



University of Mumbai
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**A REVIEW OF INDIA'S
INDUSTRIAL POLICY AND PERFORMANCE**

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WORKING PAPER UDE 34/1/2011

JANUARY 2011

ISSN 2230-8334

DEPARTMENT OF ECONOMICS
UNIVERSITY OF MUMBAI
Vidyanagari, Mumbai 400 098.

Documentation Sheet

Title:
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WP. No.: UDE 34/1/2011
Date of Issue: January 2011

Contents: 56 P, 7 T, 8 F, 62 R.
No. of Copies: 100

Abstract

When India's industrial policy chronicle is reviewed, it is found that the country has mainly followed three regimes after independence. These are the planned or controlled period till the end of the 1970s, the limited liberalization period of the 1980s and the post-reform period beginning in early 1990s. It is seen that the performance of the industrial sector as a whole coupled with the manufacturing sector has witnessed substantial growth in terms of output after the 1980s, which further stabilized in the 1990s. However, mining and quarrying as well as electricity, gas and water supply sectors of industry have decelerated in the post-reform period.

Key Words: Industry, Growth and Development, Performance, Policy, Liberalization, Investment, Licensing, Manufacturing, Electricity, Gas, Mining, Quarrying, Small Scale Industries.

JEL Code(s): L50, L52, L60, L70

A REVIEW OF INDIA'S INDUSTRIAL POLICY AND PERFORMANCE

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1. INTRODUCTION:

At the end of British colonial rule, India inherited severe structural, economic inadequacies resulting in nearly stalled industrial development. Therefore, following independence, policy makers regarded industrialization as the engine of sustained growth for the rest of the economy, which could facilitate India's move towards economic self-sufficiency and provide enough jobs to reduce the existent poverty. Consequently a comprehensive economic development strategy was pioneered which aimed at self-reliant industrialization under centralized investment planning. However, this policy regime changed its element in the wake of liberalization and de-regulation of the economy in the early 1990s, which affected the performance of the industrial sector in a positive fashion.

After independence, the economic and industrial policy clearly emphasized the institutional framework of a 'mixed economy' where private ownership was permitted in a democratic political environment (Tendulkar and Bhavani, 2004), whereas the public sector comprising of basic and heavy industries was assigned a relatively broader role. Levying multiple rigid controls over private investment, the government often also determined the scale of operations, the location of new investment, and even the technology to be used, resulting in heavily regulated markets. As noted by Ahluwalia (2002a), the industrial structure that evolved under this regime was highly inefficient and needed to be supported by a highly protective trade policy leading to import substitution-driven industrialization. The consequent disappointing performance of the industrial sector and the severe balance of payments crisis in 1991 finally compelled the policy makers to re-script their tools and move towards an '*outward oriented*' open economy model. Even though it was a late starter in

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The authors would like to thank Professor Romar Correa, Professor Neeraj Hatekar and anonymous referee for very fruitful comments, however, the authors are solely responsible for any errors. The views expressed in this paper are personal and do not represent those of the institutions that the authors work for.

liberalization, India initiated a process of wide-ranging economic reforms to shift towards a more market friendly trade and industrial policy regime. This unshackling of the economy resulted in the huge increase in India's rate of growth of GDP, from the so-called 'Hindu' (Nehru-Mahalanobis) rate of 3.00 to 3.50 percent during 1950-80 to nearly 6.00 to 7.00 percent over the last two decades of the 1980s and 1990s (Singh, 2008; p.2). Therefore, the economic reform process contributed to a steady but gradual improvement in performance of the industrial sector as well as in the economy as a whole; however inter-state differences in the pace of economic growth were persistent (Ahluwalia, 2002b). Moreover, Jhabvala and Kanbur (2002, p.1) observed that the economic reform had enormous potential for growth and poverty reduction, but there are at least three upsetting characteristics of the phenomenon that have emerged over the last two decades; technical change which is biased in favour of capital and skilled labour; increased vulnerability and exposure to economic risks; and a shift of economic power towards more mobile factors of production.

The paper is organized in six sections. The *second* section briefly reviews and elaborates the important industrial policy resolutions. Section *three* assesses the comparative performance of the industrial sector over the three major periods of study based on changes in policy regimes. Section *four* deals with the foreign direct investment in India. Section *five* briefly examines the performance of small-scale industrial sector. The last section is the conclusion.

2. BRIEF REVIEW OF INDUSTRIAL POLICY IN INDIA:

As a result of colonization and exploitation by the British government, Indian industry was typically backward till the first half of the twentieth century. Soon after independence, the new government had an immense task of restructuring and developing its industrial base through planning and strategy, so that the socio-economic gains could trickle down to the masses. India remained a relatively closed economy with an extensive role for central planning of industry via licensing and other instruments in the period after independence. However, a new chapter in the history of policy making was written only in 1985 with the de-licensing reforms of Rajiv Gandhi and the more substantial reforms and liberalization of 1991.

2.1. The Pre-Independence Period:

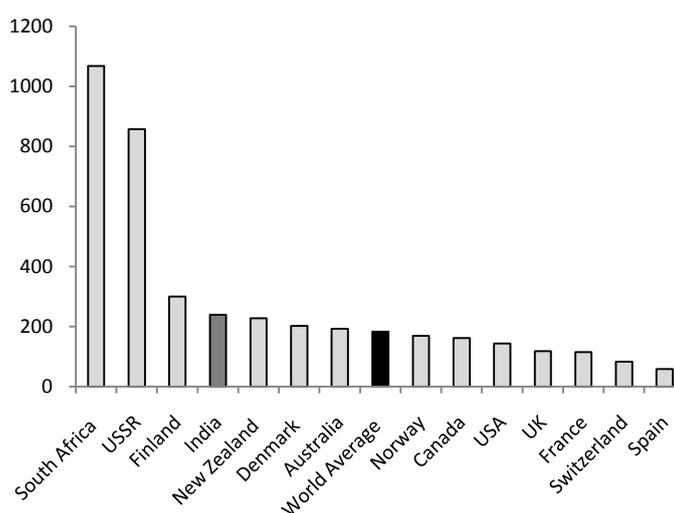
India had a self sufficient economy before the advent of the British rule, with various kinds of manufacturing activities, although agriculture was the main source of livelihood. The country was particularly well known in the worldwide market for its handicraft industries in cotton and silk textiles, metal and precious stone works etc. (Gupta and Das, 2002). However, the economic policies pursued by the colonial government were basically aimed at the protection and promotion of the economic interests of their home country rather than with the development of the Indian economy. Such policies transformed the country into a net supplier of raw materials and consumer of finished industrial products from Britain. The British not only exploited India through an exclusive 'royal monopoly' but also through a hierarchical monopoly of European businessmen who were in control of external trade and much of the large-scale internal trade in collaboration with few Indian intermediaries, landlords and moneylenders. Through suppressing Indians to foster industries and hindering the growth of the Indian capitalist class, they effectively de-industrialized the country which had a very large share of her labour force engaged in secondary industry (Bagchi, 1975). The per capita income remained stagnant, perhaps declining over the whole long period (Mohan, 2006), whereas unemployment compounded significantly.

During the second half of the nineteenth century, modern industry began to take root in India, in the form of cotton and jute textile mills and iron and steel industry among others. However, the British government never supported the growth of such industries and imported its own products to serve the market. Therefore, Mahatma Gandhi, with an objective of self sufficiency, protested against English textile imports and demonstrated the need of a society of small-scale agriculture and industry (Ahuja et al., 2006). During this period, the foundation of modern industry in India was laid by number of pioneering private business houses headed by entrepreneurs like Jamshedji Tata, Walchand Hirachand, Lala Sriram, G. D. Birla and others, which in spite of many obstructions imposed and nil investment by the British government, flourished and managed to earn huge profits. According to Singhal and Tagore (2002, pp.61-62), India's considerable industrial development occurred through import substitution as in the triennium before the First World War, UK's

share in India's imports was 62.80 percent whereas on the eve of the second world war it stood at 30.50 percent. The authors therefore believe that government intervention and investment was unnecessary and uncalled for even at the time of Independence, which retarded the pace of industrial development in the following decades. This is visible from Table 1, where India's rate of industrial growth was well above the world average, in 1938, even about a decade before independence.

Table 1: Index of Manufacturing Production in 1938

Country	Index
South Africa	1067.30
USSR	857.30
Finland	300.10
India	239.70
New Zealand	227.40
Denmark	202.10
Australia	192.30
<i>World Average</i>	<i>182.70</i>
Norway	169.20
Canada	161.80
USA	143.00
UK	117.60
France	114.60
Switzerland	82.40
Spain	58.00



Source: Singhal and Tagore (2002)

Figure 1: India's Manufacturing Position in the World

However, as Bagchi (1975, p.157) noted, 'despite the growth of large-scale industries in India since the 1850s, the country can hardly be said to have experienced industrialization in the modern period'. The author remarks that an active process of industrialization must be marked by systematic increases in mainly two ratios: the ratio of industrial output to total national income and the ratio of the working force employed in secondary industry to the working force available for employment. Over most of the nineteenth century, the latter ratio recorded a fall. The trend was not reversed even during the twentieth century, but the rate of fall was halted because of the very smallness of the ratio of industrial employment to total labour force. Summing up the industrial scenario on the eve of independence, the First Five-Year Plan 1951-56 (GOI, 1950; p.420), noted, 'the relative backwardness of industrial development in India may be judged from the fact that in 1948-49 factory establishments accounted for only 6.60 percent of total national income. The total

labour force engaged in such establishments is about 2.4 million or 1.80 percent of the working population in the country. While in the aggregate India's industrial output may look massive, per head of population it is very much lower than the industrial output in advanced countries'. Let us take a brief overview of the different policies.

2.2. The Nehru-Mahalanobis Era (Planned Development Period: 1948 - 1980):

After India became independent in 1947, the country embarked upon an ambitious plan of economic and industrial development based on a 'socialistic framework' as followed by the Soviet Union and dedicated to self-sufficiency. However, the first tryst with industrial policy can be traced back to setting up of the National Planning Committee in 1938 under the chairmanship of Pt. Jawaharlal Nehru, which recommended that the State should own or control all key industries. It therefore accorded a definite role to economic planning which could raise socio-economic conditions and growth of the economy as a whole (Sharma, 1997). This gave rise to a democratic structure of the government, which was based on the '*mixed economy*' structure. The industrial strategy adopted was inspired by the Mahalanobis Model (Singh, 2008; Jadhav, 2005), which was essentially of a closed economy, strongly biased towards capital goods on the assumption that it would induce higher investments in other sectors through forward and backward linkages. The central planning of economic reforms was evolved, which primarily aimed at State ownership and import-substitution industrialization to build the nation's internal capacity and distribute the gains of economic progress equitably. This economic strategy lasted in the 1950s, 1960s, and most of the 1970s. However, this type of socialistic planning failed to develop a strong economy and efficient institutions.

2.2.1. Industrial Policy Resolution, 1948:

The first Industrial Policy Resolution, announced in 1948, outlined the approach to industrial growth and development. It emphasized the importance of securing a continuous increase in production and ensuring its equitable distribution by providing a limited area of operation of the State in the industrial sector, introducing uncertainty over the areas of private sector activity. The resolution grouped the industries and the firms into four categories (GOI, 2002; p.146), namely:

1. Those exclusively owned by the government, e.g., arms and ammunition, atomic energy, railways, etc.; and in emergencies, any industry vital for national defence.
2. Key or basic industries, e.g., coal, iron and steel, aircraft manufacture, ship building, telephone, telegraphs and communications equipment etc. The undertakings already existing in this group were promised facilities for efficient working and 'reasonable' expansion for a period of ten years.
3. 18 specified industries were to be subject to the government's control and regulation in consultation with the then provincial governments.
4. The rest of the industrial field was, more or less, left open to the private sector.

2.2.2. Industrial Development & Regulation Act (IDRA), 1951:

The IDRA, 1951 was introduced to ensure that industries were set up and expanded only with obtaining a license and specified a schedule of industries that were subject to licensing. According to Arun (2003), the overall objective of industrial licensing was to allocate and channelize private resources according to priorities stated in the development plans. The intention was to reallocate resources from production of consumer goods and into the production of machine tools and capital goods. Only small-scale industry (SSI) was exempted from licensing to encourage labour-intensive consumer goods production in rural areas. Through this Act, the government had full control over:

1. Approval of any proposal on capacity, location, expansion, manufacture of new products etc.
2. Approval of foreign exchange expenditure on the import of plant and machinery
3. Approval for the terms of foreign collaboration

The main objectives of the Act was to empower the Government:- (i) to take necessary steps for the development of industries; (ii) to regulate the pattern and direction of industrial development; (iii) to control the activities, performance and results of industrial undertakings in the public interest. The Act applied to the 'Scheduled Industries' listed in the First Schedule of the Act. However, small-scale industrial undertakings and ancillary units were exempted from the provisions. The Act was administered by the Ministry of Industries and Commerce through its Department of Industrial Policy and Promotion (DIPP).

2.2.3. Industrial Policy Resolution, 1956:

In 1956, capital was scarce and the base of entrepreneurship not strong enough. Hence, the Industrial Policy Resolution gave utmost importance to the role of the State to assume a predominant and direct responsibility for industrial development. It widened the scope of the public sector as a means to achieving a socialistic pattern of society. This policy divided industries into three categories:

1. All basic and strategic industries (seventeen) were to be set up in the public sector, and were called category 'A' type of industries.
2. In category 'B' industries were private enterprises (twelve) who could participate along with public enterprises. This sector was called the joint sector.
3. All remaining industries falling in category 'C' were left to be developed by the private sector.

The policy distinctly emphasized the role of small-scale industries (SSI) in the development of the national economy and providing employment. It also laid emphasis on the equitable distribution of national income and the effective mobilization of resources. It, therefore, recommended the development of ancillary industries in areas where large industries were to be set up. Another objective of the resolution of 1956 was the removal of regional disparities through development of regions with a low industrial base. Accordingly, adequate infrastructure for industrial development of such regions was duly emphasized. As regards to foreign capital, both the policies i.e. 1948 and 1956 recognized its necessity in furthering industrial growth and imparting training to Indians. Therefore, as noted by Jadhav (2005), the Industrial Policy Resolution 1956 was a landmark policy statement and it formed the basis of most subsequent policy announcements.

2.2.4. Monopolies Commission, 1964:

In April 1964, the Government of India appointed a Monopolies Inquiry Commission 'to inquire into the existence and effect of concentration of economic power in private hands' (GOI, 2002; p.148). The Commission was requested to look into the prevalence of monopolistic and restrictive practices in important sectors of

economic activity, the factors responsible for these and the legal solutions for them. The Commission looked at concentration of economic power in the area of industry, and examined industry-wise and product-wise concentration. It drafted a law to control monopolies and recommended the setting up of a permanent Monopolies and Restrictive Trade Practices Commission. On this basis, an Act was passed and a Monopolies Commission was appointed by the government in 1969. The Monopolies and Restrictive Trade Practices Act (MRTP) was designed mainly to serve three purposes (Arun 2003, p.4):

1. To regulate the concentration of economic power in private hands to ensure that it does not cause detriment to the public
2. To control monopolies and prohibit monopolistic trade practices
3. To curb restrictive trade practices

However, this Act covered only private sector undertakings and did not apply to

1. Any undertaking owned or controlled by the government
2. Any trade union or other association or workmen or employees formed for their own reasonable protection
3. Any undertaking engaged in one industry, the management of which has been taken over by a body of persons in pursuance of any authorization made by the Central Government

2.2.5. Industrial Licensing Policy Inquiry Committee (1969) and FERA (1973):

In July 1969, an Industrial Licensing Inquiry Committee was appointed to examine the shortcomings in licensing policy. The Committee felt that the licensing policy had not succeeded in preventing the practice of pre-empting capacity by large houses; it had not ensured development of industries according to announced licensing policies; it did not prevent investment in non-priority industries etc. In 1969, the MRTP Act was passed by the Government and following the report of Industrial Licensing Policy Inquiry Committee, a number of new restrictions were put on the large industrial houses in the industrial licensing policy announced in 1970.

The Foreign Exchange Regulation Act (FERA) was thoroughly revised and amended in 1973. It brought a great change in the foreign investment policy of the government. The main aim of the Act was to regulate foreign exchange transactions to

limit the use of foreign exchange resources which apparently constrained the freedom of foreign investors.

1. Foreign equity was to be permitted only in companies in Appendix 1 industries (industries requiring large investments and advanced technology), or in those that were engaged in exports. Foreign firms were not allowed more than 40 percent of equity. Only certain industries in the area of sophisticated technology were allowed 51 percent foreign capital.
2. The activities of FERA companies were also subjected to stricter restrictions and were not allowed to participate in certain industries. They were also not allowed to expand and take up production of new products.

2.2.6. The Industrial Policy Statement, 1973:

This statement merely intended to make some changes in the industrial structure. With a view to prevent excessive concentration of industrial activity in the large industrial houses, the policy statement of 1973 drew up a list of Appendix 1 industries to be started by large business houses. Therefore it gave preference to small and medium entrepreneurs in setting up of new capacity particularly in the production of mass consumption goods so that the competitive effort of small industries was not affected (GOI, 2002). Large industries were permitted to start operations in rural and backward areas with a view to developing those areas and enabling the growth of small industries around. New undertakings of up to ₹ 10 million by way of fixed assets were exempted from licensing requirements for substantial expansion of assets. This exemption was not allowed to MRTP companies, foreign companies and existing licensed or registered undertakings having fixed assets of ₹ 50 million and above. The entry of competent small and medium entrepreneurs was encouraged in all industries including Appendix 1 industries. A Secretariat for Industrial Approvals (SIA) was set up in November 1973, and all industrial licenses, capital goods, import licenses, terms of foreign collaboration were brought under the SIA.

2.2.7. The Industrial Policy Statement, 1977:

The thrust of the Industrial Policy Statement of 1977 was on decentralization of the industrial sector with effective promotion of Cottage and Small-scale Industries

(SSI) widely dispersed in rural areas and small towns. It emphasized that ‘whatever can be produced by small and cottage industries must only be so produced’ (GOI, 2002; p.150). It also provided for close interaction between industrial and agricultural sectors (Jadhav, 2005).

1. The concept of District Industries Centres where each district would have such a district centre which would provide all the support and services required by small entrepreneurs was introduced. These included economic investigation of the districts, supply of machinery and equipment, raw material and other resources, arrangement for credit facilities, call for quality control, research and extension etc.
2. A new concept of tiny sector was introduced within SSI. It was defined as an industrial unit with investment in machinery and equipment up to ₹ 1 lakh, and situated in towns with a population of less than 50000 (as per 1971 census). This tiny sector was to be given special attention and extended help by way of provision for margin money assistance.
3. It considerably expanded the list of reserved items for exclusive manufacture in the small-scale sector. This concept, as recommended by the Karve Committee, was introduced in 1967 with 47 products. The list of such reserved items was 504 till 1977. The new policy expanded this list to 807.
4. It also stated that those foreign companies which diluted their foreign equity up to 40 percent under FERA 1973 were to be treated at par with the Indian companies. Moreover, it issued a list of industries where no foreign collaboration of financial or technical nature was allowed as indigenous technology was already available. Fully-owned foreign companies were allowed only in highly export-oriented sectors or sophisticated technology areas.
5. Further, in order to ensure balanced regional development, it was decided not to issue fresh licenses for setting up new industrial units within certain limits of large metropolitan cities (more than 1 million population) and urban areas (more than 0.5 million population).

All these initiatives, however, did not make a lasting impact on industrial growth and productivity (Sharma, 1997). Exogenous shocks were coupled with little or no competition, given the system of licensing, reservations, pricing, high tariffs and other quantitative restrictions. DeLong (2001) maintains that the conventional

narrative of India's post-independence history begins with a disastrous wrong turn by India's first prime minister, Jawaharlal Nehru, toward Fabian socialism, central planning, and an unbelievable quantity of bureaucratic red tape. This "license raj" strangled the private sector and led to rampant corruption and massive inefficiency, finally resulting in India stagnating until bold neoliberal economic reforms triggered by the currency crisis of 1991. Yet, when compared across countries in the same period, India showed about average growth. He gives three possible reasons for the same. Firstly, it is possible that only exceptional countries were able to avoid inefficiencies, like those of the license raj, in the post-second world war period. A second possibility is that the failure of economic policies in terms of promoting efficiency was in large part offset by successes in mobilizing resources as India had a relatively high savings rate for a country in its development position in the period. A third possibility is that the destructive effects of inefficiency-generating policies were offset by powerful advantages of a rich culture of education, democracy where there was accountability and welfare objectives, or some other factors.

As to Tendulkar and Bhavani (2004, p.4), the evolution of the post-independence economic policy had three basic features: autarkic trade policy, extension of public sector, and direct, discretionary and quantitative controls on the private sector. These features interacted in the institutional environment of functioning markets and private ownership of means of production to generate perverse incentives that constricted the operation of market forces and private economic agents and resulted in a low rate of economic growth. Ahluwalia (1991) has summed up the adverse consequences of this Indian model in the following terms:

- Barriers to entry into individual industries that restricted domestic competition;
- Indiscriminate and indefinite protection of domestic industries from foreign competition;
- The adverse effects of protecting small-scale industries and regional dispersal of growth on the choice of the optimal scale of production;
- Barriers to exit by not allowing firms, even when they were non-viable, to close down and the failure to move the resources to an alternative growing industries;
- Administrative hurdles inherent in a system of physical controls;

- Increased incentives for rent-seeking activities that resulted in dampening entrepreneurship;
- Little or no incentive to upgrade technology.

2.3. Introduction of Limited Liberalization:

After 1980, the seed of liberalization was sown, and the trend was gradually to dilute the strict licensing system and allow more freedom to the entrepreneurs, although there was very little liberalization of the external sector until 1991. The domestic political instability and uncertainty had ended; industrial policy witnessed gradual loosening of control and modernization of the manufacturing sector was sought through import of technology and inflow of foreign capital. All this finally resulted in better industrial performance together with overall economic development in the post-reform period.

2.3.1 Industrial Policy Statement, 1980:

The industrial policy statement of 1980 placed emphasis on promotion of competition in the domestic market, technological up-gradation and modernization of industries. Few steps were taken to modernize some of the most important industries such as cement, steel, aluminium and power generation equipment. Some of the socio-economic objectives spelt out in the Statement (GOI, 2000) were optimum utilization of installed capacity, higher productivity, higher employment levels, removal of regional disparities, strengthening of the agricultural base, promotion of export-oriented industries, promotion of economic federalism through equitable spread of investment and dispersal of returns and finally consumer protection against high prices and poor quality.

Policy measures were announced to revive the efficiency of public sector undertakings by developing the management cadres in functional fields viz., operations, finance, marketing and information systems. An automatic expansion of capacity up to 5 percent p.a. was allowed particularly in the core sector and in industries with long-term export potential. Special incentives were granted to

industrial units which were engaged in industrial processes and technologies aiming at optimum utilization of energy and the exploitation of alternative sources of energy. In order to boost the development of SSI, the investment limit was raised to ₹ 2 million in small units and ₹ 2.5 million in ancillary units. In the case of tiny units, the investment limit was raised to ₹ 0.2 million. In order to ensure fullest utilization of existing industrial capacities, particularly in core industries and in industries with a long term export potential, the facility of automatic expansion of capacity of 5 percent p. a. or 25 percent in a five-year plan period to be taken in one or more stages was permitted to all Appendix I Industries. Requests for setting up 100 percent export- oriented units and for expansion of existing units for purposes of export would also be considered sympathetically. Also, industrial processes and technologies aimed at optimum utilization of energy or the exploitation of alternative sources of energy was to be given special assistance, including finance on concessional terms. The control regime, however, continued to be extended in areas such as exchange management and import tariffs continued to rise.

There were some more policy changes taken towards partial or limited liberalization in the leadership of Rajiv Gandhi who aimed at increasing productivity, reducing costs and improving quality which would eventually lead to taking India 'to the 21st century'. He relaxed the license raj, governmental restrictions on foreign currency, travel, foreign investment and imports. As Prime Minister, he also increased economic aid and scientific cooperation. More encouragement was given to science and technology which led to the expansion of the telecommunications industry, India's space program and gave birth to the software industry and the information technology sector. The specific policy initiatives included (Jadhav, 2005; GOI, 2002):

1. Re-endorsement of licenses in 1984: The capacity indicated in the licenses could be re-endorsed, provided it was 25 percent more than the licensed capacity.
2. In 1988, all industries, excepting 26 industries specified in the negative list, were exempted from licensing. The exemption was, however, subject to investment and locational limitations.
3. With a view to promote industrialization of backward areas in the country, the government announced in June, 1988 the *Growth Centre Scheme* under which 71 Growth Centres were proposed to be set up throughout the country. They were to

be endowed with basic infrastructure facilities such as power, water, telecommunications and banking to enable them to attract industries.

4. Broad banding and selective de-licensing in 1985-86 was extended to 25 industries.
5. Tax rates declined slowly from the absurd highs they had reached in the seventies and modified value-added tax credit was introduced into the excise tax.

2.4. New Economic Policy, 1991:

Mostly there are convergent views on the causes of the unprecedented economic crisis faced by India in 1990-91 which led to the introduction of full-fledged liberalization of the economy. However, the root cause was the macro-economic mismanagement throughout the 1980s as reflected in unsustainably high fiscal deficits, in particular the revenue deficits and the monetized deficits. As observed by FAO (1995), from 1950 to 1980, while the Indian economy was growing at a relatively slow rate of 3.60 percent, domestic investment exceeded domestic savings by only a small margin that could be bridged through foreign borrowing on a very small-scale. However, during the period 1981 to 1990, when the average growth rate of GDP accelerated to 5.62 percent, the gap between investment and savings widened substantially. This increase in investment was mainly on account of large capital expenditures and import of machinery and raw materials, including oil, which eventually necessitated heavy borrowing from abroad and the consequent liability of external debt. Foreign debt increased from US\$ 23.50 billion in 1980 to US\$ 63.40 billion in 1991. In 1991, nearly 28 percent of total export revenues went to service the debt. The most important reason for the internal savings rate falling increasingly short of investment requirements was the expanding fiscal deficit of the government which arose for a number of reasons: exorbitant expenditures were incurred by the central government's subsidies of fertilizers, food and exports and by the state governments' of power, transport and irrigation. The inefficient functioning of many of the central and state public sector enterprises further burdened the government budget.

Finally, in addition to the current account deficit, mounting capital account expenditures by the government and public enterprises had to be financed through public borrowing. By 1990, internal debt liabilities had increased to 53 percent of

GDP compared with 35 percent in 1980, and interest payments accounted for as much as 24 percent of total government expenditure. In addition, high-cost commercial loans from the banks and non-resident Indians had to fill the gap. These sources also dried up due to loss of confidence and expectation of a devaluation of the rupee. Thus, in spite of borrowing US\$ 1.8 billion from the International Monetary Fund (IMF), the foreign exchange reserves declined to a low of US\$ 2.2 billion (with less than 15 days' cover against annual imports) (Wadhva, 2004). This eventually resulted in a severe balance of payments crisis and pushed India to the verge of bankruptcy.

According to Nagaraj (1997, p.2869), a sudden drying up of inward remittances and the west Asian markets because of the Gulf war, and the collapse of the Soviet economy - then India's largest trading partner - were the proximate economic causes of the crisis. Moreover, domestic political instability accentuated the economic troubles, as critical decisions got postponed and fiscal discipline loosened. It was against this background that the new economic policy was introduced. As observed by Ahluwalia (2002a), India took some steps in the direction of liberalization in the 1980s, but it was not until 1991 that the government signalled a systemic shift to a more open economy with greater reliance upon market forces, a larger role for the private sector including foreign investment, and a restructuring of the role of government in order to free the shackles of industry.

In the situation faced by India, it was clear that the economic liberalization would involve a stepwise approach, beginning with the restoration of the macro-economic stabilization, followed by structural and sector specific reforms. Wadhva (2004, p.263) maintains that it was of the utmost importance to restore India's international credibility by meeting its scheduled external debt liabilities and by maintaining a realistic exchange rate consistent with market obligations and more importantly control unacceptable inflation rates. These financial reforms included attempts at reducing the fiscal deficit, tax reforms and resource generation through divestment. The combined fiscal deficit of the central and state governments was successfully reduced from 9.40 percent of GDP in 1990-91 to 7.00 percent in both 1991-92 and 1992-93 and the balance of payments crisis was over by 1993 (Ahluwalia, 2002a).

2.4.1 Industrial Policy, 1991:

The structural reforms since 1991 covers selected sectors which primarily include the following areas: trade policy, industrial policy, infrastructural sector policies, privatization policies and policies for attracting foreign direct investment. However, as Ahuja et al. (2006) remarked, India's industrial policy was the central focus of the reforms and also one of the area's most changed by the economic liberalization. The objectives of the Industrial Policy 1991 were:

- To maintain a sustained growth in productivity
- To enhance gainful employment
- To achieve optimal utilization of human resources
- To attain international competitiveness
- To transform India into a major partner and player in the global arena

Following were some of the important policy measures announced to pursue the above objectives.

1. Liberalization of Industrial Licensing Policy: The system of obtaining government approvals for manufacturing has been progressively liberalized commencing in the 1990s with measures for facilitating foreign investment and technology transfers and opening most areas which were earlier reserved for the public sector. The requirement of obtaining an industrial license for manufacturing activities is now limited only to the following:
 - a) Industries reserved for the public sector related to security and strategic concerns such as atomic energy, atomic minerals and railways.
 - b) Five industries of strategic, social or environmental concern such as (1) Distillation and brewing of alcoholic drinks; (2) Cigars and cigarettes of tobacco; (3) Electronics aerospace and defence equipment; (4) Industrial explosives and (5) Hazardous chemicals
 - c) Manufacture of items reserved for the small-scale-sector (SSI Units) by non-small-scale industrial units or by units in which foreign equity is more than 24 percent.

All other industries are exempt from licensing subject to certain locational restrictions in metropolitan areas. In the event, locational restrictions are not adhered to the unit is required to obtain an industrial license.

2. Introduction of Industrial Entrepreneurs' Memorandum (IEM): Industries not requiring compulsory licensing are to file an IEM to the Secretariat for Industrial Assistance. No industrial approval was required for such exempted industries. Amendments are also allowed to IEM proposals filed after 1.7.1998.
3. Further, the new policy also conceived of a reform of the state-owned undertakings. This reform process had two components. First, it opened up areas hitherto reserved exclusively for the public sector to the private sector and second there was a decision to reduce the equity holding of the government in public sector enterprises to 51 per cent. This policy of disinvestment was expected to generate resources and at the same time subject these enterprises to disciplining by the stock market, leading to improvements in their efficiency (Mani, 1995).
4. Liberalization of Location Policy: A significantly amended locational policy was in place where no industrial approval was required for locations not falling within 25 kms of the periphery of cities having a population of more than one million except for those industries where industrial licensing was compulsory. Non-polluting industries such as electronics, computer software and printing could be located within 25 kms of the periphery of cities. Permission to other industries was granted in such locations only if they were located in an industrial area so designated prior to 25.07.91. Zoning and land use regulations as well as environmental legislations had to be followed.
5. Electronic Hardware Technology Park (EHTP)/Software Technology Park (STP) scheme: For building up a strong electronics industry and with a view to enhancing exports, two schemes viz. Electronic Hardware Technology Park (EHTP) and Software Technology Park (STP) are in operation. Under the schemes, the inputs are allowed to be procured free of duties. The Directors of STPs have powers to approved fresh proposals and also grant post-approval amendment in respect of EHTP/STP projects as have been given to the

Development Commissioners of Export Processing Zones in the case of export-oriented units. All other applications for setting up projects under these schemes are considered by the Inter-Ministerial Standing Committee (IMSC) Chaired by the Secretary (Information Technology).

6. **Environmental Clearances:** Entrepreneurs are now required to obtain statutory clearances relating to Pollution Control and the Environment for setting up an industrial project. A Notification (dated 27.01.94) issued under the Environment Protection Act 1986, has listed 29 projects in respect of which environmental clearance needs to be obtained from the Ministry of Environment. However, if investment is less than ₹ 500 million, such clearance is not necessary, unless it is for pesticides, bulk drugs and pharmaceuticals, asbestos and asbestos products, etc. Further, any item reserved for the small-scale sector with investment of less than ₹ 10 million is also exempt from obtaining an environmental clearance. Setting up industries in certain locations considered ecologically fragile is guided by separate guidelines issued by the Ministry of Environment.

7. **Policy for Small-Scale:** The investment limit for tiny units was increased to ₹ 25 lakh and locational conditions were withdrawn. The equity participation by other industrial undertakings was permitted up to a limit of 24 percent of shareholding in SSIs. Factoring services were launched to solve the problem of delayed payments to SSI. Priority was accorded to small and tiny units in allocation of indigenous and raw materials. Market promotion of products was emphasized through co-operatives, public institutions and other marketing agencies and corporations. In 2000, the exemption for excise duty limits was raised from ₹ 50 lakh to ₹ 100 lakh in order to improve their competitiveness. Also a credit linked capital subsidy of 12 percent against loans for technology up-gradation was provided in specified industries. 73 items reserved for exclusive manufacture in the SSI sector were de-reserved in June 2003. These consist of chemicals and their products, leather and leather products, laboratory reagents etc. The National Commission on Enterprises in the Un-organized/Informal Sector was set up in September 2004. It suggested measures considered necessary for improvement in the productivity of these enterprises, generation of large-scale employment opportunities, linkage of the sector to the institutional framework in areas like

credit, raw material supply, infrastructure, technology up gradation, marketing facilities and skill development by training. A further 85 items were de-reserved in October 2004.

8. Foreign Investment: The primary changes in the foreign investment regime included automatic approval of FDI up to 51 percent of equity ownership by foreign firms in a group of 34 technology-intensive industries, a case-by-case consideration of applications for foreign equity ownership up to 75 percent in nine sectors, mostly relating to infrastructure, and the streamlining of procedures relating to approval of investment applications in general. However, from time to time there has been revision in liberalization of FDI. The policy now allows 100 percent foreign ownership in a large number of industries and majority ownership in all through an *automatic route* except a small negative list. For the remaining industries, it is allowed through specific government approval accorded on the recommendation of the Foreign Investment Promotion Board (FIPB).

A few other measures after the 1991 industrial policy are (Jadhav, 2005; pp.9-10):

- Under the framework provided by the Competition Act 2002, the Competition Commission of India was set up in 2003 so as to prevent practices having adverse impact on competition in markets.
- In an effort to mitigate regional imbalances, the Government announced a new North-East Industrial Policy in December 1997 for promoting industrialization in the North-Eastern region. The Policy has provided various concessions to industrial units in the North Eastern Region, e.g., development of industrial infrastructure, subsidies under various schemes, excise and income tax exemption for a period of 10 years, etc. North Eastern Development Finance Corporation Ltd. has been designated as the nodal disbursing agency under the Scheme.
- The focus of disinvestment process of PSUs has shifted from sale of minority stakes to strategic sales. Up to December 2004, PSUs had been divested to an extent of ₹ 478 billion.
- Apart from general policy measures, some industry-specific measures have also been initiated. For instance, the Electricity Act 2003 has been enacted which

envisaged the de-licensing power generation and the permission of captive power plants. It is also intended to facilitate private sector participation in the transmission sector and provide open access to the grid sector.

- Various policy measures have facilitated increased private sector participation in key infrastructure sectors such as telecommunication, roads and ports. Foreign equity participation up to 100 percent has been allowed in construction and maintenance of roads and bridges. MRTP provisions have been relaxed to encourage private sector financing by large firms in the highway sector.

However, the exit of unviable and uncompetitive units is still significantly constrained by the Sick Industrial Companies Act of 1985, labour legislation, particularly the Contract Labour Act of 1970, the Industrial Disputes Act of 1948 and bankruptcy provisions of the Companies Act of 1956 (Srinivasan, 2003). Also, according to Panagariya (2001), labour laws must be reformed so as to restore the employer's right to lay off workers upon adequate compensation to them. The reservation of items for SSIs must end, with giving them assistance through alternative measures rather than a total ban on large-scale entry. Privatization of public sector enterprises needs to be speeded up and agriculture must get attention.

3. PERFORMANCE OF THE INDUSTRIAL SECTOR:

As we have witnessed more than 60 years of independence, there have been mainly three significant policy regimes which the government has followed to influence the industrial sector in a positive manner and change both its structure and pattern. They are:

- ❖ Planned Development Period (1950-51 to 1980-81)
- ❖ Limited Liberalization Period (1980-81 to 1991-92)
- ❖ Post-Reform Period (1991-92 onwards)

The performance of the industrial sector of India is examined under these three sub-periods based on the major industrial policy changes as well as between the whole period from 1950-51 to 2008-09. To gain insight into the performance, growth trends in the Indian economy since independence in the total industrial sector, manufacturing

sector, mining and quarrying sector and electricity, gas and water supply sector has been studied. This is done to determine if there are any breaks in the performance and to distinguish between different phases of economic and industrial growth. The data used for the purpose is that of output at factor cost (at constant prices; base year: 1999-2000) and the main data source is RBI (2009). Three following simple exercises are carried for fulfilling the objective (for details see Appendix B).

1. A simple annual growth rate (year over year i.e., Y-o-Y) of output is estimated and the compound annual growth rate (CAGR) for the periods is computed with the help of log-linear relation.
2. A moving average for a five-year period is taken.
3. The Hodrick-Prescott filter has been applied to the basic annual growth series to examine the long term cyclical fluctuations.

When the performance of the industrial sector is examined in terms of CAGR for the three periods (Figure 2), it is estimated that in the total period (1950-51 to 2008-09), the industry output matured at a healthy rate of 5.61 percent, whereas manufacturing sector was just below it at 5.45 percent. Mining and quarrying registered 5.40 percent CAGR, whereas electricity, gas and water supply showed the highest growth of 8.30 percent in the whole period of study (Figure 2). It can clearly be seen that both industry and manufacturing sectors accelerated in the second period of study, i.e., 1980-81 to 1991-92, however remained at similar levels after the reforms set in (1991-92 onwards). This suggests that the growth of the industrial sector and the manufacturing sector had started during the 1980s, although firmed up in the 1990s and thereafter. The industrial growth as a whole during the limited liberalization period (1980-81 to 1991-92) was higher on account of electricity, gas and water supply (8.74 percent), whereas during the post-reform period manufacturing (6.67 percent) led its growth. In the second period of the study i.e. limited liberalization period, mining and quarrying recorded much better growth rates of 7.71 percent than in other periods. In contrast to this, the electricity, gas and water supply sector of the industry grew mostly in the planned development period at 9.99 percent due to large investment by the government. After the reforms of the 1990s, both the sectors were already matured and therefore showed a dismal performance.

Table 2: Comparative CAGR in different Periods (Percent)

Periods	Industry	Manufacturing	Mining & Quarrying	Electricity, Gas & Water Supply
Total Period: 1951-52 to 2008-09	5.61	5.40	5.40	8.30
Period 1: Planned Development Period 1951-52 to 1980-81	5.45	5.27	4.61	9.99
Period 2: Limited Liberalization Period 1980-81 to 1991-92	6.29	5.74	7.71	8.74
Period 3: Post-Reform Period 1991-92 to 2008-09	6.30	6.67	4.73	5.48

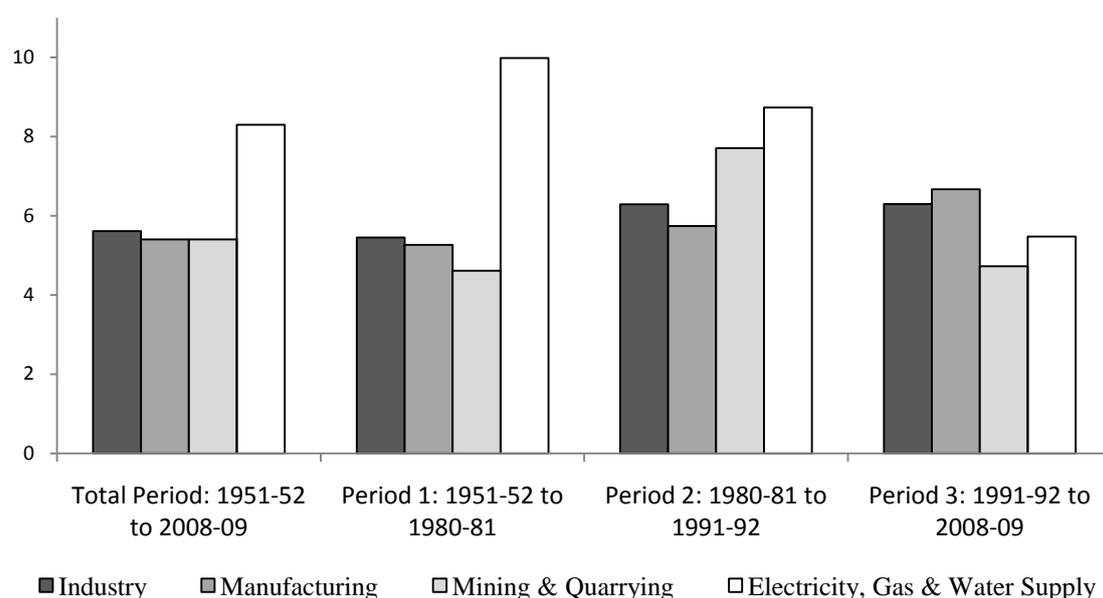


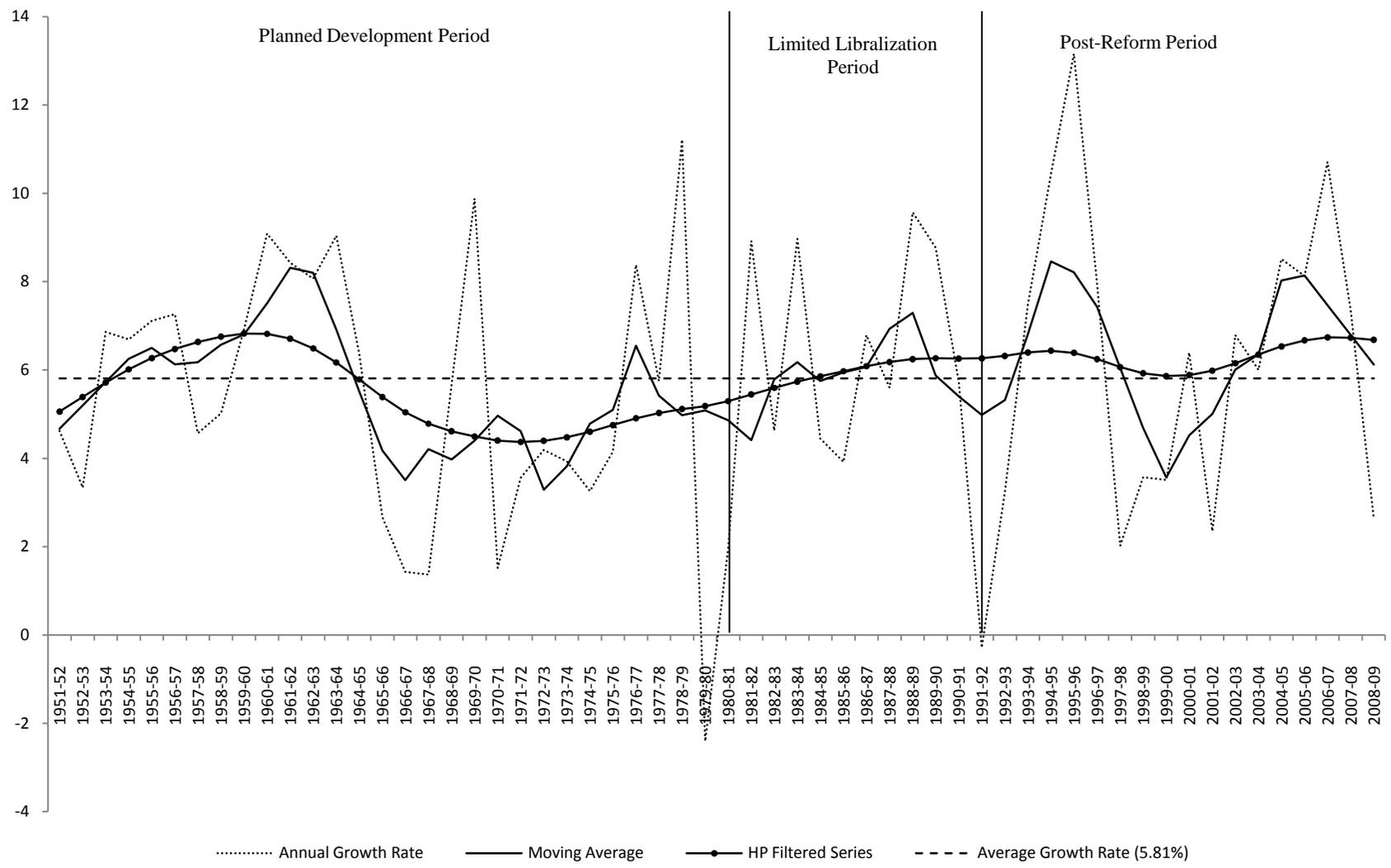
Figure 2: Comparative CAGR in different Periods (Percent)

3.1. Sector-wise Performance:

The growth of the Indian economy and specifically the industrial sector is traced and examined through three main periods based on the major policy changes, i.e., planned development period, limited liberalization period and post-reform period. Figures 3-6 show the annual growth rate of the industrial sectors of the economy, the growth trend in the HP (Hodrick-Prescott) filtered series and the five-year moving average of the growth rates over the 59 years of analysis.

It can be observed from Figure 3 that the industrial sector of India had a major boom after the independence of the country. It was steeply increasing till the year 1961-62. However, starting 1963-64, the output began to fall drastically. It remained

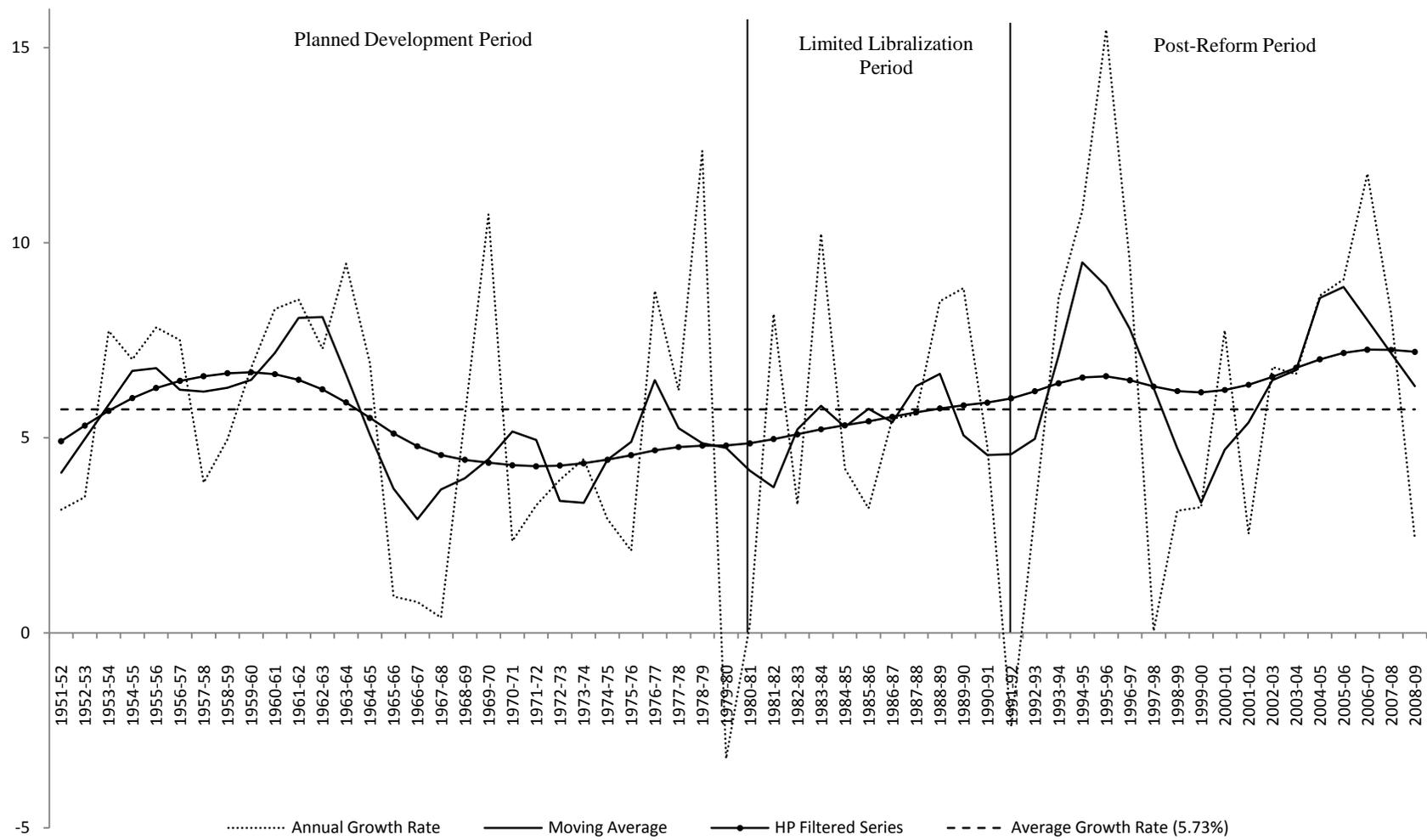
Figure 3: Growth Trends of Industrial Output (%)



stagnant for the next 10-12 years, and picked up only in the late 1970s. The upward trend starting 1974-75 is visible till 1988-89, after which the growth stagnated and remained at lower levels till the year 2000-01. Thereafter, the last few years has seen good growth in industrial output. This broad growth trend is evident from the 5 year moving average as well as the HP filtered series which clearly brings out the cycles of industrial production growth. The average of annual (Y-o-Y) growth is calculated as 5.81 percent for the whole period. Evidently, after 1984-85, the HP filtered growth series is mostly above the average (Y-o-Y) growth rate 5.81 percent. This trend is more pronounced after the reforms (1991-92). Nonetheless, the moving average dips drastically below it in the year 1999-2000. Therefore it may be concluded that the industrial output has clearly shown two booms in the history, first one being the initial post-independence period and second starting the limited liberalization period, i.e., 1980-81 onwards. The period just after the introduction of reforms did not show any significant increase in the output levels, moreover it dipped slightly in the 1999-2001 period.

The trend of growth in manufacturing output is similar to that of industrial output primarily due to more importance of the sector in the total industrial output. In the index of industrial production (IIP, base 1993-94), 79.36 percent weight is given to manufacturing, whereas mining and quarrying has only 10.47 percent, leaving 10.17 percent for the electricity gas and water supply sector. Moreover, it is affected by the same factors as the industrial sector in totality. Manufacturing output grew exceptionally well just after independence. However, it stagnated in the period starting 1964-65 (figure 4). In the limited liberalization period, it gained momentum and showed a positive trend therein, especially in the later years. Except for a little slump in the late 1990s, manufacturing output has registered growth during the post-reform period. The average (Y-o-Y) growth for the whole period is 5.73 percent, which is achieved for the entire post-reform period, starting 1987-89, as seen from the HP filtered series. Here it may be deduced that the growth in manufacturing sector was more pronounced in the period after reforms i.e., starting 1991-92, as against the total industrial sector which recovered in the limited liberalization period itself. Recent years, 2001-2002 onwards, the growth is much above the period average, giving positive signals for the sector.

Figure 4: Growth Trends of Manufacturing Output (%)



Mining and quarrying output has shown some differing growth trends as seen in Figure 5. In the planned development period, it showed around average growth (5.41 percent) throughout. However, it too encountered a slump in the period starting 1964-65 to 1974-75. Most evident is the boom in the sector in the limited liberalization period as seen by the 5-year moving average as well as the HP filtered series. The growth in output of the sector in the post-reform period is below the entire period average, testifying to its poor performance.

The electricity, gas and water supply sector of the Indian industry has demonstrated a negative trend after the liberalization of the economy. The sector saw immense growth after independence due to huge government investments. However, it soon started witnessing a slowdown, especially after the late 1960s. It recovered from 1984-85 onwards, although dipped again in the 1990s. The sector average growth rate for the entire period is calculated at 8.23 percent (Figure 6), which was not achieved in the post-reform period as seen by the HP filter series. During post-liberalization this is the sector of which output growth is continuously lower than the average growth for the entire period. This explains the present situation in the power sector of the economy.

Looking at the sector wise growth in the industrial output, it may be concluded that the electricity, gas and water supply sector contributed most to the industrial sector in the planned development period. However, in the limited liberalization period, mining and quarrying picked up, contributing substantially to the total output. Manufacturing was still stagnant in this period. Finally in the post-reform period, manufacturing sector demonstrated outstanding lead in the industrial sector output, the worst performers being the mining sector and electricity, gas and water supply. As explained, the similarity between the trends of growth between the industrial sector as a whole and the manufacturing sub-sector are mainly on account of higher weight of the manufacturing sector.

Figure 5: Growth Trends of Mining and Quarrying Output (%)

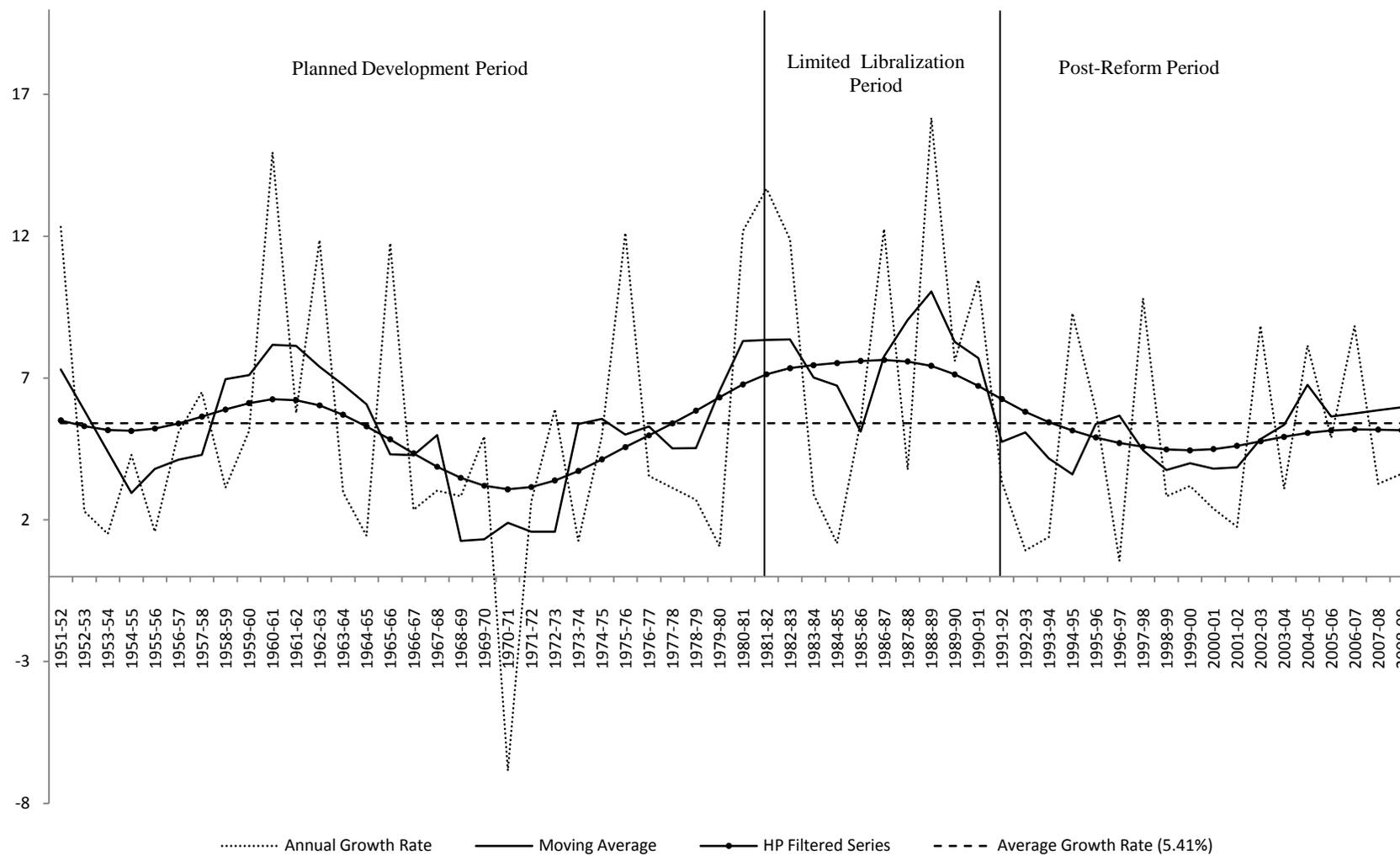
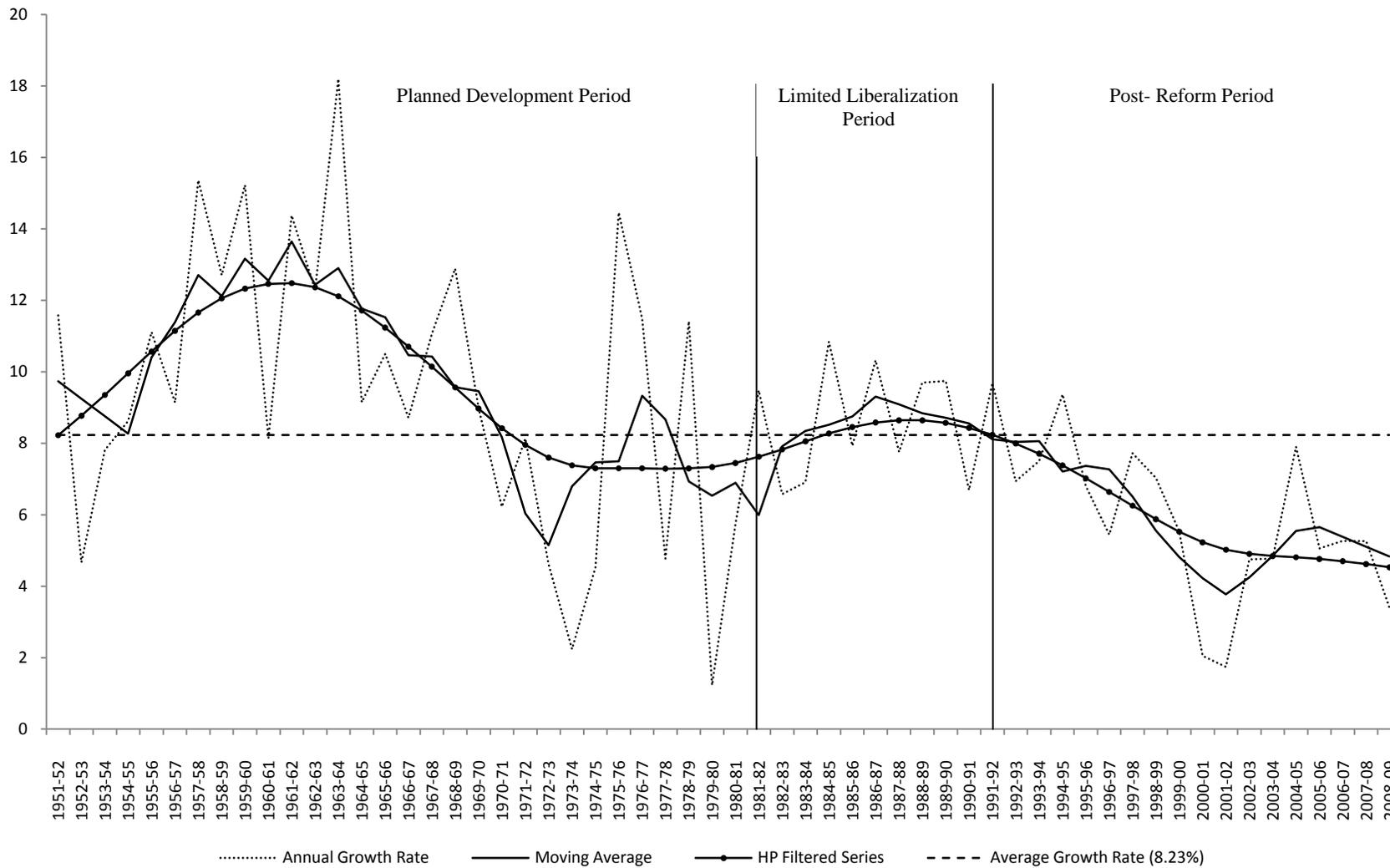


Figure 6: Growth Trends of Electricity, Gas and Water Supply Output (%)



3.2. Period-wise Performance:

Now we move on further to briefly review the sources of growth in the three periods of the study i.e., the planned development period, the limited liberalization period and the post-reform period.

3.2.1. The Planned Development Period (1950-51 to 1980-81):

It is estimated that the industry grew at a rate of 5.45 percent, whereas the manufacturing sector grew at a rate of 5.27 percent in the whole period of control. Industrial production accelerated after independence and remained stable for the following four years. However, it showed the first big fall in the year 1957-58 when the growth in manufacturing over the previous year was just 3.85 percent. This recession was primarily a result of a drop in agricultural production due to severe drought in the country. Because of the same reason, India experienced its next slump, which was even harsher, in the year 1965-66 and a few more following years. Viramani (2004) in his study supported the far-reaching effect of droughts on the growth rates during this period, while his estimates show that there was no change in the effect of rainfall on the growth rate from 1980-81 onwards.

The high growth rates in industrial production, especially in the electricity, gas and water supply sector, in the planned development period can be explained by the outlays of the first five 'five-year plans' in India. Prior to the framing of the first five-year plan (1951-56), consumer goods industries had a major emphasis in industrial development while the development of basic capital goods industries had lagged behind. The first coordinated industrial strategy was developed only under the second five-year plan (1956-61), which gave emphasis to investment in heavy industries. The same strategy was carried forward to the third five-year plan (1961-66) for the development of economic infrastructure, especially in irrigation, energy, transport and communication etc. Therefore, as the second and third five-year plan accorded a high priority to the industrialization, and especially to the development of basic and heavy industries, the growth rates remained impressive till 1966.

The plan allocation in the first five-year plan for power was around 13.0 per cent which was increased to 14.6 percent in the third five-year plan. In the fourth and fifth five-year plan allocation for the power sector was 18.6 percent and 18.8 percent respectively. In case of industry and minerals, the plan allocation in the first five-year plan was only 6.0 percent but then in the next four consecutive five-year plans the plan allocation to industry and minerals remained at around 20 percent of the total plan outlay (Table 3) and from the sixth five-year plan it went on decreasing substantially. This shows that during these five-year plans the public investment increased the industrial capacity in the different segments of the industry including public sector manufacturing enterprises. The expansion of capacity in various segments of the industry increased the output of the industrial sector without increasing efficiency of the industrial sector substantially. Moreover, at the end of the third five-year plan as the economy faced the recession, the rate of growth in the output of consumer goods industries fell drastically. This stagnation in growth was carried forward to the fourth (1969-74) and fifth plans (1974-79) as well.

As noted by Virmani (2004), in this phase of 30 years, investment grew strongly at 6.1 percent per annum whereas government consumption increased 5.80 percent which exceeded economic growth. In contrast the growth rate of private consumption was a very modest 3.20 percent per annum a rate slower than that of GDP. This highlights the fact that though in the initial period government investment and consumption may have led private consumption, at some point during this phase it started substituting for and crowding out private investment and consumption in later years. The share of production (GDP) originating in the public sector increased rapidly over most of this phase because of nationalization of certain sectors. Moreover, from the supply side, a noticeable feature of this growth was the fact that the tradable goods sector i.e., manufacturing, mining, and agriculture grew at only about half the rate of the non-tradable services sector. He has clearly divided the 30 year period into two sub periods. According to him (p.18), in the first phase i.e., by 1950-51 to 1964-65, the leadership was infused with moral righteousness and developmental enthusiasm based on the philosophical background of Fabian socialism and the experience of Soviet state socialism. In the second sub-phase i.e. 1965-66 to 1979-80, both the moral fervour and the academic certainties gradually seeped away. The policies were driven more by immediate crises and political expediency than by

Table 3: Plan Allocations for Industry and Minerals

Sr. No.	Plan	Per cent
1	First Five-Year Plan (1951-56)	6.00
2	Second Five-Year Plan (1956-61)	24.00
3	Third Five-Year Plan (1961-66)	20.10
4	Annual Plans (1966-69)	22.80
5	Fourth Five-Year Plan (1969-74)	18.20
6	Fifth Five-Year Plan (1974-79)	22.80
7	Annual Plan (1979-80)	19.60
8	Sixth Five-Year Plan (1980-85)	15.50
9	Seventh Five-Year Plan (1985-90)	13.40
10	Annual Plan (1990-91)	10.90
11	Annual Plan (1991-92)	10.10
12	Eighth Five-Year Plan (1992-97)	10.80
13	Ninth Five-Year Plan (1997-2002)	7.60
14	Tenth Five-Year Plan (2002-07)	3.90
15	Eleventh Five-Year Plan (2007-12)	4.20

Source: Economic Survey 2009-10, GOI (2010), Datt and Sundharam (2006)

economic logic. A less secure leadership struggling to establish itself was much more inclined to use economic policy as a political tool for besting its rivals.

In general, the first phase was actually more efficient in terms of growth than the second, especially in the case of industrial production. This feature was most pronounced in the electricity, gas and water supply sector due to high public investment as the existing companies were allowed to continue to operate, but all new investment came under the government with 87 percent of the GDP from this sector and 92 percent of the investment in this sector coming from government in 1960–61 (Virmani, 2004; p.20). The second phase (starting 1965-66) was characterized by inefficient resource use or stagnation mainly arising from ‘legislative-bureaucratic socialism’. Its negative features included a number of laws, such as the MRTP Act and the FERA designed to control the private sector and private economic activity; the nationalization of banks and general insurance designed to supplant the private sector by the public sector; an increasing resort to licensing and controls to direct industrial investment, imports, and agricultural exports; the spread of the public sector into a variety of areas such as consulting and consumer goods in the first sub-phase and finally tightening of labour laws and procedures.

According to FAO (1995), the period between the mid-1960s and early 1970s was marked by serious economic problems. First, because of wars with neighbours, large resources were diverted towards defence resulting in a sharp decline in

public investment that adversely affected the growth of the economy. Second, the foreign exchange situation forced India to devalue its currency in 1966. Finally, food production failed to keep pace with demand and the country became increasingly dependent on food imports under the United States Government's Public Law (PL) 480 also known as 'Food for Peace'. The situation became critical in the mid-1960s with the failure of two consecutive crops in 1964-66 and the country had to import large quantities of food grains under PL 480. In the late 1960s, agricultural growth revived with the adoption of green revolution technology in some regions of the economy.

Ahluwalia (1985, 1991) identified four principal factors responsible for the period of stagnation in the mid sixties. However, she has categorized the entire period from 1965-66 to 1979-80 as one of industrial stagnation. There was the slowdown in public investment with its particular impact on infrastructural investment, poor management of the infrastructure sectors, slow growth of agricultural incomes and its effect in limiting the demand for industrial goods, the industrial policy framework and its effect in creating a high cost industrial structure within the economy. Coincidentally, the manufacturing sector which had seen a notable deceleration in growth from 1964-65 to 1975-76, began registering better growth in 1976-77 at a positive 8.77 percent. However, in the second last year of the period, i.e., 1979-80, India witnessed an actual decline in industrial production at (-) 2.40 percent. This was the result of both a very bad monsoon, which resulted in agricultural output falling by a shocking 13 percent, and an oil price shock when petroleum prices more than doubled. However, according to Nagaraj (2003, p.3707), there was also an argument that the controls in the 1970s on output, investment and trade, popularly called the 'permit licence raj' were choking private initiative and wasting meagre public resources. These controls led to widespread inefficiency in resource use, as reflected in poor total factor productivity growth or in the economy-wide rise in the incremental capital output ratios leading to just average industrial performance. The situation was dampened with political uncertainty as Indian democracy entered the coalition era at the national level for the first time in 1977.

Nayyar (1978) has noted the following similar exogenous factors for the stagnation of the late 1960s and 1970s. They were (a) the wars of 1962, 1965 and

1971 which diverted potential public investment into unproductive uses; (b) the successive droughts of 1965-66 and 1966-67, and later 1971-72 and 1972-73, which restricted the supply of raw materials and the demand for industrial goods from the agricultural sector, (c) supply constraints which became more pronounced in the late 1960s in the form of infrastructural bottlenecks (power and transport) or shortages of intermediate goods, (d) the oil crisis of 1973 which led to considerable industrial dislocation and severe balance of payments difficulties. It can be seen in Figure 8 that the year 1976-77 registered unprecedented industrial production over the preceding year. According to Nayyar (1978, p.1266) the revival of 1976 was more apparent than real. It was mainly the outcome of a phenomenal bumper harvest and the unusual political circumstances of the time. The government increased public sector production irrespective of whether the output could be utilized so that there was a rapid accumulation of stocks in intermediate goods such as steel and coal. According to Desai (1981), adverse terms of trade to industry, increasing inequality in the income distribution and rising capital intensity in the industrial production were the major factors underlying the slow growth of Indian industry. A higher level of output and improved capacity utilization (Burange, 1992) was followed by policy towards the work force when the Emergency laws were used extensively to eliminate all forms of industrial disputes. However, these policies discouraged the private sector. Therefore, the real recovery can be said to start only in 1980-81, when the next period begins in terms of policy reforms.

3.2.2. The Limited Liberalization Period (1980-81 to 1991-92):

It can be said that the growth rates of the industrial sector, as well as of its components, remained sound for most of the period. Industry grew at an average rate of 5.75 percent, whereas the manufacturing sector registered 5.00 percent growth during this period. According to Chandrasekhar (2003, p.9), the stable growth rates of the 1980s suggest that the factors that accounted for growth during that decade were operative right through those years. Primary among those were the fiscal stimulus provided by a rising fiscal deficit to GDP ratio in a still protected market and the greater access to international liquidity which allowed firms to modernize capacity and introduce some new product innovations based on imported capital goods, intermediates and components. However, the sustainability of this rate of growth was

rightly questioned by most of the experts due to existent demand constraints and/or likely supply (resources) bottlenecks.

Joshi and Little (1994) attribute the high growth during this period to the fiscal expansion financed by external and internal borrowing. This view is also supported by Ahluwalia (2002a, p.67) who states that the build-up of external debt culminated in the crisis of 1991. However, according to Nagaraj (1990), the improved rate of growth in the manufacturing sector in the eighties was possibly due to a spurt in the production of consumer durables secured largely by import liberalization giving rise to the term 'import-led growth'.

According to Panagariya (2004, p.13), two broad factors account for much of the spurt in the growth rates during 1980s, especially the sub-period 1988-91. First, liberalization played a significant role. On the external front, policy measures such as import liberalization, export incentives and a more realistic real exchange rate contributed significantly to productive efficiency. On the domestic front, freeing up of several sectors from investment licensing reinforced import liberalization and allowed faster industrial growth than in the past. Second, borrowing on the external front allowed investment to be maintained at levels higher than what was possible otherwise and high levels of public expenditures helped boost the economy through the expansion of demand. Rodrik and Subramanian (2004) accept the point that liberalization of policies was responsible for the higher growth rates in the period, however, they point out some other factors too. According to them, the reforms of the 1980s were pro-business rather than pro-market. They have drawn a distinction between a pro-market and a pro-business orientation. The former focuses on removing hindrances to markets and aims to achieve this through economic liberalization as it favours new entrants and consumers. A pro-business orientation, in contrast focuses on raising the profitability of the established businesses as it tends to favour officials and producers. Only an 'attitudinal' shift in policy was a compelling stimulant for economic growth even in the presence of price and other market distortions.

Virmani (2004) also explains elaborately the accelerated growth of the 1980s and calls it the 'Bharatiya rate of growth'. According to him, as a result of the policy reforms, investment (gross capital formation) growth accelerated marginally where

more important than the size of the increase was the change in the structure of investment. The rate of growth of investment in machinery and equipment more than doubled during this phase and there was greater availability and use of higher quality equipment imports which proved to be important factors in the acceleration in growth during this phase. Moreover, the greater role of the private sector also contributed. Apart from changing incremental policy frameworks, he included credibility of the reforms and output gap factors as well. According to the credibility factor, there were signals to reform the failed policies which 'had an impact on the investment environment leading to more private investment and a shift from building of structures towards machinery and equipment' (p.41). The opening of the economy to imports of capital goods amplified the impact that they had on the efficiency of investment. According to his output gap hypothesis the underperforming economy during the last 15 year period had widened the gap between actual and potential performance, which provided 'an opportunity for catch-up growth or an upturn in the growth cycle' (p.41). Government consumption stimulated by fiscal deficits and a decline in oil prices, which stimulated private consumption in the presence of unused capacity, put the economy on the recovery leg of the growth cycle and accelerated growth.

Kashyap and Shah (1989) reiterated the fact that the Indian industrial economy during the four decades of independence, i.e. till the 1980s, made rapid strides in terms of product diversification and volume of output. Yet it did not emerge as the leading sector. In fact according to them the losses of the agricultural sector in terms of income generation are largely gained by the services sector with only marginal gains for the secondary sector. Inadequate attention towards agglomeration and scale economies is considered to be the main reason for this which, in turn, led to some unhealthy features like technological stagnation, low productivity, exploitative production relations, adverse factor proportions, perennial dependence on subsidies, etc. in this period.

3.2.3. The Post- Reform Period (1991-92 onwards):

This phase which began in 1991-92 started with external reforms coupled with the macroeconomic response to the BOP crisis. One of the main targets of the reforms

and liberalization process was to improve the growth performance of the industrial sector by removing various constraints and especially the requirement of an industrial license (Mani and Bhaskar, 1998) which to an extent is achieved, although double digit growth rates are still awaited. According to Chandrasekhar (2003, p.3), there were three principal supply-side mechanisms through which Indian industrial growth would take place. First, the breaking up of controls was expected to increase domestic competition, trigger a process of industrial restructuring that would involve closure of uneconomic units of production, improve capacity utilization and increase efficiency. This was expected to generate new surpluses that would be automatically reinvested leading to higher growth. Second, liberalization of imports of industrial goods would direct investment to areas in which India had a comparative advantage, resulting in greater international competitiveness. As a consequence exports were expected to rise more rapidly leading to higher growth. Finally, the liberalization of trade and foreign investment was expected to lead to large inflows of FDI which would reallocate production towards world markets again resulting in an increase in exports. However, it is evident that the growth rates in the 1990s, after reforms, just sustained the growth of 1980s instead of taking it to new levels.

It can be seen in Table A1 that growth rate of the industrial sector and the manufacturing has fluctuated widely in the post-reforms period. After registering an increase in the growth rate in the early years, it decelerated in the late 1990s. According to Virmani (2004, p.47), the net effect of increased competition on manufacturing growth was therefore positive as improved access to imported technology and inputs and cheaper imports more than offset the reduction in relative prices arising from lower tariffs on output. The only year during the post-reform period when industry as well as manufacturing sector recorded negative growth is 1991-92 when the country was under severe financial stress. In that year, industry and manufacturing grew at a rate of (-) 0.29 percent and (-) 2.40 percent respectively. The industrial slowdown following 1997-98 can be partly attributed to the decline in investment. Desai (2001) has argued that the credit squeeze in 1996 and rise in interest rates throttled the boom of 1993-96. According to Frontline (1998), it was widely acknowledged that the high rates of industrial growth during the first few years of liberalization was largely the result of a spurt in production of import-intensive durables which catered to meet the demand in the wake of liberalization of

trade and investment rules. With that market having been exhausted, growth depended on the expansion of the home market. With the unequal distribution of assets and incomes limiting the market for mass consumption goods, the growth of the home market became dependent on the effects of State expenditure which was inadequate. However, industry recovered since 2001-02 for a few years where a surge in exports was a key feature of this revival. But again industrial growth dipped sharply in the year 2008-09 due to the US financial crisis and consequent slowdown in the industrialized countries. Manufacturing grew only 2.40 percent in the year 2008-09 as against 8.20 percent in the preceding year. Export-oriented industries such as garments, textiles, leather and engineering have experienced a sharp fall in the demand for their products in the western countries. According to Chaudhuri (2009), the reform process has deliberately made India more outward-oriented. Therefore such downturns are only to be expected. To tide over the economic slowdown, the government and the Reserve Bank of India have initiated a number of expansionary monetary and fiscal policy measures since September 2008. These policies have produced a visibly positive impact on domestic demand and also contributed to the revival in the growth of industrial production by June 2009. However, according to Thomas (2009), there are clear indications that the problems affecting India's industrial growth are deeper than those triggered by the worldwide economic slowdown.

A study made by the World Bank and the Confederation of Indian Industry (Stern, 2001, p.9) found that the investment climate varies widely across states after dismantling of the 'license raj', which is reflected in a disproportional share of investment, especially foreign investment, being concentrated in the more investor-friendly states (Maharashtra, Gujarat, Karnataka, Andhra Pradesh and Tamil Nadu) to the disadvantage of other states (like Uttar Pradesh, Bihar and West Bengal). Investors perceived a 30 percent cost advantage in some states over others on account of the availability of infrastructure and the quality of governance. These differences across states have led to an increase in the variation in the state growth rates with some of the less favoured states actually decelerating compared to the 1980s (Ahluwalia, 2002b). As liberalization has created a more competitive environment, the pay-off from pursuing good policies has increased, thereby increasing the importance of state level action. Infrastructure deficiencies will take time and

resources to remove but deficiencies in governance could be handled more quickly with sufficient political will. Sen (2009) has singled out two factors that have created unequal industrial growth among states, i.e. geography and institutions. Geographical factors relate to access to trade modes and point of production whereas institutions include labour markets, business environment etc.

3.2.4. Debate on the Acceleration of Growth:

There are no contestations on the fact that the planned development or control period generated insufficient growth and development in almost all the sectors of the economy. However, it is seen that the average growth rates of the second and third periods i.e. 1980s as well as 1990s onwards, are very similar, especially in case of the industrial sector as a whole. Therefore there are many who contest the belief that real reforms in form of complete liberalization of the economy is responsible for the acceleration which India witnessed post 1990s. However, the debate on the issue is ongoing.

According to DeLong (2001, pp.5-6), conventional opinion trace recent growth to policy reforms at the start of the 1990s. However, the aggregate growth data tells us that the acceleration of economic growth began much earlier, that is in the early or mid-1980s, long before the exchange crisis of 1991 and the shift of the government of Narasimha Rao and Manmohan Singh toward neoliberal economic reforms. DeLong's calculations suggest that the significantly more ambitious reforms of the 1990s actually had a smaller impact on India's long run growth path. Apparently the policy changes in the mid and late 1980s under the last governments of the Nehru dynasty were sufficient to start the acceleration of growth, which possibly would have been small and short-lived. Furthermore, he continues that in the absence of the second wave of reforms in the 1990s it is unlikely that the rapid growth of the second half of the 1980s could be sustained. According to Rodrik (2002, p.19), what seems to have set off growth in the 1980s were some relatively minor reforms. During the prime ministership of Rajiv Gandhi, the government made some tentative moves to encourage capital-goods imports, relax industrial regulations, and rationalize the tax system, which consequently led to an economic boom and changes in the attitudes of officials over the change in policies.

According to Panagariya (2004, p.6), however, neither DeLong nor Rodrik suggest that the reforms of 1990s were ‘detrimental to the growth process’. He argued that in the 1980s, well before the launch of the July 1991 reforms, the annual GDP growth rate had hit the 5.6 percent mark, whereas the growth rate in the 1990s was not much higher. Therefore, liberalization cannot be credited with having made a significant difference to growth. Notwithstanding, he firmly maintains that growth during 1980s was fragile, highly variable across years, and unsustainable. In contrast, once the 1991 reforms stabilized, growth became less variable and sustainable with even a slight upward shift in the mean growth rate. The difference between the reforms in the 1980s and those in the 1990s is that the former were limited in scope and without a clear roadmap whereas the latter were systematic and systemic. The reforms in the 1980s proved particularly crucial in building a base for future liberalization and imparting confidence in the ability of policy changes such as devaluation, trade liberalization and de-licensing of investment in realizing rapid growth.

Further, Ahluwalia (2002a) too argued that the 1980s growth was unsustainable, fuelled by a build-up of external debt which culminated in the crisis of 1991. In sharp contrast, growth in the 1990s was accompanied by a remarkable external stability despite the East Asian crisis when most of the other developing countries slowed down. Poverty also declined significantly in the post-reform period, and at a faster rate than in the 1980s. But again it is observed that the achieved growth rate is way below the target of 7 to 8 percent, mainly because of failure to implement the reforms effectively and at a rapid pace.

4. FOREIGN DIRECT INVESTMENT:

The significant role of foreign direct investment (FDI) in accelerating the economic growth of the country was recognized in the economic and financial reforms in 1991. However, the 1980s itself witnessed a gradual and limited relaxation of the foreign investment rules. Moreover, the reforms starting 1991-92, aimed at faster integration of the Indian economy with the global economy, are still in the pipeline. Prior to 1991, the FDI policy framework in India was highly regulated. All dealings in foreign exchange were regulated under the Foreign Exchange Regulation

Act (FERA), 1973, the violation of which was a criminal offence. Nevertheless, under this framework the investment process got plagued with unethical and lengthy bureaucratic procedures. Therefore under the deregulated regime, FERA was consolidated and finally amended to introduce the Foreign Exchange Management Act (FEMA), 1999. The new Act aimed at improving the management of foreign exchange markets and facilitates external trade and payments. Consequently it resulted in improved access to foreign exchange.

There are three primary institutions in India that handle FDI related issues, viz., the Foreign Investment Promotion Board (FIPB), the Secretariat for Industrial Assistance (SIA), and Foreign Investment Implementation Authority (FIIA). Foreign investment is permitted in virtually every sector except those of strategic concern such as defence (opened up recently to a limited extent) and rail transport. Foreign companies are permitted to set up 100 percent subsidiaries in India. No prior approval from the exchange control authorities (RBI) is required except for certain specified activities. According to the current policy, FDI can come into India in two ways.

1. **Automatic Route:** FDI in sectors/activities to the extent permitted under the automatic route does not require any prior approval either from the government or the RBI. The investors are only required to notify the concerned regional office of the RBI within 30 days of receipt of inward remittances and file the required documents with that office within 30 days of issue of shares to foreign investors.
2. **Prior Government Approval Route:** In the limited category of sectors requiring prior government approval, the proposals are considered in a time-bound and transparent manner by the FIPB under the Department of Economic Affairs, Ministry of Finance. Approvals of composite proposals involving foreign investment/foreign technical collaboration are also granted on the recommendations of the FIPB.

FDI is prohibited only in four activities viz., Retail Trading (except Single Brand Product Retailing), Gambling and Betting, Lottery and Atomic Energy (GOI, 2009). Under the small-scale policy, equity holding by other units including foreign equity in a small-scale undertaking is permissible up to 24 percent. However there is no bar on higher equity holding for foreign investment if the unit is willing to give up

its small-scale status. In case of foreign investment beyond 24 percent in a small-scale unit which manufactures small-scale reserved items, an industrial license carrying a mandatory export obligation of 50 percent would need to be obtained (GOI, 2003, p.13).

Over the years, FDI inflow in the country is increasing. However, India has a tremendous potential for absorbing greater inflow of FDI in the coming years. In the 1970s there was hardly any new foreign investment in India. Indeed, some firms left the country. Inflows of private capital remained meagre in the 1980s. However in the period before liberalization (1980-1991) the FDI grew at a CAGR of 14.17 percent. In the period after the policies were fully liberalized (1991-2008), the FDI registered a magnanimous CAGR of 31.31 percent p. a. It is also seen from Table 4 that the growth of FDI has been less fluctuating in the post 1991 era as against the partial reform period where very wide fluctuations are visible. From 1992 to 1997 foreign direct investment flows growth was steady and strong; however it declined drastically at (-) 27.25 percent in 1998 and the following year. Again in the year 2002 a FDI of 2.83 percent might signify the slowdown in the world economy, which reduced world demand and accentuated and accelerated the global restructuring process of major multinational enterprises in the sectors characterized by excess capacity (UNCTAD, 2003; p.2). The decline in the FDI in 2002 also reflects the aftermath of 9/11. When we look upon the percentage share of FDI in GDP, it is clear that it started increasing steeply only after 1992. The last three years of study has witnessed an even better rate of increase of FDI as a percentage of GDP.

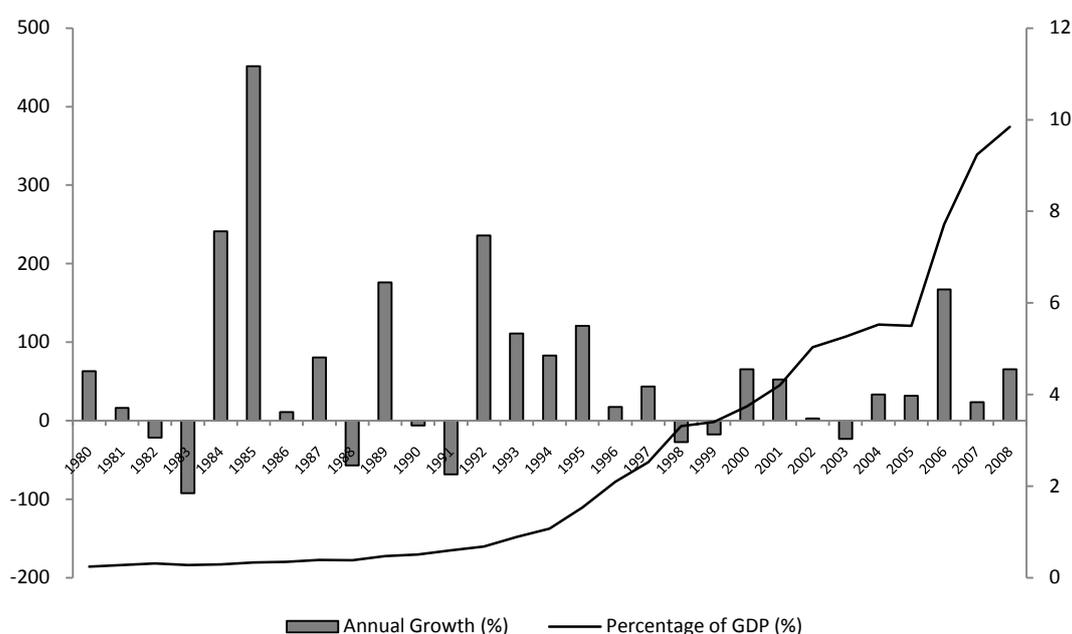
Over the recent past, the sector-wise inflows of FDI have undergone a change. The important sectors of the Indian economy attracting more investments into the country from 1996 to 2007 (Figure 8) are electrical equipments (9.86 percent), transportation industry (6.53 percent), services sector (14.63 percent), telecommunication (7.03 percent), computer hardware and software (3.46 percent), fuels (3.86 percent), chemicals (3.13 percent) etc. Of these the services sector and computer hardware and software sectors have recently gained importance.

Table 4: Foreign Direct Investment in India

Year	FDI (US\$ Million, Current Prices and Exchange Rates)	Growth over Previous Year (%)	As Percentage to GDP (%)	Year	FDI (US\$ Million, Current Prices and Exchange Rates)	Growth over Previous Year (%)	As Percentage to GDP (%)
1980	79.16	62.98	0.24	1995	2151.00	120.84	1.53
1981	91.92	16.12	0.28	1996	2525.00	17.39	2.10
1982	72.08	- 21.58	0.31	1997	3619.00	43.33	2.52
1983	5.64	-92.18	0.28	1998	2633.00	- 27.25	3.31
1984	19.24	241.13	0.29	1999	2168.00	- 17.66	3.40
1985	106.09	451.40	0.33	2000	3585.00	65.36	3.74
1986	117.73	10.97	0.35	2001	5472.00	52.64	4.20
1987	212.32	80.34	0.39	2002	5627.00	2.83	5.03
1988	91.25	- 57.02	0.38	2003	4323.00	- 23.17	5.26
1989	252.10	176.27	0.47	2004	5771.00	33.50	5.53
1990	236.69	- 6.11	0.51	2005	7606.00	31.80	5.50
1991	75.00	- 68.31	0.60	2006	20336.00	167.37	7.72
1992	252.00	236.00	0.68	2007	25127.00	23.56	9.24
1993	532.00	111.11	0.89	2008	41554.00	65.38	9.84
1994	974.00	83.08	1.07	CAGR	28.67	--	--

Source: UNCTAD (2009)

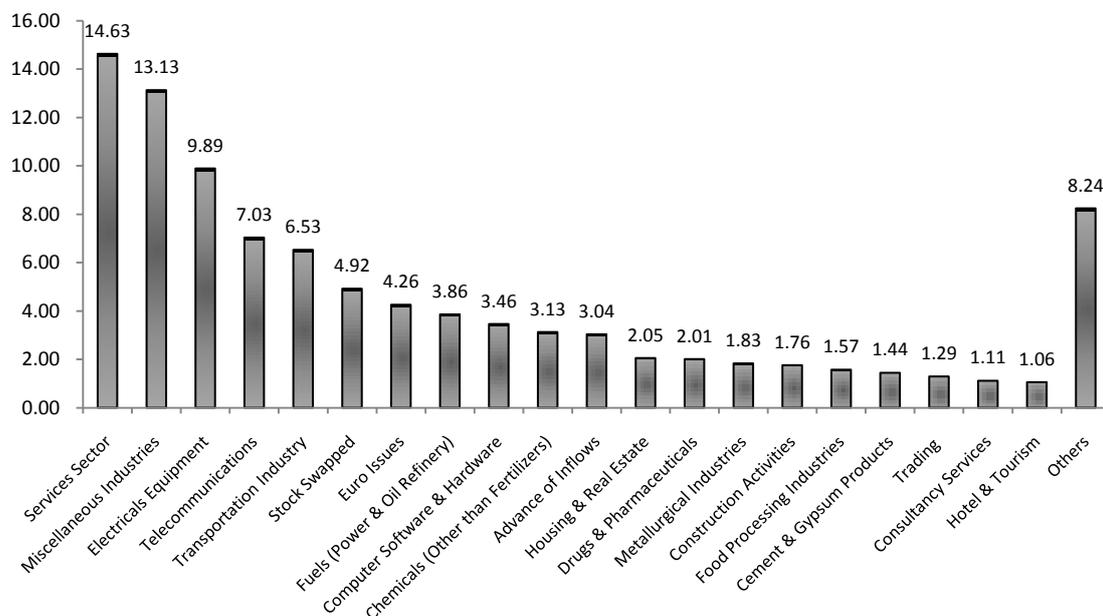
Figure 7: Growth Trends of FDI in India



Maharashtra, Delhi, Karnataka, Tamil Nadu and Gujarat (RBI's region-wise break-up) have been the largest recipients of FDI in terms of cumulative FDI inflows from January 2000 to October 2008 (NCAER, 2009, p.19). These states are either known for their strong industrial base (like Gujarat) or as software hubs (like Karnataka and Delhi). This could also be attributed to their better resources,

infrastructure like roads and power, investor-friendly policies like single-window clearances and investment-promotion schemes like special economic zones. However, the competition among the states to promote their own state in attracting FDI has led to an increasing trend in FDI in other states. Still FDI-enabled service facilities located in small cities with numerous manufacturing plants, where more than two-fifth of the market capitalization originates, are relatively less in number (35 percent of the total) (NCAER, 2009). States with relatively high share of market capitalization in Class-3 cities include Andhra Pradesh, Assam, Haryana, Rajasthan and Uttar Pradesh.

Figure 8: Sector wise Share of Foreign Direct Investment Received in India (%) (1996-2007)



Source: Calculated from Indiatats (2010)

Note: The Sector specific amount includes the Inflows Received through SIA/FIPB route, acquisition of existing shares and RBI's automatic route only

5. PERFORMANCE OF SMALL-SCALE INDUSTRIAL SECTOR:

The importance of the Small-scale Industries (SSI) is recognized the world over as well as in India for its significant contribution in fulfilling various socio-economic objectives such as higher growth of employment, output, promotion of exports and nurturing entrepreneurship. Since independence industrial policies have targeted the sector with various incentives pertaining to financial, fiscal and infrastructure-related

measures. Later, keeping with economic liberalization, it was decided to phase out the reservation policy with the objective of enhancing the potential of the SSI sector in their export orientation. However according to Ahluwalia (2002a), the main area where action has been inadequate in the post-reform period in the case of SSIs relates to the slow pace of phasing out of reserved production of certain items for them. About 800 items were covered by this policy since the late 1970s where many of such items had high export potential and the failure to permit development of production units with more modern equipment and a larger scale of production severely restricted India's export competitiveness. While a radical change such as abolition of reservation in policy was unacceptable, some policy changes have been made very recently. Fourteen items were removed from the reserved list in 2001 and another 50 in 2002. In addition, the investment ceiling for certain items was increased to US \$1 million. However, these changes are very recent and it will take some years before they are reflected in performance.

The number of units belonging to SSI in 1980-81 was less than a million (Table 5) whereas it increased to 7.35 million in 1992-93, finally climbing up to 13.37 in 2007-08. This means CAGR in the number of units during the whole period is 11.95 percent, which is more than desirable. However, the data reveals that though in terms of number of units there has been increasing trend, yet in terms of growth rate in percentage, the number of small-scale units have shown a decelerating trend in the period from 1990-91 to 1999-2000. This may be due to privatization, globalization and the resultant escalation of competition. Moreover, SSI is plagued by industrial sickness which is a major hindrance to economic growth as it results in locking up of resources, wastage of capital assets, loss of production and increase in unemployment.

The sector contributes 40 percent of the gross manufacture to the Indian economy. When the production is looked upon, it is clear that the 1980s witnessed stable growth at around 8 to 12 percent. But this rate dropped drastically in 1990-91 to be (-) 55.38 percent. This unexpected sharp drop is mainly on account of data inconsistency which could not be resolved. Moreover, the low growth rates in the following 3 to 4 years i.e. 1991-92 to 1993-94 can also be viewed in the backdrop of the general recession in the economy. The transition period of the process of economic reforms was also affected for some period by adverse factors such as

foreign exchange constraints, credit squeeze, demand recession, high interest rates, shortage of raw material etc. (Exim Bank, 2009). Moreover it is often believed that the protection in the 1980s somehow protected the inefficient non performing units rather than the independent growth of units under a competitive business environment (Suresh and Shashidhar, 2007). During 1999-2000, the SSI recorded production growth of 8.16 percent over the previous year, a higher growth rate than the industrial sector as a whole. This upswing has remained stable in the following years

Table 5: Performance of SSI in Key Parameters

Year	Units (Million Nos.)	Production		Employment (Million Nos.)	SSI Export	
		At Constant Prices (₹ crore)	Growth over Previous Year (%)		(₹ crore at Current Prices)	Growth over Previous Year (%)
1980-81	0.87	72200	8.73	7.10	1600	--
1981-82	0.96	78300	8.45	7.50	2100	31.25
1982-83	1.06	84700	8.17	7.90	2000	- 4.76
1983-84	1.16	93500	10.39	8.42	2200	10.00
1984-85	1.24	104600	11.87	9.00	2500	13.64
1985-86	1.35	118100	12.91	9.60	2800	12.00
1986-87	1.46	133600	13.12	10.14	3600	28.57
1987-88	1.58	150500	12.65	10.70	4400	22.22
1988-89	1.71	169900	12.89	11.30	5500	25.00
1989-90	1.82	189900	11.77	11.96	7600	38.18
1990-91	6.79	84728	-55.38	15.83	9664	27.16
1991-92	7.06	87355	3.10	16.60	13883	43.66
1992-93	7.35	92246	5.60	17.48	17784	28.10
1993-94	7.65	98796	7.10	18.26	25307	42.30
1994-95	7.96	108774	10.10	19.14	29068	14.86
1995-96	8.28	121175	11.40	19.79	36470	25.46
1996-97	8.62	134892	11.32	20.59	39248	7.62
1997-98	8.97	146263	8.43	21.32	44442	13.23
1998-99	9.34	157525	7.70	22.06	48979	10.21
1999-00	9.72	170379	8.16	22.91	54200	10.66
2000-01	10.11	184401	8.23	24.09	69797	28.78
2001-02	10.52	282270	53.07	25.23	71244	2.07
2002-03	10.95	306771	8.68	26.37	86013	20.73
2003-04	11.40	336344	9.64	27.53	97644	13.52
2004-05	11.86	372938	10.88	28.76	124417	27.42
2005-06	12.34	418884	12.32	29.99	150242	20.76
2006-07	12.84	471663	12.60	31.25	--	--
2007-08	13.37	532979	13.00	32.23	--	--

Source: RBI (2009)

Notes: 1.Data has been revised since 1990-91 on the basis of the findings of the Third All-India Census of SSI units. 2. Production figures are at 1993-94 prices till 2000-01. However, since 2001-02, they are at 2001-02 prices.

The SSI sector in India generates the largest employment opportunities for the Indian populace, next only to agriculture. It has been estimated that a lakh rupees of

investment in fixed assets in the small-scale sector generates employment for four persons (Pandey and Shivesh, 2007). Table 8 shows that the employment generated by small industrial units in India increased from 7.10 million persons in 1980-81 to 16.60 million persons in 1991-92 at a CAGR of 7.62 percent, which further increased to 32.23 million persons in 2007-08 at a CAGR of 4.22 percent. The rate of increase in employment is more pronounced in the initial periods because the industrial policy statement of 1977 and 1980 gave new thrust to the SSI, changing its face forever. However the following policies only kept up the pace.

Bala Subrahmanya (2006, p.244) has attributed four factors for the inferior post-reform period performance of SSIs in India especially in terms of number of units and employment. They are:

1. New SSIs might not have come up as significantly in the globalization period as in the pre-globalization period due to the threat of competition.
2. Those new SSIs that have come up in the globalization period might be much more capital-intensive than those that had come up in the past.
3. A significant proportion of existing SSIs might have strengthened their competitiveness through modernization, particularly to take advantage of the developments in the international market.
4. Those SSIs which lacked access to basic infrastructural facilities and which could not strengthen their competitiveness, would have exited from the market.

The sector plays a major role in India's export performance too as around 45 percent of the Indian exports is being contributed by the sector. Direct exports from the SSI sector account for nearly 35 percent of total exports whereas the number of small-scale units that undertake direct exports would be more than 5 thousand. Besides this, it is estimated that small-scale industrial units contribute around 15 percent to exports indirectly (Exim Bank, 2009). This takes place through merchant exporters, trading houses and export houses. The exports from the SSI sector have been showing excellent growth rates from 2002-03 onwards, mostly stimulated by the performance of garment, leather and gems and jewellery units from this sector. The CAGR of the whole period of 1980-81 to 2005-06 is estimated to be 21.32 percent. However the sharpest increase can be observed between 1991 and 1995.

6. CONCLUSIONS:

As noted by Rodrik and Subramanian (2004), India's economic performance during the first three decades since independence was christened the 'Hindu' rate of growth, a term connoting a disappointing but not disastrous outcome, whereas Virmani (2004) calls it a 'socialist rate of growth'. During the first three decades of planning, the growth rate of the economy remained around 3.5 percent. At this time, India followed policies that closed the economy to international trade, erected inefficient industries under state control, burdened the private sector with unmanageable regulations, and choked it with bureaucratic hindrances. However, the term of 'Hindu' rate of growth is gradually losing its ground because of the remarkable transformation in India during the last three decades. In the 1980s, with some liberalization in the form of de-licensing of some industries and permitting flexible use of capacity in others through changes in product-mix within the licensed capacity under so-called 'broad banding', and relaxation of some import restrictions, significant growth of around 5 to 6 percent was generated. Virmani (2004) calls the period starting 1980 a 'Bharatiya rate of growth' characterized by the recognition of the harmful effects of industrial and other controls on distribution, production, and investment and the need to remove the distortions created by government policy on industry and exports. In 1991, initiated by a balance of payments crisis and macroeconomic instability, the process of full-fledged liberalization of the economy began. Trade barriers were slashed, foreign investment was welcomed, the license raj was dismantled and privatization began. Consequently, the economy started to boom at around 7 to 8 percent. When the industrial sector is examined, it is found that in terms of production, prices, investment and trade; it has made huge gains after the economy started opening up in the 1980s, although with cyclical fluctuations. However, employment has not shown any significant improvement in the more than five decades of independence. The growth of small-scale industries is satisfactory. Therefore it may be concluded that although the industrial sector of India has grown after independence, the rate is below expectations, especially after liberalization. According to Panagariya (2001), if India grows only at 6 percent p.a. on a sustained basis, it will take 14 years to reach the current level of per capita income of China, 36 years to reach Thailand's, and 104 years to reach that of the United States. Thus, the need for accelerated growth can hardly be overemphasized.

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Appendix: A

Table A1: Annual (Y-o-Y) Growth Rate of Output

(Percent)

Years	Industry	Manufacturing	Mining & Quarrying	Electricity, Gas & Water Supply
1950-51	--	--	--	--
1951-52	4.62	3.16	12.33	11.58
1952-53	3.34	3.48	2.30	4.67
1953-54	6.86	7.74	1.51	7.81
1954-55	6.69	7.01	4.29	8.62
1955-56	7.11	7.83	1.58	11.11
1956-57	7.26	7.51	5.07	9.14
1957-58	4.57	3.85	6.50	15.36
1958-59	5.02	4.95	3.14	12.71
1959-60	6.93	6.79	5.14	15.23
1960-61	9.09	8.30	14.96	8.15
1961-62	8.43	8.54	5.77	14.38
1962-63	8.07	7.28	11.86	12.29
1963-64	9.04	9.46	2.96	18.20
1964-65	6.37	6.91	1.44	9.15
1965-66	2.67	0.93	11.76	10.50
1966-67	1.43	0.79	2.35	8.71
1967-68	1.37	0.39	3.03	11.07
1968-69	5.68	5.54	2.83	12.89
1969-70	9.88	10.73	4.94	8.98
1970-71	1.52	2.35	- 6.85	6.22
1971-72	3.56	3.27	2.64	8.13
1972-73	4.19	3.92	5.90	4.62
1973-74	3.93	4.45	1.26	2.24
1974-75	3.26	2.92	4.96	4.53
1975-76	4.15	2.11	12.12	14.46
1976-77	8.38	8.77	3.55	11.48
1977-78	5.75	6.22	3.13	4.77
1978-79	11.21	12.35	2.71	11.41
1979-80	- 2.40	- 3.22	1.07	1.23
1980-81	1.95	0.19	12.19	5.75
1981-82	8.92	8.17	13.67	9.48
1982-83	4.63	3.29	11.89	6.58
1983-84	8.97	10.23	2.90	6.91
1984-85	4.45	4.21	1.17	10.84
1985-86	3.92	3.19	5.45	7.93
1986-87	6.79	5.49	12.25	10.32
1987-88	5.60	5.60	3.77	7.76
1988-89	9.57	8.50	16.17	9.70
1989-90	8.77	8.84	7.60	9.74
1990-91	5.72	4.77	10.46	6.69
1991-92	- 0.29	- 2.40	3.36	9.69
1992-93	3.25	3.09	0.92	6.94
1993-94	7.47	8.59	1.39	7.50
1994-95	10.44	10.82	9.29	9.37
1995-96	13.16	15.46	5.87	6.80
1996-97	7.96	9.50	0.55	5.44
1997-98	2.02	0.05	9.81	7.72
1998-99	3.57	3.13	2.83	7.03
1999-00	3.51	3.22	3.19	5.54
2000-01	6.39	7.75	2.39	2.05
2001-02	2.35	2.54	1.75	1.74
2002-03	6.79	6.81	8.85	4.75
2003-04	6.00	6.63	3.09	4.77
2004-05	8.51	8.65	8.15	7.90
2005-06	8.13	9.06	4.89	5.06
2006-07	10.71	11.77	8.84	5.27
2007-08	7.36	8.20	3.27	5.26
2008-09	2.63	2.40	3.62	3.40
Average Growth (%)	5.81	5.73	5.41	8.23

Source: RBI (2009)

#Output at constant prices; Base Year: 1999-2000

Table A2: Average Growth Rate of Industrial Production during Plan Periods

(Percent)

Periods	Years	Industry	Manufacturing	Mining & Quarrying	Electricity, Gas & Water Supply
Planned Development Period (1950-51 to 1980-81)	First Five-Year Plan (1951-56)	5.73	5.84	4.40	8.76
	Second Five-Year Plan (1956-61)	6.57	6.28	6.96	12.12
	Third Five-Year Plan (1961-66)	6.92	6.62	6.76	12.90
	Annual Plan (1966-67)	1.43	0.79	2.35	8.71
	Annual Plan (1967-68)	1.37	0.39	3.03	11.07
	Annual Plan (1968-69)	5.68	5.54	2.83	12.89
	Fourth Five-Year Plan (1969-74)	4.62	4.94	1.58	6.04
	Fifth Five-Year Plan (1974-79)	6.55	6.47	5.30	9.33
	Annual Plan (1979-80)	-2.40	-3.22	1.07	1.23
Limited Liberalization Period (1980-81 to 1991-92)	Sixth Five-Year Plan (1980-85)	5.79	5.22	8.36	7.91
	Seventh Five-Year Plan (1985-90)	6.93	6.32	9.05	9.09
	Annual Plan (1990-91)	5.72	4.77	10.46	6.69
	Annual Plan (1991-92)	-0.29	-2.40	3.36	9.69
Post- Reform Period (1991-92 onwards)	Eighth Five-Year Plan (1992-97)	8.46	9.49	3.60	7.21
	Ninth Five-Five Plan Year (1997-2002)	3.57	3.34	3.99	4.82
	Tenth Five-Year Plan (2002-07)	8.03	8.59	6.76	5.55
	<i>Eleventh Five-Year Plan(2007-09)*</i>	4.99	5.30	3.44	4.33

Source: Estimated from RBI (2009)

*Plan is not yet completed

Appendix: B

Hodrick-Prescott Filter:

The Hodrick-Prescott filter is a mathematical tool used in real business cycle theory to separate the cyclical component of a time series from raw data. It is used to obtain a smoothed non-linear representation of a time series, one that is more sensitive to long-term than to short-term fluctuations. The adjustment of the sensitivity of the trend to short-term fluctuations is achieved by modifying a multiplier λ (Wikipedia 2010). The methodology relates to the decomposition of the time series. The original series Y_t is a sum of a growth component (g_t) and a cyclical component (c_t)

$$Y_t = g_t + c_t$$

where, Y_t is the logarithms of a time series variable and $t = 1, 2, 3, \dots, T$.

Given a chosen positive value of λ , the HP-Filter isolates the cycle component by the following minimization problem.

$$\min \sum_{t=1}^T (Y_t - g_t)^2 + \lambda \sum_{t=1}^T [(g_{t+1} - g_t) - (g_t - g_{t-1})]^2 \quad \dots \quad (3)$$

The first term of equation 3 is the sum of the squared deviations $d_t = Y_t - g_t$ which penalizes the cyclical component. The second term is a multiple λ of the sum of the squares of the trend component's second differences. This second term penalizes variations in the growth rate of the trend component. Therefore, the first term is a measure of the *fitness* of the time series while the second term is a measure of the *smoothness*. When λ is 0, the trend component becomes equivalent to the original series while λ diverges to infinity, the trend component approaches a linear trend. The larger the value of λ , the higher is the penalty. Hodrick and Prescott (1981) advise that, for quarterly data, a value of $\lambda = 1600$ is reasonable, whereas in the literature, the value of $\lambda = 100$ for an annual data (Backus, Kehoe and Kydland, 1992) is used. Therefore we have used 100 as the value of λ for the calculation of HP filtered series in Microsoft Excel Addin of data analysis.