Small-scale industries in India in the globalisation era: performance and prospects

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Abstract: Small-scale industries occupy a place of strategic importance in Indian economy in view of its considerable contribution to employment, production and exports. However, since 1991 small-scale industries in India find themselves in an intensely competitive environment due to globalisation, domestic economic liberalisation and dilution of sector specific protective measures. This paper probes the implications of globalisation and domestic economic liberalisation for small-scale industries and analyses its growth performance in terms of units, employment, output and exports. The paper concludes with policy recommendations to ensure the sustenance and competitive growth of small-scale industries in India.

Keywords: small-scale industries; policy; globalisation; India; innovation; employment; exports; production; clusters; competitiveness.

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1 Introduction

The development of Small-Scale Industries (SSI) has been one of the major planks of India's economic development strategy since independence. Today, SSI sector occupies a place of strategic importance in Indian economic structure due to its considerable contribution in terms of output, exports and employment. By the end of March 2002, there were 3.4 million small-scale industry units, accounting for more than 40% of the gross value of output in the manufacturing sector, about 35% of the total exports and provided employment to over 19.2 million persons, which is second only to agriculture

(Planning Commission, 2002). This contribution has emerged despite the sector being exposed to intensifying competition in Indian economy, which is in a state of transition since 1991 (Wani, Garg and Sharma, 2003). SSI in India has been confronted with growing competitive environment since 1991 due to:

- liberalisation of investment regimes in the 1990s, favouring foreign direct investment (FDI) at the international level, particularly in socialistic and developing countries
- the formation of World Trade Organization in 1995 forcing its member countries (including India) to drastically scale down the quantitative and non-quantitative restrictions on imports
- domestic economic reforms (Bala Subrahmanya, 2002).

The cumulative impact of all these is a remarkable transformation of the economic environment in which SSI operates implying that the sector has no option but to 'compete or perish'.

- Why should global and national policy developments affect SSI in India? How? What are its implications?
- How far SSI has been able to cope up with the competitive environment? What was its growth performance in the last decade? How different was it as compared to the earlier decade?
- What are the future prospects of SSI in India in the era of globalisation? What steps need to be taken to strengthen SSI to ensure its sustained contribution to Indian economy?

This paper is an attempt to provide answers to these questions. In this paper, official definitions of a small enterprise pursued from time to time by the Government of India under the Industries Development and Regulation (IDR) Act, 1951 are followed. Currently, a small-scale enterprise is defined as one having original investment in plant and machinery, whether held on ownership terms or on lease/hire purchase basis, not exceeding Rs. 10 million (Planning Commission, 2001). This paper comprises five sections. Section 2 deals with the policy changes that have taken place globally, nationally and sectorally and its implications for SSI in India, Section 3 analyses the growth performance of SSI in India in the 1990s as compared to that of the 1980s and Section 4 probes the future prospects in the light of initiatives to be taken to strengthen SSI in the country. Section 5 presents summary and conclusions of the paper.

2 Global, national and sectoral policy changes: implications for SSI

The 1990s was an eventful decade in terms of policy changes, nationally as well as internationally. Since the beginning of 1990s policy changes have been taking place at three different levels – global, national and sectoral – which have implications for the functioning and performance of SSI in India. The first and the foremost development is the 'globalisation' process at the international level. Globalisation refers to free movement of factor inputs (both labour and capital) as well as output between countries. According to Stiglitz, J (2002), globalisation is the closer integration of the countries and

peoples of the world which has been brought about by the enormous reduction of costs of transportation and communication, and the breaking down of artificial barriers to the flow of goods, services, capital, knowledge, and (to a lesser extent) people across borders. However, the developments that have been taking place since the early-1990s are mostly with reference to the free movement of capital, commonly known as Foreign Direct Investment (or FDI) and free movements of goods, particularly from the developed to the developing countries.

The liberalisation of FDI regimes and the strengthening of international standards for the treatment of foreign investors allow foreign firms greater freedom in making international location decisions (UNCTAD, 2001). On an average, 58 countries have introduced changes in their investment regimes annually during 1991–2000. In 2000 alone, 69 countries made a total of 150 regulatory changes, out of which, 147 (98%) were more favourable to foreign investors (UNCTAD, 2001). As a result, global FDI inflow increased to US $1271 billion in 2000 from US $209 billion in 1990. The rate of growth of FDI inflow increased to about 21% in the early-1990s as compared to 17.4% in the 1980s and further increased to about 41% in the late-1990s. The increased inflow of FDI has led to its greater share in gross capital formation in all industries together as well as manufacturing industries (Table 1). The increase was more significant in developing countries. This would have led to intensifying competition in the national as well as international markets for small firms.

Table 1 FDI in capital formation: 1980, 1990 and 1998

Region	*FDI as a percentage of Gross Capital Formation (All Industries)*	*FDI as a percentage of Capital Formation in Manufacturing*
7.1.1 World		
1980	2.3	9.0
1990	4.7	14.0
1998	11.1	21.6
Developing Countries		
1980	1.2	11.7
1990	4.0	22.3
1998	11.5	36.7

Source: UNCTAD (2000)

The formation of World Trade Organisation (WTO) in 1995 has only accelerated the process of scaling down of tariff and non-tariff restrictions on imports. India, as a member of the WTO has substantially done away with its quantitative and non-quantitative restrictions by April 1, 2001 (Ministry of Finance, 2002). As a result, industry will have to face much stronger international competition (Planning Commission, 2002). The process of removal of quantitative and non-quantitative restrictions across countries has led to free movement of goods between countries including India. As a result, world exports grew in dollar terms at an average rate of 5.9% during 1990–1999 as against 5.2% during 1980–1990 (Ministry of Finance and Company Affairs, 2003). The reduction of restrictions on the movement of goods

between countries and the subsequent increase in world exports would have benefited Multinational Corporations much more than small enterprises.

This has to be viewed along with the process of economic reforms launched by the Government of India at the national level. This has resulted in considerable freedom for enterprises – domestic as well as foreign – to enter, expand or diversify their investments in Indian industry. India's economic reforms have two major outcomes, among others: Firstly, the growth of the public sector has come down considerably since 1991 as compared to the earlier period in terms of not only investment and employment but also production (Table 2). Public sector has been a major customer of SSI in India. The curtailed growth of PSUs would have resulted in reduced growth or even absolute reduction in public sector demand for SSI products in the 1990s. The relative role of the public sector as a distinct entity will decline further in the course of the Tenth Five-Year Plan (Planning Commission, 2002). This will most probably bring down public sector demand further for SSI products.

Table 2 Growth of public sector enterprises in India: 1973/74 to 1997/98

Year	*Investment (Rs. Million)*	*Employment (Number in '000)*	*Production (Rs. Million)*
1973/74	64700	13650	32190
1990/91	777900	23230	755680
1997/98	1439550	23880	1795870
Period		*Compound Average Growth Rate*	
1973/74 to 1990/91	15.75	3.17	20.39
1990/91 to 1997/98	9.19	0.39	13.16

Source: EPW research foundation (2002)

Secondly, there has been a rapid increase in FDI inflow into diverse sectors of Indian industry. FDI inflow increased from Rs. 3514.3 million in 1991 to Rs 161344.4 million in 2002 (which excludes ADRs/GDRs/FCCBs, stock swapping, etc.) at the rate of about 42% per annum (SIA, 2003). This would have created not only threats through greater competition, particularly in non-durable consumer goods industries but also opportunities for outsourcing in durable consumer goods and capital goods industries, to small enterprises.

The introduction of an exclusive policy for SSI, which laid emphasis on imparting more vitality and growth impetus to the sector, is the sectoral dimension of the major policy changes relevant to small-scale industries (Ministry of Industry, 1991). The policy marked:

- the beginning of an end to protective measures to SSI
- promotion of competitiveness by addressing the basic concerns of the sector, namely, technology, finance and marketing (Bala Subrahmanya, 1998).

Subsequently, the number of items reserved exclusively for SSI manufacturing has been gradually brought down from 842 in 1991 to 675 in 2003. Of course, the contribution of this policy to SSI growth was nothing much to talk about (Bala Subrahmanya, 1995). Concessional element in lending rates for SSI has been largely withdrawn during the 1990s (RBI, 2003). The number of products reserved exclusively for purchase from SSI

by Directorate General of Supplies and Disposals for the public sector has been changed to 358 items from 409 items after deleting items having common nomenclature and making the entries more generic as well as addition of new items (DCSSI, 1999). The price preference scheme (upto 15% over the lowest quotation of the large scale units) has remained the same. On the whole, the protection emphasis of India's SSI policy has undergone dilution since 1991.

Thus, policy changes that have occurred at the global, national and sectoral levels have radically changed the environment for the functioning of SSI in India. The growth of SSI in the country has to be analysed with this backdrop.

3 Performance of SSI in the globalisation era

The overall performance and contribution of SSI to Indian economy is generally described in terms of its absolute growth in units, employment, production and exports. Equally important is its relative contribution, which can be analysed in terms of its share in national income, total exports and total organised sector employment. Thus, the growth performance of SSI can be evaluated in two ways:

- to compare the growth rates of units, employment, output and exports of SSI in the 1990s with that of 1980s
- to ascertain the change in the relative contribution of SSI to GDP, exports and organised sector employment in the 1990s with that of 1980s.

This will reveal how the sector is coping up with challenges and changes in the intensifying competitive environment emerging since 1990–91. The growth of SSI in terms of units, employment, production and exports is estimated based on the figures given in *Economic Surveys* (Ministry of Finance). The share of SSI in National Income is arrived at as follows: The Gross Value Added (GVA) of firms having investment more than that of the SSI investment limit is deducted from the manufacturing sector's contribution to Gross Domestic Product (GDP) and the remainder is the contribution of SSI to GDP. This value is calculated as a percentage of the total GDP. *Annual Survey of Industries* (EPW Research Foundation, 2002) and *Hand Book of Statistics on Indian Economy* (RBI, 2001) are used for the purpose. The share of SSI exports in total exports is calculated in rupee terms based on the figures available in the *Economic Surveys* (Ministry of Finance). Similarly, the quantum of employment of SSI is calculated as a percentage of total organised sector employment based on *Economic Survey* figures. Strictly speaking, SSI employment comprises employment generated by both organised and unorganised sectors and therefore, is not directly comparable to total organised sector employment. However, here the purpose is to show the importance of SSI in terms of employment generation as compared to the employment of entire organised sector.

The growth rates of SSI in terms of units, employment, output and exports for the 1980s and 1990s are presented in Table 3. It is clear that the growth of SSI in the transitional period of 1990s has come down in terms of not only units and employment but also in terms of output. This could be an indication that increasing competition in the globalisation period does affect the growth of Indian SSI adversely. However, the growth rate of exports has actually increased marginally. To probe the growth pattern further, growth rates are estimated for five-year periods for both 1980s and 1990s. They also

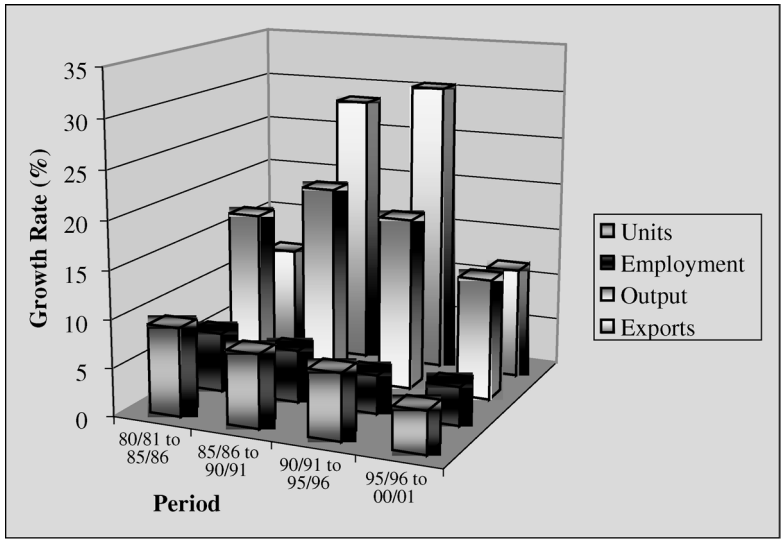
broadly correspond to India's five-year plans: sixth, seventh, eighth and ninth five-year plans respectively. The scenario does not differ much, except for exports (Table 3). The growth rates of units and employment have steadily come down. But the growth rates of output and more importantly, exports have fluctuated. In fact, the growth rate of output increased in the late-1980s as compared to the early-1980s but then declined in the early-1990s and further in the late-1990s. Whereas the growth rate of exports increased steadily till the early-1990s but then declined considerably (Figure 1).

Table 3 Growth of small-scale industries: 1990s vs. 1980s

	Period	*Units**	*Employment**	*Output**	*Exports**
I	1980s	8.40	5.84	18.66	19.38
	1990s	5.62	4.00	15.31	20.62
II	1980–1981 to 1985–1986	9.18	6.21	16.88	11.00
	1985–1986 to 1990–1991	7.63	5.47	20.46	28.40
	1990–1991 to 1995–1996	6.88	4.02	18.05	30.42
	1995–1996 to 2000–2001	4.37	3.99	12.62	11.56

Note: * Figures represent compound average rate of growth (CARG)
Sources: SIDBI (1999), Government of India (2002)

Figure 1 Growth of small-scale industries in India (1980/81–2000/01)



The other dimension of SSI performance is its relative contribution to national income (GDP), exports and employment. The contribution of SSI is considered for three periods of time: 1980–1981, 1990–1991 and 2000–2001 (Table 4). The share of SSI in national income increased in the protection period of 1980s but declined considerably in the transitional period of 1990s. The share of SSI in exports and its employment in relation to organised sector employment have consistently increased both in the protection period and in the transitional period. But, the increase in the share of SSI in total exports was

more significant in the protection period of 1980s as compared to the transitional period of 1990s. However, the increase in the relative share of SSI employment was more significant in the 1990s as compared to the 1980s. SSI employment (which included partly unorganised manufacturing sector employment as well) was equivalent to about 31% of the total organised sector employment in 1980–1981. It went up to nearly 48% of the organised sector employment in 1990–1991. By 2000–2001, SSI employment increased to the level of two-thirds of the organised sector employment. That is, though the growth rate of SSI employment had come down in the 1990s, SSI employment increased more than proportionately in the period of globalisation as compared to the protection period, with respect to other sectors of the Indian economy. As a result, its size relative to organised sector employment has gone up.

Table 4 Small-scale industries in India's national income, exports and employment (in %)

Year	*National Income*	*Exports*	*Employment*
1980–1981	9.2	24.5	31.0
1990–1991	11.0	29.7	47.6
2000–2001	7.8*	30.9	66.4

Note: * For the year 1997/98

Sources: Government of India (1998; 2002), Reserve Bank of India (2001), EPW Research Foundation (2002)

To further probe the influence of globalisation on the growth of SSI units, employment, production and exports, linear least square lines have been fitted based on the time series data for the annual growth rates of these four variables for two periods of time: 1978/79 to 1990/91 (pre-globalisation period) and 1990/91 to 2002/03 (globalisation period). The results are displayed in graphs from A to D in Figure 2.

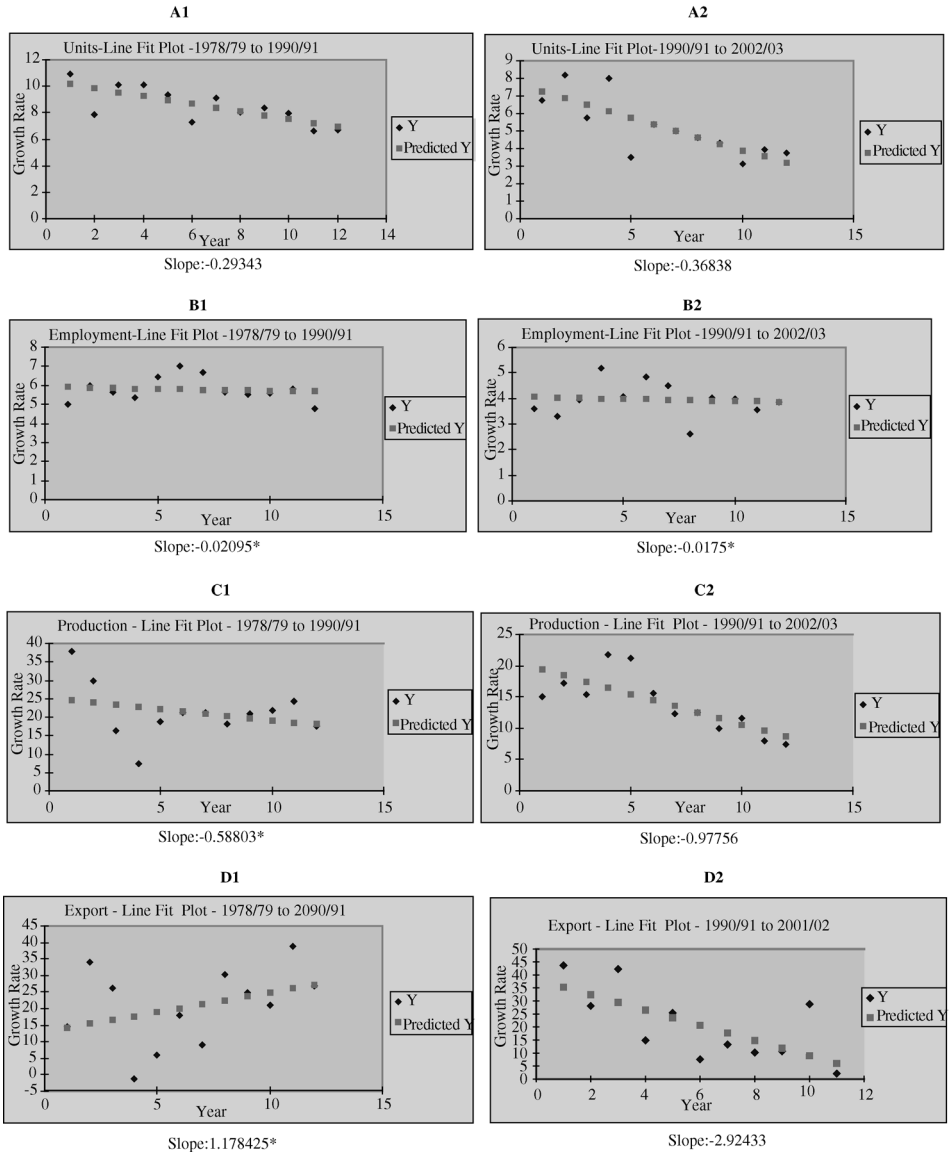
Units: The linear least square lines for units are presented in graphs A1 and A2 (Figure 2). There is a discernable change in the slopes of the two least square curves. The correlation coefficients are significant at 004 level. This indicates that the process of globalisation, which had begun in 1991, has an influence on the rate of growth of SSI units. Since the slope for the globalisation period is much steeper negatively, there is evidence to infer that the growth rate has been adversely influenced.

Employment: The linear least square fits for employment are not good and significant (graphs B1 and B2 in Figure 2). Therefore we can infer that the time series data do not reveal any influence of globalisation on the rates of growth of employment.

Production: The linear trend line for production prior to the globalisation period is insignificant (graph C1 in Figure 2). But the linear trend for the globalisation period is significant at 003 level and is negative (graph C2 in Figure 2). This could be an indication that globalisation has a negative influence on the rate of growth of production.

Exports: The least square fit for exports for the period prior to globalisation is not significant (graph D1 in Figure 2). Whereas the linear trend line for the globalisation period is significantly negative thereby indicating an adverse impact on the rate of growth of exports (graph D2 in Figure 2). In summary, there is some evidence to infer that the growth of SSI units, production and exports has been adversely affected in the globalisation period.

Figure 2 Graphs showing the influence of globalisation on units, employment, production and exports of SSI



On the whole, SSI performance does indicate that the sector faces a tough challenge for its survival and growth in the period of globalisation. One would feel all the more so, if one realises the ground realities. Media reports periodically bring out the declining state of affairs in SSI in states like Karnataka (Ramesh, 1999; Kulkarni and Parishwad, 2001; Raghu, 2001; Menon and Raghunandan, 2003). Our field visits to industrial estates in Bangalore, Mysore, Shimoga, Mangalore, Dharwad and Hubli in connection with our research projects relating to SSI have confirmed that a considerable number of SSI units have been closed down or have curtailed their operations significantly.

The pertinent issue is why liberalisation and globalisation should affect Indian SSI to such an extent? The reasons are not far to seek. A substantial majority of SSI does not have access to reliable and efficient infrastructure even today, which in turn, impedes its competitiveness. According to Kulkarni and Parishwad (2001), about 40% of the 0.26 million SSI units in Karnataka have been closed due to infrastructural bottlenecks and lack of orders from Public Sector Undertakings, among others. In Peenya Industrial Estate, Bangalore, which is considered to be the largest in South and South-East Asia, only about 2000 units function out of the total 3500 units and lack of infrastructure and competition are considered to be the major causal factors (Menon and Raghunandan, 2003).

The infrastructural constraints confronted by SSI can be broadly classified as economic, technological, marketing and financial. Stable and reliable economic infrastructure such as power, water, transport and communications are a pre-requisite for the efficient functioning of any economic activity including SSI. Inadequate economic infrastructure is one major factor that affects the performance and competitiveness of SSI. It is to overcome the infrastructural deficiencies faced by the sector, particularly in rural/backward areas and to strengthen linkages between agriculture and industry the government introduced the Integrated Infrastructure Development (IID) Scheme in 46 centres in 1994 (DCSSI, 1999). The IID scheme proposes to contain developed sites, power distribution network, water, telecommunications, drainage and pollution control facilities, road, banks, raw material depots, storage and marketing outlets, common facilities and technological back-up services (DCSSI, 1999). Thus, IID scheme aims at providing not only economic but also technological, marketing and financial infrastructure for the development of SSI. However, the IID scheme has not made much headway even after almost a decade. So far only 58 IID centres have been approved and 50 more centres have been proposed for development in the 10th Plan (Planning Commission, 2002). But a small number of IID centres will not make any major impact on SSI performance. Recently, the government of India has proposed to extend IID scheme to the entire country (Planning Commission, 2002). However, it is not clear how and when the scheme will be extended to cover the entire country.

Technological obsolescence has been a characteristic of SSI in India across a wide variety of sectors. In the early-1990s, two survey-based studies have brought out that technological obsolescence of small-scale industries affect quality and productivity adversely. These empirical studies indicated that SSIs in general, are characterised by technological obsolescence and therefore, inferior quality as well as low productivity (Awasthi, Krishna and Sebastian, 1993; NCAER, 1993). Subrahmanian (1995) had also highlighted the lack of technological dynamism in Indian SSI.

However, the need for improving the competitive strength of SSI through technology improvement and modernisation was recognised as early as in the 1950s with the setting up of Small Industries Development Organisation (SIDO) and a network of Small Industries Service Institutes (SISIs), National Small Industries Corporation (NSIC) and National Research Development Corporation (NRDC). Since then, over a period of time, particularly in the 1990s exclusive technology infrastructure has come up for SSI to facilitate technology transfer (Bala Subrahmanya *et al*., 2002). Thus, Policy Makers in India have considered technology development in SSI only from a single dimension, that is, through institutional technology transfer.

How far technological infrastructure meant for SSI has helped them is another issue. For example, the Technology Bureau for Small Enterprises (TBSE) which was set up in 1995 through the collaboration of United Nations' Asian and Pacific Centre for Transfer of Technology (UN-APCTT) and Small Industries Development Bank of India (SIDBI), as an endeavour to bridge the technology gap, attended so far to a total of 5793 enquiries, facilitated 29 technical collaborations and helped 124 small enterprises in identifying indigenous technologies, among others (SIDBI, 2002). Of course, the network of 28 Small Industries Service Institutes (SISIs) and 30 branch SISIs have 45 common facility workshops spread across the country and they provide technical support services, among others (SIDO, 2003). But they do not undertake any technology upgradation programme. The Integrated Technology Upgradation and Management Programme (UPTECH), which was launched in 1998 by SIDO, covers all the facets of technological improvements but the scheme was approved only for 12 clusters for implementation during the IX Plan (DCSSI, 1999). State Bank of India (SBI) has implemented Project Uptech scheme to catalyse technology upgradation in 19 SSI clusters and approved its implementation in another four clusters (Swamy, 2003). In addition, SIDBI has identified about 25 SSI clusters for structured intervention including technology upgradation (SIDBI, 2002). But India has 361 small and medium enterprise (SME) clusters (which are overwhelmingly predominant with SSIs and the share of medium and large-scale industries is nominal) and 1656 artisan clusters (SIDO, 2003). Given this, it is not difficult to comprehend that the technology infrastructure would have made, at the most, only a marginal impact on the sector as a whole.

But technology development in SSI can be achieved even through in-house technological innovations as well as inter-firm linkages with large firms. Technological innovation involves the situationally new development and introduction of knowledge-derived tools, artifacts, and devices by which people extend and interact with their environment (Tornatzky and Fleischer, 1990). It is primarily rooted in a firm's internal competencies (Kim and Nelson, 2000). The advantage with in-house technological innovations is that it can be firm specific and continuous. Similarly, a small firm can get technological inputs and technology through sub-contracting relationship with large firms on a continuous basis. In Japan, effective sub-contracting relationship between small and medium enterprises (SMEs) and large firms works as an important mechanism of technology transfer (Nagaoka, 1989). But in India, policy seems to have overlooked the ability of small firms to innovate (Bala Subrahmanya, 2002) and the extent of ancillarisation, though increasing in recent years, is well below the potential (Planning Commission, 2002).

Timely availability of adequate finance is another issue, which crucially determines the survival and growth of small firms. Small firms are largely dependent on bank credit to meet their financing requirements while the big firms have alternative sources of finance (RBI, 2003). To ensure better financial infrastructure, Small Industries Development Bank of India (SIDBI) was set up in 1990. Today, SIDBI operates through the head office, five regional offices and 36 branch offices across the country (SIDBI, 2002). In addition, based on the recommendations of Nayak Committee set up by RBI (1992), 370 exclusive bank branches for SSI were set up by Public Sector Banks by 1998 (DCSSI, 1999). Further, as per Nayak Committee recommendations, Reserve Bank of India has directed banks to meet the working capital needs of SSI at the rate of 20% of annual output subject to an individual upper limit of Rs. 20 million (DCSSI, 1999).

However, despite the development of exclusive financial infrastructure for SSI, the growth in the amount of bank credit extended to SSI declined in the 1990s as compared to that of the 1980s (Table 5). In fact, the decline in the growth rate was more pronounced relative to total priority sector, medium and large-scale industry sector and total non-food bank credit. As a result, credit to SSI as a percentage of non-food gross bank credit increased marginally from about 14% in 1980/81 to 15.14% in 1990/91 but decreased to 13% in 2000/01. Further, the total bank credit extended to SSI as a percentage of SSI output declined marginally from about 9.4% in 1993/94 to 8.7% in 2000/01 (Table 6). This brings out that despite policy support, credit flow to SSI has actually declined relatively in the 1990s.

Table 5 Sectoral deployment of non-food gross bank credit (Outstandings) (Rs. Million)

Year	*Priority Sector**	*Small Scale Industries*	*Medium and Large Scale Industries*	*Non-Food Gross Bank Credit*
			Rs. Million	
1980/81	850400	322900	996000	2304500
1990/91	4291500	1718100	4450800	11351300
2000/01	15441400	5600200	16283700	42916200
Period			*Compound Average Growth Rate (%)*	
1980/81 to 1990/91	17.57	18.19	16.14	17.28
1990/91 to 2000/01	13.66	12.54	13.84	14.22

Note: * Priority sector includes small-scale industry, among others

Source: RBI (2001)

Table 6 Bank credit to small-scale industries (Rs. Million)

Year	*Bank Credit Extended to Small Scale Industries*	*Small Scale Industry Output*	*Bank Credit as percentage of Output*
1993/94	2261700	24164800	9.36
1997/98	4350800	46264100	9.40
2000/01	5600200	64549600	8.68

Sources: RBI (2001), Ministry of Finance (2002)

Marketing has been identified as one of the major problem areas of the SSI and it has been ranked, according to the Second Census of Small Scale Industries, as the second most important reason for the closure of SSI units (SIDBI, 2002). It is quite logical and obvious. If small firms do not have access to reliable and efficient economic infrastructure, they suffer, in general, from technological obsolescence and if credit flow is not sufficient, they will not be able to produce quality goods and productivity will not be high either. In such a case, small firms will not be able to penetrate markets, national or international, even if marketing support is coming forth from government agencies.

In the 1990s, two major steps have been taken by the government to promote SSI marketing:

- The scheme of establishing Sub-Contracting Exchanges (SCXs) by Non-Government Organisations (NGOs) and Industry Associations was launched in February 1995 (DCSSI, 1999). As a result, during 1995–2001, 27 such sub-contracting exchanges had been set up, in addition to the already existing 34 SCXs in the SISI network (SIDO, 2003). One of the major objectives of sub-contracting exchanges is to develop sub-contracting relationship between small and large firms.
- With a view to ensure that exporters from SSI sector exhibit their products in the International Exhibitions, required assistance and support is provided. Expenditure on account of space rent, handling and clearing charges, insurance and shipment charges, etc., are met by the Office of the Development Commissioner (Small-Scale Industries) under one of the plan schemes (SIDO, 2003). In 2000–2001, SIDO has participated in seven international trade fairs/exhibitions (SIDO, 2003). During 1996–2001, SIDBI conducted/participated in 18 trade fairs/exhibitions, nationally as well as internationally (SIDBI, 2002). Both these schemes would have helped those small firms, which are modernised, efficient and produce quality goods. However, small firms interested in entering international markets face a difficult decision with regard to the choice of governance modes (Li and Qian, 2003). None of the above-referred agencies help small firms in India to develop an appropriate strategy to enter international markets. Further, the proposed marketing of mass consumption items under common brand names by National Small Industries Corporation (NSIC) has not taken off at all even after 12 years of exclusive policy announcement for small-scale industry, which contained the proposal.

Thus, the current status of SSI in India can be appropriately understood in the above context. Given the declining performance of SSI in the context of constraints, it is essential to ponder over its future prospects and the strategy to be adopted by the stakeholders; namely, the government and more importantly, the SSI sector itself.

4 Future prospects of SSI in India

The central issue of concern for the future growth of SSI is how to strengthen its competitiveness. First of all, if SSI has to thrive steadily, infrastructural bottlenecks must be overcome to enable them to compete based on their inherent potential. And it is the responsibility of the government to remove any structural bottleneck for SSI performance especially when market forces are given prominence through the removal of 'protective elements'. It is essential to provide the much-needed 'level playing field' to small enterprises through infrastructure development. But overcoming the infrastructural bottlenecks for SSI is easier said than done.

SSI units in India have come up in an unplanned, uncontrolled and haphazard manner (CPCB, 2001). They have emerged anywhere and everywhere – closer to the location of resources as well as markets – in clusters as well as in a dispersed manner, in industrial, commercial and residential areas. Of these, the 2000 and odd SSI clusters vary in size with a population ranging from hundred to thousand units. Approximately, these clusters would account for 1/3 to 1/2 of the total SSI units in the country. A considerable majority of these clusters is natural and traditional skill based. By and large, these clusters lack reliable and efficient infrastructural facilities such as power, road, water, transportation

and communications, information, technical inputs, etc. But infrastructural problem is more acute in the case of SSI units, which are located in a dispersed manner.

To enable efficient monitoring and provision of infrastructural facilities, SSIs should be permitted to come up only in designated industrial areas or estates. Each state should be asked to develop a database of SSI, which should be updated at least, once in three years with the help of District Industries Centres (DICs). There is an urgent need to introduce a system of delisting closed registered SSI units (Planning Commission, 2002). This will facilitate 'policy corrections' from time to time. DICs must be revitalised and made the nodal centres for the provision of all infrastructural facilities to SSI at the district level. DICs should have information about the sources of technology and material inputs, opportunities for sub-contracting/outsourcing, etc. The ongoing process of 'networking of DICs' is welcome, as it will enable effective information dissemination across the country.

In addition, the state governments along with industry associations should involve the private sector in the development of infrastructure in existing industrial estates and clusters and permit provision of infrastructural services on payment. Similarly, private sector investment should be encouraged for the development and management of existing as well as new industrial parks/ clusters/ estates (Abid Hussain, 1997). Development of industrial parks/estates/clusters should be treated at par with infrastructure development and state governments should prepare guidelines for private investments. These steps would go a long way in strengthening the infrastructure for SSI development in India.

Further, subsequent to the recommendation of the Planning Commission Expert Committee on Small Scale Enterprises (Planning Commission, 2001), Government of India has now decided to cover the entire country by Integrated Infrastructure Development (IID) schemes. This is a welcome development. But the government has not set up any time frame for its completion. Preferably, the IID scheme must be implemented by the end of the 10th Five Year Plan, i.e. by 2007/08. Of course, this would call for a huge plan outlay but would give the much-needed qualitative support to the performance of SSI. Further, to facilitate speedier infrastructure development for SSI, Planning Commission Expert Committee (Planning Commission, 2001) has recommended the setting up of an Infrastructure Development Fund of the order of Rs. 20 billion. The fund has to be meant for creating, revamping and upgrading industrial infrastructure for SMEs including upgrading the infrastructure in existing industrial estates – by states/UTs. However, the Government of India has not yet setup the Infrastructure Development Fund for SSI.

There is a need to explicitly recognise and exploit the 'innovation potential' of SSI. In developed countries SSIs are promoted, among others, as the 'seed bed' of innovation (Bala Subrahmanya, 2002). Small-scale enterprises have the specific advantages of flexibility, concentration and internal communications for carrying out technological innovations (Rothwell and Zegveld, 1982). Technological innovations contribute to competitiveness (Tornatzky and Fleischer, 1990). Even in the Indian context, a significant number of small firms do carry out technological innovations and thereby enhance their competitiveness (Bala Subrahmanya, 2002). Therefore, it is appropriate to incorporate schemes in the existing policy and institutional network to provide technological and financial assistance to in-house technological innovations at the district level and make it easily accessible to SSI. There is a need to create R&D fund at the state level for disbursement as margin money through DICs to SSI units to encourage them to

undertake formal R&D and technological innovations. In addition, Department of Science and Technology (DST) may allocate funds to Universities and engineering institutions, which could provide institutional infrastructure for R&D or conduct R&D for SSI units at the regional level (Bala Subrahmanya, 2002).

These schemes are not to undermine the significance of the present strategy of 'technology transfer'. It is essential to pursue with more intensity the existing strategy of technological upgradation and modernisation by involving local governments and SSI associations, particularly with a focus on SSI clusters. However, it needs to be emphasised that the technological transformation of Indian SSI is a gigantic task and government alone cannot achieve the objective, however extensive its infrastructure may be. Therefore major initiative has to come from SSI itself, particularly through their associations. The importance of 'achieving and sustaining competitiveness in the long run' and investing 'self-efforts and resources' needs to be realised and spread among SSI units through their associations at the regional level. This will play a crucial role in their long-term development in the future.

The increase in the competitiveness of SSI will also be determined by the availability and quantum of finance. The demand for finance – implicit as well as explicit – from SSI will be substantial considering its size, structure, growth pattern, need for its restructuring and technology development (Bala Subrahmanya, 2002). Particularly, the investment demand for finance from small-scale industry will increase considerably due to technology upgradation and modernisation, expansion (of efficient ones), quality improvement, R&D and technological innovations, environment related investments (industry specific), etc. In South Korea expansion and modernisation together accounted for more than 50% of the total investment demand for finance of small and medium enterprises (SMEs) in 1980s, that is, when the Korean economy was undergoing industrial restructuring. The R&D demand formed a meagre 0.2% of the total investment demand of SMEs in 1982 but it went up to 1% by 1986 (Asian Development Bank, 1997). To meet the growing and diversified investment demand requirements, it is essential to broaden the financial infrastructure, specifically to take care of the technological transformation of small-scale industries and lay more thrust on adequate flow of finance to the sector (Bala Subrahmanya, 2002).

The promotion of inter-firm linkages is another issue deserving more recognition. Till recently small and medium-sized enterprises (SMEs) in general were precluded from participating in the lucrative supply-chain transactions generated by much larger manufacturers and suppliers. In most cases SMEs were unaware or unable or unwilling to spend the necessary capital or transactional system implementations, or infrastructure upgrades (Sommer, 2003). However, time is changing now. The increasing presence of Transnational Corporations (TNCs) in the country would open up new opportunities for sub-contracting/outsourcing. This is because FDI has flowed into industries such as telecommunications, transportation, electrical equipments (including computer software), metallurgical industries, automobiles, among others, where opportunities for obtaining sub-contracting/outsourcing are high for SSI. The potential of such outsourcing opportunities must be tapped to the maximum possible extent to the advantage of SSI. The Directorate of Industries in each state must take the initiative by involving SSI associations, on the one hand, and newly entered TNCs, on the other. The Directorate of Industries and Commerce, Government of Karnataka has already taken such an initiative (*The Times of India*, 2002).

Globalisation need not affect Indian SSI only adversely. It would have created beneficial opportunities as well. The removal of quantitative restrictions and the reduction of import duties, particularly after the setting up of WTO in 1995, have opened up foreign markets to Indian SSI as much as Indian market to foreign goods. Many efficient and export oriented small firms would have got benefits out of this development. Such global opportunities should act as an incentive to small firms in India to enhance their competitiveness to penetrate the global market. This could also be achieved by small firms becoming vendors or sub-contractors to foreign large-scale industries. The trend is outsourcing of supplies by TNCs and they are always on the look out for firms who could supply reliable and quality products (Sabade, 2001).

In fact, outsourcing is the major factor contributing to the growth of Indian software industry (Ministry of Finance, 2001) and Business Process Outsourcing (BPO) (*Economic and Political Weekly*, 2003). After software and BPO, auto parts is being mentioned as the site of the next big outsourcing wave likely to bring in a clutch of investors looking for a low-cost, high quality production base. A number of the world's largest automobile and equipment-makers have already announced plans to source parts from Indian companies or expand their own production operations in the country, especially for export. This trend is likely to gain further momentum as a recession-hit global automotive industry struggles to cut production costs (*Economic and Political Weekly*, 2003). Such opportunities should be exploited with concerted efforts in other industries as well by the government, SSI and their associations together.

Finally, irrespective of the degree of support extended by the government and irrespective of the amount of efforts put in by SSI and their associations, India is going to experience the emergence of SSI sector, which is qualitatively superior, technologically vibrant and internationally competitive, in the next five-to-ten years because the 'inefficient ones' are likely to vanish gradually. The objective of the Policy Makers as well as SSI associations should be to enable the sector to emerge vibrant and competitive without a considerable reduction in its size and thereby enable it to make a sustainable contribution to national income, output and exports.

5 Summary and conclusions

SSI in India finds itself in an intensely competitive environment since 1991 due to globalisation, domestic economic liberalisation and dilution of sector specific protective measures. As a result, its growth in terms of units, employment, output and exports has come down. This has resulted in less impressive growth in its contribution to national income and exports in the 1990s. Lack of reliable and stable economic infrastructure, reduced growth of credit inflow and technological obsolescence, which together would have led to inferior quality and low productivity are the major banes of SSI in India.

But at the same time, international and national policy changes have thrown open new opportunities and markets to Indian SSI. Concerted efforts are needed both from the government and more importantly, from SSIs themselves to imbibe technological dynamism into Indian SSI. Technological upgradation and in-house technological innovations and promotion of inter-firm linkages need to be encouraged consciously and consistently. The benefits and need to go for technology development through either technology transfer or technological innovations or inter-firm linkages should be

emphasised in the light of dimensions of global competition and its negative fallouts as well as positive opportunities, to SSI entrepreneurs through seminars and workshops at the local level. Financial infrastructure needs to be broadened and adequate inflow of credit to the sector be ensured taking into consideration the growing investment demand including the requirements of technological transformation. SSI should be allowed to come up only in designated industrial areas for better monitoring and periodic surveys though DICs should enable policy corrections from time to time. A technologically vibrant, internationally competitive SSI sector should be encouraged to emerge, to make a sustainable contribution to national income, employment and exports.

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