980-85, New Delhi 1981, Ch. 1, Table 1. 2, p. 2.

B. Ashok V. Desai : "Factors underlying the slow Growth of Indian Industry" Economic and Political Weekly, Annual Number March 1981, Bombay, Table 6, p. 387.

C. Kripa Shanker : "A Study of Capital-Output Ratios in the Indian Corporate Sector, 1961-62 to 1977-78" Reserve Bank of India Occasional Papers, June 1981, Bombay, Table 4, p-8.

D. Ashok V. Desai, *op.cit*, Table 7, p. 389.