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Policy on Small Scale Industries in India and Structure, Growth and Productivity of SSI Sector

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POLICY ON SMALL SCALE INDUSTRIES IN INDIA

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**STRUCTURE, GROWTH AND PRODUCTIVITY
OF SSI SECTOR**

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I POLICIES TO PROMOTE SMALL SCALE ENTERPRISES

Given that the development of small - medium enterprises is desirable on both allocative efficiency and equity considerations particularly in the new technological and market scenario what are the major policy instruments available to governments to promote the small-medium sector? Policy instruments need to be developed which do not just protect SSEs indiscriminately but which help them develop in a dynamic and changing environment This would result in more efficient firms which are able to exploit the opportunities for growth Further these instruments must ensure that firms with different efficiencies and potential for growth derive differential benefits from the assistance which is available This implies that such instruments should have a general and pervasive in impact rather than be specific to particular industries or groups within the SSI sector

The reservation of specified product lines for the small scale sector has been central to Indian policies for development this sector In India policies based on reservation have persisted in the manufacturing sector over a long time and India is almost unique in its dependence on and persistence with such policies A large number of product groups - defined at a fairly detailed level using the National Industrial Classification Code are reserved for the exclusive production by SSEs which are defined on the basis of value of fixed investment in plant and machinery Once a product line is reserved those firms with levels of investment exceeding the SE limit are restricted to the level of production equal to their installed capacity at the time of reservation This method of fostering the growth of SSEs was first introduced in 1967 and the list of items has been progressively increased until today it comprises a total of around 830 The value of the limit in plant and machinery has been increased over time in nominal terms but the increase in value of this limit after allowing for inflation has been small

This line of approach had its value in the initial stages of encouraging the SSI sector Large numbers of new SSI units were encouraged to establish themselves and protected from competition from the large-scale sector But the problem with the continuation of such policies is that it is not sufficiently discriminatory in favour of small enterprises which show potential for growth Industry based policies of reservation overlook the fact that small enterprises is not confined to specific product lines and that their importance in different product groups are constantly changing In view of this there is a need to implement policies for the development of SSEs which are generally and have a pervasive effect in the sense that all small enterprises no matter in what product groups could potentially take advantage of the assistance measures available Secondly it is important that such policies do not discourage the growth of small into medium enterprises

1.1 General and Pervasive Policies to Encourage SSEs

- I In many instances the removal of bias in policies discouraging the small - medium sector should help considerably The regulatory framework including elaborate licensing procedures affecting outputs inputs and urban land rights has been widely discussed as severe

constraints on the SSEs in the Latin American literature (e.g., de Soto) and is relevant to Asian countries although perhaps to a smaller extent. A large literature has focused on the impediments to SE success which come from trade and foreign investment policies which are implemented. It has frequently been concluded that the protective structure has been biased against SSEs in the sense that effective protection rates are higher for those industrial sectors where the SE share of output is relatively low (Pitt 1981 for Indonesia, von Rabenau 1976 for Malaysia, Anderson and Khambata 1981 for the Philippines). The era of import substituting industrialisation with its regime of rationing of foreign exchange for importers of machinery and material inputs and overvalued exchange rates which reduced the effective price of capital equipment has been traditionally viewed as a source of bias against SSEs. But in more recent years when export promotion policies (import tax drawbacks, special credit facilities, other tax breaks based on the level of exports, etc) have been used as a substitute for lower exchange rates, the performance of the SE sector might have been adversely affected since such assistance is less accessible to them for more or less the same reasons that quantitative restrictions are biased against them (Bruch and Heimenz 1984, Marsden 1984). Similarly, policies to encourage direct foreign investment would favour large firms because lumpiness of investment and the high management cost of dispersal are likely to encourage foreign investors to enter the LE sector.

Protective macro-economic policies have particularly hurt SSEs in creating scarcity of good quality raw materials for these units. While LEs get access to raw materials at low regulated prices (in some cases on account of their export potential) SSEs have to scramble for materials in the open market. This is one, though not the only reason for SSEs producing at the lower end of the quality scale.

In the Indian context, in spite of the concerns with SSE development in government policies, there are many instances of both regulatory and macro policies being discriminatory to the small sector. The Committee on Simplification of Procedures for SSIs appointed by the Ministry of Industry (the Mahapatra Committee) pointed out that a small scale unit had to deal with about 20 Departments of government -both Central and State - and that an entrepreneur had to interact with 50 inspectors. They ranged from Labour laws to Environmental, Excise and Developmental regulations -some of them actually meant to provide subsidised services to SSEs. While large units can assign special staff for the purpose of filing returns to numerous bodies, the burden is quite disproportionate on small entrepreneurs. It has been mentioned above that a major item in the cost structure of SSEs is often the payments to a large body of inspectors who need to be induced to look the other way.

- ii. Of the Asian countries for which we have information, Hong Kong comes closest to a free market model of development. It is observed that "within the proclaimed *laissez faire* environment in Hong Kong, the government does not seem to have a policy towards manufacturing, not to mention any policy towards the SSIs" (Beng 1988: 58). An obvious

hypothesis emerging from the Hong Kong experience is that in the absence of the usual sort of policy biases which protect both capital and labour in large firms the most successful enterprise size for an export oriented economy would be in the SME range (under 100 workers) and the wage and productivity differentials with respect to larger units will be small. It might be objected that the compact geographical size of the colony is unique and does not allow for generalisation to other types of countries.

Industrial units are much more spatially dispersed in Taiwan. The important role played by SMEs in this economy needs to be studied more carefully. Like Hong Kong the adaptability of relatively small units seems to have been an important contributor to overall export success. The role of financial institutions in helping the SME sector in Taiwan is an important element of their success. Taiwan developed a widely distributed structure of manufacturing enterprises many of which had low start-up capital like in Hong Kong. One study has stressed the importance of government supported financial institutions specialising in 'venture capital' lending in this process (Scitovsky 1985).

- iii The most common and widely used supply side intervention to support the SME sector is the program of subsidised credit put in place by governments with or without the help of multilateral or bilateral donors. The World Bank has championed SME lending projects for almost a decade. Typically a central development bank of the borrowing country acts as the wholesale borrower for these loans and as a lender to commercial banks which retail them against a guarantee given by the central development bank. Although these schemes have had a positive effect on the promotion of enterprises outside the corporate sector their cost-benefit ratio varies enormously and it is not altogether clear that the potentially most efficient enterprises or groups of enterprises are helped most. The conclusion which emerges from the evaluation of such schemes is that such programmes are generally successful if they are backed up by associated programmes of technical and marketing assistance. A further relevant point is that the provision of subsidised credit is meant to address the problem of capital market segmentation which makes the cost of capital relatively high for SSEs. Accordingly its success depends very much on the effectiveness of other policies to help develop the financial structure which provides easier access to finance for SSEs. In the absence of such developments in the banking and other lending institutions government efforts to provide subsidised credit can only have a limited effect and are likely to get stalled.
- iv One of the major ways in which economies with a substantial presence of large scale industry have successfully developed a small sector component is subcontracting. Japan is of course the most cited example where in spite of powerful economic and institutional factors favouring LEs small industrial units have continued to provide a large share of employment and value added in manufacturing (43 percent of the former and 28 percent of the latter in the mid-eighties with small units being defined as those with less than 50 workers). Many of the large units in several branches of industry found it profitable to contract out some parts of the

production process to smaller firms. The economic logic of vertical subcontracting lies in the fact that economies of scale are important in some areas of the production and marketing process and not in others. It is significantly helped by the flexibility which is introduced in the use of labour. The Japanese labour system in large factories is that of lifetime employment so that fixed costs of labour are very much reduced by passing on the burden of demand fluctuations to subcontractors.

The last point is of relevance to many countries of Asia which have had to cope with increasing job security of factory workers due to institutional and economic pressures. While subcontracting is obviously the most efficient way of increasing greater labour market flexibility, its successful development is critically dependent on large firms being able to transfer the know-how for quality production to the ancillary units and to build up a relationship of healthy co-operation rather than dominance. The experience in several Asian countries has not been very satisfactory from this point of view. In countries and sectors like garments in which some elements of production are put out to small, often household enterprises, the labour market system is better described as casualisation to take advantage of depressed wages and working conditions. Skill formation is minimal among the subcontractors who have little hope of branching out in other activities led by the parent company.

One country which has successfully developed its sub-contracting in recent years is Korea. In 1990 probably half of the output of small establishment was subcontracted. The radical change in industrial size structure wrought between 1975 and the early 1990s was partly a result of the changing composition of industrial output by sector but was also directly sought by policy with a view to spreading the fruits of industrial growth more widely (Berry 1996 basing himself on Baek 1992 and Cho 1995). The process was helped by the post-1987 changes in labour behaviour with rising worker militancy and labour costs, even as Korean industry faced increasing competition.

- v An important point to mention in the context of subcontracting is that the nature of indirect taxation might have an important effect on the growth of the subcontracting system. If the revenue system depends on excise taxes based on the gross value or quantity of the final product, firms will be discouraged from subcontracting out part of their operations. A system of MODVAT / VAT taxation (taxing value added at each stage of production) would remove the disincentive to subcontracting.

While subcontracting involves vertical inter-firm co-operation, much interest has been expressed recently on the development of horizontal small-small co-operation. The idea that "networks or clusters" of mainly small firms interacting themselves through specialisation and sharing of services have been the key to the success of many industrial areas in developed countries dominates the discussion of clusters. In a well-known work Piore and Sabel (1984)

argued that the vitality of small firms in the Third Italy lay in the co-operative competition among communities of enterprises and on the broad skills of the labouring communities

In the Asian context favourable note has been taken of Tiruppur a district in Southern India which became a major centre of cotton knitwear for both the export and home market in the decade after 1975 (Cawthorne 1995) In spite of considerable competitive rivalry among the large number of small-medium firms there was dense inter-firm linkages in production signs of collective activity involving sharing of information about markets and design capability and external economies reaped from the growing market for outputs and inputs including labour Cawthorne however makes the pertinent point that Tiruppur had been an industrial cluster for a long time before it embarked on its recent dynamic phase This dynamism is to a large extent a function of its having successfully entered export markets for high volume / low-to-medium quality knitwear goods This suggests perhaps a more general point that it is not clustering per se which makes for industrial success but clustering in a propitious macroeconomic context" (Cawthorne p 54) One might add that policy help on the demand side of the market is probably more fundamental Governments may provide some assistance in providing services which help the economics of clusters but the major effort has to come from the entrepreneurs' own initiatives in Asia as in Italy The role of the government would be to make provisions for assistance - financial technical and marketing - which will be available to all members of the cluster" Furthermore central provision for labour training control of pollution and other control facilities carries important external economies and hence can be provided more economically in "clusters

- vi A major role of institutions like subcontracting and "clusters is to facilitate the provision of technology support for SSEs It has already been remarked that financial assistance - such as directed credit facilities - have often had only limited effect in India and elsewhere because of the lack of suitable measures to follow up on the credit measures with technical help Officials concerned with banking operations are generally not the most suitable or knowledgeable in the provision of technical help But without active support in this area SSEs even if they get financial help tend to get mired in low levels of productivity with little potential for growth It is not clear that public agencies are the ideal bodies to carry the brunt of transferring technical know-how to SSEs The more successful cases of development in this area in Italy as in Taiwan have come from trade and manufacturing associations who are near to changing market conditions Nevertheless public support is needed in the encouragement of such activities particularly in the early stages Of special interest is the constitution of funds earmarked to helping the organisation of contacts between potential suppliers and customers through trade fairs periodic visits and so on
- vii A continuing concern in the literature on urbanisation in developing countries has been the problem of over-expansion of large urban conglomerations and what are called megacities Even with the spiralling costs of real estate and money wage costs which such developments

entail external economies enjoyed by firms locating in these areas encourage continued concentration of private capital and investment. Enough has been said in the migration literature to show that excessive rural - urban migration or an uncontrolled migration of people in search of city lights is not the basic problem. Rather it is the distribution of public capital - investment in infrastructure and services like health, education and utilities - which favours large conglomerations and this in turn raises the marginal productivity of private capital and labour in these areas leading to a concentration of both capital and labour. The implication of this type of urban concentration for poverty alleviation and the development of the small scale sector is profound. No doubt the informal sector and small enterprises are an important part of the economic landscape of large conglomerations. But it can be maintained with some empirical justification that the type of informal sector activities which develop in these areas are not of the type that could promote dynamic skill formation and technological progress in the sector. Rather it is biased towards small - scale trade and services and even within manufacturing enterprises providing ancillary or repair services would predominate. The high costs of land and labour and the relatively low cost of financial services in the large cities favour production with relatively high capital intensity and economies of scale. The type of decentralised development of a network of small, dynamic and flexible manufacturing enterprises like we have seen in Germany and Italy in recent years is only possible if there has been widespread distribution of public capital creating infrastructure facilities in small and medium towns. In the history of developing countries the development of manufacturing in Taiwan approaches this model. Ho (1978, 1980) contrasts the regional dispersion of industry in Taiwan (with its prominent small-scale sector) with the experience of Korea with its dominant large firms and high concentration in large cities.

The spatial distribution of public investment can hardly be divorced from the welfare of specified classes in society whose interests are promoted by such investment and hence cannot be meaningfully disentangled from income distribution considerations. For example the welfare of the middle or upper classes in most developing countries may be served most efficiently by concentrating public investment in large urban centres whereas policies designed to promote the well being of the mass of low income people might be better served by a more widely dispersed pattern of public investment. The economic and social costs of growth of megacities cannot then be divorced from the income distribution goals and the political economy of the State.

India's attempts to help backward areas by offering subsidies of various kinds to entrepreneurs who locate in these regions is no substitute for more determined policies to develop infrastructure. According to Vepa (1983) 50 percent of the central subsidy has gone to developed states and even in the backward areas much of the subsidy finds its way to larger units who can better access the limited infrastructure facilities. The creation of conditions which would attract SEs is surely a more cost-effective way of promoting decentralised development than subsidies for dispersion.

1.2 Policy of Reservation for the Small Scale Sector: A Critique

The policy of reservation for the small scale sector has been a central element of government policy for SSE development. The impact of this policy on the distribution of employment between the small and the large sectors will be examined elsewhere in a later chapter. It will be shown there that India did not achieve a particularly large portion of the modern manufacturing employment in small enterprises compared to many other countries of Asia. At the same time the rather large productivity and wage differential between SEs and LEs in India probably has made the distribution of earnings in the urban labour market more unequal than in some of the East and South East Asian countries. In this chapter we are concerned more with the general difficulties of the policy of reservation for achieving economic efficiency and hence the potential growth of the manufacturing sector and indeed the economy at large.

The fundamental difficulty with reservation as an instrument of policy is that it does not discriminate between production units on the basis of their efficiency - current or potential. We saw at the end of the last chapter that although there is a *prima facie* case in most developing economies for promoting the SSEs so that their share of the economy is greater than what they would have had under free market conditions, the efficiency of the economy is likely to be adversely affected even if the capital - labour ratio is pushed towards its socially optimal level because of the prevalence of significant economies of scale in the particular line of production or a significant degree of "technical inefficiency" in the group of SSEs concerned.

Maximising the labour - capital ratio for a unit of production is not the objective of promoting economic welfare in any meaningful way. For example, employing a group of workers to dig up holes in the ground and filling them up again adds little to national output although the labour intensity of this operation is close to infinity. Product lines have widely different production functions - showing the possible set of techniques of production techniques at different capital-labour ratios. This distinction is not made in reservation policies as they are being implemented. In some products the minimum capital - labour ratio which is appropriate even at relatively low implicit (socially optimal) price of labour may require investment in fixed capital which is above the limit prescribed in the reservation policy. If the policy limits production to enterprises which use a technique with a lower capital - labour ratio than this socially optimal, then output is reduced below its potential. While the producers who are protected by this policy would enjoy exceptional rent or profits (as a group), the consumer surplus or welfare is reduced so that the redistribution is the opposite of what was desired - from consumers who have lower income levels to producers who are richer.

There is no evidence to suggest that any detailed information was collected about the spectrum of production techniques used in the different product lines to determine if the "optimal" capital-labour ratio in the reserved product line was indeed below the declared limit. A more fundamental point is that this type of information is impossible to collect even for an all-seeing computerised super-machine with access to an infinite array of reliable input-output data. In a changing vibrant economy, production techniques are

constantly evolving often due to small changes made by enterprising entrepreneurs to their basic blueprint -and the list of blue prints gets ever more complicated and longer

The last point suggests a reason why we have no explanation in official documents anywhere how the list of reserved items have been selected and on what basis additional items have been added. The changes over time gives the impression that the choice of products was somewhat arbitrary.¹ Eighty percent of the reserved items are concentrated in 11 three-digit NIC categories.² The remainder are spread over 90 three-digit categories. This heavy concentration of policy incidence together with a long tail demonstrates, to some extent, successful lobbying for reservation by special interest groups. In the absence of a well defined and rational criterion for product selection - which we have suggested is impossible in practice - the scope for such action remains large and its potential for welfare loss to the consumers and the economy increases commensurably.

The concentration of reserved items in a narrow group of three digit industries suggests that an attempt might have been made to pick up the most promising sectors. There is no evidence of this or if these sectors are particularly labour intensive. But two specific points might be made in this context to complement the general point made above about the near impossibility of selecting product lines on the basis of optimal labour intensity. These refer to the distinction between labour intensive enterprises and labour intensive industries and the variations in product quality within the same product line.

1.21 Labour Intensity in Enterprises and in Industries

Small enterprises are generally more labour intensive than large ones especially if size is defined in terms of fixed investment rather than employment (see Chapter 3). But it does not mean that they are concentrated in industries where the mean capital - labour ratio is particularly low. SSEs are found in most industries. There is no reason that in any economy the number employed (or the proportion of total output or investment) in SSEs would be larger in those industries which have a less than average capital - labour ratio than in those in which the ratio is above the average. This is because there is a spectrum of techniques within each industry and enterprises of different sizes and capital intensities will be found in most of them.

Little Mazumdar and Page analysed the Korean Industrial Census of 1971 at the five digit level and classified the industries by the percentage of workers in SSEs defined as those employing less than 50 workers. The distribution of employment in SSEs among the different industry groups were as given in Table 1.1 (LMP Table 6-4 p 79)

¹At one time table fans were reserved for small firms while ceiling and pedestal fans were not. This was rectified in March 1988 when table fans were deleted from the reserved list.

²These are Knitting in Mills (260) Manufacture of Plastic Products (303) Manufacture of basic and industrial organic and inorganic chemicals (310) Paints varnishes and lacquers (312) Photochemicals sensitised fibres (319) Fabricated metal products metal boxes cans safes and vaults (340) Hand tools and general hardware (343) Electrical appliances domestic appliances switches and sockets (363) Auto parts (374) Bicycles rickshaws and parts (376) Mathematical and miscellaneous instruments (380)

Table 1 1

Percentage of workers in units of less than 100 workers	Number of industries	Percentage of employment in SSEs
75% to 100%	114	17
50% to 74%	61	24
25% to 49%	86	39
1% to 24%	112	20
Total	373	100

The conclusion is that the correct and generally meaningful way of encouraging SSEs (and labour intensity) is to adopt policies which will correct bias against such units in all industries not just in the few which appear at a certain level of disaggregation to be labour-intensive

1 22 Product Quality

A great deal of variation in the quality of the product is possible even when the product line is defined rather narrowly. A product has many attributes and it is possible to vary the composition of the attributes depending on the price at which the product is sold. What is more, the technique of production employed determines to some extent the bundle of attributes which is contained in the particular brand of product being manufactured.

We can discuss the set of issues involved with the example of washing soap. The basic attribute of washing soap is its cleaning power. But there are many other attributes which are desired by some consumers. These include smoothness of the lather, perfume, packaging, etc. In an economy with varying income levels of the consumers, soap with different combinations of these attributes will be produced. The brand with cleaning power as its only (or nearly so) attribute will be offered at a low price and will be consumed by low income groups. Richer consumers will demand more of the other attributes and will be prepared to pay a higher price for it. Technically speaking, non-mechanised methods of production (with a low capital-labour ratio) are generally able to produce basic soap without too many of the other attributes. We need non-mechanised techniques (the Mazzoni process) to produce soap with the additional attributes of smoothness, fragrance, etc.

Consider what will happen if, as is the case in India, the reservation of the product for the small-scale sector resulted in a situation in which only the non-mechanised technique of production could be used for producing washing soap, because the investment required for the non-mechanised process exceeded the limit prescribed. Most of the output of washing soap demanded would now be produced only by the non-mechanised technique. The enterprises with mechanised plants would find their capacity frozen. Their reaction as profit-seeking entrepreneurs would be to exaggerate the contents of the extra

attributes in their brand of product. They would try to create a niche for themselves in the market for rich consumers by incurring large selling costs to advertise these brands. Thus the gap between different quality grades of the product is exaggerated. Consumer welfare is decreased for both poor and rich groups because the former cannot now afford to buy the soap with the 'finer' attributes and their cost to the latter is increased.

A second important point is that the SSEs are excluded from the opportunity of technological upgrading and have to compete among themselves on a much narrower spectrum of quality variation. The negative impact on technical progress and quality improvement could be serious. Ultimately it has a detrimental effect on market development and in an export context allows other countries (with similar factor endowments) to develop markets abroad in high growth product areas at the expense of technological laggards. We have extensive evidence of this happening in a number of product lines in India - the most notable examples being diesel engines, garment finishing, consumer electronics and leather products.

The fact that in some lines of production reserved for the small scale sector, LEs are permitted to produce capital-intensive brands for the export market only does not really provide a serious counter argument. First, development of a base and experience in the more secure and familiar home market is often a necessary pre-condition for the expansion into export markets for manufacturing firms. Secondly, continuation of low technology perpetuates an industrial sector with low labour productivity (and hence) low wages and dampens the expansion of the domestic market by slowing down income growth. It should be emphasised that maximisation of employment at low wages at a point of time is not the ultimate objective of development policy. (Recall the example of digging holes and filling them up again.) Technological progress sustains productivity growth and expanding incomes in the long run - which indeed provides more employment over time.

1.23 Polarisation of the Industrial Structure

The discussion about the dual structure based on product quality is only a particular example of a general tendency to a polarisation of the industrial structure which has been noticeable in India - and to which the policy of reservation has contributed significantly. A useful study by Guhathakurta (1993) of the metal manufacturing industry can be used as an example to elucidate the major points involved. Guhathakurta found large, medium and small units in the rapidly expanding industry in course of his survey.

1. The large sector clearly had a market leader who was generally perceived to have a superior product and enjoyed a special status among consumers. Along with this leading producer there were about half a dozen large-scale manufacturers who are now engaged in production on "carry on business" licenses when the reservation for the small-scale went into effect. In spite of the limitation on their capacities these large scale units have been able to increase sales by increasing capacity utilisation as we shall soon see. The

demand for their products is so strong because of the perception of higher qualities that they have long waiting lists and are able to charge high prices bolstered by expensive sales campaigns. The existing reservation policy favours an oligopolistic market structure for these large producers since no other competitor is able to join their ranks.

- ii At the other end of the spectrum are small artisans and units started by small entrepreneurs who switched from previous jobs in industry and many of them continue to be involved in industrial jobs while managing their business only on a part time basis. There is an intensely competitive market faced by these producers in spite of the expanding demand. This is because the conditions of production are often dismal discouraging quality. Further these small entrepreneurs are dependent for their profits on middlemen who are often dealers from middle and large units. These small units in many cases are able to survive only because of the subsidies they enjoy from some government policies relating to finance etc. and the payment of very low wages, use of child labour (dubbed as 'apprentices') and matching their use of labour to fluctuations of demand because of the high turnover rate. The small scale sector policies do not all help them. Important costs are imposed by inspectors who have to be paid off regularly for looking the other way when production and labour conditions are below standard and by their dependence on the open market for their raw materials which are 20-30 percent higher than the regulated price at which mainly the large or medium size units are able to buy.
- iii A few of the smaller units started in the decades of the sixties and the seventies have managed to graduate to medium scale status, often depending on government subsidies and mandatory government purchases from the small scale sector. They were reported to be growing slowly, targeting the lower end of the consumers or niche markets like hospital furniture. They are slow to commit major investments or undertake product improvement through more mechanised processes because the required capital investment would push them over the inviolable investment ceiling. In sum, the reservation policy has created a small segment of large units with high productivity and a competitive low productivity sector, very few from whose ranks are able to grow sufficiently to challenge the market dominance of the large scale. A second important aspect of the polarisation is that wage levels reflect productivity levels and a very large difference exists in the wage levels between the large and the small sectors, with the medium units paying widely varying rates.
- iv Guhathakurta also analysed trends in productivity, capital investment and value added from a number of secondary sources. The ASI sector showed a high rate of growth of 3.1 percent per annum of value added at constant prices in spite of a 1.6 percent rate of decline of the number of units. There was a substantial growth rate of fixed capital per factory (5.7 percent), employment actually declined (at a rate of 1.4 percent) while wages per worker increased at a staggering rate of 9.8 percent per annum. Evidently, the

economic forces reacting to the reservation policies have accentuated the polarisation in the industry. A select group of workers have benefited from the high increase in productivity in the large scale sector. The driving force behind this has been the striking growth in capital intensity as the large units sought to beat the limits on expansion of capacity by upgrading the equipment quality and productivity. The loss of jobs in the well paid sector has unfortunately been set off with jobs in the low wage sector with adverse effects on the distribution of labour earnings.

1.3 Conclusion

The crux of the argument in this chapter has been that in order to serve the needs of a dynamic SSE sector much more reliance is needed on pervasive measures which help small enterprises in all industries. The policy of reservation concentrated on the protection of SSEs in individual industries which had not been selected on the criterion of superior efficiency of SSEs in these product lines. At its worst this policy created opportunities for vested interests and at its best it threatened to create a protected SSE sector with low productivity and little opportunity for dynamic growth.

In this chapter we have reviewed a variety of measures which are pervasive in nature. From the discussion in the last chapter it emerged that the central point of intervention is the capital market. India along with other countries have experimented with financial sector measures to help SSEs including directed credit at subsidised rates. But enough has been said to suggest that while innovative measures such as equity subsidies are possible to add to the armoury of financial intervention, the impact of this type of assistance will continue to be limited in the absence of other types of needed help in the SSE sector - particularly transfer of technology and knowledge of markets. We have reviewed the importance of institutions like subcontracting and clusters which have been successful in marrying financial and non-financial assistance in other countries.

The commendable goal of decentralisation has also been addressed earlier. At one level there might be an apparent conflict between the economies of "clustering" and dispersion which is needed for decentralised industrialisation. But such a conflict could be reduced if emphasis is placed on infrastructure investment aiding the formation of "clusters" rather than direct subsidies to SSEs willing to operate in backward areas.

II THE EXISTING POLICY, INSTITUTIONAL AND LEGAL FRAMEWORK

The policy institutional and legal framework governing small industry in India is founded on the presumption that employment generation is of paramount importance in a labour surplus economy. Its leitmotif is an equitable spread of welfare benefits of industrial growth to the large majority of people. Small enterprises manufacturing labour-intensive products make an economical use of capital and draw on abundant labour supplies which characterize an underdeveloped economy. On the other hand, large capital-intensive enterprises reward a small minority of their promoters and a small section of labour which is skilled and urban.

The germ of the vision of small industry development was Mahatma Gandhi's classic call for protection of handicrafts devastated by imports of factory-made products. It was the touching plight of hapless craftspeople overwhelmed by mass-manufactured factory products that steered the resolve to protect small enterprises. In the years thereafter, Gandhi's vision crystallized into an elaborate structure of institutions to nurture craft enterprises and small enterprises. India made the deliberate choice not to wait for a phase of industrial development propelled by large companies before encouraging the growth of small enterprises.

Although Mahatma Gandhi had conceived a program for the development of craft enterprises, small industry development was seen as its natural corollary. After independence, the specific role of small industries was recognized by the Industrial Policy 1948 which stated that cottage and small scale industries are particularly suited for better utilization of local resources and for the achievement of local self-sufficiency in respect of certain types of essential goods. After the formulation of the First Five Year Plan, a Committee was appointed by the Planning Commission with Professor D. G. Karve as Chairman. The Committee recommended that any development programme for small industry should be decentralized, should aim at gradual improvement in techniques without reducing job opportunities, should assure marketing through cooperatives, and aim at positive promotional support. Later on, in the 1950s, a structure for the administration of small industries was proposed by a Ford Foundation team which recommended a Small Scale Industries Board. Its other suggestions were to establish small industry service units (for technical assistance and industrial extension) under the Central Small Industries Organization and a Small Industries Corporation (for marketing).

The culmination of the policies initiated in the second five year plan was the industrial policy statement of 1977. It was then decided that the sole criteria for reservation of products in the small scale sector would be its ability to physically manufacture them. Other measures such as the participation of state governments in small industry development were also taken at that time. The regime for small industry development has remained virtually unchanged after that.

The key planks of India's policy for the development of small industry have been reservations, fiscal concessions by way of lower excise duties, extension of business services by the government and preferential procurement by government. Small industry was sought to be protected from the competition of big companies by earmarking a large number of products for exclusive manufacture by them. Fiscal

concessions are meant to be a subsidy for fostering infant enterprises. Extension of business services by the government was considered necessary in the absence of an equivalent private sector providing such services. The objective of government procurement from the SSI sector was to share the risk of first entry into the market by a small entrepreneur.

The policy, institutional and legal regime for the governance of the small industries in India is described below. We will begin with the various explicit and implicit definitions of small industry in India as they underpin the policy regime. Thereafter we will review the policy regime and incentives instituted for the development of small scale industry. This will be followed by a description of the agencies providing business services to aid small industry development. A brief review of the legal structure surrounding the small scale sector and its deficiencies conclude this chapter.

2.1 Definition and Scope of Small Industry

The best known definition of small scale industry in terms of investment ceilings has been etched into the minds of people by frequent use. This is understandable since investment limits are used as a guide to extend promotional assistance. However, two other methods of classification by employment and turnover are implicit in the Factories Act registration requirements and excise duty waivers available to small scale industry. The data on investment limits for a variety of small industry segments is tabulated below (Table 2.1) and this is followed by a description of provisions under the Factory Act and the tax laws which define small scale industry.

Table 2.1 Investment Ceilings for Small Scale Industry

Type of small scale industry	Investment limit	Remarks
Small scale industry	Rs 60 lakh	Historical costs of plant and machinery
Ancillary	Rs 75 lakh	At least 50% of its output should go to other industrial undertakings
Export oriented	Rs 75 lakh	Obligation to export 30 percent of production
Tiny enterprise	Rs 5 lakh	No location limits
Service and business enterprise	Rs 5 lakh	No location limits
Women enterprises	Rs 60 lakh	51 percent equity holding by women

Notes.

- i. *Small Scale Industry cannot be owned, controlled or be a subsidiary of another industrial undertaking. The policy framework for all segments is the same except for some incentives.*
- ii. *The limits have been periodically revised upwards (see Table 2.2).*

Small scale industries were recognised as a sector of special importance in the Industries (Development and Regulation) Act, 1951, a central Act that provides for the regulation and development of industries. The industries licensing policies are determined under this Act. The important provisions of the Act are highlighted below.

- Section 11-B provides the power to specify the definition of SSI in consideration of factors relating to
 - ◆ investment of unit in fixed assets
 - ◆ nature of ownership
 - ◆ the number of workers employed
 - ◆ nature cost and quality of products etc
- Section 29 B provides for reservation of products for exclusive production in the small scale industries sector

The definition of small scale industries had undergone changes over the years in terms of investment limits. This is illustrated by Table 2.2

Table 2.2 Evolution of Investment Limits for Small Scale Industries

Year	Investment Limits	Additional Condition
1950	Upto Rs 5 lakh in fixed assets	Less than 50 / 100 persons with or without power
1960	Upto Rs 5 lakh in fixed assets	No condition
1966	Upto Rs 7.5 lakh in plant and machinery	No condition
1975	Upto Rs 10 lakh in plant and machinery	No condition
1980	Upto Rs 20 lakh in plant and machinery	No condition
1985	Upto Rs 35 lakh in plant and machinery	No condition
1991	Upto Rs 60 lakh in plant and machinery	No condition

The small scale sector is a part of the larger Village and Small Industries (VSI) Sector which consists of small scale industries and traditional industries. The administrative and developmental framework is constituted along sectoral divisions and is shown in Table 2.3 below

Table 2 3 Administrative Structure for Governance of Small Scale Industries

Industry	Agency	Administrative Dept. / Ministry
Large / Medium Industries		Dept of Industrial Policy and Promotion and Dept of Industrial Development
Small Scale Industries	Small Industries Development Organisation	Dept of Small Scale Agro & Rural Industries
Powerlooms	Textile Commissioner	Ministry of Textiles
Traditional Industries		
Khadi and Village Industries (KVI)	Khadi and Village Industries Commission	Dept of Small Scale Agro & Rural Industries
Handlooms	Development Commissioner (Handlooms)	Ministry of Textiles
Senculture	Central Silk Board	Ministry of Textiles
Handicrafts	Development Commissioner (Handicrafts)	Ministry of Textiles
Coir Fibre	Coir Board	Dept of Small Scale Agro & Rural Industries

In practice the small scale industries sector serves as a residuary sector in the sense that all units that fall within a prescribed investment limit and are not recognised in a particular subsector are included in the small scale industries sector

2 11 Other Definitions

The classification of the size of companies by employment levels is implicit in the registration requirements of the Factories Act as well as the labour laws. Enterprises are obliged to register themselves with the Department of Industry of a state government if they employ more than 50 people and use power or employ 100 workers and don't use power. Small industries below these levels of employment can choose to register but they don't have to. Other social legislation such as labour laws, social security and medical insurance apply for firms employing more than 10 workers with power and 20 without power. By implication, household enterprises are defined as ones with less than 10 workers with power and 20 without power and are not subjected to social legislation.

Finally, exemptions from indirect taxes, i.e. excise and sales tax, are allowed for firms below the threshold levels of sales turnover. The turnover ceiling is set at Rs 30 lakh per year for full exemption and on a sliding scale upto a turnover of Rs 300 lakh per year for small companies.

2.2 Policy Framework

The foundations of the policy for the small scale industry were laid in the Second Five Year Plan. In 1956 the government announced its second industrial policy which unambiguously chose equity as the guiding principle for small industry development. The operative statement says 'small scale industries provide immediate large scale employment offer a method of ensuring a more equitable distribution of national income and facilitate an effective mobilisation of resources of capital and skill which might otherwise remain unutilised

2.2.1 1977 Policy Statement

A high watermark in the evolution of the policy for small industry was the Industrial Policy Statement of 1977. It was then that the protection of small industry touched its acme. The guarded initiatives of earlier years were cast aside by a heightened zeal for an expanded role for this sector. In particular the reservation of products for exclusive manufacture by the small industry begun in 1967 was greatly extended to many more products. The important planks of the 1977 industrial policy statement were

- Whatever can be produced by small cottage industries must only be so produced
- The number of products reserved for SSI was increased from 180 to 504 and further to 807 items
- Special attention to be given to the 'Tiny Sector' defined as enterprises with investment in plant and machinery of upto Rs 1 lakh and situated in towns and in villages with population less than 50 000
- Special legislation will be introduced to give due recognition and adequate protection to the self-employed in cottage and household industries
- The focal point of development for small sector and cottage industries will be taken away from big cities and state capitals to the district headquarters. In each district there will be one agency to deal with all requirements of small and village industries. This will be called 'District Industries Centre'
- Special arrangements for marketing of the products of Small Scale Sector will be made by providing services such as product standardisation, quality control, marketing surveys, etc.

2 22 1980 Policy Statement

The recognition of the importance of ancillary industry found expression in the policy statement of 1980 which laid emphasis on ancillaries. Moreover, the programme for the development of rural and backward areas was accelerated. The salient features of this policy were

- Investment limits were raised to Rs 20 lakh for small scale industry as a whole
- Investment limits for tiny sector increased from Rs 1 lakh to Rs 2 lakh
- Higher limit for capital investment in ancillary units to Rs 35 lakh

2 23 1985 Industrial Policy Statement

The Industrial Policy Statement of 1985 made incremental changes and took into account the impact of inflation. The investment ceiling for SSI was raised to Rs 35 lakh and for ancillaries to Rs 45 lakh.

2 24 Economic Policy Reforms of 1991 and Small Scale Industry

In the wave of economic reform of 1991, the government took cognizance of the institutional context and complementary infrastructure impinging on the fortunes of small scale industry. The Statement on Industrial Policy of 1991 was accompanied by a special Policy Statement for Small Scale Industries whose salient points are listed below.

- The policy stated that its primary objective was to impart greater vitality and growth to the sector. In furtherance of this objective, the sector would be deregulated and debureaucratized to remove all fetters on its growth potential.
- Modifications in all statements, regulations and procedures should be made to ensure that they do not militate against the interest of small and village enterprises.
- A separate package for the promotion of tiny enterprises and recognition of all industry related service and business enterprises as Small Scale Industries.
- Emphasis to shift from subsidised / cheap credit except for specified target groups to adequate flow of credit on normative basis to SSI sector.
- To provide access to capital markets to SSI Sector by allowing 24 percent equity participation by other industrial undertakings.
- Legislation to ensure prompt payment of small industries bills and legislation for Limited Partnership Act.

- Introduction of a new scheme of Integrated Infrastructural Development to promote industrialisation in rural and backward areas
- Significant stress on technology upgradation by setting up of Technology Development Cell and strengthening the existing facilities available with SIDO
- Promotion of marketing of SSI products through institutions other agencies and consortia approach
- Promotion of ancillansation
- Strengthening of exports through setting up of Export Development Centre
- Enforcement of quality control and support to modernisation and technology upgradation of SSI sector
- Change in definition of women enterprises and support to women entrepreneurs
- Significant expansion in programmes for entrepreneurship development
- Simplification of rules and procedures to enable small scale entrepreneurs

2 3 Incentives for Small Scale Enterprise Development

2 31 Product Reservations

At present 836 products are reserved for exclusive manufacture by small scale industries. The units which are not in the small scale sector can manufacture reserved items only if they undertake to export 75 percent of their production (50 percent in case of garments)

Elements of Reservation Policy

The reservation policy is kept under constant review. A Statutory Advisory Committee on Reservation constituted by the central government under the chairmanship of Secretary (SSI) reviews the base of items / products reserved for exclusive manufacture in the SSI sector. The Advisory Committee on Reservation constituted under IDR Act makes its recommendations after taking into consideration the following criteria which are listed below

- The nature of any article or class of articles which may be produced economically by the ancillary or small scale industrial undertakings
- The level of employment likely to be generated by the production of such article or class of articles by the ancillary of SSI undertaking

- The possibility of encouraging and diffusing entrepreneurship in industry
- The prevention of concentration of economic power to the common detriment
- Such other matters as the Advisory Committee may think fit

The situations in which medium or large units can manufacture reserved items are

- i Existing medium or large unit already manufacturing an item when it is put on reserved list. In such a case the unit has to obtain Carry on Business (COB) license from the Ministry of Industry. The capacity of the unit is pegged at the highest production level achieved by the unit in the three years preceding the date of reservation of the product.
- ii Existing SSI units manufacturing reserved items graduate by their process of growth into the medium / large scale. Such units have to obtain COB license wherein the capacity is pegged with respect to the date when it became incumbent on the unit to apply for and obtain a COB license.
- iii Medium / large units undertake to export a minimum of 75 percent of their production. In case of ready-made garments units are allowed investment upto Rs 3 crore in plant and machinery provided they export at least 50 percent of their production from the third year (at least half of the exports to non-quota areas).

There is no restriction on the marketing of products reserved for manufacture in SSI by large units or big companies.

2.32 Tax Incentives

Indirect Taxes

Excise duty waivers have been available to the small scale industries since 1986. Registered as well as unregistered units can avail of these benefits. The eligibility criteria is the annual turnover of the unit. No duty is charged upto a sales turnover of 30 lakh. A concession of 10 percent of normal duty (subject to a minimum tax of 5 percent for sales value between Rs 30 and Rs 50 lakh) and 5 percent for turnover between Rs 50 and Rs 75 lakh (subject to a minimum of 5 percent) is also available. These exemptions / concessions are available upto an annual turnover ceiling of Rs 3 crore. Recent budgets have introduced some modifications in the general scheme for indirect tax benefits.

- Excise duty exemption for products manufactured under a brand license for another company have been withdrawn since 1993-94.
- Notional credit of 10 percent subsequently reduced to 5 percent on purchases of SSI products by other units has been withdrawn since 1993-94.
- Full excise duty exemption on 389 products was withdrawn in 1993-94.

Direct Taxes

At present there is no direct tax exemption for SSI units. The exemptions that were available earlier under Section 80 HH and 80 HHA have been withdrawn. At present there is a general exemption available to the industrial sector under Section 80 IA but most SSI units do not qualify since they do not fulfill the condition of employment levels in excess of 10 persons.

2.33 Government Procurement and Marketing

The central government has reserved 409 products that are purchased exclusively from small scale units. Such buying allows price preference of up to 15 percent to small / tiny units. State governments have their own lists of products for exclusive purchase from small scale units.

2.34 State Policies and Programs

The very size and dispersed nature of the small scale sector implies that the onus of promotion and development of small scale industries rests mainly on state governments and state institutions. State governments have come out with their own policies to promote small scale industries. These policies provide a variety of direct and indirect support to SSI. Thus, the policy framework developed by the central government acts as a guiding principle and the efforts of the various organs of central and state governments complement one another. The institutional arrangement for coordination between central and state governments is attained by the scheme of registration of small scale units. It is a voluntary scheme wherein small scale units are encouraged to register with the District Industries Centres. The registered units can avail the various benefits accruing from the policies of incentives and facilities and other direct support programmes put in place by the central and state governments. The important aspects of state policies are as follows:

- Development and management of industrial areas by the industrial development and investment corporations
- Capital investment subsidy ranging from 15 percent to 25 percent of fixed investment (subject to an outer ceiling) to new units
- Exemption / deferment in Sales Tax to units for a fixed period (ranging from 5 to 10 years). Quantum of benefit is limited by fixed capital investment as well as tax liabilities
- Incentives / subsidies for using power derived from alternative energy sources
- Special assistance programmes for women and weaker sections
- Seed capital / margin money assistance scheme on soft terms

- Underwriting costs on feasibility studies / consultancy for modernisation technology upgradation
- Allocation of land / sheds in industrial areas on hire purchase or lease basis
- Empowered committees at the district / state level to accord clearances and settle disputes
- Higher incentives to set up pioneer units in backward / 'no industry districts
- Equity participation by state corporations in joint / assisted sector projects

2.4 Institutional Credit to Small Scale Industry Sector

2.4.1 Existing Institutional Network

Reserve Bank of India (RBI) has played an important role in building the requisite institutional structure to meet the credit requirements of the SSI sector by embarking on a multi-agency approach. At the national level the commercial banks provide both working capital and term loan to SSI units. At the state level the main purveyors of credit to the SSI sector are State Financial Corporations (SFCs) and State Industrial Development Corporations (SIDCs) and state co-operative Banks and at the regional and rural level credit is provided through Regional Rural Banks (RRBs), district central co-operative banks and primary co-operative banks. At the apex level Small Industries Development Bank of India (SIDBI) provides refinance and co-ordinates the activities of all these institutions engaged in providing assistance to SSIs. SIDBI reaches a large number of small scale industry (SSI) beneficiaries in the country by making use of network of banking and state level institutions numbering about 887 with over 65000 branches (including 169 specialised SSI branches) by providing refinance, bills rediscounting and resource support to these primary lending institutions (PLIs). In addition to refinance, SIDBI also extends direct credit assistance to the sector. National Bank for Agriculture and Rural Development (NABARD) provides refinance assistance to commercial banks / co-operative banks, regional rural banks and state land development banks for extending assistance to farm and non-farm sector. NABARD operates a Rural Infrastructure Development Fund with a corpus of Rs. 2000 crore for supporting select infrastructural projects. Recently, RBI has announced the policy for establishing local area banks (LAB) to meet the credit requirement of tiny and SSI units at the micro level. The assistance to micro enterprises is also extended by non-government organisations (NGOs) / Voluntary Organisations (VOs) for the benefit of certain target groups. Khadi and Village Industries Commission (KVIC) and Khadi & Village Industries Board (KVIB) are providing assistance on soft terms to Khadi & Village Industries located in semi-urban and rural areas.

The other services like supply of raw materials and equipment on lease and hire purchase are provided by National Small Industries Corporation (NSIC) at the national level and State Small Industries Development corporations (SSIDCs) / State Small Industries Corporations (SSICs) at the state level.

2 42 Trend in Institutional Credit - Long Term Credit (LTC)

According to the Nayak Committee Report the total long term credit demand during the Eighth Plan period was placed at Rs 13 700 crore. Of this the demand for credit under non-farm sector covered under NABARD's refinance was estimated at Rs 2 000 crore. The balance was to be provided under SIDBI's refinance scheme which was estimated at Rs 11 700 crore reflecting the demand for SIDBI refinance at Rs 9 950 crore and balance (Rs 1 750 crore) being provided by SFCs / banks etc. Based on the disbursements made by SIDBI and NABARD during the four years of the 8th plan period [1992-93 to 1995-96] and the expected credit flow from these institutions during FY 97 the Expert Group is of the opinion that the term credit during the 8th plan period at 55 percent of the fixed capital formation in SSI sector as projected by the Nayak Committee would have been by and large met by the Institutions / banks. However looking to the increasing need of the sector it is desirable that the ratio goes up to about 75 percent of fixed capital formation until strong equity culture is developed in the sector to tap the capital market for part-financing the long term requirement. LTC includes various instruments such as term credit leasing / hire purchase deferred credit bills etc. Trends in bank and institutional credit to SSI sector during 8th plan period is given in Table 2 4.

Table 2 4 Trends in Bank and Institutional Credit In The Small Scale Sector During the Eighth Plan Period (Rs Crore)

S No	1992-93	1993-94	1994-95	1995-96	1996-97 (Est)
1 Total no. of units (nos. lakh)	22	24	26	28	29
2 Production	209 300	241 648	293 990	356 060	430 000
3 Growth rate in production (%)	17	15	22	21	21
4 bank credit to SSI of total Bank credit (%)	15	15	15	16	16
5 Net Bank credit to SSI	19 388	21 561	25 483	29 482	33 000
6 Share of Working capital finance (WCF) (78% of 5)	15 123	16 818	20 158	22 996	25 740
7 Long term credit (LTC) from SFC to SSI	1 204	1 311	1 313	1 686	1 975
8 WCF from SIDBI (direct discounting of Bills)	289	561	1 074	1 300	1 430
9 LTC from SIDBI direct	226	573	916	1 168	1 400
10 Total WCF from formal sources (6+8)	15 412	17 379	21 232	24 296	27 170
11 Total WCF from formal sources / production (%)	7	7	7	7	6
12 Total LTC from formal sources (22% of 5+7+9)	5 695	6 627	7 914	9 430	10 635
13 Total credit to SSI (10+12)	21 107	24 006	29 146	33 636	37 805
14 Total credit to SSI / Production (%)	10	10	10	9	9

Sources

(i) SIDBI Annual Report

(ii) Report of Sub-Group on finance credit & sickness on SSIs for the 9th five year plan

2 43 Small Industries Development Bank of India (SIDBI)

SIDBI is the apex bank set up for promotion financing and development of industry in the small scale sector. The bank commenced operations on 2nd April 1990. Its main functions consist of

- Refinance of term loans extended to SSI by banks and State Financial Institutions

- Equipment refinance to SSI units
- Special refinance schemes for in-house quality control facilities DG sets pollution control equipment energy saving systems
- Financial assistance to marketing organisations marketing SSI products
- Loans to organisations / institutions to set up industrial estates for SSI
- Equity type assistance schemes, e.g. Seed capital scheme National Equity Fund Scheme
- Single Window Scheme (SWS) to provide both term loan and working capital to SSI through one agency
- Special refinance schemes for women entrepreneurs
- Bills Rediscounting scheme for sale / acquisition of machinery on deferred payment terms
- Direct discounting scheme for equipment and components
- Pre-shipment credit in foreign currency to EOUs
- Venture Capital Fund with a corpus of Rs 20 crore
- Resource support to factoring companies and other institutions promoting SSI
- Direct Project Financing

Since its inception in April 1990 till March 1996, SIDBI has provided assistance of Rs 22 272 crore to 4 91 lakh units in SSI sector. The year-wise data on assistance sanctioned and disbursed by SIDBI is given in Table 2 5

Table 2 5 SIDBI Operation 1991-1996 (Rs Crore)

	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	Cumulative
Sanction	2 409	2 846	2 908	3 354	4 699	6 056	22 272
Disbursement	1 839	2 027	2 146	2 671	3 385	4 796	16 864

Source: SIDBI Annual Reports

If the real growth of the sector is estimated at 12 percent the total long term credit requirement of the sector during the 9th plan period (1997-2002) is likely to be Rs 36 500 crore as can be seen from Table 3 6. Refinance avialment from SIDBI has been about 60 percent of the long term credit (LTC) of Public Lending Institutions. Thus the requirement of funds by SIDBI during the 9th plan on account of LTC refinance alone would be around Rs 21 900 crore in addition to the requirement for its direct lending operations. The Expert Group notes that sizable credit out of its refinance portion flows to lower segments

of the SSI sector at highly concessional rates of interest. In view of the proposed change of definition to SSE and coverage of all service sector activities, the requirement of LTC of SSEs is likely to go up substantially during the 9th plan period and appropriate arrangements would have to be mobilised for its refinance and direct operations.

Table 2 6A Projections for Working Capital Finance (WCF) from Institutional and Bank Sources to the SSI Sector During the 9th Plan Period (Rs Crore)

	1996-97	1997-98	1998-99	1999-2000	2001-01	2001-02
Est Production (at 1997-98 Prices) *	521 447	584 021	654 103	732 595	820 507	918 968
Est WCF required at 20% of production value		116 804	130 821	146 519	164 101	183 794
Est WCF likely at the start of the plan (est at 8% of production)	41 716	46 722				
Target WCF outstanding		67 746	86 946	111 586	143 209	183 794
Gap in WCF outstanding		49 058	43 875	34 933	20 893	0
Annual (additional WCF target		26 031	19 199	24 640	31 623	40 585
Shortfall in the annual WCF provision		49 058	43 875	34 933	20 893	0

* Projecting at a 12% rate of growth and an assumed rate of inflation of 6% from the figure for 1994-95

Table 2 6B Projections for Long Term Credit (LTC) from Institutional and Bank Sources to the SSI Sector During the 9th Plan Period (Rs Crore)

	1997-98	1998-99	1999-2000	2001-01	2001-02
Projected requirement of LTC (1997 98 prices) @	38 660	43 299	48 495	54 315	60 833
Gap on LTC	7 732	5 789	3 866	1 933	0
Target for outstanding LTC	30 928	37 500	44 629	52 382	60 833
Annual disbursement target #	6 614	6 572	7 129	7 752	8 451
Cumulative disbursement target	6 614	13 186	20 315	28 067	36 518

@ obtained by projecting the March end 1995 figures of total LTC outstanding to the sector adjusting the same for adequacy (at 75% of the fixed capital stocks) and with an assumed (most likely) growth rate of 10% during the closing years of the 9th plan and at an inflation rate of 6%

this figure is likely to go up substantially on account of recommended change in definition of SSI into SSE including coverage of all service activities

Source Report of Sub-group on finance credit & sickness on SSIs for the 9th five year plan

2.44 National Small Industries Corporation (NSIC)

NSIC was established by the central government in 1955. Over the years it has emerged as a premier institution for SSI which provides technology and marketing support. Its main functions are

- Machinery hire purchase scheme for small scale units
- Equipment leasing scheme

- Marketing support programmes under consortia marketing
- Single point registration scheme for marketing
- Technology assistance
- Development and training activities
- Raw Matenal Assistance

2 45 State Financial Corporations (SFCs)

During the last four decades SFCs have been mainly responsible for term lending to the SSI sector. However, the need for evolving a new approach by SFCs has been underlined by the liberalised environment. While some SFCs have performed well in terms of growth in sanctions and disbursements, the average recovery rate of all the SFCs put together has been very low at around 37 percent. Four SFCs have almost become defunct and non-functional owing to their inherent weaknesses.

It has been recognised that the scope of activities of the SFCs need to be widened, their resource base enlarged and their organisation transformed to ensure operational autonomy. A committee constituted by the finance ministry under the chairmanship of Shri S H Khan, Chairman and Managing Director, IDBI, addressed various issues which would substantially effect the operations of SFCs. The suggested changes were in the areas relating to

- i widening the definition of industrial concern and addition of certain business activities to be undertaken by the SFCs
- ii increasing the share capital and changes in share holding pattern
- iii borrowings from other sources and deployment of funds in other securities
- iv restructuring of Board of Directors ensuring functional autonomy
- v exposure limit in the borrowing companies and
- vi recovery of SFCs dues

2 46 Trend In Institutional Credit-Working Capital Finance (WCF)

Small Scale Industries are entitled to priority sector lending from the public sector banks. Over the years, it has been found that this sector has been getting about 15 percent to 16 percent of total bank's advances. Small loans are available at lower rates but these are not specifically meant for the small scale industry. Loans of amounts upto Rs. 25,000 are at present extended at a rate of interest of 12 percent, the interest rate rises to 13.5 percent for loans more than Rs. 25,000 but less than Rs. 2 lakh. For loans higher than Rs. 2 lakh, the interest rate is now deregulated.

The percentage of bank credit to SSI total bank credit remained more or less at 15 percent during the initial 3 years of the 8th plan period and is estimated to be around 16 percent during the last two years of the 8th plan. Total WCF from formal sources available to the sector was around Rs 15 400 crore in 1992-93 which is estimated to have increased to around Rs 27 000 crore at the end of the 8th plan period (Table 2.4). However, the percentage of working capital finance from formal sources (banks / FIs) to the total production was lower at about 7 percent than the expected level of requirement at 20 percent as suggested by the Nayak Committee. As per the estimates of Sub-Group on finance, credit and sickness on SSI for the 9th plan period, the likely requirement of WCF at 20 percent of the production is estimated at about Rs 116 800 Crore in 1997-98 which is expected to go up to Rs 184 000 crore by the end of the 9th plan period (Table 2.6). The estimated gap would be about Rs 49000 Crore in the initial year of the 9th plan (1997-98).

2.47 The Credit Policy of 1992

In recognition of the widespread dissatisfaction with the availability of credit to small scale enterprises, in September 1992, the Reserve Bank of India set up a Committee under Deputy Governor Shri P. R. Nayak to recommend measures to enhance credit to the small scale sector. Its key recommendations are given below:

- SSI units are entitled to working capital of a minimum of 20 percent of their projected sales turnover but not exceeding Rs 100 lakh of their fund based needs.
- The entire SSI sector (upto Rs 60 lakh investment in plant and machinery) is entitled to priority sector lending of the banks. At least 40 percent of the loans to the SSI have to be directed towards the cottage, KVIC units, artisans and tiny industries or other such units subject to credit ceilings of upto Rs 5 lakh.
- State Financial Corporations (SFCs) will act as the principal financing agency for SSIs in 23 out of the 85 districts with significantly high industry density (each having more than 2 000 registered SSI units). They will take care of the working capital as well as the demand for term loans. The commercial banks will be the principal financing agency under the Single Window Scheme (SWS) in the remaining districts. Commercial banks will also open specialised or dedicated branches in other areas of high small industry density.
- An effective grievance redressal machinery will be established within each bank to take care of SSI problems.
- Banks would adopt and implement the single window scheme in full earnest.
- Rehabilitation packages for alleviating sickness for potentially viable small units made more attractive.

- The government announced a seven point action plan in 1995-96 Budget for the effective implementation of the Nayak committee report. This was done when it was found that the SSI sector was getting working capital worth 7.8 percent of its turnover in 1995-96 down from 8.1 percent as reported by the Nayak committee. The important features of this action plan are as follows
 - ◆ Time bound action for setting up specialised SSI branches in 85 identified districts and at least 100 such dedicated branches to be opened before the end of 1995-96
 - ◆ Adequate delegation of powers at the branch and regional level
 - ◆ Banks to conduct sample surveys of their performing SSI accounts to find out whether they are getting adequate credit
 - ◆ Steps to be taken to see that as far as possible composite loans (covering both term loans and working capital) are sanctioned to SSI entrepreneurs
 - ◆ Regular meeting by banks at zonal and regional levels with SSI entrepreneurs
 - ◆ Need to sensitize bank managers and reorient them regarding working of the SSI sector
 - ◆ Simplification of procedural formalities by banks for SSI entrepreneurs

2.5 Institutional Framework for SSI Support

The highest echelon of the administrative hierarchy for the promotion of the small industry in India is the Department of Small Scale Industries and Agro & Rural Industries (SSI & ARI) in the central government. It is responsible for the policy framework for small scale industries in India.

2.5.1 Small Industries Development Organisation

A tier below the Department of Small Scale Industry is the Development Commissioner for Small Scale Industries (DCSSI) and the associated Small Industry Development Organisation (SIDO). It formulates and monitors the policies and programmes for promotion of small scale industries. SIDO also provides a host of business services ranging from quality control to consultancy delivered by a network of institutions. A description of the nature of the services supplied by SIDO follows.

- **Entrepreneurship Development and Training**

A variety of Entrepreneurship Development Programmes (EDPs) familiarize new entrepreneurs with the dos and do nots of setting up a unit. These courses are conducted by the technical personnel available with the SISIs and Branch Institutions and the National Institute for Entrepreneurship and Small Business Development (NIESBUD) New Delhi set up in 1983. This body provides training to EDP trainers and develops training aids and materials.

- **Extension and Training Services**

Another national institute called the National Institute for Small Industry Extension and Training (NISIET) Hyderabad was established under the aegis of SIDO and its functions are self-explanatory. Another institute called the Integrated Training Centre at Nilokheri provides technical training to artisans / workers. It also organises training of extension officers engaged in various developmental organisations.

- **Skills Development**

Training in technical skills development is given to technicians and workers in various workshops attached to the SISIs and institutions such as Testing Centres and Tool Rooms. For example, Central Footwear Training Centre (CFTC) provides training to the workers in footwear trade.

- **Assistance to Entrepreneurship Development Institutes (EDIs)**

A new scheme assists state governments by way of capital and revenue grants not exceeding Rs 50 lakh for each state to strengthen and establish Entrepreneurship Development Institutes (EDIs). The Indian Institute of Entrepreneurship was established at Guwahati in March 1993.

- **Preparation of Project Profiles**

Technical officers of SIDO at central / state level prepare and update project profiles on various product groups on a regular basis. These are disseminated to entrepreneurs around the country. Nearly 1 000 project profiles are prepared / updated by the various officers every year. These efforts are supplemented by potentiality / feasibility studies on trade-wise basis and preparation of state / district potentiality survey reports. Information on markets and technologies is also collected, assessed and disseminated.

- **Plant Modernisation Studies**

Detailed in-plant studies are undertaken in particular units located in industry clusters. The studies identify the present uses of processes / technology and prepare programmes for modernisation of the specified industry group based on the empirical studies. This is supplemented by efforts to encourage units to take up projects for modernisation. On an average 10-20 studies are taken up each year in various groups.

- **Testing Services**

Testing facilities are available through Regional Testing Centres and 19 Field Testing Stations and the workshops attached to the SISIs. Besides testing, these institutions provide certification as well as third party assurance to purchasers who procure goods from SSI units. The centres also organise training programmes for suitable people to equip them to handle testing work. Nearly 50 percent of the expenses incurred on these centres are earned as revenue through job work.

- **Sub-contracting Exchanges**

As many as 16 exchanges have been established for dissemination of information relevant to ancillaries

- ◆ To register idle capacities available in SSI units
- ◆ To identify the requirements of large units so as to utilise the idle capacities
- ◆ Organise vendor development programmes and exhibitions and promotional programmes
- ◆ To promote interaction between small and large units

Efforts are being made to strengthen the activities of the sub-contract exchanges and to promote private ventures to setup such exchanges throughout the country

- **Tool Rooms and Product and Process Development Centres**

These provide the following services

- ◆ Design / manufacture of tools jigs fixtures etc
- ◆ Service facilities for manufacture of tools etc
- ◆ Training to tool makers
- ◆ Short term / part time courses for entrepreneurs
- ◆ Product-cum-process development work in specific industry groups

The Tool Rooms / PPDCs generate revenue from the job work they undertake on the behalf of the SSIs

- **Marketing Support**

The schemes being operated by SIDO for promoting market including exports consists of

- ◆ Training in packaging
- ◆ Participation in Indian and International Trade Fairs

- ◆ **Data Collection**

SIDO has a vast programme for collection of statistics through a central scheme by involving both District Industries Centres and Small Industries Service Institutes. SIDO meets the salary of the state staff engaged in the task of data collection. At present data are collected regularly under these programmes

- ◆ Sample survey of 2 percent of the registered units This is being raised to 5 percent of registered units by raising the number of units to 29 000 and for 500 items
- ◆ The data is supplied to CSO for the preparation of Index of Industrial Production (every month)
- ◆ Collection of quarterly data for preparation of Index of SSI production
- ◆ Analysis of registration data

It also conducts *ad hoc* surveys and census So far SIDO had held two Census of Registered SSI Units for base year 1972-73 and 1987-88 and two diagnostic survey on Sickness of SSIs in 1985 and 1994-95 It is also computing 147 DICs and 25 Director Industries in Eighth Plan

- **Major schemes of SIDO**

The budget of SIDO under various functions is given in Table 2.7 below

Table 2.7 Budgetary Provision for SSI Promotion

	8th Plan	1996-97
Prime Minister's Rozgar Yojana	305 50	120 00
Integrated Infrastructure Development Scheme	50 00	17 59
Tool Rooms	105 05	22 11
PPDCs	58 00	3 83
Collection of Statistics	29 00	6 48
Modernisation and Technology Upgradation	15 80	0 05
Others	64 15	48 59
Total SIDO	627 50	218 65

2.52 Small Industries Service Institutes (SISIs)

SISIs are associated with SIDO There are 28 SISIs 30 Branch institutes set up in state capitals and other places all over the country Their main functions are

- Interface between the central and state governments
- Technical support services and consultancy services
- Entrepreneurial development programmes
- Developmental efforts
- Promotional programmes
- Export promotion Liaison

2 53 Tool Room / Tools Design institutes

The Tool room is at the heart of engineering industry. Due to huge investments needed, small scale industrial units cannot afford to have their own tool rooms. Therefore, the central government established these centres to help SSI units to obtain quality toolings.

- **Functions**

- ◆ Assistance in tool design
- ◆ Manufacture of tools, jigs, fixtures, moulds etc
- ◆ Training facilities to tool makers
- ◆ Common service facilities
- ◆ Consultancy

- **Facilities provided by Tool Rooms**

- ◆ **Tool Production**

- ◇ Manufacture of dies, tools, moulds, jigs and fixtures, gauges and tool components
- ◇ Heat treatment of all types of steels
- ◇ Quality control and testing
- ◇ Regrinding, resharpening and maintenance of dies and tools
- ◇ CAM (Computer Aided Manufacturing)

- ◆ **Tool Design**

- ◇ Design of dies, tools, moulds, jigs, fixtures, gauges for metal and plastic industry as per international standards
- ◇ Design to the customer requirements
- ◇ CAD (Computer Aided Design)
- ◇ Tool-related innovations for imported product design

- ◆ **Consultancy**

- ◇ Introduction of modern production technology
- ◇ Use and maintenance of precision tools
- ◇ Quality control and testing of tools and products
- ◇ Selection and use of CNC machines
- ◇ Selection of proper materials for tools as well as the products manufactured

- ◆ Training
 - ◇ Industry based long term training for tool and die makers
 - ◇ Short term training for Managers / Supervisors to upgrade their knowledge and skills
 - ◇ Need-based technical training for skilled workers / too makers / machinists
 - ◇ Training for inspection quality control testing and maintenance
 - ◇ CNC technology training
 - ◇ Heat treatment training
 - ◇ Certified long duration courses such as post-graduate diploma in tool die and mould design

Tool Rooms are located at several locations Calcutta Ludhiana Jalandhar Hyderabad Nagore Ahmedabad Aurangabad Indore Bhuvaneshwar Jamshedpur New Tool Rooms are likely to come up in future at Mysore and Bhopal There are also proposals under consideration for new tool rooms at other places These Tool Rooms are being established with the help of financial assistance from international agencies from Germany and Denmark

2 54 Product-Cum-Process Development Centres (PPDC)

Certain industries have a tendency to grow in a concentrated way in certain important centres Such areas have emerged as important centres for specific type of industries like sports goods in Meerut Glass items in Firozabad Foundry in Agra etc These units have normally engaged in production of items in traditional manner and do not have much exposure to changing technology designs an manufacturing process To help meet the above requirements SIDO has a programme of establishing PPDCs at such centres

- **Functions served by PPDCs**
 - A To serve as research and development institutions in areas of dense industry cluster
 - B Product design and innovation
 - C Product and process improvement and development of improved packaging techniques
 - D Common facility centre
 - E Manpower development / training
- **Existing PPDCs are located at**
 - F PPDC Agra for foundries PPDC Meerut for sports goods PPDC Mumbai for household electrical appliances ESTC Ramnagar (UP) for electronic industries

- **New PPDCs**

G CIGI Firozabad (UP) for glass industry (under implementation)

H PPDC Kannauj (UP) for essential oils and perfume industries (under implementation)

I PPDCs are designed to work basically as R & D institutes to carry out advanced developmental work and act as centres of excellence in the concerned fields

J Steps to establish more PPDCs for pumps and diesel engines food and bakery products polymer and polymer based products are also on the cards

K Financial assistance is obtained for PPDCs from international agencies

Till 1995-96 SIDBI has sanctioned an aggregate assistance of Rs 13 795 crore and made disbursements of Rs 10 960 crore Among the new schemes started / assisted by SIDBI are Factoring Services for Small Scale Industries and a Venture Capital Fund

2 55 Other Autonomous Institutions Extending Support to SSI

There are various national level institutions which help support the SSI in various ways Some of the important institutions among them are

- Entrepreneurship Development Training Institute of India Ahmedabad a national resource institution promoting and developing entrepreneurship through education training research and institution buildings
- National Institute of Design, Ahmedabad is a premier design school in the country It also provides specialised courses in product design in areas of furniture ceramics textile printing leather plastics and metal forming to SSI
- National Productivity Council (NPC) and its local branches to provide help in improving productivity in SSI units
- Seven product cum process development centres in areas of ceramics foundry sports goods electrical appliances electronics glass and essential oils
- Ten tool rooms located in different parts of the country
- Four Central Footwear Training Centres for training manpower in leather and footwear products

2 56 Industry Associations

The industry associations provide the SSI with a common platform to voice their needs and to initiate co-operative efforts in promoting SSI Government policies in recent years have stressed the

increasing role of the industry associations and the NGOs in setting up common facilities and other co-operative ventures in areas of technology marketing and other support services Some of the major national associations are

- Federation of Association of Small Industries of India (FASII)
- Indian Council of Small Industries
- Indian Federation of Tiny Enterprises
- World Association of Small and Medium Enterprises
- All India Manufacturers Organisation
- Federation of India Chamber of Commerce and Industry
- PHD Chamber of Commerce and Industry
- Confederation of Indian Industry

2 57 Small Scale Industries Board

The range of development work in small scale industries involves several departments / ministries and several organs of the central and state governments To facilitate co-ordination and inter-institutional linkages the Small Scale Industries Board was constituted in 1954 It is an apex advisory body constituted to render advice to the government on all issues pertaining to the Small Scale Sector The Industries Minister in the central government is the chairman and the Board comprises among others state industry ministers some members of parliament secretaries of various departments of the central government representatives of financial institutions public sector undertakings industry associations and experts

2 6 State Level Institutions

The following are the state level institutions playing an important role in the development of small enterprises in India

- The State Financial Corporations which provide term loans to small and medium enterprises
- The State Small Industries Export Corporations which procure and distribute scarce raw material machinery on hire purchase assist in marketing equity support etc
- The State Industrial Development Corporations which acquire land and offer plots and sheds to entrepreneurs
- State Trading Corporations which assist in exports provide market intelligence at national and international levels and operate show rooms

- A few states have regional development corporations for individual regions
- A few states have set up venture capital funds
- A few states have set up Institutes for Entrepreneurship development

2.7 District Industries Centres (DICs)

DICs came into being as a result of recommendations of Industrial Policy Statement of 1977. Their objective is to provide an integrated administrative machinery at the district level to support cottage and small industries which are widely dispersed in rural areas and other small towns.

DICs were designed to provide all the service and support required by small entrepreneurs ranging from pre-investment, investment and post-investments stages under a single roof. The services include economic investigation of local resources, supply of machinery and equipment, provision of raw material, arrangement for credit facilities, marketing, quality input, consultancy and extension services.

About 430 District Industries Centres have been set up covering almost all districts of the country, leaving out the metropolitan cities. This programme was started in May 1978 as a centrally sponsored scheme with the central government providing 50 percent assistance. The District Industries Centres are envisaged as a single window interacting agency with the entrepreneur at the district level. Service and support to small entrepreneurs are provided under a single roof through the DICs. They are the implementing arm of the central and state governments of the various schemes and programmes. Registration of small industries is done at the District Industries Centres.

Management of the District Industries Centres is done by the state governments. Beginning from 1993-94, the scheme has been transferred to states and they will also provide funds for running the DICs. The central scheme of Prime Minister's Rozgar Yojana will also be administered by them. The activities of DICs include:

- **Regulatory Functions**
 - ◆ Registration of SSI units
 - ◆ Activities connected with policy implementation
 - ◆ Administrative work including settlement of disputes
 - ◆ Implementation and monitoring of programmes of both central and state governments
- **Recommendatory for assistance from government agencies for**
 - ◆ Machinery
 - ◆ Finance
 - ◆ Procurement of materials
 - ◆ Registration and licenses

- **Promotional**
 - ◆ Preparation of Project Reports
 - ◆ District Action Plans
 - ◆ Entrepreneurship Development
 - ◆ Surveys
 - ◆ Consultancy
 - ◆ Escort Services

2.8 Summary

This review has shown the wide array of policies, programmes, schemes and institutions that have been developed over the years to provide support to small scale industries. We have not itemised in detail some of the other schemes for support provided to traditional industries such as khadi and village industries, handicrafts, silk industries, coir industries and the like, each of which have specific institutional structures to cater to their needs.

The design of policies and schemes have two basic characteristics. First, many policies have been designed to protect small scale industries from competition from large industries, the premier instrument being the reservation policy. This protective aspect is buttressed by other measures of credit and fiscal policies to provide concessions to small scale industries. The second characteristic is to design programmes and institutions to provide support from the government to selected sectors and directly to small scale units.

The central government supported by the state governments has therefore clearly recognised the need for providing special support to small scale industries. The support structure has reflected well the needs of 1950s and 1960s in particular, the beginning of industrialisation in India and the controlled economic regime in particular, characterised by licenses and quotas. Consequently, as in other sectors, the government has attempted to intervene directly in its support programmes.

In view of the vast growth of small scale industries that has taken place through the years, the existing network of government institutions cannot hope to serve well the needs of all the vast number of small industrial units throughout the country. Second, it is better to provide overall support to small scale enterprises rather than selecting particular sectors or units. Third, with the general opening of the economy and the imperatives of industrial growth, the continuation of the reservation policy becomes increasingly questionable. Fourth, the support structure has focused exclusively on the small scale industries rather than small scale enterprises. There is immense potential in the growth of business and technical support services—both for entrepreneurship and employment growth. The policy framework for the small scale sector should therefore support all small scale enterprises equally.

III STRUCTURE, GROWTH AND PRODUCTIVITY OF THE SMALL SCALE SECTOR AN OVERVIEW

This chapter pulls together the empirical material available on the SSI sector in India. We are first interested in the size of the sector and its importance in the total manufacturing activity in the country both in terms of employment and output. A number of statistical sources have to be utilised for this purpose. Although not entirely consistent the use of the several sources enables us to provide a best estimate of the SSI sector (more details of the sources used are to be found in the Annex to this chapter).

We build on the same sources to look successively at other dimensions of the SSI sector: its growth over the last two decades; changes in its composition; the distribution by size within SSI; and trends in investment and productivity in the sub sector. The issue of regional dispersion of small enterprises is also addressed in this discussion.

In part II of this chapter we turn to the empirical evidence of the key economic ratios in small and large units. We want to know if the balance of evidence suggests that small enterprises are indeed more labour intensive—and if so at what level of overall economic efficiency.

3.1 Size of the SSI Sector: Employment

3.1.1 The Population Census and The Annual Survey Of Industry

An estimate of the total employment in the SSI manufacturing sector can be made for the years of the decennial population Censuses by using the Census figures together with the numbers given in the Annual Survey of Industries (ASI) for the corresponding years. The former records employment in manufacturing for the census years by the household and non-household enterprises. The ASI provides figures of employment in the 'registered' sector, i.e. the establishments covered by the Factories Act. By subtracting this estimate from the Census figure of employment in the non-household sector it is possible to estimate three sub-groups of workers in manufacturing: those in the household, the non-household unregistered, and the non-household registered sectors. The results are reported in Table 3.1.

Table 3 1 Growth And Distribution Of Main Workers 1981-91

	Census 1981	Census 1991	Absolute Change in 000s	Rate of Growth (%)	Share in Total (%)		Share in Non Household (%)	
	in 000s	in 000s			1981	1991	1981	1991
All Manufacturing	25 145	28 671	3 526	1 4	100	100		
Household	7 713	6 804	-909	-1 18	30 7	23 7		
Non Household	17 432	21 867	4 435	2 54	69 3	76 3	100 0	100 0
ASI*	7 715	8 163	448	0 58	30 7	28 5	44 3	37 3
Non Factory	9 717	13 704	3 987	4 1	38 6	47 8	55 7	62 7
Household non ASI								

Note Population figures exclude Assam and Jammu and Kashmir manufacturing includes electricity water and gas Census 81 from Paper 2 of 1983 key population statistics based on 5 percent sample data Census 91 from Primary Abstract 1991

ASI summary results for the factory sector 1980-81 & 1990-91

Source Ramaswamy (1994) Table 2 p 8

In 1991 while the non-household sector provided employment for 76.3 percent of total manufacturing employment the unregistered sector accounted for as much as 47.8 percent. The SSI sector is bigger than the 'unregistered' sector because some of the units covered by the ASI are small-scale according to conventional definitions whether by employment size (less than 50 workers) or by capital size. In 1990-91 units under 50 workers add another 6.5 percentage points to the SSI- giving a total of 54.3 percent of employment in the sector (17.5 percent of ASI employment was in units of 0-49 size class. It was 18.2 percent if we adopt the capital size definition prevailing at this date i.e. those having a value of plant and machinery of less than Rs 5 lakhs). Adding the household sector of course increases the importance of small scale in total manufacturing enormously- to over three quarters of the total.

3 12 The Economic Census

The Central Statistical Organization (CSO) conducts a survey of non-agricultural establishments in the unorganized sector every five years. The first one was in 1978-79 the second in 1984-85 and the last in 1989-90. As explained in the annex to the chapter the survey was in two rounds - here we use only the first round pertaining to manufacturing and repairs services units. The establishments are classified into three groups

- i Directory Manufacturing Establishments (DME)
- ii Non-Directory Manufacturing Establishments (NDME) and
- iii Own Account Enterprises (OAE)

A DME is an establishment with six or more workers at least one of whom is hired on a fairly regular basis. An NDME is one which employs five or less workers at least one of whom is hired and an establishment with no hired worker is classified as OAE.

It should be noted that the OAE sector does not coincide with the household sector as conceived of in the Population Census although there is considerable overlap between the two. The Census of Population considers the household sector to be those establishments which carry out their operations from their own residence.

Furthermore, the absolute numbers employed in manufacturing are not comparable between the two sets of statistics. There are two conceptual reasons for this apart from errors in recording. First, considerable uncertainty and volatility exist in the Census of Population because of the problems in identifying "main" and "subsidiary" workers employed in manufacturing. This is why in the figures given in Table 3.1 only the Census figure of main or principal workers is used. It is not known if the Economic Census confronted the problem of distinguishing main and subsidiary workers and if so how they solved it. But at least on this point it is reassuring to find that the Economic Census figure of the total employed in the non-factory sector is considerably higher than the figure given in Table 3.1 - 40.25 million in the 1989-90 CSO survey results as against 28.67 million in the Census of Population suggesting that the former did include some secondary workers. A second reason why the absolute figures of employment in manufacturing might differ in the two Censuses is that the boundary between manufacturing and repair/services is very hazy in the SSI sector and particularly in the household sector. In any event more interest attaches to the proportions of employment in the different sectors as recorded in the two Censuses.

The statistics provided by this source add to our information because it is possible to classify small scale sector by further size categories in particular distinguish the small (> 6 workers) from the tiny sector (1-5 workers) consisting of the NDME and the own account establishments.

The statistics provided by the two more recent survey of DME and NDME & OAE are reproduced in Table 3.2. Full details (absolute numbers and percentages) are provided in Appendix Table A-1 and A-2.

Table 3 2 Manufacturing Employment In Different Sectors (Percent)

Sector	1984-85	1989-90
I Factory Sector	16.8	20.2
(of which SSI)	(5.7)	(7.6)
II DME	10	14.5
III NME(1-5 Workers)	10	6.4
IV OAE (Own Account)	63.2	58.9
Total	100	100
Total in Number (Lakh)	468.2	402.51

Sources

I ASI 1984-85 & 1985-90 Summary Results for Factory Sector (CSO)

II Directory Manufacturing Establishments Survey Results of 1994-85 1989-90 (CSO)

III Non Directory Manufacturing Establishments Survey Results of 1984-85 & 1989-90 (NISSO)

It is clear that the data are not of the quality which can be used to trace detailed changes between the Censuses. It seems very unlikely that the total employment in manufacturing should have fallen between the two dates by more than 10 percent (the first Census of 1978-9 was not reliable enough to be used by the National Accounts Office). Nevertheless the orders of magnitude of proportion of workers in the different segments are fairly close together at the two dates and could be used for giving reliable estimates of the distribution. It is seen that if the modern small-scale sector is assumed to be the sum of the DME and the SSI in the manufacturing sector (a procedure which makes it comparable with much international data giving information on manufacturing employment in enterprises of more than 5 and less than 50 workers) it accounts for around 20 percent of the total but perhaps 50 percent of the modern manufacturing sector.

3.13 Small Industry Development Organisation (SIDO) Census

The Office of the Development Commissioner Small Scale Industries has conducted two censuses of the small-scale units (CSSU) with reference period as 1972 and 1987-88. This is based on a scheme of voluntary registration with the State Industry Departments (DIs and DICs). Because of the uncertainty of the criterion of registration and of its continuation over time it is difficult to be sure where it fits into the other sources mentioned above. In 1987-88 the estimate of employment in the SIDO units was 7.692 million which compares with the Economic Census estimate of employment of 7.348 million in 1984-85 in the DME plus the SSI factory sector. In 1989-90 estimate of employment in SIDO units was

8 699 million which falls short of economic census estimate of 8 919 million for 1989-90 (See Appendix Table A-2)

It is apparent that it is impossible to obtain a consistent estimate of the total employment in the small-scale sector in the absence of coordination among the different agencies responsible for recording statistical counts. The comments made on the proportions in each of the segments distinguished above is as far as we can go.

3.2 Size of the SSI Sector Value Added

The vast majority of enterprises in the small-scale sector are units of the cottage type with low productivity or value added per worker. The structure of value added would thus differ significantly from the structure of employment.

Presumably the most reliable source of data on value added would be the National Accounts Statistics. For 1989-90 the unregistered sector in manufacturing accounted for 37.7 percent of Gross Value Added (GVA). The registered sector of course included the SSI part of the factory sector. The ASI estimate for this sector was 11.5 percent of GVA. Thus summing them the total small scale sector contributed 49.2 percent of GVA to the manufacturing sector.

It might be of interest to supplement this estimate with the breakdown of different sub-sectors given in the Economic Census of this date. This is done in Table 3.3 based on the data in Appendix Table A-1.

Table 3.3 Gross Value Added in Manufacturing in Different Sectors (Percent)

Sector	1984-85	1989-90
I Factory Sector	66.2	73.3
(of which SSI)	(10.4)	(11.5)
II DME	9.2	8.2
III NME	8.8	6.4
IV OAE	15.9	11.7
Total	100.0	100.0
Total GVA (Rs Crore)	37,697	70,966

Source: Table A.2

Comparing the percentage distribution of employment in Table 3 2 with that of value added in Table 3 3 we see the enormous differences in labour productivity The indices of value added per worker (relative to the average of all manufacturing) are obtained by dividing the percentages of Table 3 3 with those of Table 2 These are reproduced for 1984-85 only in Table 3 4

Table 3 4 Indices of Relative Gross Value Added Per Worker

SECTOR	1984-85
I Factory Sector (non SSI)	476 1
II SSI Factory Sector	161 4
III DME	92
IV NME	88
V OAE	18 5
Total	100

Source Tables 3 2 and 3 3

The data show the dominance of the high productivity large scale units in the productivity ladder and the remarkably low value of the own-account enterprises Many of the latter must be providing supplementary income to workers engaged in multiple occupations Another important point to notice in the Table is the difference in labour productivity between the SSI units in the Factory sector and the DME units outside the purview of this sector

3 3 Growth Rate

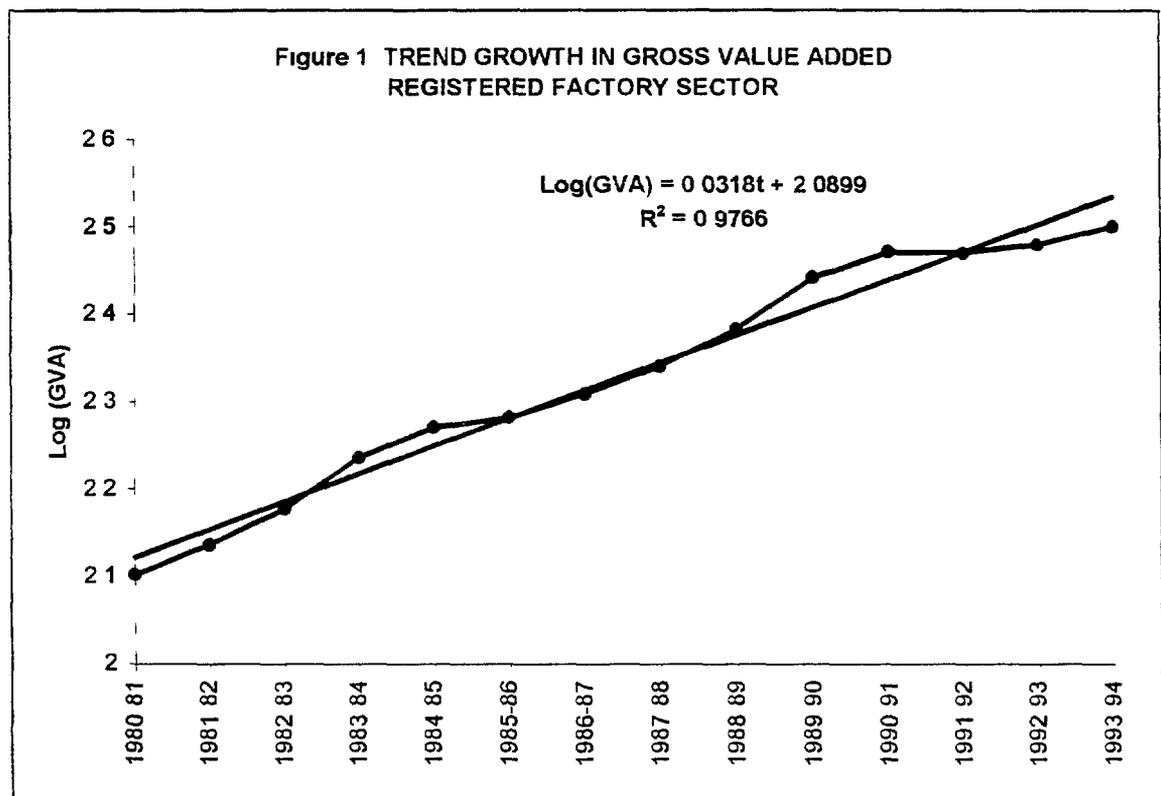
3 31 The Household Sector

As in all countries the household sector within manufacturing has shown a declining trend over several decades Looking at the changes under the Population Census definition employment in this sector as shown in Table 3 1 above declined from 30 7 to 23 7 percent in the decade of the eighties, if we confine our attention to main workers only This continues the trend noticed in Little Mazumdar and Page (hereafter LMP) of a nearly 20 percent decline in household industry in the 1961-71 period concentrating on male workers only (LMP Table 5-2 p 61) The Economic Census adopting a different definition of own-account units also shows a decline in the proportion of OAE employment in the late 1980s (Table 3 2 above) India is thus behaving no different from other countries in which the sector of low productivity shrinks with economic development This is all to the good as the process of transformation raises overall productivity and labour earnings by shifting workers from cottage shops to more productive units

3 32 The Registered and the Unregistered Sectors

The National Accounts data presented in Appendix Table A-3 show the changing composition of manufacturing output in terms of the registered and the unregistered sectors— the criterion of registration being coverage under the Factories Act. It is seen that the proportion of value added accounted for by the unregistered sector has fallen slowly from a share of just over 41 percent in the early eighties to just over 37 percent in the early nineties. Evidently the decline in the household sector in manufacturing was not fully compensated for by the growth of the non-household production in the small-scale sector. Of course the "registered" sector in the National Accounts includes SSI units coming under the Factories Act.

But as the figures 1, 2 and 3 show the growth rate of the SSI sector fell short of the growth rate of the non-SSI sector value added over the 1980s and early 1990s. Table 3.5 presents figures of annual growth rates of the small scale sector (adding together the unregistered sector of the National Accounts and the SSI sector obtained from the ASI) for the years since 1980-81.



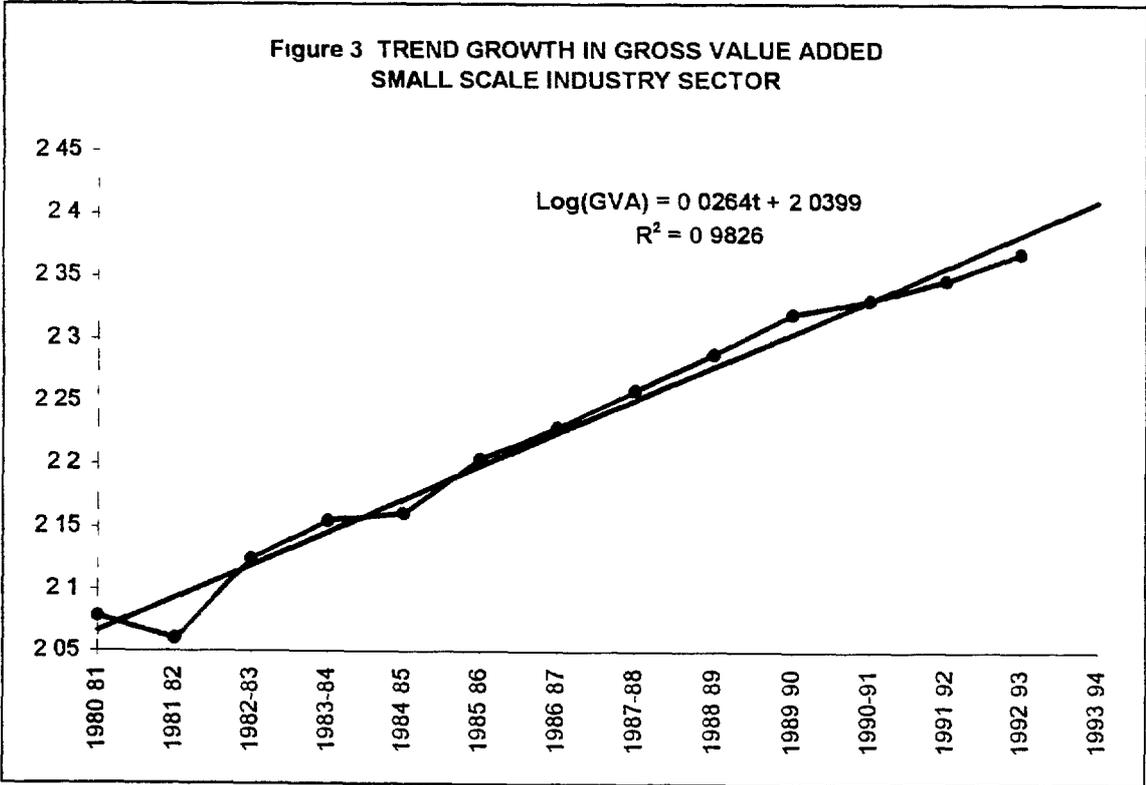
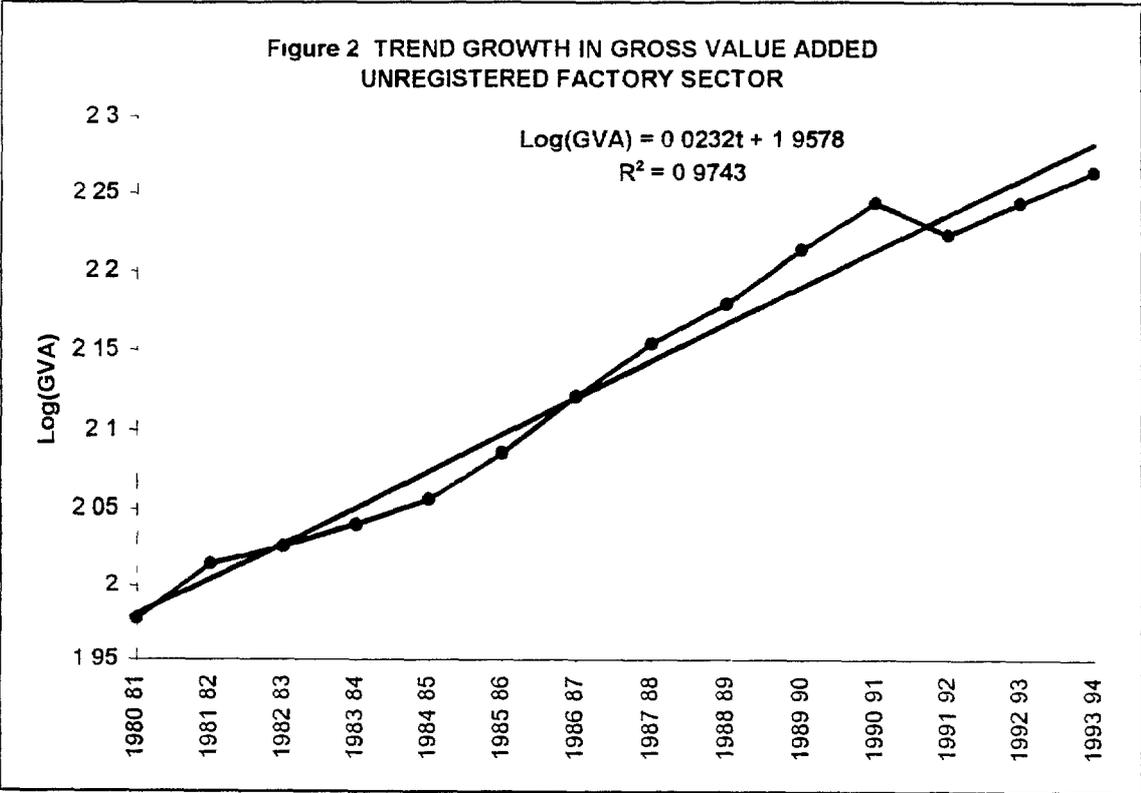


Table 3 5 Growth Rates Of Small Scale Sector
(Unregistered Sector Of The National Accounts
And The SSI Sector From the Annual Survey Of Industries)

Year	Gross Value Added (Rs Crore)	Growth Rate (%)
1980-81	11 973	-
1981-82	11 477	(-) 4 14
1982-83	13 319	16 05
1983-84	14 271	7 15
1984-85	14 469	1 39
1985-86	15 999	10 57
1986-87	16 932	5 83
1987-88	18 157	7 23
1988-89	19 402	6 86
1989-90	20,898	7 71
1990-91	21 440	2 59
1991-92	22 525	5 06
1992-93	23 370	5 15

Source

i Annual Survey of Industry

ii National Accounts Statistics

SIDO figures give an estimate of growth rates of the small-scale sectors under their purview which is considerably in excess of the estimates presented in the national accounts. For example, the average annual growth rate of value added was estimated at 9.22 percent between the two Censuses of 1972 and 1987-88 at 1972-3 constant prices (NCAER table 3.10 p. 68). Even allowing for the fact that the household sector has dragged the growth rate down in the National Accounts estimate of the small-scale sector, the difference between the SIDO and the National Accounts estimates is very large. However, the methodology of estimating the growth rate in the SIDO data is deficient. It appears that the SIDO arrives at its figures on a gross basis without allowing for the mortality of previously counted units. An NCAER study allowing for a mortality of around 4 percent per annum showed that over a period of time the over-estimation of the number of units, and hence the inflation of employment and output based on the per unit data, would be considerable (see Appendix Table A-2). It should be noted that while the SIDO data cannot be used for calculating over-all growth rates of the SSI sector, the changes in the proportions and ratios of

various variables over the period of the two Censuses are likely to be not subject to error unless there are big differences in the relevant ratios between surviving and extinct units

3 4 The industrial composition of SSI and its change over time

We now use various sources to trace the more significant changes in the composition of industry Which are the sectors or industry groups which are most prominent in the growth of the SSEs?

3 41 Traditional vs Modern SSI

The Planning Commission provides the basic composition of the entire decentralized (small-scale or VSI) sector by major types of industries bringing together the different areas under the purview of different government entities The data for different dates are set out in Table 3 6

Table 3 6 Composition of Output of Very Small Industries

Industry	1973-74	1979-80	1984-85	1989-90	1991-92
A Traditional Industries					
Khadi	0 44	0 27	0 26	0 18	0 14
Village Industries	0 90	1 04	1 17	0 96	1 10
Handlooms	6 20	5 19	4 45	2 95	2 08
Senculture	0 46	0 39	0 49	0 43	0 51
Handicrafts	7 83	6 11	5 41	6 18	6 79
Coir	0 44	0 26	0 15	0 11	0 09
Sub Total of A	16 10	13 26	11 45	10 82	10 71
B Modern Small Industries					
Small Scale Industries	52 94	64 51	78 12	80 55	81 93
Power Looms	14 56	9 69	9 93	8 63	7 36
Sub Total of B	67 50	74 20	88 05	89 18	89 29
C Others	16 40	12 54	0 5	0	0
Grand Total (A+B+C)	100	100	100	100	100

Source Planning Commission

The composition of output in the VSI sector mirrors the long-term change already noticed in the relative decline of the household sector in terms of employment. There has been a significant increase in the modern small-scale sector from a share of 67.5 percent in 1973-4 to as much as 89.3 percent in 1991-2. Furthermore within the modern sector the importance of basic textile production in powerloom units has also been reduced.

3 42 Composition of the Modern SSI Sector

We can use the data from the Economic Census and the ASI to put together the data for the DME sector and the SSI part of the ASI. The summing of these mutually exclusive types (distinguished by the fact that they are not or are covered by the Factories Act) provide a fairly accurate picture of the composition of employment and output in the small scale modern sector. By relating these figures to the ASI data for the non-SSI sector one can also compute the share of the small-scale sector in total output or employment in the modern manufacturing sector. These data are reproduced in Table 3 7.

Table 3 7 Role Of SSI In Different Product Categories (Percent Share)

	Output				Value Added					Employment				
	SSI & DME	SSI			SSI & DME	SSI			SSI & DME	SSI				
	1984-85	1978-79	1984-85	1987-88	1978-79	1984-85	1978-79	1984-85	1987-88	1978-79	1984-85	1978-79	1984-85	1987-88
Food Products	49.6	26.5	26.3	25.8	28.4	29.9	13.1	14.3	14.2	48.1	53.5	14.9	19.6	20.6
Beverages Tobacco Etc	43.3	20.8	19.7	25.3	28.7	24.7	14.8	13.8	21.7	56.6	49.7	31.3	28.3	37.8
Cotton Textiles	28.4	7.6	8.8	9.5	13	9.3	1.4	5.3	5.1	38.5	45.7	6.6	8.6	9.8
Wool Silk Etc	27.3	15.2	15	15.8	21.3	27.8	8.7	11.3	9	59.8	50.7	16.1	13.1	11.9
Jute Textiles	8.9	3.1	2.5	4	13	2.2	0.7	1.1	2.8	2.2	2.7	0.7	0.7	1.2
Textile Products	77.1	36.4	37.9	36.5	65.9	62.8	26.7	25.9	30.1	85.8	88.8	31.3	33.2	30
Wood Furniture Etc	79.1	52.4	41.8	49.4	74	78	39	37.5	42.3	84.2	89.5	50.3	50.9	49.9
Paper and Printing Etc	30.1	18.6	17.4	19.5	24	27.8	13.8	14.5	16.2	43.7	49.4	21.2	21.1	23.3
Leather and Fur Products	47	23.2	15.5	21.3	33.9	47.9	16	16.5	19.7	46.9	59.5	23.7	17.3	18.9
Rubber and Petroleum	11.8	7	6.9	8.1	14.4	19	8.6	10.9	8.5	45.2	49.2	24.7	27.6	29.7
Chemicals	18.2	10.2	9.2	10.8	11.1	10	7.8	6.7	6.7	29.7	33.8	13.8	13.7	14.8
Non Metallic Products	25.2	10.3	9.1	10.8	28.9	20.3	10.2	8.2	10	69.9	65.7	20.2	24.5	27.3
Basic Metal Industries	8.1	10.8	9.6	11.7	8.8	9	6.3	5.5	7.2	20	19.5	11.7	11.7	13.3
Metal Products	56.6	36.3	31.6	32.7	40.5	56.5	24.9	24.1	24	65.9	72.3	38.7	38.8	37.8
Non Electrical Machinery	29.8	13.6	17	16.2	16.8	23	11.1	15.5	13.8	33.9	41.5	20.2	22.6	23.3
Electrical Machinery	24.5	11.2	11.9	14.2	10.7	12	7.3	7.1	9.6	22.4	30.7	12.3	14.8	16.3
Transport Equipment	14.7	6.3	5.8	6.7	6.8	14.2	3.8	4.2	5.1	11.7	15.9	6.4	7.5	9
Other Manufacturing	55.7	29.2	22.6	22.8	60.1	46.9	21.3	15.9	19.3	85.9	84.7	31	29.1	29.7

Source Annual Survey of Industries and Directory of Manufacturing Establishments Survey

Four groups of 2 digit industries have substantially higher presence of the SSEs in total production (in terms of value added) of total modern manufacturing. In 1984-5 the over-all share of the SSEs was 28 percent. The following four groups had considerably higher shares: Textile products (62.8), Wood furniture etc (78.0), Paper and printing (47.9) and Metal products (56.5).

A miscellaneous collection of 'other manufacturing' also have a share of 46.9 percent. Only 7 of the other 13 two-digit groups have particularly small shares of SSEs. These are cotton textiles, jute textiles, rubber and petroleum, chemicals, basic metal industries, electrical machinery and transport equipment.

At this level of aggregation, India does not stand out as particularly peculiar in terms of the presence of the small-scale sector in modern manufacturing. A more formal analysis has found that the presence of small-scale was higher the less vertically integrated the industry, the lower the extent of economies of scale in management (as measured by the proportion of workers to total employees) and the higher the labour productivity of small firms relative to the total industry sub-sector. (Ira N. Gang, 1990)

3.43 Changes in the Composition of SSE Output in the Modern Small Scale Sector

Some interest attaches to the change in the composition of product groups which are under the purview of the SIDO, and thus represent largely the modern small scale sector not covered by the Factories Act. Table 3.8 reproduces the data, grouping the products into five broad groups.

Table 3.8 Growth And Structure of Employment By Major Product Groups

Major Product Groups	Employment		Annual Average Growth Rate (%)	Share of Total Employment (%)	
	1972	1987-88		1972	1987-88
Food & Beverages	136,000	555,000	9.87	8.2	15.1
Textiles	75,000	238,000	8.00	4.5	6.5
Metals and Electricals	705,000	1,092,000	2.96	42.6	29.8
Other Manufacturing	698,000	1,524,000	5.34	42.2	41.6
Services	39,000	256,000	13.36	2.5	7
Total	1,653,000	3,665,000	5.45	100	100

Source: Census Reports 1972 and 1987-88

The Table gives the surprising result that between the two Censuses there has been a big decline in the metals and electrical product groups and a marked shift to the more traditional food and beverages group

3.4.4 The Role of "Reserved Items"

The number of reserved products manufactured by SSI have increased from 177 to 843 between the two SIDO censuses but the total value of reserved products in the over-all total of The SIDO sector increased only marginally from 24 to 29 percent (Ramaswamy Table A-10 reproduced in appendix Table A-4)

More than 75 percent of reserved items in 1972 were in three industry groups viz chemical products metal products and transport equipment But by 1987-8 the share of these groups had come down to only 50 percent although the number of reserved items within these groups had been increased quite substantially (Ramaswamy 1994 p 15)

The point suggests a substantial growth in the SSI sector outside the reserved category According to the second SIDO Census out of 7 500 products manufactured in the Small Scale Sector 1 075 products were reserved products 200 products considered as "leading products"(each with production worth over Rs 40 crores during 1987-88 but only 48 of these were in the reserved category This implies that production activity of small units is not dominated by reservation— excepting in hosiery and garments

The fact that production increase in SSI has grown outside the reserved sector in spite of the huge growth in reserved items calls into question the rationale for this policy stance On the one hand it might be suggested that since growth takes place outside the reserved sector the policy of reservation is of limited importance On the other hand the policy might still be allowing the creation of a stagnant pool of inefficient producers who might be discouraging the entry of more dynamic units in these product lines In the absence of full analysis of the micro data available in the Census it is not possible to test for the relative efficiency of the units in the reserved sector However Sandesara has drawn attention to one relevant statistic available in the SIDO report at the aggregate level and in a majority of the individual industries capacity utilization of the SSI units producing the reserved items was lower than those producing the unreserved items (Sandesara 1993 pp 28-29)

3.5 Size Structure within the Small Scale Sector

One criterion of excessive development of inefficient units in a sector is a strikingly unequal development of the distribution of enterprises In a dynamic sector one would naturally expect a large number of very small units which are newly born and struggling to make their way upwards But if the

proportion of such units is excessive then the natural conclusion is that artificial protection or other measures of subsidy are supporting a host of inefficient units which show little ability to grow. The unequal distribution of units of small and large sizes in terms of contribution to production is quite striking in the SIDO Report. In 1987-88 at the upper end of the distribution (Investment in plant & machinery Rs 40 lakh and above) 0.004 percent of units employing 0.08 percent of the total employed in the SIDO sector accounted for 1.43 percent of total production. At the lower end (Investment in plant & machinery upto Rs 2 lakh) 83 percent of the units employing 54 percent of the workers, managed to produce only 28 percent of the output (using figures from Table 14 CCSU-1987-88)

Sandesara also compared the change between the two Censuses. There is a clear increase in concentration of output in larger units and a more unequal distribution of enterprises in terms of production levels within the sector. Between 1972 and 1987-8 the group of enterprises with investment of more than Rs 3 lakh (at 1972-3 constant prices) increased its share of production from 21 to 52 percent but the percentage of units went up from only 2 to 7. This represents an increase in the 'concentration ratio' from 10.5 to 13 (using data given by Sandesara 1993 Table 7 p 226). To look at it from the lower end of the distribution the relative production per unit in the group with less than Rs 3 lakh investment (at 1972-3 prices) fell from 0.81 to 0.52. (The percentage of units in this group fell only marginally from 97 to 93)

The NCAER Survey of 657 small-scale enterprises in 1992 also commented on the highly skewed distribution of the units in terms of their output particularly in some of the industries. In garments 14 units (17 percent) employing more than 50 persons accounted for no less than 82 percent of production in the units. In electrical components the share of two units employing more than 50 workers was 36 percent and in detergents four units in the same size group accounted for 37 percent of production (NCAER Table 3.23)

Evidently the market structure within the SSI sector has been showing clear indications of monopolistic competition, with an excessive number of tiny units crowding in to share in the rent created through policy of protection and subsidisation while success is achieved by a mere handful.

3.6 Trends in Employment, Investment and Productivity in the SSI Sector

The CSSUs of 1972 and 1987-8 have been compared by Sandesara for assessing the nature of growth in the SIDO sector some of his Tables are reported in Appendix Tables A-5 and A-6. Substantial growth was recorded in production and fixed assets (at constant prices) but as explained above some of this growth is due to increase in the scope of the industries sampled at the two dates.

More interesting is the change in factor ratios over time. The average size of the unit (enterprise) fell in terms of all factors - but most dramatically in terms of employment— from 12 to 6 - while investment in plant and machinery (at 1972-3 prices) fell by 12 percent and net value added by 8 percent. The smaller employment size of the average enterprise was thus accompanied by an increase in capital intensity (K/L)

and also by an increase in the productivity of both labour and capital. To summarize, net value added/employment (V/L) increased by 73 percent, investment in fixed assets/employment (K/L) by 66 percent, net value added/Investment in fixed assets (V/K) by 38 percent.

The data show increased capitalization of the average unit together with significant economies of scale (or total factor productivity growth). They are consistent with a more skewed distribution of enterprises in which the more capitalized units achieve a high level of productivity, while a large number of units of low employment size crowd the lower part of the distribution.

3.7 Spatial Distribution of SSEs

One of the aims of India's SSI policy was the dispersed development of units in rural areas and in less developed "backward" areas. There has been only limited success in attaining this objective.

Analysing the data of registered SSEs, the Sixth Plan reported that nearly 67 percent of units had been established in developed States until 1976 (NCAER, p. 79). The second SIDO Census reported a big leap in the share of SSEs in backward areas— increasing from 35 percent in 1972 to 62 percent in 1987-8. It has, however, been pointed out that the degree of dispersion might have been exaggerated.

The NCAER Report points out that in the case of rural areas, nearly 25 percent of the units are in food products. No less than 83 percent of the rural units are in a few industries, each employing only 2-4 workers. The development of artisan type units cannot be considered to be a strong growth of modern SSEs even if they are registered by the DICs.

The SIDO figures suggest that 85 districts with more than 2,000 units in each account for 51 percent of the total. More than 81 percent of SSEs are concentrated in 204 districts, and more than 50 percent of the districts do not have any significant number of small enterprises (NCAER, 3.7.6, p. 81).

The objective of dispersal might be in conflict with the dynamic growth of modern and efficient growth. There has been important spatial concentration of SSEs in "clusters" in particular product lines. The external economies which these clusters generate in terms of easy availability of raw materials, skilled labour, markets, etc., have been known to have been instrumental in the growth of SSEs in many countries, including Italy and Germany. India is proving no exception to this basic economic impulse. (See NCAER, p. 81 for a list of the more important "clusters" in India.) It is appropriate that these trends might be more emphatically encouraged in official policies and objectives. A closer look needs to be taken at the methods for fostering development in "backward" areas through such methods as tax concessions and special allotment of scarce materials.

3 8 Economic Ratios

Much space has been used up in the literature on the variations in key economic ratios by establishment size. The objective of these discussions is to search for and perhaps establish the hypothesis empirically that as the size of firm increases capital intensity (K/L) increases with a fall in capital productivity (Y/K) and increase in labour productivity (Y/L). In other words, arranging enterprises in ascending order of size groups one might be able to discover a fairly smooth production function in which larger use of capital per worker leads to diminishing return to capital. If then, as explained in the opening chapters, if the prevailing ratio of prices of capital to labour in the economy is lower than the socially optimal, the empirical case for selective support of the small-scale is established. In some ways, such exercises are of secondary interest because even though the expected relationship is established it says nothing about the nature of intervention which is desirable— whether it should be by physical control (reservation for the small-scale) or through supply side interventions in the factor markets (e.g. providing subsidized credit).

Instead of going through a laborious process of reviewing the many studies in this area we propose to summarize the most persistent findings which stand out from this area of research.

- i. At the aggregate level, looking at all manufacturing industrial groups together, the expected behaviour of the economic ratios is observed with much greater regularity and smoothness when enterprises are grouped by capital or fixed investment size than by employment size. This is as true of industrial census data in India as in other countries like Japan (LMP Chapter 7). This is also as true of the ASI sector as of the units surveyed under the SIDO survey of SSI units (Suresh Narayan). Even smaller surveys confined to a few selected industries and a limited number of units produce these results (NCAER Tables 3 17 and 3 18 pp 96-97). A little reflection will show that this is as it should be. Techniques of production are distinguished by the degree of mechanization which is reflected in the amount of fixed capital employed, not so much by the number of employees. A less mechanized technique of production would generally require a small amount of investment in plant and machinery, but because of low labour productivity (and low wages) could use a lot of labour. The systematic rise in capital-labour ratio with increasing slabs of capital show that more mechanized techniques tend to be used by larger enterprises. Furthermore, at the aggregate level there is not much evidence of increasing returns to capital, so that economic ratios change in the expected way.
- ii. For guides to policy, however, examination of the aggregate data for all industrial groups put together, serve little purpose. The relevant question is, does this relationship hold at the level of individual industries - and more disaggregated the industrial grouping, the more realistic is the result for policy purposes. Unfortunately, when we consider individual industries even at the 2-digit level, the systematic relationship breaks down. This is because of the very large variations in the capital-labour ratio prevalent in different industries. The more disaggregated the data from industrial Censuses, the more pronounced the difference between inter-industry

variations in capital-labour ratios and the variations by size groups within industries. In an early study of Korean data which were available at the five-digit level of classification, Ho (1980) found that the variation in capital intensity by size groups within individual industries seldom exceeded 1.3 while the inter-industry range was more like one hundred.

- iii. A second important point to remember is that partial factor productivities like the amount of capital per unit of output or the amount of labour per unit of output are not sufficient to measure the true resource use for any size class of firms. The small scale units might use less of capital and more of labour, but this does not make it automatically more efficient from a welfare point of view. We need to calculate the value to the economy of the capital saved and weigh it against the value of the extra labour used. Thus we need to calculate the "total factor productivity" of different classes of firms, weighting the inputs, capital and labour, by their appropriate economic or "shadow" prices.
- iv. Industry studies in a systematic way have not been possible in India because we need firm-level data to perform any meaningful analysis of economic ratios by size within individual industries. The major surveys like the ASI and the SSI have been reluctant to make such material available for detailed analysis. We have to depend on the results of small-scale individual studies of specific industries for this purpose.

LMP studied several industries in Northern India - shoemaking, printing, soap manufacturing, machine tool manufacturing and metal casting. There was a distinct increase in capital intensity, accompanied by the expected increase in labour productivity and fall in capital productivity in only one of these industries - shoe making. This was so partly because it was possible in this industry to mix mechanized and non-mechanized techniques in different ways and also the units differed in the degree of vertical integration. In soap making, where only non-mechanized units were surveyed, capital first fell and then rose with firm size while labour productivity remained virtually constant. A sharp increase in capital intensity above Rs. 10 lakh (at 1980 prices) in machine tool manufacturing was reflected in a rise in labour productivity but without a corresponding marked decrease in capital productivity - suggesting that in this industry larger units in terms of capital size were probably more productive.

In general, the variations in the economic ratios within each capital size class were large - so that differences in the mean values of economic ratios between size groups were often not statistically significant. Furthermore, there was surprisingly less regularity in the pattern of labour and capital productivities than in capital intensity, which suggested that there were substantial variations in efficiency in production as measured by total factor productivity.

The wide variation in total factor productivity was confirmed by our analysis of technical efficiency. Within each of the five industries, technical inefficiency (measured by the difference between actual and predicted output) was substantial and variations in total factor productivity (indicated by comparison of the Farrell indexes across firms) were also marked. We were able to find relatively little evidence of a systematic bivariate relationship between employment size and technical efficiency. The only industry in which technical efficiency was correlated with firm employment size was machine tool manufacturing. We

have already mentioned our conjecture that this relationship revealed the effect of superior organization in production and mastery of technology by large firms

A heroic attempt has been made in the unpublished literature to use the ASI data at the 3-digit level of industries. A state-wise breakdown of data from seventeen industries for the year 1984-5 was utilized to increase the number of observations. These are reproduced in Appendix Table A-7. The results are summarized as follows

- In the first instance, relative efficiency was measured by calculating partial productivities

Of the seventeen product groups, only four showed that the small scale enterprises (defined as less than 2 million rupees of capital investment) were comparable or superior to, the larger units. These product groups were Spinning, Weaving and Textile Finishing, Garments manufacturing, footwear manufacturing, and Structural Metal Products. Of these garments and leatherwear are leading export sectors with a large SSE representation and one would assume that relative efficiency and competitiveness would be high in these sectors. In the Structural Metal Product category, Ramaswamy (1990) also found similar results using more disaggregated data. These results give us some confidence about the exercise undertaken. But the most noteworthy result is that in about 75 percent of the product categories SSEs were found to be less efficient, sometimes by a wide margin.

- A second step of the analysis with the above data set was the comparison across firm size groups of efficiency relative to the 'best practice' observed within the data set. For this purpose a deterministic production frontier econometric approach was adopted, constrained by the assumption of constant returns to scale.

Of the sixteen product groups analyzed as per Table A-8, only three showed SSEs to be technically more efficient— Grain Mill Products, Spinning, Weaving, Finishing of other textiles and Knitting Mills. In all other product groups SSEs were shown to be less efficient— the difference with larger firms being larger the higher the measured returns to scale (e.g. in metal utensils).

All this, of course, is the result based on the performance of the firms actually in operation. It does not say anything about the relative merits of SSEs in a particular line of production if more competitive conditions prevailed in Indian manufacturing. To sum up, our tentative conclusion is that, with all the difficulties of drawing firm conclusions from less than ideal data sets, nothing in the several studies cited gives one any confidence in the relative efficiency of SSEs in specific lines of production. With this in view, a better course of action for encouraging labour intensive production would seem to be to institute general policies aimed at providing positive help to SSEs in all lines of production. We recall the result cited earlier for Korea, in which SSEs were found to be distributed over a wide range of product groups and the number found in groups in which SSEs dominated accounted for only a minority of total employment in SSEs.

3 9 Conclusions

This chapter has surveyed a large number of sources to throw light on different aspects of the structure growth and economic characteristics of the SSI sector in India. It might be useful to highlight the more important of the findings

- i On the size of SSI inspite of the different measures obtained from the different sources the orders of magnitude of the share of SSI in total manufacturing and of its various components are reasonably clear. We may distinguish the 'small scale modern' sector - consisting of units employing 6 or more workers and the 'tiny' sector including household enterprises. In terms of employment around 1990 the former accounted for roughly 20 percent of all manufacturing employment but nearly a half of employment in the modern manufacturing sector. The tiny and household sector is 2.5 to 3 times as large depending on whether or not we include secondary workers in the labour force. The contribution of SSI in terms of value added is of course much smaller - only a third as for as the modern manufacturing sub-sector is concerned and no more than 40 percent of all manufacturing value added. The last point emphasises the enormous difference in labour productivity between the different sub-sectors of manufacturing (as the dramatic figures brought together in Table 3.4 show)
- ii As in other countries the household sub-sector has declined slowly over the last two or three decades. A more surprising finding is that inspite of the vigorous policy of protecting the small scale this decline has not been fully compensated for by the growth of non-household production in the small scale sector. The SIDO figures of high growth rates of SSI's under their purview seem to be grossly exaggerated
- iii Inspite of the vast increase in the number of reserved items much of the growth in the SSI sector seems to have been in product lines outside the reserved list. It is possible that the policy of reservation might be merely protecting inefficient units in stagnant industries
- iv A finding of some concern is the unequal distribution of units of small and large sizes within the SSI sector. There seems to be an increase in the concentration of output in larger units over the last two decades. A comparison of the data from the two SIDO censuses of 1972 and 1987-88 show a sharp fall in the mean employment size but an increase in capital-intensity of the SIDO units-which is consistent with a more skewed distribution of enterprises and increased contribution of the more productive units
- v The claim that there has been substantial dispersal of units to backward and rural areas under the SSI policy might be exaggerated. As for as the modern SSI's are concerned there is considerable evidence of spatial concentration of SSEs in clusters in specific product groups. We have already emphasised in earlier chapters that there is a need for policies of decentralization to come to terms with the economic logic of external economies which clusters provide

- vi In section 4.8 the empirical work on relative economic efficiency of small versus large units in India was reviewed. Nothing in the several studies examined give one any confidence in the relative efficiency of SSEs as they exist in specific lines of production. Rather, some economically efficient small enterprises exist in many product groups. The cause of SSI development is then best served by encouraging the potentially dynamic units to grow and prosper in any product group they operate in - rather than by the prejudice the product group which will favour the small units.

ANNEX TO CHAPTER III STATISTICS ON SMALL SCALE INDUSTRY IN INDIA

INTRODUCTION

- 1 There are two major sources of information on small-scale industries (SSI) in India namely, the Small Scale Industry Organisation (SIDO) and Central Statistical Organisation (CSO). Each has its own strengths and weaknesses. Although representing a substantial share of the total SSI population, SIDO does not cover all industries. More importantly, its data suffer from sampling problems and are highly aggregated. On the other hand, CSO provides better coverage and is less aggregated, but its information is scattered among different surveys and is not readily available.
- 2 Administratively, India's SSI is divided into seven industry groups: (1) handicrafts, (2) handlooms, (3) khadi, village and cottage industries, (4) coir, (5) sericulture, (6) powerlooms, and (7) small-scale industries which are residual. Mainly on account of simple tools and production process, the first five subsectors are collectively called the 'traditional sector' whereas the last two - powerlooms and residual small-scale industries - are known as the "modern" sector. For coordination of development programs at the central level, each of the subsectors has its own supervisory body or board, such as Khadi and Village Industries Commission, Development Commissioner for Handlooms, Development Commissioner for Handlooms, Development Commissioner for Handicrafts Board, Central Silk Board, Coir Board, and SIDO. The residual "small-scale industries" subsector is overseen by SIDO. Because it accounts for the important share of SSI, SIDO is often seen as representing the whole sector. In the present report, unless otherwise stated, we include in our analysis both the traditional and modern sectors in line with CSO's statistical coverage.
- 3 For the purposes of administering tax and promotional benefits, there is a unified official definition of SSI which cuts across the different supervisory lines. Since 1954, when the Small Industries Development Program was introduced, the definition has undergone continual change. In 1955, SSI was defined as establishments with fixed investment of less than Rs. 5 lakh, which employed less than 50 workers when working with power or less than 100 workers when not working with power. But the employment criterion was dropped in 1960, and SSI has since been officially defined solely in terms of investment in plant and machinery at original value. From time to time, the investment ceiling is revised upwards. In 1966, it was raised from Rs. 5 lakh to Rs. 7.5 lakh (or Rs. 10 lakh for ancillary units). These went up further to Rs. 10 lakh and Rs. 15 lakh in 1975, Rs. 20 lakh and Rs. 25 lakh in 1980, and the current levels of Rs. 35 lakh and Rs. 45 lakh in 1985. New ceilings of Rs. 60 lakh and Rs. 75 lakh were introduced in August 1991.

SIDO DATA

- 4 **First Census** The first attempt by SIDO to establish a database was made in 1973/74 when it undertook an All-India census of the registered small-scale industrial units. Detailed information was collected from around 140 000 units (out of 258 000 expected) on number of units, employment, fixed investment, borrowings, inputs, output and exports at the four-digit level of the National Industrial Classification. Some of the results were presented in the Handbook of Statistics 1985.
- 5 For the purpose of updating the census data on a year-to-year basis, a revised registration procedure was introduced in 1975. As before, registration with SIDO remained voluntary, but new provision was made in the application itself to collect all basic information including product manufactured, employment, capacity, investment etc. Also, all registrants were requested to supply annual production returns to the Directorates of Industries in each state.
- 6 To keep track of production trends at the industry-group level, production data have been collected on a quarterly basis since 1976 from establishments registered with SIDO covering 356 products based on a 2 percent sample (2400 units) from the 1973/74 Census. From this, a weighted production index for the registered small-scale sector is routinely computed using 1970 as the base year. Given the small sample size, the results are neither precise nor representative, while the corresponding index for unregistered units is nothing but a very rough approximation.
- 7 **Second Census** Although the data collected during the first census continued to be periodically updated, it was found that the system was inadequate because it did not cover all the 2 400 products and that almost half the units sampled were either untraceable or had been closed down. It was therefore decided that a second All-India census of registered SSI units be conducted so as to obtain a more reliable frame of SSI units registered with the State/UT Industries Directorates up to March 31 1988. The main objectives of the census were to
 - i Obtain a dependable frame of functioning SSI units registered up to March 31 1988 and falling under the purview of SIDO so as to enable state governments to identify SSI units to whom concession/facilities are to be continued.
 - ii provide data by product group on capacity, production, employment and other important characteristics of registered SSI units at All-India as well as State/UT levels.
 - iii facilities selection of sample units out of live units frame for estimating monthly production of selected items/products manufactured in the small-scale sector for use in construction of the Index of Industrial Production by the Central Statistical Organization and for building up future estimates for products, industry groups, employment, investment etc. and
 - iv estimate the mortality rate of SSI units in various industry groups.
- 8 The census was to cover around one million registered SSI units, but in the event only around 800 000 were enumerated.

ANNUAL SURVEY OF INDUSTRIES (ASI)

- 9 Since 1959 various data collecting agencies such as the Census Organization and the CSO/National Sample Survey Organization (NSSO) have made conscious efforts to accommodate some of its data needs of SSI in their data collection programs. The ASI is the principal source of industrial statistics in India. It is conducted annually under the statutory provisions of the Collection of Statistics Act 1953 except in the state of Jammu & Kashmir where it is conducted under the State Collection of Statistics Act 1961. The field work of the survey is carried out by the Field Operations Division (FOD) of the National Sample Survey Organization (NSSO) through its network of regional and sub-regional offices located in different parts of the country. The processing of data and publication of reports are the responsibility of the Central Statistical Organization (CSO). However, the overall responsibility for the choice and collection, processing and tabulation lies with the steering Committee on Industrial Statistics constituted by the Governing Council of the NSSO.
- 10 The ASI covers the entire country except the states of Nagaland and Sikkim and union territories of Arunachal Pradesh, Dadra & Nagar Haveli and Lakshadweep Islands and Mizoram. All the electricity undertakings engaged in the generation, transmission and distribution of electricity registered with the Central Electricity Authority are covered under ASI irrespective of employment size. ASI covers all factories registered under the Factories Act of 1948 which employed 10 or more workers and using power or 20 or more workers and not using power on any day of the preceding 12 months. Certain services and activities like cold storage, water supply, repair of motor vehicles and other consumer durables like watches etc. are covered under the survey. (In the present report we are concerned mainly with manufacturing activities and have thus omitted all services except repairs.)
- 11 The primary unit of enumeration is a factory in the case of manufacturing, a workshop in the case of repair services, an undertaking or a licence in the case of electricity, gas and water supply undertakings, and an establishment in the case of bidi and cigar industries. The owner of two or more establishments located in the same state and belonging to the same industry group is, however, permitted to furnish a single consolidated return, a common practice among bidi and cigar establishments, electricity and certain public sector undertakings.
- 12 The ASI frame is revised every four years by the Regional Offices of the FOD who liaise with the Chief Inspector of Factories in the states. While names of the de-registered factories are removed from the ASI frame only once every four years, newly registered units are added every year. In enumeration the units (often small-sized) that have been selected for the survey but are found to be non-existent are excluded from calculation.
- 13 For the purpose of the ASI, the factories in the frame are classified into two sectors, viz. the census and the non-census (or sample) sectors. Until 1987/88, the census sector was operationally defined as factories employing 50 or more workers and using power or those employing 100 or more workers but

not using power while the remaining factories constitute the non-census sector. As from 1987/88 the census sector is redefined as units with 100 or more workers regardless of power use. Once a factory is classified into census/non-census sector its status is not altered for a period of four years i.e. until the frame is revised even though a change in employment might warrant it.

- 14 All the census units are enumerated while only half (one third since 1987/88) of the sample sector are enumerated each year with the exceptions of (1) industries which at the three/four digit level of NIC do not total more than 50 factories in the whole country and (2) factories located in relatively less industrialized states and union territories. Otherwise individual units in the sample sector were enumerated every other year based on a stratified unistage sample design.³ The reference period for ASI 1984/85 was the accounting year of the factory ending on any day during the fiscal year 1984/85.
- 15 ASI provides results by employment size and investment value at the aggregate level whereby SSI units may be readily distinguished. However at detailed levels of two- or three-digit NIC no such breakdowns are available which by virtue of their relatively large employment size are registered with SIDO.) But these represent only the larger units of SSI. For information on smaller units i.e. those with less than ten employees and using power or less than twenty without power⁴ one has to consult two other complementary surveys also by CSO namely Directory Manufacturing Establishment (DME) and Non-Directory manufacturing Establishment (NDME) surveys the latter including Own-Account Establishments (OAE).

DIRECTORY AND NON-DIRECTORY MANUFACTURING ESTABLISHMENT SURVEYS

- 16 To obtain information on the 'unorganised' non-agricultural sectors of the economy, the first economic census of non-agricultural establishments was carried out in 1977 by the Central Statistical Organisation in collaboration with the Department of Economics and Statistics (DES) in the States/Union territories. In the census establishments were divided into three groups namely (i) Directory Establishments (DE) which had six employees at least one of whom was hired and (ii) Own -Account Enterprises (OAE) if there are no hired workers at all.
- 17 Based on the frame produced from the census two rounds of sample surveys were subsequently conducted involving establishments that were not covered by ASI i.e. DE, NDE and OAE. The first round which took place in 1978/79 covered units in manufacturing and repair services while the second round which followed six months later was concerned with trade, restaurants and hotels.

³ The strata were formed by grouping factories within each state/union territory by industry group at the three/four-digit level of NIC. Thus in each state each industry group constituted a stratum. Within each stratum the districts were first arranged in ascending order of their employment size. Thus arranged the factories within each stratum were then allotted a running serial number. Those with odd serial numbers were surveyed in the first year and those with even numbers in the second year of a cycle of two years.

⁴ More generally establishments that are not registered under the Factories Act.

transport and services. In the first round (manufacturing and repair services) two separate surveys were undertaken: Non-Directory Manufacturing Establishment (NDME) survey which included OAE⁵ and Directory manufacturing Establishment survey (DME). The joint NDME/OAE survey took place during July 1978 - June 1979 as part of the 33rd round of the National Sample Survey (NSS) while the DME was undertaken as a separate survey three months later by the Central Statistical Organisation in October 1978 - September 1979.

- 18 Conducted at the three-digit level of National Industrial Classification (NIC)⁶ the surveys covered the entire country excluding the rural areas of Nagaland and Chandigarh, Sikkim, Lakshadweep, Dadra & Nagar Haveli, some part of Jammu & Kashmir, part of Madhya Pradesh and Maharashtra, Manipur and Andaman & Nicobar Islands. In NDME and OAE a combined total of 178 664 were enumerated or about 2.2 percent of the estimated total of 8.13 million. In the DME a total of 34 878 establishments were enumerated or 10.4 percent of the estimated total of 334 896.
- 19 Similar surveys were conducted five years later in 1984/85 based on the frame obtained from the Second Economic Census (1980). The second NDME survey along with OAE was undertaken during July 1984 to June 1985 as part of the fortieth round of the NSS and was followed three months later by the second DME during October 1984 - September 1985. In these surveys the output/turnover/receipts criterion that was used in the first round was dropped and distinction between Directory and Non-Directory is now based on the number of employees only. That is, units with six or more employees, at least one of whom was hired on a fairly regular basis, were classified as DE including establishments manufacturing bidi and cigar other than those covered in the ASI. Establishments manufacturing bidi and cigar other than those covered in the ASI irrespective of whether they were registered or not under the Bidi and Cigar Act. Likewise NDME is defined as those with five or less employees, at least one of whom is a hired worker; establishments with no hired worker at all are classified as OAE.
- 20 In the 1984/85 (along with OAE) survey a total of 135 998 enterprises were canvassed or 0.7 percent of the estimated total of 19.2 million. Of this 75 percent were in rural areas and 25 percent in urban areas. Own-account enterprises accounted for 89 percent of the total. In the corresponding DME a total of 31 739 units were interviewed or 6.7 percent of the estimated total of 474 882. Of this 37.7 percent were in rural areas and 62.3 percent in urban areas. The geographic coverage of the second surveys was essentially the same as in the first.

⁵ defined as enterprises not employing hired workers at all

⁶ except for handicrafts, handloom and khadi which were classified at the four-digit level for identification purposes

DATA LIMITATIONS AND ALTERNATIVES

- 21 None of the above data sets separately provide complete coverage of India's SSI. To recapitulate SIDO's data and censuses only cover units under its purview i.e. the residual SSI in the modern sector and are thus incomplete in their coverage. Of those units under its purview only about two thirds are reportedly registered. Information on the rest is just a rough estimate.
- 22 ASI is also partial in its coverage as it only covers the larger spectrum of the SSI units that are registered factories. A further complication is that in the publicity available results these units cannot be distinguished from the rest of the sample except in the aggregates where the results are broken down by employment and investment size. No such distinction is made in industry-wise data. To get around this problem some researchers have resorted to the sample portion in 1982/83. Apart from their obvious datedness the data from the sample roster have another serious limitation in that the SSI is necessarily defined in terms of employment size (49 or less if using power or 99 or less not using power) rather than in terms of investment value as it officially adopted, thus making it less useful from the policy point of view.
- 23 Another commonly used proxy for SSI'S output is the value added of "unregistered/unorganised sector" at the two-digit level of NIC as reported in the National Accounts Statistics. Based on DE, NDE and OAE⁷ these represent net output of the unregistered units that are not covered by ASI. However as these establishments cover mainly those with ten or less employees they represent the smaller units of the SSI sector. It should also be noted that as these surveys are conducted at five-year intervals the national accounts figures for the unorganised sector for years other than 1978/79 and 1984/85 are essentially extrapolations based in some cases (e.g. chemicals) on growth rates of medium and large-scale enterprises.

⁷ Adjusted for the slight difference in reference periods from ASI by assuming certain growth rates for the non-factory sector labour force.

Table A-1 Number of Manufacturing Establishments, their Employment, Emoluments, Output and Gross Value Added

Establishment	1984-85					1989-90				
	No of Units	Employment	Emoluments	Output	Gross Value Added	No of Units	Employment	Emoluments	Output	Gross Value Added
	(Million)	(Million)	(Rs Crore)	(Rs Crore)	(Rs Crore)	(Million)	(Million)	(Rs Crore)	(Rs Crore)	(Rs Crore)
A All Enterprises	19 822	46 82	12 020 65	134 540	37 697	15 606	40 251	21 844 54	284 972	70 966
I Factory Sector	0 097	7 872	10 660 21	105 566	24 942	0 108	8 143	18 408 88	230 659	52 037
II Non Factory Sector	19 725	38 948	1 360 44	28 974	12 755	15 498	32 108	3 435 66	54 313	18 929
B Decentralised or VSI	19 812	41 598	3 052 78	50 506	16 666	15 594	35 181	7 230 48	102 784	27 121
I Non Factory Sector	19 725	38 948	136 44	28 974	12 755	15 498	32 108	3 435 66	54 313	18 929
II SSI in Factory Sector	0 087	2 65	1 692 34	21 532	3 911	0 096	3 073	3 794 82	48 471	8 192
C Non SSI in Factory Sector	0 010	5 222	8 967 87	84 034	21 031	0 012	5 070	14 614 06	182 188	43 845
D Breakup of Non Factory Sector										
I DME	0 475	4 698	578 48	11 574	3 455	0 567	5 846	2 621 00	27 159	5 840
II NDE	2 160	4 68	781 96	6 700	3 300	1 627	2 546	814 66	11 564	4 816
III OAE	17 090	29 57		10,700	6 000	13 304	23 716		15,590	8 273

Source

(i) Annual Survey of Industries 1984-85 & 1989 90 Summary Results for Factory Sector (CSO)

(ii) Directory of Manufacturing Establishments Survey Results of 1984-85 and 1989 90

(iii) Non Directory Manufacturing Establishment Survey Results of 1984-85 and 1989 90

Table A-2 Estimates of Number of Units, Employment and Production and Current Prices

Year	Before Adjustment			After Adjustment		
	No of Units (Million)	Production (Rs Crore)	Employment (Million)	No of Units (Million)	Production (Rs Crore)	Employment (Million)
1987-88	1.58	87.300	10.7	1.14	62.760	7.69
1988-89	1.71	106.400	11.3	1.24	77.070	8.2
1989-90	1.82	132.320	11.96	1.35	97.700	8.7
1990-91	1.95	155.340	12.53	1.45	115.790	9.12
1991-92	2.08	178.700	12.98	1.59	136.860	9.47

Source

SIDO and Second SSI Census (1987-88)

Adjusted figures by NCAER (1993) Table 3.2 P.56

Table A-3a Gross Value Added in Indian Manufacturing (Rs Crore at 1980-81 prices)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Total Manufacturing	22 143	24 021	25 643	28 166	30 004	31 289	33 555	36 144	39 253	44 023	47 186	46 256	47 797	50 102	na
Registered	12 640	13 683	15 026	17 197	18 627	19 125	20 345	21 888	24 157	27 689	29 649	29 559	30 222	31 741	na
Unregistered	9 503	10 338	10 617	10 969	11 377	12 164	13 210	14 256	15 096	16 334	17 537	16 697	17 575	18 361	na
% Share Unregistered	42 92%	43 04%	41 40%	38 94%	37 92%	38 88%	39 37%	39 44%	38 46%	37 10%	37 17%	36 10%	36 77%	36 65%	na
Growth Rate Registered		8 25%	9 82%	14 45%	8 32%	2 67%	6 38%	7 58%	10 37%	14 62%	7 08%	0 30%	2 24%	5 03%	na
Growth Rate Unregistered		8 79%	2 70%	3 32%	3 72%	6 92%	8 60%	7 92%	5 89%	8 20%	7 37%	4 79%	5 26%	4 47%	na

Table A-3b Gross Domestic Investment (Rs Crore at 1980-81 prices)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Total Manufacturing	4 844	9 002	8 362	9 041	8 919	9 076	8 590	10 459	17 007	12 264	14 193	18 820	10 076	12 475	16 097
Registered	2 923	6 777	6 345	6 739	6 623	6 688	6 049	7 785	14 100	8 826	10 635	9 105	6 583	9 121	11 618
Unregistered	1 921	2 225	2 017	2 302	2 296	2 388	2 541	2 674	2 907	3 438	3 558	2 715	3 493	3 354	4 479
% Share Unregistered	39 66%	24 72%	24 12%	25 46%	25 74%	26 31%	29 58%	25 57%	17 09%	28 03%	25 07%	14 43%	34 67%	26 89%	27 83%

Source National Accounts Statistics 1990 1994 and 1996 (CSO)

Table A-4 Share of Reserved Products in Total Output

2 Digit NIC Code	Industry Group	No of Reserved Products	Percentage Share in Output of Group	No of Reserved Products	Percentage Share in Output of Group
		1987-88	1987-88	1972	1972
20&21	Food Products	17	35.85	0	0
22	Beverages Tobacco and Tobacco Products	1	0.20	0	0
23	Cotton Textiles	0	0	0	0
24	Wool Silk and Synthetic Fibre Textiles	0	0	0	0
25	Jute Hemp and Mesta Textiles	0	0	0	0
26	Hosiery & Garments	31	80.11	0	0
27	Wood Products	14	56.85	2	20.58
28	Paper Products and Printing	30	24.79	0	0
29	Leather Products	17	46.86	2	12.06
30	Rubber and Plastic Products	99	30.92	7	32.43
31	Chemicals and Chemical Products	166	29.74	19	26.55
32	Non metallic mineral products	39	14.47	8	28.75
33	Basic Metal Products	14	4.18	0	0
34	Metal Products	131	42.62	62	49.06
35	Machinery and Parts except Electrical	55	8.83	2	32.76
36	Electrical Machinery and Parts	59	8.57	22	37.55
37	Transport Equipment and Parts	102	23.80	48	8.58
38	Miscellaneous Manufacturing	68	35.22	5	64.31
97	Repair Services	0	0	0	0
99	Services Not Elsewhere Classified	0	0	0	0
OT	Other Services and Products	0	0	0	0
	All Industries	843	29.36	177	23.71

Source

Reports on Census of SSI Units 1972 and 1987-88 respectively

Reproduced from Ramaswamy (1994) Table A 10

Table A-5 Average Size of Small Industry in 1972 and 1987-88

Item	1972	1987-88	% Change in 1987-88 over 1972
Investment in Fixed Assets (Rs Thousand Book Value 1972-73 prices)	57	50	-12
Investment in Plant and Machinery (Rs Thousand Original Value 1972-73 prices)	38	30	21
Gross Production (Rs Thousand 1972 73 Prices)	186	232	25
Net Value Added (Rs Thousand 1972 73 Prices)	60	55	-8
Employment (Number Lakh)	12	6	50

Source

Reports on Census of SSI Units 1972 and 1987 88 respectively

Table A-6 Selected Ratios in Small Industry in 1972 and 1987-88

Item	1972	1987-88	% Change in 1987-88 over 1972
Production / Investment in Fixed Assets	3 27	4 62	41
Net Value Added / Investment in Fixed Assets	1 06	1 1	38
Output per worker (Rs Thousand)	1 57	3 69	135
Net Value Added / Investment in Fixed Assets / Worker	5 09	8 81	73
Employment/ Rs 1 Lakh investment in fixed assets	2 08	1 25	-40
Investment in Fixed Assets / Worker (Rs Thousand)	48 09	79 83	66

Source

Reports on Census of SSI Units 1972 and 1987 88 respectively

Table A-7 Productivity and Relative Efficiency

Product Category & NIC Number	Gross Value Added/ Employee (Rs 000)			Gross Value Added/ Productive Capital		
	Small	Large	Total	Small	Large	Total
Manufacture of Dairy Products (201)	13 52	30 39	27 68	0 42	0 38	0 38
Grain Mill Products	7 94	29 39	9 36	0 36	0 33	0 35
Mfg of Other Edible Oils (211)	15 50	40 99	20 93	0 35	0 40	0 37
Printing Dyeing /Bleaching						
Cotton Textiles (232)	14 14	20 89	17 10	0 65	0 76	0 71
Spinning Weaving & Textile Finishing(247)	21 47	38 48	35 76	0 77	0 45	0 47
Manufacture of Knitwear (260)	22 63	49 91	27 13	0 58	0 72	0 62
Mfg of all types of Garments (264)	20 27	17 14	19 57	1 11	1 12	1 11
Printing & Publishing (285)	15 22	22 80	20 41	0 84	0 69	0 72
Manufacture of Footwear (291)	14 07	13 27	13 66	0 85	0 49	0 62
Mfg Drugs & Medicines (313)	30 77	60 87	50 31	0 80	0 58	0 62
Mfg of Structural Clay Prod (320)	6 02	27 55	10 04	0 70	0 39	0 50
Foundaries for Casting Iron & Steel (331)	14 16	29 97	24 22	0 57	0 38	0 41
Mfg of Fabricated Metal Prod (340)	21 07	47 56	32 41	0 72	0 78	0 75
Mfg of Structural Metal Products (341)	18 66	36 85	24 46	0 83	0 48	0 62
Mfg of Handtools & Gen Hardware (343)	15 18	33 70	25 08	0 55	0 53	0 54
Mfg of Metal Utensils (345)	16 28	48 60	18 96	0 48	0 92	0 53
Mfg of Electrical/Industrial Apparatus & Parts (360)	20 63	60 65	53 14	0 52	0 65	0 63

Product Category & NIC Number	Productive Capital/ Employee (Rs 000)			Relative Efficiency Index		
	Small	Large	Total	Small	Large	Total
Manufacture of Dairy Products (201)	31 87	79 64	71 98	0 77	1 04	1 00
Grain Mill Products (204)	22 02	87 76	26 38	0 94	1 53	1 00
Mfg of Other Edible Oils (211)	44 91	102 72	57 24	0 89	1 26	1 00
Printing Dyeing/Bleaching						
Cotton Textiles (232)	21 60	27 46	24 17	0 87	1 15	1 00
Spinning Weaving & Textile Finishing (247)	27 68	85 28	76 09	1 10	1 00	1 00
Manufacture of Knitwear (260)	38 83	69 38	43 86	0 91	1 32	1 00
Mfg of all types of Garments (264)	18 29	15 24	17 61	1 01	0 96	1 00
Printing & Publishing (285)	18 03	32 89	28 21	0 87	1 06	1 00
Manufacture of Footwear (291)	16 50	27 07	21 88	1 17	0 88	1 00
Mfg Drugs & Medicines (313)	38 37	104 51	81 31	0 92	1 06	1 00
Mfg of Structural clay Prod (320)	8 58	71 07	20 23	0 89	1 53	1 00
Foundaries for Casting Iron & Steel (331)	24 95	78 09	58 76	0 86	1 09	1 00
Mfg of Fabricated Metal Prod (340)	29 36	61 26	43 02	0 80	1 21	1 00
Mfg of Structural Metal Prod (341)	22 51	76 40	39 69	1 03	1 07	1 00
Mfg of Handtools & Gen Hardware (343)	27 59	63 57	46 84	0 76	1 18	1 00
Manufacture of Metal Utensils (345)	33 96	52 76	35 52	0 88	2 00	1 00
Mfg of Electrical/Industrial Apparatus & Parts (360)	39 50	93 97	83 75	0 60	1 07	1 00

Source

The data is drawn from the 1984-85 ASI broken down by state. Small is classified as units with investment in plant and machinery upto Rs 20 lakh and large for those units with plant and machinery exceeding Rs 20 lakh

Table A-8 Estimates of Technical Efficiency

NIC CODE (3-digit)	Constant	Ink	Inl	Adj R2	F Stat	Return to Scale	Technical Efficiency			Index (All = 1.0)		No Obser
							Large	Small	All	Large	Small	
201 Manufacturing of dairy products	0.80 (0.74)	0.22 (1.09)	1.00 (3.34)	0.80	37.20	1.21	0.72	0.60	0.65	1.11	0.92	19
204 Grain mill products	1.87 (1.88)	0.58 (2.55)	0.24 (1.37)	0.65	30.50	0.82	0.52	0.61	0.56	0.93	1.09	33
211 Manufacture of other edible oils	2.78 (1.37)	0.20 (.65)	0.74 (2.23)	0.47	11.43	0.93	0.76	0.53	0.50	1.52	1.06	25
232 Printing dyeing & bleaching of cotton textiles	0.32 (.55)	0.66 (4.90)	0.40 (2.86)	0.96	218.80	1.05	0.95	0.92	0.93	1.02	0.99	20
247 Spinning weaving finishing of other textiles	0.56 (1.86)	0.60 (7.51)	0.45 (4.17)	0.99	639.40	1.05	0.90	0.98	0.94	0.96	1.04	20
260 Knitting mills	-0.56 (.51)	0.64 (2.41)	0.56 (1.83)	0.91	63.60	1.21	0.65	0.78	0.74	0.88	1.05	13
264 Manufacture of all types of garments	-0.06 (.04)	0.57 (1.45)	0.58 (1.53)	0.85	32.40	1.15	0.71	0.70	0.70	1.01	1.00	12
285 Printing and publishing	1.39 (4.11)	0.09 (1.03)	1.06 (10.27)	0.97	477.20	1.15	0.94	0.92	0.93	1.01	0.99	32
313 Manufacture of drugs and medicines	-0.30 (.45)	0.69 (5.15)	0.45 (2.76)	0.91	158.00	1.14	0.84	0.76	0.79	1.06	0.96	29
320 Manufacture of structural clay products	2.00 (1.80)	0.66 (6.40)	0.15 (1.33)	0.72	32.10	0.82	0.80	0.78	0.79	1.01	0.99	25
331 Foundries for casting and forging iron/steel	-0.53 (.76)	0.45 (3.62)	0.76 (5.98)	0.94	255.80	1.20	0.88	0.78	0.82	1.07	0.95	34
340 Manufacture of fabricated metal products	-0.58 (.69)	0.69 (3.15)	0.48 (1.91)	0.90	126.70	1.17	0.82	0.75	0.77	1.06	0.97	28
341 Manufacture of structural metal products	0.98 (2.35)	0.25 (3.66)	0.92 (10.44)	0.95	225.80	1.17	1.01	0.88	0.91	1.11	0.97	25
343 Manufacture of handtools and general hardware	-0.37 (.70)	0.58 (5.50)	0.58 (5.29)	0.96	337.90	1.16	1.04	0.87	0.92	1.13	0.95	26
345 Manufacture of metal utensils	-0.72 (.54)	0.40 (1.23)	0.90 (2.59)	0.86	65.20	1.30	1.21	0.68	0.74	1.64	0.92	22
360 Manufact of electr inds apparatus and parts	-0.35 (.81)	0.75 (5.89)	0.36 (2.16)	0.97	418.00	1.10	0.94	0.88	0.90	1.04	0.98	25

Remarks

(i) *Figures in paranthesis are t statistics*

(ii) *Efficiency index is ratio of technical efficiency of one class of firms over sample average*

Table Total Number of Manufacturing Establishments, Their Employment, Emoluments, Output and Gross Value Added

Establishments	1984-85					1989 90				
	Number (Lakh)	Employment (Lakh)	Emoluments (Rs Crore)	Output (Rs Crore)	GVA (Rs Crore)	Number (Lakh)	Employment (Lakh)	Emoluments (Rs Crore)	Output (Rs Crore)	GVA (Rs Crore)
A All Enterprises	198 22	468 20	12 020 65	134 540	37 697	156 06	402 51	21 844 54	284 972	70,966
I Factory Sector	0 97	78 72	10 660 21	105 566	24 942	1 08	81 43	18 408 88	230 659	52 037
II Non Factory Sector	197 25	389 48	1 360 44	28 974	12 755	154 98	321 08	3 435 66	54 313	18 929
B Decentralised of VSI	198 12	415 98	3 052 78	50 506	16 666	155 94	351 81	7 230 48	102 784	27 121
I Non Factory Sector	197 25	389 48	136 44	28 974	12 755	154 98	321 08	3 435 66	54 313	18 929
II SSI in Factory Sector	0 87	26 50	1 692 34	21 532	3 911	0 96	30 73	3 794 82	48 471	8 192
C Non SSI in Factory Sector	0 10	52 22	8 967 87	84 034	21 031	0 12	50 70	14 614 06	182 188	43 845
D Break up of Non Factory Sector										
I DME	4 75	46 98	578 48	1 1574	3 455	5 67	58 46	2 621 00	27 159	5 840
II NDE	21 60	46 80	781 96	6 700	3 300	16 27	25 46	814 66	11 564	4 816
III OAE	170 90	295 70		10 700	6 000	133 04	237 16		15 590	8 273

Source

(i) Annual Survey of Industries 1984-85 & 1989-90 Summary Results for Factory Sector (CSO)

(ii) Directory of Manufacturing Establishments Survey Results of 1984 85 & 1989-90

(iii) Non Directory Manufacturing Establishment Survey Results of 1984 85 & 1989 90