

Report on

**SOCIO ECONOMIC BARRIERS
IN ADOPTION OF IMPROVED
TECHNOLOGY IN THE SSI
SECTOR**

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New Delhi

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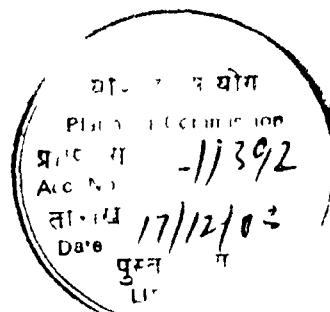


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PREFACE

The Planning Commission, Government of India assigned the study "Socio-Economic Barriers in Adoption of Improved Technology in the SSI Sector" to the Society for Economic and Social Transition (SEST), New Delhi. The study is based on the empirical data generated by extensive surveys conducted by SEST in the four States of Delhi, Haryana, Maharashtra and Rajasthan. The intensive interaction with the owners and managers of SSI units was aimed at obtaining a realistic assessment of the problems faced by these units specially as regards adoption of new and improved technologies.

The study revealed the general conviction of the owners of SSI units regarding increase in productivity, improvement in quality and competitiveness in Indian and export markets and improved profitability with the adoption of improved technologies. An encouraging conclusion derived from the survey is that improved technology in SSI sector leads to higher employment. The report brings out the constraints, both internal and external, which have prevented about one-third of the surveyed units from moving up the technology ladder.

The study reveals that the SSI sector has continued with a healthy growth even after facing the challenges of globalisation and emergence of the WTO regime. The comprehensive policy measures for developing SSI sector announced by the Hon Prime Minister in August 2000 have removed a number of problems faced by SSI units and have accelerated their growth. Some other issues such as prohibitive cost of imported modern technologies for small entrepreneurs, lack of indigenous R&D efforts, high cost of working capital, lack of trained technicians, problems of timely availability of quality raw materials etc have been brought out in the study mainly through informed perceptions of SSI owners and managers. Valuable insights into these and other issues were obtained through interviews with senior and experienced officers dealing with SSIs in the States and the Government of India.

The study was conducted under the guidance of the Principal Researcher, S.K. Sinha and the Researcher, Bal Krishna. The field surveys were mainly conducted by the professional agency, Radix Research under the supervision of S. K. Sinha and Bal Krishna. The tabulation and analysis of data was done by B.R. Software Service under the supervision of the research team. A.K. Sarkar assisted with the initial draft of the report. Internet services for sourcing the latest national and international research material on related topics were provided by Vivek Mathur and Hemant Kumar. Discussions with eminent experts of the Planning Commission, Ministry of Small Scale Industry and Development Commissioner, SSI, provided useful insights on related subjects. Their contributions to the study have been valuable and are gratefully acknowledged.

Secretarial assistance in the preparation of the report was provided by Arun Kumar. The report was gone through by R.C. Nandwani.

It is hoped that the results of the study will provide the ground level assessment of the problems faced and the efficacy of measures taken to date for strengthening this vital sector of the nation's economy. The study is thus expected to be helpful to the policy planners as also to others interested in this sector as users or facilitators.

November, 2003

Shahzad Bahadur
Project Director

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EXECUTIVE SUMMARY

1. Introduction

- 1.1** The study utilizes the empirical data generated by the survey of small-scale industries in the four states of Maharashtra, Delhi, Haryana, and Rajasthan to assess the problems faced by them especially in respect of adoption of improved technologies. The small-scale industries have come to occupy a vital place in the national economy. Spread all over the country including the semi-urban and rural areas, the number of SSI units has touched 3.4 million and this sector now accounts for 20 million jobs, 6.29 percent of GDP and 35 percent of export earnings.
- 1.2** The sector has, in the past, functioned under the umbrella of protection and reservations but with economic liberalisation, it is facing increasing international competition. The domestic market has also become more demanding. The sector has to modernize to cater to changing tastes and trends of the domestic and foreign buyers for which upgradation of production technologies and management is essential. The process of technology upgradation by SSI units, however, has been slow in spite of a number of policy initiatives and facilities offered by the Government and financing institutions.

2. Objectives of the Study

- 2.1** The main objectives of the study are:
 - I.** To identify major causes inhibiting the adoption of improved technologies in different sub-sector of SSI and to assess the role of existing policies and programmes in over coming them;
 - II.** To study the present procedure for availability of finance to SSI units for upgrading and modernizing their technologies and suggest measures for facilitating such services to small scale entrepreneurs;

- III. To study the adequacy of Credit Guarantee schemes in facilitating availability of finances specially to the smaller and first generation entrepreneurs;
- IV. To assess the managerial requirements for bringing about greater efficiency and professionalism in management;
- V. To assess the requirements of improvements in skills, education and training of work force and supervisory in SSI units to absorb and implement technologies;
- VI. To assess social / economic discriminatory factors, if any, in availability of finance and other facilities to small entrepreneurs;
- VII. To assess the impact of cultural issues, if any in adoption of improved technologies. Issues like employment of child labour may, also be looked into in a limited manner only to the extent that they relate to adoption of improved technology.

3. Scope of the study

- 3.1 This study has primarily focused on ascertaining the socio-economic barriers to the adoption of improved technology. Data on various issues and constraints in technology adoption in SSIs have been obtained in the survey of small units. Assessment of current technology being adopted by the entrepreneurs in nine groups of industries selected as representative for the survey have also been attempted in the study. The status of indigenously developed technology as compared to the imported one has also been analyzed in relation to their costs and effectiveness. Reasons for not updating present technologies have also been analyzed.
- 3.2 An attempt has been made to relate views on impact of adopting new technologies on production, employment, and efficiency. The requirements of technicians to manage the working of new technology and the need to train fresh skilled manpower, accountability and management of all the processes involved in the

transfer and operation of new technology have also been analyzed in the report for the nine group of industries covered in the study.

4. Tenth five-year plan

4.1 To encourage the SSI sector, the Tenth Plan envisages the industrial sectors to grow at the rate of 10 percent to achieve the plan target of 8 percent growth of GDP. With the objective of making the SSI sector more efficient and competitive in the global market, a Study Group on the Development of SSI was set up under the chairmanship of Member, Planning Commission and its recommendations were reviewed by a Group of Ministers. The package of measures recommended by the Group of Ministers was considered by the Hon. Prime Minister and he announced on 30th, August 2000 comprehensive policy measures for developing and modernizing the sector. Some of these measures were:

- (i) Increase the exemption limit for internal excise duty from Rs. 5 million to Rs. 10 million.
- (ii) Increase the limit of composite loan from Re. 1 million to Re.2.5 million.
- (iii) Industry related services and business enterprises having a maximum investment of Re. 1 million would qualify for priority lending.
- (iv) Increase in the eligible project cost limit for soft loan assistance under national equity fund scheme from Rs. 2.5 million to Rs. 5 million
- (v) Launch a credit guarantee fund scheme
- (vi) Provide capital subsidy of 12 percent of investment in technology in select sectors.
- (vii) Create an inter-ministerial group of experts to define the scope of technology upgradation
- (viii) Continue the grant of Rs 75,000 to each unit that receives ISO-9000 certification, upto the end of the Tenth plan.

* Chemical and Chemical products, Rubber and Plastic products, Leather products, Wood products, Paper products and Printing, Hosiery and Garments, Food products, Metal products, Electrical Machinery and Apparatus

5. Sampling frame for the Study

- 5.1** The study has been conducted in four states, i.e. Delhi, Haryana, Maharashtra and Rajasthan. In all the states, nine groups of industries were identified on the basis of their importance and representative character and these were considered as the sampling frame in each state. The SSI units as a whole are classified into 31 groups and the number of all the registered units in Delhi, Rajasthan, Haryana and Maharashtra on 31st December 2002 has been recorded as 25,000, 82,000, 85,000 and 1,40,000 respectively. As the number of registered units was quite large, we have obtained the list of registered SSI units of each state only for the nine groups, which have been identified for the study. The nine groups of industries are Chemicals and Chemical products, Rubber and Plastic products, Leather products, Wood products, Paper products and Printing, Hosiery and Garments, Food products, Metal products and Electrical Machinery and Apparatus.

6. Sample Size and Sampling Procedure

- 6.1** As indicated in the project proposal, 500 SSI units were to be surveyed, 125 each in the four states of Maharashtra, Delhi, Haryana, and Rajasthan. While selecting a sample from the registered units of each state, the Stratified Random Sampling method was basically employed, strata being the products/SSI category as stated above. For each industrial category, the sample was drawn independently using Random Sampling Technique selecting minimum of 8 units and maximum upto 20 units from each stratum. However, the number of units was increased in some of the strata where the sampling frame was quite large. The number of sampled units in each state selected was at least 125.

7. Methodology

- 7.1** The study is empirical in nature, as statistical and other primary data have been collected through field survey. Altogether 529 units covering nine groups of small industries were selected to collect data through a well-designed questionnaire. Primarily, it was intended to collect information from the owner/entrepreneurs of

the SSI units. However, due to non-availability of the owner, in certain cases, information has been obtained from the representatives like managers, supervisors, and financial officers. The industries selected for the survey represent a cross section of numerous small, medium and larger ones – all within the scope of SSIs- old and new industries and those located in and around the main cities, towns and talukas.

8. Nature of Data Collected

8.1 The study was designed to collect information primarily on the social and economic barriers which make adoption of new technology difficult by the small entrepreneurs in the SSI sector. To the extent possible, information regarding other important factors which are considered helpful in understanding these barriers and problems has also been collected. For example, data on types of technology, nature of consultancy needed for technology upgradation, availability of technology, indigenous and external, perception of entrepreneurs on technology adoption, external competitiveness, Chinese goods vs. Indian goods, labour relations, discriminatory access to finance, WTO commitments, role of women entrepreneurs in creating jobs for women workers etc. have also been obtained in the survey. Specific information collected in the survey includes:

- i. Capital output ratios in nine group of industries covered
- ii. Capital labour ratios
- iii. Total productive capacity and the range of utilization of capacity by each group
- iv. The net value added per worker
- v. Magnitude of capital employed
- vi. Source of finance
- vii. Nature and type of ancillary relationship with larger units
- viii. Utilization of capacity by individual units
- ix. Suggestions to improve performance of the SSI sector in the on going changing economic scenario

- x. Information gaps relating to the knowledge of different types of technology for different categories of units on research and development, role of industrial associations, role of fairs and exhibitions, seminars/workshops etc.
- 9. The salient features of the study are presented below.**
- 9.1 Classifications of industries by registration**
- 9.1.1 More than 45 percent of the SSI units were established after 1990 indicating favourable impact of National Industrial Policy, 1991. Haryana showed specially commendable growth of SSIs during this period as around 80 percent of SSI units in the state were established after 1990.
- 9.2 Classification of industries by main activity**
- 9.2.1 More than 80 percent of SSI units were found engaged in manufacturing activities and 5 percent units were found to undertake more than one activity (or performing secondary activity). In Maharashtra the SSI units engaged in manufacturing activities are around 70 percent
- 9.3 Classification of industries by ownership**
- 9.3.1 More than 55 percent of SSI units were found to have the status of proprietorship and only 14 percent units could achieve the status of a Company whereas household industries were only 5 percent.
- 9.4 Classification of industries by investment (fixed capital)**
- 9.4.1 More than 20 percent of the SSI units surveyed in the four states were having investment below Rs. 5 lakhs on fixed assets whereas the investment below Rs. 20 lakhs was found in more than 60 percent of SSI units. Such industries in Delhi are 80 percent whereas in Haryana they are more than 70 percent and in Maharashtra such industries are around 30 percent.

9.5 Employment by category

- 9.5.1 The total employment in the sampled SSI units in four states altogether has been of the order of 9000; of which around 18 percent are technical persons and more than 55 percent are daily wage workers.
- 9.5.2 Women participation in total employment is around 7 percent, which varies from state to state significantly. The share of women employees in Maharashtra is around 14 percent; in Delhi it is 6 percent and in Haryana only 4 percent. In Rajasthan women employment is insignificant (only 1 percent).
- 9.5.3 The average employment in the SSI units comes to 17 (16 male and 1 female) in the four states altogether. In Maharashtra and Haryana, the average employment is 21 (18 male and 3 female) and 18 (17 male and 1 female) respectively while in Delhi and Rajasthan the average employment is found to be lower being 17 persons.
- 9.5.4 Average employment in the SSI units using improved technology has been of the order of 19 which is significantly higher as compared to 11 in the units without improved technology indicating that technology use has substantial employment potential. This condition is satisfied in all the four states.

9.6 Growth of output

- 9.6.1 The growth of output over a period of one year (i.e. 2001-02 to 2002-03) has been observed as around 15 percent in all the four states together. However the growth of output in Rajasthan is significantly higher and estimated at around 23 percent. In Delhi also the growth rate was obtained as 17 percent.
- 9.6.2 The growth of output in the SSI units using improved technology in the state of Delhi has been observed around 20 percent whereas in Rajasthan it was around 22 percent indicating higher output with use of improved technology.

9.7 Labour productivity

9.7.1 The output per worker has been worked out as Rs. 4.6 lakhs in the SSI units; Rs. 5 lakhs in the units using improved technology and Rs. 3.2 lakhs in the units without improved technology indicating the beneficial impact of technology on output.

9.7.2 Maximum output per worker was found in the SSI units of Rubber and Plastic products which is Rs. 9.3 lakhs, Rs. 10.6 lakhs in the units using improved technology and only Rs. 3.5 lakhs in the units without improved technology indicating wide difference in the output of SSI units with and without improved technology. .

9.7.3 Rubber and Plastic units stand first in all states except in Maharashtra which is at second place in respect of output per worker.

9.8 Capital/labour ratio

9.8.1 The maximum investment per worker has been observed in the SSI units of Paper products and Printing in Maharashtra, units of Electrical Machinery and Apparatus in the states of Delhi and Rajasthan and SSI units of Rubber and Plastic products in Haryana.

9.9 Impact of technology on SSI units

9.9.1 The use of technology has a favourable impact on production, employment, social empowerment and economic development of the country.

9.9.2 In all the four states together the analysis indicates that more than 70 percent of SSI units using improved technology indicated substantial quality improvement. 46 percent indicated reduction of cost in production and more than 20 percent units indicated the achievement of competitiveness in domestic and international markets through adoption of improved technology. A similar trend was observed in Maharashtra.

9.9.3 In Haryana, out of 100 units using improved technology, 51 have indicated quality improvement, 47 units indicated increase in quantity produced and 31 units indicated reduction in cost of production. Only 2 units have indicated achievement of competitiveness in domestic market.

9.9.4 In Delhi more than 85 percent of SSI units using improved technology indicated quality improvement and more than 75 percent indicated increase in quantity produced whereas increase in efficiency and better capacity utilization have been indicated by more than 50 percent units.

9.9.5 In Rajasthan only 35 percent of the units using improved technology have indicated quality improvement and 17 percent units have mentioned increase in the quantity produced. Better capacity utilization and reduction in cost of production have been mentioned by 14 percent units whereas 8 percent units have reported increase in efficiency.

9.10 Impact of technology on working capital

9.10.1 The working capital on an average for the SSI units using improved technology in all the four states together is Rs. 45.3 lakhs and Rs. 20.4 lakhs for the units not using improved technology, indicating higher working capital requirements for the units using improved technology.

9.11 Impact on technology on social empowerment

9.11.1 Education either general or technical has a great impact on technological development and this could raise the social and cultural level of the population as well. It has been observed that religion and castes are no bars against technological development.

9.12 Impact of technology on economic development

9.12.1 With improved productivity and profits, technological development in SSI units would assist in the economic development of the country. The analysis of capital /

output ratio indicates that for the output of Rs. 1 crore, an average investment of Rs. 47.6 lakhs is required in the units using improved technology whereas investment of Rs. 49.3 lakhs is required for the same output in the units without improved technology. This identity holds good for all industries except Metal products and Electrical Machinery and Apparatus. The state wise analysis also projects the same identity.

9.13 Barriers in adoption of improved technology in the SSI sectors

- 9.13.1 The most important barriers in adoption of improved technology are the financial aspects, basically the inadequacy of financial capacity of the unit. At other times, the costs of technology make it difficult to adopt as being economically not viable.
- 9.13.2 A large number of SSI units reported difficulty in obtaining sufficient funds from banks and financial institutions. There was lack of awareness about the credit guarantee scheme.
- 9.13.3 The other barriers observed are lack of awareness or lack of knowledge and information about the availability of requisite technology, desire to avoid risk in adoption of improved technology, low level of indigenous R and D, inadequate management skills and non-availability of technically qualified persons to operate the new technology.
- 9.13.4 The R&D institutions should proactively assist the SSI units by giving all possible counseling on technology development, manpower planning, market development, equipment problem and other technical help in imparting technical know how to the SSI units.
- 9.13.5 The reduction of cost of production is an important factor for achieving competitiveness, market penetration and sometimes the very existence of the SSI units themselves. The demands of the industry for reducing excise duties, taxes, interest rates etc. need sympathetic consideration by the Government,

9.13.6 The small-scale industry of India has a great role to play in the development of the country. It has the potential of being an important “engine of growth” for this century serving national priorities of generating employment, removal of poverty and removal of regional disparities. The adoption of new and improved technologies is vital for the growth of this sector and the removal of all types of barriers for the adoption of new technologies must be taken up in all earnestness by the Government, by the financial institutions, by the research and development agencies and also by the private sector acting together with a sense of mission. The efforts to date which, no doubt, have to be strengthened, promise that the future for this sector is bright.

Chapter I

INTRODUCTION

I.1 Importance of Small Scale Industries Sector

- I.1.1** This study compiles the empirical data available through survey of small-scale industries in the four states of Maharashtra, Delhi, Haryana and Rajasthan. The dimension of small-scale industries is very wide and spread all over the country including the semi-urban and rural areas. Presently, its number comes up to 3.4 million units accounting for 20 million jobs, 6.29 percent of the GDP and 35 percent of export earnings.
- I.1.2** According to Ministry of Small Scale Industry, about 2.8 million jobs have been added in SSI sector during the last 4 years, thus sustaining employment growth at 4 percent. The average growth rate of the sector stands at 7 percent, which is higher than the growth in industry in general. This has occurred despite the acute recession in the global economy and a distinct slowdown in the domestic market. This demonstrates the immense capacity of the small sector to grow against all odds. Considering the immense potential of the sector in creation of employment an independent Ministry of Small Scale Industry was created in the Ministry of Industry during 1999. This marked the beginning of a good start for the sector. Within a year of the creation of Ministry, the Prime Minister announced a comprehensive policy package for developing the small industries. This was followed by the decision of the Ministry to have held an annual SSI convention on August 30 every year to coordinate removal of all the bottlenecks in the development of the SSI sector and to take appropriate decisions thereon.
- I.1.3** The National SSI board has been holding regular meetings for the past three years to devise ways and measures for implementing various schemes for improvement of technology in the sector. In order to achieve an international status for the sector, the Ministry set up a WTO cell to organize workshops and seminars to

create awareness in respect of anti-dumping measures, intellectual property rights and biotechnology. It has been encouraging the adoption of international best practices in technology and quality standards (like ISO-9000) for the benefit of the sector.

1.1.4 In terms of fiscal incentives the sector has received a boost with the excise exemption ceiling being enhanced from time to time. From Rs. 30 lakh in 1986, it was raised to Rs. 50 lakh in 1998 and further to Rs. 1 crore in the year 2000. This was highly appreciated by the sector and all associated with its development. Banks have been asked to earmark 40 percent of their credit to the priority sector, of which SSI sector is an important constituent. But the entrepreneurs still suffer from the lack of suitable collateral security desired by the lender banks. Government of India has launched a credit guarantee fund scheme to enable bank assistance more easily accessible to small entrepreneurs. The credit guarantee fund trust for SSI (CGFSI) is being operated through SIDBI. This makes collateral free credit available to the small entrepreneurs. The scheme is becoming popular but it has not yet created the desired impact on the small entrepreneurs. However it is very encouraging to note the Government initiatives to make the small sector credit-worthy. An overall performance of the sector is given in Statement 1.

I.2 Genesis of the Study

1.2.1 SSI sector has a strategic importance in the development of country's economy especially from the point of generation of employment. It is a very vast sector and can boast of producing a variety of goods both for domestic and external consumption. Previously the sector was kept under the umbrella of protection and reservation. With the changing economic situation, the sector is now exposed to the world competition, particularly in the wake of Economic Liberalization. The question comes up as to where our Indian SSI units stand in comparison with the contemporary external sector industries producing similar goods, as we are. More importantly, we have to know how does our SSI sector fare in the use of modern technology.

Statement 1. Overall Performance of Small Scale Industry

Year	No. of units (million)	Production at constant prices of 1993-94 (Rs. Crore)	Employment (million)	Exports at current prices Rs. billion)
1993-94	2.39	2,41,648	13.94	253.1
1994-95	2.57(7.5)	2,66,054 (10.1)	14.66 (5.0)	290.7 (14.8)
1995-96	2.66(3.5)	2,96,385 (11.4)	15.26 (4.1)	364.7 (25.4)
1996-97	2.80(5.3)	3,29,953(11.3)	16.00 (4.8)	392.5 (7.6)
1997-98	2.94(5.0)	3,57,749 (8.4)	16.72 (4.5)	444.4 (13.2)
1998-99	3.08(4.8)	3,85,296 (7.7)	17.16 (2.6)	489.8(10.2)
1999 - 2000	3.21(4.2)	4,16,736 (8.2)	17.85 (4.0)	542.0 (10.7)
2000-01	3.37 (5.0)	4,51,033 (8.2)	18.56 (4.0)	698.0 (28.8)
2001-02	3.46 (2.7)	4,77,870 (16.0)	19.22 (3.6)	869.5 (24.6)

Source: - Small Industries Development Organisation (SIDO)

NOTE: - Figures in brackets are percentage growth over previous year.

- I.2.2 It is perceived that inspite of helpful policies and measures taken up by the Government to modernize the sector technologically, the process of technology adoption has been slow. This is so, despite the fact that India enjoys the status of having the third largest pool of scientists and technocrats in the world. No doubt some sectors like computer software, communication, and electronics etc. have made rapid advancement by taking advantage of such measures, but at the same time, several other important sectors like Chemicals, Leather, Printing, Food processing and Textiles, are lagging in technological advancement.
- I.2.3 This study has been taken up with the object of identifying the actual barriers to the adoption of technology and attempts to highlight those attitudes, motivation and social and cultural situations, which hinder our entrepreneurs in using or adopting the desired modern technology in the sector. The study in fact, attempts a

holistic approach in assessing the actual and practical barriers in the way of utilization of appropriate technology.

1.3 Scope of the study

- 1.3.1 This study has primarily focused on ascertaining the socio-economic barriers to the adoption of improved technology. Data on various issues and constraints in technology adoption in SSIs have been obtained in the survey of small units. Assessment of current technology being practiced by the entrepreneurs in all the 9 groups of industries under survey have also been attempted in the study. The status of indigenously developed technology in comparison to the imported one, of the same type, have also been analyzed in relation to their cost and effectiveness. Reasons, in detail, for not using a technology too have been analyzed in an exhaustive manner.
- 1.3.2 An attempt has been made to relate views on impact of adapting new technology on production, employment, and efficiency. The requirements of technicians to manage the working of new technology and the need to train fresh skilled manpower, accountability and management of all the processes involved in the transfer of new technology have also been analyzed in the report. All these exercises have been conducted for all the 9 group of industries^{*} covered in the study. Though several sectoral studies in the recent years have been conducted on the small-scale industries, there was a felt need for a comprehensive study on subject dealing with Socio-Economic Barriers in the Adoption of Modern Technology.
- 1.3.3 Keeping this in view we have selected four states of Delhi, Haryana, Maharashtra and Rajasthan to conduct the study. These states were selected because of concentration of types and sizes of small entrepreneurs there and in order to assess impact of Government measures, bank lending policies and other factors on SSI

^{*} Chemical and Chemical products, Rubber and Plastic products, Leather products, Wood products, Paper products and Printing, Hosiery and Garments, Food products, Metal products, Electrical Machinery and Apparatus

enterprises. It was also easier to have representation of desired types of units for the study in these states. It was planned to study working units, non-working units and those units which were identified as potentially viable for rehabilitation. When we discussed regarding these industries with Development Commissioner of SSI in Delhi office, it was found that the addresses of non-working units and units potentially viable were not traceable. Therefore we restricted our study to the registered and working units only in the 9 groups, which were considered important for the purpose of study after discussion with the Development Commission SSI, Delhi.

I.4 Objectives of the Study

I.4.1 The objectives of the study were the following:

- I. To identify major causes inhibiting the adoption of improved technologies in different sub-sectors of SSI and to assess the role of existing policies and programmes in over coming them;
- II. To study the present procedure for availability of finance to SSI units for upgrading and modernizing their technologies and suggest measures for facilitating such services to small scale entrepreneurs;
- III. To study the adequacy of Credit Guarantee schemes in facilitating availability of finances specially to the smaller and first generation entrepreneurs;
- IV. To assess the managerial requirements for bringing about greater efficiency and professionalism in management;
- V. To assess the requirements of improvements in skills, education and training of work force and supervisory in SSI units to absorb and implement technologies;
- VI. To assess social economic discriminatory factors, if any, in availability of finance and other facilities to small entrepreneurs;
- VII. To assess the impact of cultural issues, if any in adoption of improved technologies. Issues like employment of child labour may, also be looked into in a limited manner only to the extent that they relate to adoption of improved technology.

I.5 SSI upto the Ninth Five-Year Plan

- I.5.1** Since the beginning of plan era in the country, emphasis was given to develop SSI sector independently. Upto the fifth five- year plan its growth was steady. During sixth five-year-plan the production in the SSI sector increased more than 90 percent and the export was doubled during the same period. During seventh five-year plan, the increase recorded in the export of SSI sector was more than 200 percent. A commendable achievement in the performance of the sector was noticed during the eighth five-year plan. In terms of production, it increased from Rs. 92,080 crore in 1989-90 to Rs. 4,18,863 crore in 1996-97 indicating more than 24 percent annual growth. In the area of export it increased from Rs. 14,807 crore in 1989-90 to Rs. 52,230 crore in 1996-97.
- I.5.2** During the ninth plan, the SSI sector registered an average annual growth of 12 percent. Regarding employment, total employment in the sector increased from 57.5 millions to 66.6 millions and out of that increase modern SSI units contributed 3.6 millions. But the most encouraging aspect of the SSI was export which touched Rs. 86,950 crores by 2001-2002, and was expected to grow at the rate of about 15 percent per annum in future. This achievement was remarkable encouraging further strengthening of the modern SSI sector. It was noticed that during ninth plan several steps to strengthen the SSI were taken through modernization of technology, quality production, modern management practices, providing marketing and other key inputs, increased credit availability, easy access to financial institutional loans etc. Besides these, SSI units were made aware about the WTO implications on trade practices, removal of QRs and reduction in the list of items reserved for the sector. Report of the Study Group appointed by the Planning Commission was submitted to the Prime Minister, who announced a number of new steps on 30th August 2000 to improve the working of the SSI sector. This was followed by policy announcement by the Ministry of SSI and Agro Rural Industries (SSI & ARI).

1.6 Tenth Plan Strategies to Promote SSI sector

- 1.6.1** The Tenth Plan has recognized that the SSI sector has a vital role in hastening the process of industrialization. It has also been acknowledged that SSI sector has wide potential in producing new entrepreneurs who can start small enterprises which later grow up big. They are also considered as vehicles for making dispersal of industries easier in rural and small urban areas. Since the sector is more employment intensive per unit of capital than the large-scale industry, it is also considered an important source of employment generation.
- 1.6.2** The sector is capable of promoting substantial non-farm employment in rural and semi-urban areas. Having all these factors in view, the Tenth Plan has assured that the policies and measures must support the small-scale industrial sector to develop without any difficulty and the benefits must percolate to the small units easily. Particularly, the plan emphasizes easy and adequate credit flow to the SSI units in all parts of the country. On policy of reservation, the plan has accepted the views of eminent experts who have advocated that while the policy of reservation needs to be phased out in due course, care should be taken that de-reservation does not have an adverse effect on the employment potential of the sector. The Tenth Plan has also taken into consideration the extension of the investment limit for SSIs to broaden the employment potential and production capacity of the sector. The plan views that an ancillary relationship of small sector with the larger one should not be taken as adverse. This type of relationship between the smaller and larger units provides mutual benefits to both. There are a number of policy distortions which prevent the operation of such complementarities. Policies that impede this relationship should be modified.
- 1.6.3** The Tenth Plan has taken a good look at SSI potential. It has also, been mentioned in the plan document that the nature of Government measures cannot always be taken as alibi for non-performance of the sector. Research studies conducted recently have suggested that main barriers to achieving efficiency, competitiveness and excellence in the sector may be internal to the establishments.

I.6.4 The Tenth Plan envisages the industrial sector to grow at the rate of 10 percent to achieve the plan target of 8 percent growth of GDP. Therefore a social and economic environment has to be created in the country in which our small-scale industrial sector can become efficient and competitive in all respects. These issues have been considered by a Study Group of the Planning Commission and by the Group of Ministers for SSI Policy Measures.

I.7 Study Group on the Development of SSI

I.7.1 A Study Group on Development of Small Enterprises was set up under the chairmanship of Dr. S.P. Gupta, Member, Planning Commission to look into the problems of the SSI sector. The Study Group submitted the interim report in July 2000 and a final report in February 2001. Major recommendations of the report were in respect of (a) Policy and Legal Framework for Reservation and other SSI issues (B) Financial matters (C) Technology Upgradation and Modernization, and (D) Marketing Management and Exports.

I.8 Group of Ministers for SSI Policy Measures

I.8.1 In order to strengthen the sector further in a more effective manner the Hon. Prime Minister constituted an Inter-Ministerial Group of Ministers on June 28, 2000 under the chairmanship of Hon. Union Home Minister with Minister of Finance, Minister of Textile and Dy. Chairman Planning Commission as members. The objects of this Group were:

- i. To consider various recommendations including one from the Ministry of SSI, to formulate balanced package of policy measures necessary to develop the sector, particularly in relation to dismantling of QRs and the consequent increase in international competition.
- ii. To consider and develop a road map for selective de-reservation in respect of certain SSI products.

1.8.2 The package recommended by the Group of Ministers was considered by the Hon. Prime Minister and he announced on 30th, August 2000 comprehensive policy measures for developing and modernizing the sector. Some of these measures were:

- (i) Increase the full exemption limit in the internal excise duty from Rs. 5 million to Rs. 10 million.
- (ii) Increase the limit of composite loan from Re. 1 million to Re.2.5 million.
- (iii) Industry related service and business enterprises having a maximum investment of Re. 1 million would qualify for priority lending.
- (iv) Increase in the eligible project cost limit for soft loan assistance under national equity fund scheme from Rs. 2.5 million to Rs. 5 million
- (v) Launch a credit guarantee fund scheme
- (vi) Provide capital subsidy of 12 percent of investment in technology in select sectors.
- (vii) Create an inter-ministerial group of experts to define the scope of technology upgradation
- (viii) Continue the grant of Rs 75,000 to each unit that receives ISO-9000 certification, till the end of Tenth plan.

1.9 Sampling frame for the Study

1.9.1 The study has been conducted in four states, i.e. Delhi, Haryana, Maharashtra and Rajasthan. In all the states, nine groups of industries were identified on the basis of their importance and representative character and these were considered as the sampling frame in each state. The SSI units as a whole are classified into 31 groups and the number of all the registered units in Delhi, Rajasthan, Haryana and Maharashtra on 31st December 2002 has been recorded as 25,000, 82,000, 85,000 and 1,40,000 respectively. As the number of registered units was quite large we have obtained the list of registered SSI units of each state only for the nine groups, which have been identified for the study. The nine groups of industries are Chemicals and Chemical products, Rubber and Plastic products, Leather products,

Wood products, Paper products and printing, Hosiery and Garments, Food products, Metal products and Electrical Machinery and Apparatus.

1.10 Sample Size and Sampling Procedure

1.10.1 As indicated in the project proposal. 500 SSI units were to be surveyed, 125 each in the four states of Maharashtra, Delhi, Haryana, and Rajasthan. While selecting a sample from the registered units of each state, the Stratified Random Sampling method was basically employed, strata being the products/SSI category as stated above. For each industrial category the sample was drawn independently using a Random Sampling Technique selecting minimum of 8 units and maximum to 20 units from each stratum. However, the number of units was increased in some of the strata where the sampling frame was quite large. The number of sampled units in each state selected was at least 125.

1.10.2 The list of registered units in the SSI sector for the state of Delhi was obtained from the Development Commissioner, SSI and a representative sample was taken from each stratum. Similarly the list of registered SSI units for Maharashtra was obtained from the office of Development Commissioner, SSI located in Mumbai and a representative sample was taken from each stratum. The list of industries for Haryana and Rajasthan, however was obtained from the central office of SSI located at AGCR building in Delhi. A representative sample from each of nine industrial categories was taken for Haryana and Rajasthan also. The Products/ SSI category where the number of sampled units exceeds 20 are Rubber and Plastic Products and Paper Products and Printing in the State of Maharashtra and Metal Products in Rajasthan. Altogether in 4 states, 529 SSI units have been selected in the sample for the study, which have been presented in statement-2 by Products/SSI category and by State.

1.11 Methodology

1.11.1 The study is empirical in nature, as statistical and other primary data have been collected through field survey. Altogether 529 units covering nine groups of small

industries were selected to collect data through a well-designed questionnaire. Primarily, it was intended to collect information from the owners / entrepreneurs of the SSI units.

Statement 2. Number of Sampled SSI units by Products and by State

Product/SSI Category	Maharashtra	Delhi	Haryana	Rajasthan	Total
Chemical and Chemical Products	15	13	9	14	51
Rubber and Plastic Products	22	14	20	18	74
Leather Products	11	8	11	11	41
Wood Products	10	12	15	17	54
Paper Products and Printing	21	17	17	9	64
Hosiery and Garments	14	14	17	11	56
Food products	14	20	10	13	57
Metal Products	19	19	8	21	67
Electrical Machinery and Apparatus	18	14	19	14	65
Total	144	131	126	128	529

I.11.2 However, due to non-availability of the owner, in certain cases, information has been obtained from the representatives like, manager, supervisor, and financial officer. The industries selected for the survey represent a cross section of numerous small, medium and larger ones, old and new industries that were located in and around the main cities, towns and talukas. Industries whose importance was expected to grow with the increasing industrialization of the region, for instance Rubber and Plastic, Paper Products and Printing in Maharashtra and Haryana, Garments in Delhi and Metal products in Rajasthan, were preferred to be selected. In view of the importance of food processing, printing activities and garments manufacturing in the economy of the country, the number of these types of units has been increased to some extent in Delhi, Maharashtra and Rajasthan and numbers of units in leather, wood processing etc. have been reduced proportionately. However, the sample has been taken proportionately from the different groups of industries in each state.

1.11.3 For the purpose of this study, we have gone by the definition of SSI as defined by Ministry of SSI, Development Commissioners SSI, Government of India. Definition of SSI adopted in the report is as follows: -

1.11.4 The SSI was first defined in 1950 on the basis of gross investment in fixed assets and workforce. The work force criterion was dropped in 1960. Since, 1966, the original value of plant and machinery has been the sole criterion for defining the SSI. Ceiling in original value of plant and machinery has been revised from time to time since 1966. The current limit of gross investment in plant and machinery for SSI units is Rs. 1.0 crore (Rs 10 million), whether held on ownership basis or lease or hire purchase basis. However, the limit in the select products like knitwear and hand tools is allowed up to Rs, 50 million.

1.11.5 It is clearly stated that a SSI unit cannot be controlled or owned by, or be a subsidiary of any other industrial undertaking. The SSI sector comprises different segments such as ancillary undertakings, tiny units, export oriented units, women entrepreneurs and small-scale service and business enterprises. In our sample we have a few ancillary units and a small number of service industries. An ancillary unit is that unit where investment in plant and machinery has not exceeded Rs, 10 million. At present industry related service enterprises with an investment upto Rs. 1 million in fixed assets excluding land and buildings are also treated as SSI enterprises.

1.12 Nature of Data Collected

1.12.1 The study was designed to collect information primarily on the social and economic barriers which make adoption of new technology difficult by the small entrepreneurs in the SSI sector. To the extent, possible, information regarding other important factors which are considered helpful in understanding these barriers and problems have also been collected. For example, data on types of technology, nature of consultancy needed for technology upgradation, availability of technology, indigenous and external, perception of entrepreneurs on technology

adoption, external competitiveness, Chinese goods vs. Indian goods, labour relations on discrimination, access to finance, WTO commitments, role of women entrepreneurs in creating jobs for women workers etc. have also been obtained in the survey. Specific information collected in the survey include:

- I. Capital output ratios in nine group of industries covered
- II. Capital labour ratios
- III. Total productive capacity and the range of utilization of capacity by each group
- IV. The net-value added per worker
- V. Magnitude of capital employed
- VI. Source of finance
- VII. Nature and type of ancillary relationship with larger units
- VIII. Utilization of capacity by individual units
- IX. Suggestions to improve performance of the SSI sector in the on going changing economic scenario
- X. Information gaps relating to the knowledge of different types of technology for different categories of units, knowledge about research and development, role of industrial associations, role of fairs and exhibitions, seminars/workshops etc.

I.13 Chapter Layout

- I.13.1 This report has 5 chapters. The first chapter provides the Introduction. This gives a general presentation of the current scenario in the SSI sector along with a statement on the overall performance of small-scale industry giving information on the number of units, with their production, employment situation and their exports performance upto 2001-02. Next, we have given of genesis of the study indicating as to why it was important to conduct a study of this nature. Other items in this chapter include scope and objectives of the study. Sampling frame and basic sources to prepare this have also been discussed in this chapter. In order to have an idea of different stages of development of SSI since the introduction of planning era, we have presented a brief review of strategies to promote the SSI sector during the five-year plans including the tenth five year plan.

- I.13.2 Chapter II has been devoted to the production factors and labour market conditions in SSI sector. In this chapter discussions are about nature and type of units, use of power, subsidiary activity of the unit, financial particulars, input/output, investment, working capital, production capacity, utilization capacity, data on employment, nature of employment by major products and use of technology. Chapter III discusses the impact of technology on production, employment, social and cultural factors, economic development and other related issues. In the fourth chapter we have considered critically the main Socio-Economic Barriers in the Adoption of Modern Technology in the SSI sector whereas the fifth chapter deals with the conclusions and recommendations for making the SSI sector more vibrant and dynamic.
- I.13.3 An Executive Summary has been presented in the beginning of the report to provide a brief synopsis of the report.

Chapter II

PRODUCTION FACTORS AND LABOUR MARKET CONDITIONS IN SMALL - SCALE INDUSTRIES

II.1 Classification of Industries

II.1.1 In this Section an attempt has been made to analyse the labour market conditions in different categories of enterprises, which have been surveyed in the four states of Delhi, Maharashtra, Haryana and Rajasthan. The aspects of employment have been analyzed based on the activities of the industry, technology used and investment and output impact on employment. In these four states 529 industries have been surveyed. The number of SSI units surveyed was 144 from Maharashtra, 131 from Delhi, 126 from Haryana and 128 from Rajasthan. Distribution of industries by state and by product has already been presented in Statement 2. In all the four states, 51 industries are of Chemical and Chemical products, 74 of Rubber and Plastic products, 41 of Leather products, 54 of Woods products, 64 of Paper products & Printing, 56 of Hosiery and Garments, 57 of Food Products, 67 of Metal Products and 65 belong to the Electrical Machinery and Apparatus.

II.1.2 Regarding the establishment of these SSI Units it has been observed that 46 percent of the industries were established after 1990, 29 percent of the industries were registered in 1980s, 15 percent in 1970s and 10 percent industries were established prior to 1970 (Ref. Table 1). However, it varies from state to state.

II.1.3 In Haryana 79 percent of the SSI units were established after 1990 whereas this percentage in Maharashtra and Delhi is below 30 percent and in Rajasthan it is more than 55. There has been commendable growth during the period 1991-2000 which is considered the era of new economic policy. The growth in new establishments during this period may be on account of facilities/infrastructure provided to the SSI sector under the new policy. Another point that is striking is

that this growth created a group of new entrepreneurs in the sector, which is vital for its development. In Delhi also the achievement of 30 percent is quite good and encouraging. Amongst the new establishments (46 percent) most of the units were in the manufacturing sector. More than 30 percent units in Maharashtra and Delhi were established in 1980s and more than 20 percent in 1970s while 24 percent of the SSI units in Maharashtra were established prior to 1970 (Ref. Table 1A, 1B, 1C and 1D).

II.1.4 So far as the main activities of the SSI units are concerned, in the four states together more than 80 percent of SSI units are engaged in manufacturing activities and 11 percent are engaged in processing. It has also been observed that 30 units out of 529 are engaged in more than one activity. The proportion of the manufacturing industry in Maharashtra however is less than the national level. 25 percent of the SSI units in Maharashtra have been found in processing activity. In other states the manufacturing activities are undertaken by more than 80 percent of the SSI units (Ref. Table 2, 2A, 2B, 2C and 2D).

II.1.5 The ownership pattern of the sample units indicates that more than 55 percent of the SSI units in the four states together have achieved the status of proprietorship, 23 percent of them are under partnership firm and 14 percent have achieved the status of company, whereas only 5 percent are found to be the household industry. This percentage varies from state to state. In the states of Haryana and Rajasthan about two-thirds of the SSI units are under the status of proprietorship, whereas the proprietorship in Maharashtra is only 37 percent. The status of 'Company' has been achieved by 21 percent of the SSI units in Maharashtra and 20 percent of the SSI units in Haryana. The Household units in Delhi, Haryana and Rajasthan are less than 5 percent whereas they are more than 10 percent in the state of Maharashtra (Ref. Table 3, 3A, 3B, 3C and 3D.)

II.1.6 It appears from our data that there is a tendency to keep the business within the bounds of the ownership of the family. An industry wise analysis has shown that number of units with company status are smaller i.e. 14 percent of the total.

Majority of this 14 percent units were in Chemicals (Soap, detergent), Printing, Plastic and Rubber products, Electrical machinery, Hosiery and Garments, and Metal products. This trend indicates that where large amount of capital is required, the family resources are not sufficient, a number of units are converted into partnership firms.

II.2 Classification of Industries by Investment (Fixed Capital)

II.2.1 According to the latest definition, the investment on land and building and machinery in the SSI units is limited to Rs. one crore. The analysis of establishments with respect to fixed capital reveals that investments of Rs. 50 lakhs or more are found only in 12 percent of SSI units surveyed in the four states of Maharashtra, Delhi, Haryana and Rajasthan. 26 percent of SSI units were found to have the investment in fixed assets in the range of Rs. 20-50 lakhs whereas 20 percent units were having investment in the range of Rs. 10-20 lakhs (Ref. Table 4). The state wise analysis reveals significant differences.

II.2.2 In Maharashtra 21 percent of SSI units were found to invest on fixed assets more than Rs. 50 lakhs whereas in Delhi such units constitute only 6 percent and 11 percent each in the state of Haryana and Rajasthan. 40 percent of SSI units in Maharashtra were having investment on fixed capital in the range of Rs. 20-50 lakhs whereas such units in Delhi, Haryana and Rajasthan are 14, 16 and 23 percent respectively. The units with investment in the range of Rs. 10-20 lakhs on fixed assets in Maharashtra were 14 percent whereas such units in Delhi, Haryana and Rajasthan are 26, 17 and 21 percent respectively. 11 percent of SSI units in Maharashtra were found to invest on fixed capital in the range of Rs. 5-10 lakhs whereas such units in Haryana are 17 percent and 22 percent each in Delhi and Rajasthan. Again 6 percent units in Maharashtra were found to invest less than Rs. 5 lakhs on fixed capital whereas such units in Delhi, Haryana and Rajasthan are 30, 39 and 23 percent respectively. (Ref. Table 4A, 4B, 4C and 4D).

II 2.3 As more than 60 percent of the SSI units were found to invest below Rs. 20 lakhs on fixed capital, the effect of fixed capital on the economic coefficients would not be significant and therefore for further analysis, investment on working capital has been used.

II.3 Classification of Industries by Size of Employment

II.3.1 In four states together 17 percent of the industries were found to employ more than 25 persons and the employment between 21-25 was found in 6 percent of the SSI units. 13 percent units employ between 16-20 persons and 14 percent between 11-15. 30 percent of the industries were found to employ between 6-10 employees whereas 20 percent of the industries were employing only 5 persons or less in their activities (Ref. Table 7).

II.3.2 In case of Delhi 43 percent of the industries were found to employ between 6-10 persons whereas the percentage of such industries in Rajasthan was 33. In Haryana more than 14 percent of the industries were employing only less than 5 persons and industries employing more than 25 persons were 21 percent. The percentage of industries employing more than 25 persons in Maharashtra seemed to be quite significant which was of the order of 24 percent (Reference Table 7A, 7B, 7C and 7D).

II.4 Analysis of Employees by Category

II.4.1 In all the sampled and surveyed units in the four states, the total employment has been of the order of 9,000. Amongst these persons, about 18 percent were technically qualified and 21 percent of the employees were on contract basis, 57 percent were employed on Daily Wages and remaining were either honorary or family workers. The women participation was only 7 percent in the total employment. Amongst the women, 17 percent were technical, 23 percent were on contract basis, 56 percent were in the category of Daily Wage workers and remaining 4 percent were family workers (Ref. Table 22). However, this distribution differs from state to state.

11.4.2 In the state of Maharashtra women employees are around 14 percent, in Delhi women are 6 percent, in Haryana the share of women is 4 percent and in Rajasthan the share of women is quite insignificant and only 1 percent and of these 60 percent were on contract basis and remaining 40 percent were in the category of Daily Wagers. The share of technical persons in Rajasthan is also insignificant which is only 5 percent. In Maharashtra 24 percent of the employees are found to be technical whereas in Delhi the share of technical persons is 17 percent. In Haryana the share of technical persons is 21 percent. The share of women employees as technical persons is quite insignificant and 97 percent of the women employees in SSI units of Delhi were found in the category of Daily Wage workers. In all the four states it has been observed that the maximum share is constituted by the category of Daily Wage workers. In case of Delhi, the share of Daily wage workers is nearly 75 percent whereas in Rajasthan it is 70 percent. In Haryana, the share of Daily Wage employment is more than 55 percent and it is 40 percent in case of Maharashtra (Reference Table 22 A, 22 B, 22C and 22D).

11.5 Analysis of Employees by use of Technology in the SSI Units

11.5.1 In all the units surveyed it has been observed that around two-thirds of the SSI units are using improved technology whereas remaining one-third units have not adopted the improved technology so far. In this area Haryana may be given the status of a modern state where around 80 percent of the SSI units are using the improved technology. In Rajasthan the use of improved technology has been adopted by 68 percent units and in Maharashtra such industries were 64 percent whereas in Delhi the number of such units is minimum, and is less than 60 percent. The distribution of such establishments by state has been presented in the statement 3 below. Details by product and by state may be seen in Tables 11, 11A, 11B, 11C and 11D)

Statement 3. Distribution of Sampled SSI units by State and by Technology use.

	Establishment using improved technology	Establishments without improved technology	Total
Maharashtra	92	52	144
Delhi	77	54	131
Haryana	100	26	126
Rajasthan	87	41	128
Total	356	173	529

II.5.2 The average employment in the SSI units in India (4 states together) has been observed as 17 (16 male and 1 female). The average employment in the SSI units with improved technology has been observed as 19 (18 male and 1 female) whereas in the units without improved technology the average employment has been observed as 13 (12 male and 1 female). The maximum average employment has been observed in the SSI units of Hosiery and Garments. It was followed by the units of Electrical Machinery and Apparatus, Chemical and Chemical Products, Rubber and Plastic Products, Leather Products, Paper Products and Printing, Food Products, Metal Products and Wood Products (Ref. Table 23). The average employment in the SSI units in each state however differs significantly as indicated in the statement 4.

Statement 4. Average Employment in SSI units by state and by Technology use and by sex

State	Units using improved technology		Units without improved technology		Total	
	Male	Female	Male	Female	Male	Female
Maharashtra	20	3	15	3	18	3
Delhi	14	1	10	1	12	1
Haryana	19	1	9	0	17	1
Rajasthan	17	0	11	0	15	0
Total	18	1	12	1	16	1

II.5.3 In case of Maharashtra the average employment has been observed as 21 (18 male and 3 female). In case of SSI units using improved technology the average employment has been observed as 23 (20 male and 3 female) and in the units without improved technology the average employment has been observed as 18 (15 male and 3 female). The highest average employment in the state was

observed in the SSI units of Electrical Machinery and Apparatus followed by SSI units of Chemical and Chemical Products, Leather Products, Hosiery and Garments and Wood Products (Ref. Table 23 A).

II.5.4 In the state of Haryana the average employment was of the order of 18 persons (17 male and 1 female). In case of SSI units using improved technology the average employment was observed as 20 (19 male and 1 female) whereas in the units without improved technology the average employment was observed as only 9. It is interesting to note that for the SSI units in Metal products not using the improved technology, the average employment was of the order of 35. The highest average employment observed in the SSI units was for Hosiery and Garments, which was of the order of 44 followed by the SSI units in Electrical Machinery and Apparatus, Chemical and Chemical Products and Metal Products (Ref. Table 23C).

II.5.5 In Delhi average employment in the SSI units was observed as 13 (12 male and 1 female). The average employment in the SSI units using improved technology was 15 (14 male and 1 female) whereas in the units not using improved technology, the average employment was of the order of 11 (10 male and 1 female). The maximum employment has been observed in the SSI units of Hosiery and Garments which is of the order of 30; 39 in case of units using improved technology and 18 in the units without improved technology. It was followed by the units of Paper Products and Printing, Leather Products, Metal Products and Chemical and Chemical Products (Ref. Table 23B).

II.5.6 In the State of Rajasthan the average employment in the SSI units has been estimated as 15. 17 in the units using improved technology and 11 in the units without improved technology. As already indicated, women employment in the state is negligible; however their employment has been observed in the Hosiery and Garments Units. The highest average employment has been observed in the SSI units of Rubber and Plastic Products, which is followed by Food Products,

Electrical Machinery and Apparatus, Hosiery and Garments, Wood Products, Metal Products and Chemical and Chemical Products (Ref. Table 23D).

II.6 Analysis of Employment by Investment and Output

- II.6.1 Taking into consideration the increase of output over a period of one year, it is evident that SSI units have an important role to play in the economic development of the country. About 15 percent growth in output has been observed over a period of one year (2001-02 to 2002-03). In Rajasthan the growth of output was observed around 23 percent whereas in Delhi it was 17 percent. The minimum growth was observed in the state of Haryana, which was around 6 percent only. In the case of Delhi, the growth of output in the units using improved technology was 20 percent whereas in Rajasthan it was 22 percent. It was 11 percent in Maharashtra but in Haryana it was only 4 percent. The growth of output is of crucial importance to the employees working in the SSI units. (Ref. Table 25, 25A, 25B, 25C and 25D).
- II.6.2 The output/labour ratio indicates an output of Rs 4.6 lakhs per worker in the SSI units; output of Rs 5 lakhs per worker in the units using improved technology and Rs 3.2 lakhs per worker in the units without improved technology. It indicates that use of technology has great impact on output and it was also indicated that the technology use is employment oriented as the average employment in the units using improved technology is higher than those without improved technology.
- II.6.3 The output per worker was found maximum in the SSI units of Rubber and Plastic Products which was Rs 9.3 lakhs per worker; Rs 10.6 lakhs in case of units using improved technology and Rs.3.5 lakhs in case of units without improved technology which is followed by Electrical Machinery and Apparatus which are producing Rs 6.1 lakhs per worker and is same in both the units using improved technology and also in the units without improved technology. Food products units provide an output of Rs 5.7 lakhs per worker and units of Chemical and Chemical products were indicating an output of Rs 5.2 lakhs per worker. In other units, the output per worker was less than the average output of Rs.4.6 lakhs (Ref. Table 27).

The output per workers in the states however differs significantly as indicated in the statement 5.

Statement 5. Output per worker in the SSI units by state and by technology use.

State	Output in units using improved technology Rs. (lakhs)	Output in the units without improved technology Rs. (lakhs)	Total Rs. (Lakhs)
Maharashtra	2.3	2.2	2.2
Delhi	6.9	1.8	5.2
Haryana	5.7	4.8	5.6
Rajasthan	6.7	6.1	6.6
Total	5.0	3.2	4.6

- II 6.4 In the state of Maharashtra the out put per worker in the SSI units has been estimated to Rs.2.2 lakhs. It is notable that the output in both types of SSI units using improved technology and without improved technology is more or less the same. The maximum output per worker has been marked in the SSI units of Chemical and Chemical Products as Rs.5.4 lakhs per worker followed by the units in the Rubber and Plastic Products, Paper Products and Printing and Metal Products. In other group of industries the output per worker was less than the average output of Rs.2.2 lakhs and the minimum output was in the units of Hosiery and Garments which was indicated at Rs.50 thousand only (Ref. Table 27A).
- II 6.5 In Delhi the output per worker has been estimated at Rs.5.2 lakhs; Rs.6.9 lakhs in the SSI units using the improved technology and Rs.1.8 lakhs in the units without improved technology. The maximum output per worker has been observed in case of Rubber and Plastic units which is Rs.18.6 lakhs per worker; Rs.26.1 lakhs in case of units using improved technology and Rs.3.6 lakhs in case of units without improved technology which is followed by the SSI units of Electrical Machinery and Apparatus at Rs.13.2 lakhs per worker, Food Products with Rs.10.2 lakhs and Chemical and Chemical Products as Rs.5.6 lakhs. In other SSI units the output per worker was less than the average of Rs.5.2 lakhs and the minimum output of Rs.70 thousand has been observed in the units of Leather Products (Ref. Table 27B).

- II.6.6 In the state of Haryana, the average output per worker has been estimated at Rs.5.6 lakhs; Rs.5.7 lakhs in the units using improved technology and Rs.4.8 lakhs in the units without improved technology. The maximum output per worker has been estimated as Rs.26 lakhs in the units of Rubber and Plastic Products followed by Metal Products, Chemical and Chemical Products, whereas the minimum output per worker has been indicated in the SSI units of Woods Products (Ref. Table 27C).
- II.6.7 In the state of Rajasthan the average output per worker has been worked out to Rs.6.6 lakhs; Rs.6.7 lakhs in the units using improved technology and Rs.6.6 lakhs in the units without improved technology. The maximum out put per worker has been found in the SSI units of Electrical Machinery and Apparatus followed by Leather Products and Food Products. In other group of industries the output per worker was below the average of Rs.6.6 lakhs and the minimum output of Rs.1.1 lakh was observed in the Paper Products and Printing units (Reference Table 27D).
- II.6.8 The average investment* per worker in the SSI units surveyed in four states together is Rs.2.2 lakhs; Rs.2.4 lakhs in the SSI units using improved technology, and Rs.1.6 lakhs in the units without improved technology. The maximum investment per worker was seen in case of Rubber and Plastic Products followed by the units of Electrical Machinery and Apparatus and Metal Products. In other group of industries the investment was below the average investment and minimum investment of Rs.1 lakh per worker was noticed in case of Hosiery and Garments Units (Ref. Table 26).
- II.6.9 As in the case of output, the investment per worker in the states may also differ significantly. In the state of Maharashtra the average investment per worker was estimated at Rs.90 thousand only. The investment above the average was observed in the units of Paper Products and Printing followed by Rubber and Plastic

* Investment on working capital

Products, Metal Products and Leather Products. In all other group of SSI units the investment per worker was below average (Ref. Table 26A).

11.6.10 In the state of Delhi the average investment per worker has been worked out as Rs.2 lakh; Rs.2.4 lakhs in the units using improved technology and Rs.1.2 lakhs in the units without improved technology. The maximum investment per worker (Rs.8.4 lakhs) has been observed in the SSI units of Electrical Machinery and Apparatus and followed by Food Products and Chemical and Chemical Products. In other SSI units the investment per worker was below the average and the minimum investment was observed in the units of Leather Products (Ref. Table 26B).

11.6.11 In Haryana the average investment per worker has been estimated to Rs.3 lakhs; Rs.3.2 lakhs in the units using improved technology and Rs.1.5 lakhs in the units without improved technology. The maximum investment per worker (Rs.17.1 lakhs) was observed in case of Rubber and Plastic Products followed by the SSI units of Chemical and Chemical Products. In other groups of SSI units, the investment was below the average investment of Rs.3 lakhs. The minimum investment has been observed in the units of Wood Product (Ref. Table 26C).

11.6.12 In Rajasthan the average investment per worker has been estimated at Rs.3.4 lakhs; Rs.3.5 lakhs in the SSI units using improved technology and Rs.3.1 lakhs in the units without improved technology. The maximum investment per worker in the state has been worked out at Rs.10.8 lakhs in the SSI units of Electrical Machinery and Apparatus followed by the units of Metal Products and Leather Products. In other group of industries the investment per worker was observed below the average investment of Rs.3.4 lakhs and the minimum investment of Rs 70 thousand per worker was seen in the units of Paper Products and Printing. (Ref Table 26D)

11.7 The labour market conditions in the SSI units indicate that the SSI units using the improved technology are having more employment potential than those without

improved technology. It has also been observed that qualified technical persons are not available in the SSI units in any of the states which is a handicap to the SSI units. It is felt that the qualified technical persons are attracted to and are absorbed by the big industries and the SSI units have to be dependent on the residual manpower.

Chapter III

IMPACT OF TECHNOLOGY ON SSI UNITS

III.1 Technology Impact

III.1.1 In this section an attempt has been made to examine the impact of technology adopted in the SSI units. The impact of technology has been assessed on the production and whether it has increased with the adoption of improved technology. It seeks to assess whether the quality of products has improved, whether the cost of production has reduced and whether the product has achieved competitiveness in the domestic/international market. Similarly the effect of technology on labour market conditions has been examined including its impact on creation of employment opportunities for technical manpower. The use of improved technology requires skill development and generates training needs for the existing employees. The impact of technology on social empowerment and economic empowerment has also been assessed based on the data collected from the sampled SSI units in the four states. As indicated earlier there are 356 SSI units, which are using the improved technology. 173 units are still using their old technologies which comprise 52 units in Maharashtra, 54 units in Delhi, 41 units in Rajasthan and 26 units in Haryana. The analysis of the survey indicates that the use of appropriate technology has a substantial impact on production, employment, social empowerment and economic development of the country.

III.2 Analysis of Units by Investment and Output

III.2.1 The maximum number of units were found to have invested in the range of Rs 5-20 lakhs as working capital. Whereas 104 units were found to have invested between Rs 20-50 lakhs as working capital, 151 units were found with investment of Rs 5 lakhs or less in their working capital, another 46 units were having working capital between Rs 50 lakhs to 1 crore and only 17 units were having their working capital of more than Rs one crore. As far as output is concerned, 219

units were producing output in the range of Rs 5-20 lakhs, 113 units in the range of Rs 20-50 lakhs, 76 units were producing in the range of Rs 50 lakhs to 1 crore and the rest 53 units were producing more than Rs 1 crore of output annually while 68 units were observed to produce output of below Rs 5 lakhs (Ref. Table 5 and 6). Such analysis may differ from state to state.

III.2.2 In the state of Maharashtra no SSI unit was found to have working capital of Rs.1 crore or more. There were 15 SSI units having the working capital between Rs 50 lakhs to 1 crore, 28 units were having the working capital between Rs 20-50 lakhs, 58 units between Rs 5-20 lakhs and 43 units have investment below Rs 5 lakh in their working capital. So far as output is concerned there are 6 SSI units in Maharashtra producing output of more than Rs 1 crore whereas 31 units were producing output between Rs 50 lakhs to 1 crore, and another 31 units between Rs 20-50 lakhs. 57 units were producing in the range of Rs 5-20 lakhs whereas 19 units were producing in the range of less than Rs 5 lakhs (Ref. Table 5A & 6A).

III.2.3 In Delhi, out of 131 units 32 units were found to invest Rs 5 lakhs or less in their working capital, 65 units were having the working capital between Rs 5-20 lakhs, 30 units were investing in the range of Rs 20-50 lakhs and 2 units each were having the working capital between Rs 50 lakhs to Rs 1 crore and more than 1 crore rupees respectively. So far as the output is concerned, 13 units were providing output of Rs 5 lakhs or less whereas 63 units were producing in the range of Rs 5-20 lakhs, 30 units were found to produce between Rs 20-50 lakhs, whereas 17 units were producing between Rs 50 lakhs and Rs 1 crore as the output and 8 units were producing more than 1 crore rupees of output annually (Ref. Table 5B and 6 B).

III.2.4 In Haryana there were 8 units having working capital of more than Rs 1 crore whereas 50 units were having working capital only less than Rs 5 lakhs. 34 units were found to invest on working capital in the range of Rs 5-20 lakhs whereas 19 units were having the investment of Rs 20-50 lakhs. Only 15 units were found to invest between Rs 50 lakhs to Rs 1 crore as their working capital. Amongst these

126 units, 41 units were producing output in the range of Rs 5-20 lakhs, 28 units were giving the output below Rs 5 lakhs. 24 units were producing in the range of Rs 20-50 lakhs. 12 units were providing output in the range of Rs 50 lakhs to Rs 1 crore whereas 21 units were producing more than Rs 1 crore of output in a year (Ref. Table 5C & 6C).

III.2.5 In the state of Rajasthan only 26 units were found investing less than Rs 5 lakhs as their working capital. 54 units have invested in the range of Rs 5-20 lakhs whereas 27 units were found to invest in the range of Rs 20-50 lakhs, 14 units have invested between Rs 50 lakhs to Rs 1 crore and 7 units were found to invest more than Rs 1 crore as their working capital. The output analysis indicates that 18 units were found to provide output of more than Rs 1 crore whereas 16 units were producing in the range of Rs 50 lakhs to Rs 1 crore. 58 units were giving output in the range of Rs 5-20 lakhs whereas 28 units were producing between Rs 20-50 lakhs. Only 8 units were found to have an output of Rs 5 lakhs or less per annum (Ref. Table 5D and 6D).

III.2.6 It has been observed that the majority of the units using the improved technology were found to utilize their production capacity fully while the units without improved technology could not utilize their production capacity fully. The reason for not utilizing full capacity was indicated as power shortage, lack of demand of their products in the market and marketing problems in general. In the state of Maharashtra more than 70 percent of the units have indicated full capacity utilization, whereas in Delhi the number of such units was low. In Haryana also the number of units utilizing full capacity of production was low and similar situation was observed in the state of Rajasthan. (Ref. Table 8, 8A, 8B, 8C and 8D)

III.3 Impact of Technology on Production

III.3.1 Analysis with respect to the impact on production in the SSI units using advanced/improved technology has been presented in the statement 6.

Statement 6. SSI units with improved technology showing impact on production by state

State	Number of untis showing impact on						Total
	Quality Improve-ment	Better Capacity utilization	Increase in quantity produced	Increase in efficiency	Reducing cost of production	Achieving competi-tiveness	
Maharashtra	91	88	87	88	86	66	506
Delhi	66	39	59	41	33	14	252
Haryana	51	15	47	10	31	2	156
Rajasthan	47	11	17	7	12	4	98
Total	255	153	210	146	162	86	1012

III.3.2 The analysis of technology used SSI units indicates that out of 356 units using improved technology surveyed in four states, 255 units (22 of chemical and chemical products, 42 of rubber and plastic products, 19 each of leather product and wood products, 33 of paper products and printing, 26 of hosiery and garments, 21 of food products, 36 of metal products and 37 of electrical machinery and apparatus) have indicated substantial quality improvement in their production by adopting the improved technology. whereas 210 units have indicated increase in the quantity produced by them with the use of improved technology. 162 units have pointed out the reduction in the cost of production and 153 units have indicated better capacity utilization through adoption of improved technology. 146 units have indicated the increase in efficiency of their workers whereas 86 units have also indicated the achievement of competitiveness in domestic/international market with the use of improved technology. Analysis by industry could be seen in Table 14.

III.3.3 In the state of Maharashtra, almost all the SSI units using the advanced technology have indicated a great impact on quality improvement, better capacity utilisation, increase in efficiency of their employees, increase in quantity produced by them and reduction of cost of production, 70 per cent of the units have also indicated the achievement of competitiveness in domestic/international market through adoption of technology. Product wise analysis has been presented in Table 14A.

III.3.4 In Delhi, out of 77 units using improved technology, 66 units have indicated quality improvement through adoption of improved technology whereas 59 units have indicated increase in quantity produced by them. 41 units have also indicated increase in efficiency and 39 units indicated better capacity utilization through adoption of improved technology in their units. Analysis by industry is available in Table 14B

III.3.5 In Haryana out of 100 units using improved technology, 51 units have indicated quality improvement, 47 units indicated increase in quantity produced and 31 units indicated reduction of cost of production by adopting the improved technology in their units. Only 2 units have indicated the achievements of competitiveness in the domestic/international market through adoption of improved technology. Product wise analysis may be seen in Table 14C.

III.3.6 In the state of Rajasthan, 47 out of 87 units using improved technology have indicated quality improvement by adopting the improved technology in their units whereas 17 units have indicated increase in the quantity produced. 12 units have indicated reduction in cost of production and 11 units have pointed out better capacity utilisation whereas 7 units have indicated increase in efficiency of their employees. Product wise analysis may be seen in Table 14D.

III.4 Impact of Technology on Investment

III.4.1 The average working capital worked out for the surveyed units indicates that there is an investment in working capital of around Rs 37.1 lakhs in the SSI units; Rs 45.3 lakhs in the units using improved technology and Rs 20.4 lakhs in the units without improved technology for the 4 states as a whole. The maximum investment has been observed in the units of Electrical Machinery and Apparatus followed by Rubber and Plastic Products. In other group of industries the investment has been observed below the average of Rs 37 lakhs and the minimum investment was observed in SSI units of Wood Products (Ref. Table 24).

III.4.2 The state wise analysis however, differs significantly. In case of Maharashtra the average investment in the SSI units was observed at Rs 19.8 lakhs which is more or less similar in both types of SSI units using improved technology and without improved technology. The minimum investment in the state was observed in Hosiery and Garments units which was of the order of Rs 7.4 lakhs (Ref. Table 24A).

III.4.3 In Delhi the average investment on working capital in the SSI units has been worked out at Rs 26.1 lakhs; Rs 34.9 lakhs in the units using improved technology and Rs 13.4 lakhs in the units without improved technology. It shows a great variation of investment amongst the units using improved technology and those not using improved technology. The maximum investment was observed in the units of Electrical Machinery & Apparatus followed by Food Products. In other groups of industries the investment is less than the average investment of Rs 26 lakh and the minimum investment was observed in SSI units of Leather Products (Ref. Table 24B).

III.4.4 The average investment in the SSI units in Haryana was Rs 52.5 lakhs; investment of Rs 62.8 lakhs in the units using improved technology and only Rs.13.1 lakhs in the units without improved technology. It shows a great imbalance and impact of technology on the basis of investment. The maximum investment was observed as Rs 1.62 crores in the units of Rubber and Plastic Products followed by Hosiery and Garments, Electrical Machinery and Apparatus. In case of Rubber and Plastic products, the SSI units using improved technology were found to invest Rs 1.89 crores as their working capital against Rs 70 thousand only in the units without improved technology (Ref. Table 24C).

III.4.5 In the State of Rajasthan the average investment in the SSI units was of the order of Rs 52.7 lakhs, Rs 61 lakhs in the units using improved technology and Rs 35 lakhs in the units without improved technology. The maximum investment was observed in the units of Electrical Machinery and Apparatus which was in the order of Rs 1.78 crore with Rs 2.25 crores in the units using improved technology

and Rs 1.16 crores in the units without improved technology. It was followed by the units of Metal products whereas in other group of industries the investment was below the average investment of Rs 52.7 lakhs (Ref. Table 24D).

III.5 Impact of Technology on Output

III.5.1 The average output in the SSI units has been estimated as Rs 77.5 lakhs during 2002-2003 against the average investment of Rs 37.1 lakhs for all the four States. The output was Rs.95 lakhs in the units using improved technology and Rs 41.4 lakhs in the units without improved technology against the investment of Rs.45.3 lakhs and Rs.20.4 lakhs respectively. The highest output was recorded in the units of Rubber and Plastic Products followed by Electrical Machinery and Apparatus and Chemical and Chemical Products. In other groups of SSI units the output was below the average output of Rs 77.5 lakhs (Ref. Table 25). As in case of investment, the output in the states also differs.

III.5.2 In case of Maharashtra the average output was Rs 47.8 lakhs against the investment of Rs 19.8 lakhs. The average output of Rs 52.4 lakhs in the units using improved technology against the investment of Rs 19.9 lakhs indicates a good margin of profit to the SSI units, which are using improved technology. In the units without improved technology, the average output was around Rs 40 lakhs against the investment of same order as in the case of units with improved technology indicating lesser margin of profit due to not using the improved technology. The maximum output was observed in case of Chemical and Chemical Products whereas the minimum output was in the SSI units of Hosiery and Garments (Ref. Table 25A).

III.5.3 In Delhi the average output in the SSI units was worked out as Rs 67.8 lakhs against the working capital of Rs 26.1 lakhs. The average output of Rs 1.01 crores in the units using improved technology against the working capital of Rs 34.9 lakhs shows good profitability of the industries using improved technology. The average output of Rs 20.6 lakhs against the investment of Rs 13.45 lakhs in the

units without improved technology is not so encouraging because of not using the improved technology. The maximum output has been observed in case of Rubber and Plastic Products followed by Electrical Machinery and Apparatus and Food Products. The other groups of SSI units are producing below average output (Ref. Table 25B).

III.5.4 In Haryana the average output of Rs 96 lakhs has been worked out for the SSI units against the working capital of Rs 52.5 lakhs. The average output in the SSI units using improved technology is of the order of Rs 1.1 crores against the investment of Rs 62.8 lakhs and the annual output of Rs 42.6 lakhs in the units without improved technology against the investment of Rs 13.1 lakhs indicates that use of improved technology has not increased profits proportionately (Ref. Table 25C).

III.5.5 In the case of Rajasthan the average output of the SSI units during 2002-2003 was Rs 1.02 crore against the investment of Rs 52.7 lakhs. It seems to be quite good. The average output of Rs 1.18 crores in the units using improved technology against the investment of Rs 61 lakhs shows a better result for the units without improved technology, as their output is Rs 70 lakhs against the investment of Rs 35 lakhs. The maximum output has been observed in the SSI units of Electrical Machinery and Apparatus followed by Food Products, Rubber and Plastic Products and Wood Products whereas in other groups of industries the average output has been observed less than the average output of Rs 1.02 crores. (Ref. Table 25D)

III.6 Impact of Technology on Employment

III.6.1 The survey result indicates that the SSI Units using improved technology have better employment potential as compared to the units, which are not using such technology. It is reflected in the average employment in the SSI units using the improved technology as well units without improved technology. The average employment in the SSI units has been in the order of 17 (16 male and 1 female).

The average employment in the SSI units using improved technology has been worked out as 19 against the average employment of 13 in the units without improved technology. It clearly indicates that the use of technology has no adverse effects on employment generation. This conclusion holds good for all other groups except the SSI units of Metal Products where the average employment in the units using improved technology is less than those without improved technology (Ref. Table 23). The analysis may differ from state to state.

III.6.2 In the state of Maharashtra the average employment has been worked out as 21 (18 male and 3 female). The average employment of 23 persons in the SSI units using improved technology against the average employment of 18 in the units without improved technology satisfies the conclusion that use of technology has definite employment potential. However, in some cases the average employment in the units without improved technology has been observed to be higher than those using improved technology e.g. in the units of Electrical Machinery and Apparatus the average employment in the units using improved technology has been 33 whereas in the units without improved technology it was 48. Similarly, in case of Wood Products the average employment in the units using the improved technology was 19 and the average employment in the units without improved technology was 21. Barring these exceptions in all other group of industries the conclusion that improved technology use has higher employment potential holds good (Ref. Table 23A).

III.6.3 In Delhi the average employment has been observed as 13 (12 male and 1 female). For units with improved technology, the average employment was of the order of 15 and it was 11 in case of units without improved technology. It clearly indicates that the use of improved technology does not reduce employment. However, the employment in the units without improved technology has been observed more in case of Metal products, Paper products and Printing and Leather products in the state of Delhi (Ref. Table 23B).

III.6.4 In Haryana the average employment has been of the order of 18 (17 male and 1 female). The average employment in the SSI units using improved technology was of the order of 20 and it was 9 in case of units without improved technology. It is notable that in case of Metal products the average employment in the units without improved technology is significantly higher than those of using improved technology. Except for the Metal products group, for all other groups, the average employment in the units with improved technology is considerably higher than for the units without improved technology (Ref. Table 23C).

III.6.5 In the state of Rajasthan, the average employment in the SSI units was observed to be of the order of 15; 17 in the units using improved technology and 11 in the units without improved technology. In this case the SSI units of Electrical Machinery and Apparatus using improved technology have shown lesser employment than the units without improved technology. The SSI units of Metal products however show equal employment in both categories of units using improved technology and without improved technology. In other groups of industries, the average employment in the units using improved technology was higher than those without improved technology. Thus the analysis clearly indicates that the use of improved technology has higher employment potential (Ref. Table 23D).

III.7 Labour Productivity

III.7.1 The Output/Labour Ratio also indicates that the output per worker is significantly high in the SSI units using improved technology as compared to those without improved technology. As worked out, the output per worker in the units using improved technology is Rs 5 lakhs against the output of Rs 3.2 lakhs in the units without improved technology. However, the output in the SSI units of Metal products using improved technology is less than those without improved technology and the output in the units of Electrical Machinery and Apparatus has been similar in both types of units. Barring these two groups the output in the SSI

units using improved technology has been found more than for units without improved technology (Ref. Table 27).

III.7.2 The state wise analysis indicates that in the State of Maharashtra the output per worker is more or less same in both types of units using the improved technology and without improved technology. It is notable that the output per worker in the units without improved technology is more than those of using improved technology in case of Leather Products, Food Products and Electrical Machinery and Apparatus (Ref. Table 27A).

III.7.3 In the state of Delhi it has been observed that the output per worker in the units using improved technology is significantly higher than those without improved technology. The output in the units using improved technology has been worked out as Rs 6.9 lakhs whereas in the units without improved technology it is Rs 1.8 lakhs only. However, in case of Hosiery and Garments the output in the units without improved technology is higher than those using improved technology (Ref. Table 27B).

III.7.4 In the state of Haryana the average output per worker in the units using improved technology has been worked out as Rs 5.7 lakhs whereas in the units without improved technology it is Rs 4.8 lakhs. It also indicates that technology use is necessary for raising output. However, in case of Metal products the output per worker is significantly high in the units without improved technology than those of using improved technology. In Paper products and Printing also the output per worker has been observed more in the units without improved technology (Ref. Table 27C)

III.7.5 In the state of Rajasthan the output per worker in the units using improved technology is slightly higher than those of not using improved technology. In case of Food Products and Rubber and Plastic products the output per worker in the units without improved technology has been observed more than those units using improved technology. In other groups it was more in case of units using improved

technology indicating the necessity of improved technology in the SSI units for increasing the output. (Ref. Table 27D)

III.8 Impact of Technology on Social Empowerment

III.8.1 The use of technology creates opportunities for employment of skilled workers and technical manpower who are in a position to operate the technology. It raises the average educational and possibly cultural level of the employees of the SSI units, which could lead to better productivity, better understanding between employees and owners and creation of wealth for the country. . The analysis of opinions of owners obtained by us also indicates that technically qualified entrepreneurs or those relying on technically qualified professional managers are quicker to take advantage of new, emerging and improved technologies. Religion and caste have no effect on technology development. The survey has indicated correlation between education as a social and cultural factor and adoption of improved technologies in 40 units of Chemical and Chemical products, 57 units of Rubber and Plastic products. 28 units of Leather products, 36 units of Wood products, 52 units of Paper products and Printing, 47 units of Hosiery and Garments, 48 units of Food products, 41 units of Metal products and 48 units of Electrical Machinery and Apparatus. Thus 75 per cent units have indicated the effect of education on technology development whereas effect of cultural background on development has been reported by 23 per cent units. (Ref. Table 20).

III.8.2 State wise analysis also indicates that education has a great effect on development. In the state of Maharashtra more than 90 per cent of SSI units have indicated the effect of education on technology development. The effect of cultural background on development has also been indicated by more than 30 per cent of the SSI units whereas 10 per cent units have indicated the effect of religion and caste (Ref. Table 20 A)

III.8.3 In Delhi more than 85 per cent SSI units have indicated the effect of education on technology development. The effect of cultural background on development has also been indicated by more than 50 per cent SSI units whereas the effect of religion and caste on technology development has been mentioned by around 15 per cent SSI units (Ref. Table 20 B)

III.8.4 Around 80 per cent of SSI units in Haryana have indicated the effect of education on technology development whereas the effect of cultural background has been pointed out by only 3 per cent of the SSI units surveyed. None has reported the effect of religion and caste (Ref. Table 20 C)

III.8.5 In Rajasthan the response to this query is as low as less than 50 per cent. 38 per cent units have indicated the effect of education on technology development whereas the effect of caste and cultural background on development is quite insignificant (Ref. Table 20 D)

III.9 Impact of Technology on Economic Development

III.9.1 The use of technology in the SSI units has a great impact on output and therefore it is directly related to economic development. The analysis of capital/output ratio indicates that the units using improved technology are producing more than the units without improved technology with the application of less working capital. As indicated in the results that for the output of Rs 1 crore, an investment of Rs 47.6 lakhs is required in the units using improved technology whereas an investment of Rs 49.3 lakhs is required in the units without improved technology for the same output. This identity holds good for all groups of industries except Metal products and Electrical Machinery and Apparatus. In case of Metal products for the output of Rs 1 crore, investment of Rs 1.1 crore is required in case of the units using improved technology whereas in the units without improved technology only Rs 31.4 lakhs of investment has been shown for the same output. Similarly in the case of Electrical Machinery and Apparatus for the output of Rs 1 crore an investment of Rs 60 lakhs is required for the units using improved technology whereas in the

units without improved technology only Rs 50.6 lakhs is required to be invested for the same output (Ref. Table 28)

III.9.2 State wise analysis also projects the same identity. In case of Maharashtra for the output of Rs 1 crore an investment of Rs. 37.9 lakhs is required in the units using improved technology whereas in the units without improved technology an investment of Rs 49.6 lakhs is required for the same output. In Delhi for the output of Rs 1 crore, an investment of Rs 43.6 lakhs is required in the units using improved technology whereas Rs 64.9 lakhs are required for the units not using improved technology for the same output. In the state of Haryana the situation has been observed as reverse. As indicated, for the output of Rs.1 crore in the SSI units using improved technology an investment of Rs.57.2 lakhs is required whereas in the units without improved technology an investment of Rs 30.7 lakhs is required for the same output. In the case of Metal products for the output of Rs 1 crore similar amount is required for investment (Ref. Table 28A, 28B and 28C).

III.9.3 In Rajasthan it is indicated that the investment in the units using improved technology is not so encouraging. For the output of Rs 1 crore an investment of Rs 51.8 lakhs is required in the units using improved technology whereas in the units without improved technology an investment of Rs 50.1 lakhs is required for the same output. If we view the increase in productivity due to the use of improved technology, the investment over it becomes attractive (Ref. Table 28D).

Chapter IV

BARRIERS IN ADOPTION OF IMPROVED TECHNOLOGY IN THE SSI SECTOR

IV.1 Problems of modernization

IV.1.1 As indicated earlier about one-third of the SSI units surveyed in the four states are not using modern technologies which are available either within the country or from abroad. It is generally known and accepted that adoption of improved technologies will lead to increase in productivity and profits and also enhance the quality of products which would help improve their acceptability and competitiveness in domestic and international markets. The globalization of the economy, the removal of QRs, the de-reservation of items for SSI sector and gradual withdrawal of subsidies lends urgency to the modernization of SSI units. It therefore, needs to be seriously investigated as to why a large number of SSI units are not taking the benefits of improved technology; whether they are not aware of the availability of the technology or the technology is not economically viable for them or they do not desire to take risk by adoption of improved technology for their units or whether there might be a lack of adaptability in the changing trends of economy. To answer these questions a variety of analyses have been attempted such as the utilization of production capacity, difficulties faced by the SSI units with the banks and financial institutions in getting loans and other social aspects.

IV.1.2 The commonly understood reasons for SSI units not willing or not being able to adopt new improved technologies are:

- i. Lack of access to technological information and consultancy services**
- ii. Inadequacy of financial capacity**
- iii. Desire to avoid risk**
- iv. Non-availability of technically qualified persons to operate new technology**

- v. Inadequate management skills
- vi. Lack of knowledge and adaptability to changing tastes, requirements and market trends
- vii. Low levels of indigenous R & D and problems of its commercial availability
- viii. Availability of infrastructure and raw materials for imported technology

IV.1.3 The Government of India, specialised financial institutions like SIDBI and industry institutions have framed specific programmes to take care of these concerns and needs. This survey has attempted to find out as to why these multi-pronged initiatives have not percolated to a large number of SSI units desirous of or needing modernization.

IV.2 Non-utilisation of existing capacity

IV.2.1 The analysis of survey responses indicate that a large number of SSI units are not utilizing their full capacity due to which they are incurring losses. The low capacity utilization does not give any incentive to the owner to invest further in the enterprise unless he is fully assured of the profitable marketability of the product of his expanded unit. In addition to higher cost of production and less than desired market acceptability of the product, there are other reasons for not utilizing full capacity such as lack of demand of their product in the market, power shortage, equipment problems, non availability of raw materials, labour problem, lack of funds, marketing problems etc. Problems with existing equipment have been indicated by 40 industrial units, which are not using the modern technology, whereas the labour problem was indicated by 50 SSI units. Such problems indicate that the use of technology can improve the quality of production. It may reduce the cost of production and increase the efficiency of the employees. The other problem of not using the improved technology in the SSI units is that they have to be dependent on large industries for their output. Without improved technology the finished products is not possible and they have to supply the semi finished goods to large industries for which they are not paid a satisfactory cost of production and the development of the SSI units is hampered on this basis.

IV.3 Problems of financial management and technical know-how

IV.3.1 Lack of financial management and lack of technology know-how have been cited as hindrance to modernization by a number of units. The problem of technical know-how has been pointed out by more than 50 percent of the SSI units not using the modern technology, whereas lack of financial management has been pointed out by about one-third of these units. The human resource problem of SSI units is aggravated by the fact that technically trained persons and business managers prefer to get employment in large industry where compensation packages are larger and chances of career advancement are brighter. As such only residuary manpower is available to the small-scale industry which is not able to provide the requisite service to SSI units (Ref. Table 18, 18A, 18B 18C and 18D).

IV.4 Financing Problems

IV.4.1 The major problem of technology development is the non-availability of the requisite finances. It has been observed that inspite of the availability of a number of financing options for modernizing SSI units, the entrepreneurs face difficulties in actual sanction of loans from banks and other financial institutions. The experience of SSI owners with the banks has been that they take a long time for processing the loan applications and also they charge high rate of interest and other charges. Rate of interest is not uniform for all the banks. Some units have pointed out that the financial institutions also demand unofficial charges for expediting sanctions. The penalties for delayed payments of loan installments are also harsh. Small units sometimes go into default due to circumstances beyond their control with the result that the unit becomes sick (Ref. Table 29, 29A, 29B, 29C and 29D).

IV.4.2 The analysis of responses of different SSI units indicates that the maximum number of SSI units feel that it is basically a financial problem that makes

investment in upgradation of technology a daunting task. Inadequacy of financial capacity has been pointed out by 83 SSI units.

IV.5 Other Problems

IV.5.1 47 units have indicated the low level of R&D in the SSI units as an impediment in adopting improved technology in their units. 34 units have stated that they do not have the desired management skills for managing the improved technology. Out of 173 establishments, 65 desire to avoid risk in adoption of new and as yet untested technologies. 30 units have indicated the lack of adaptability in the changing trends of economy as a major barrier to adopt the improved technology in their SSI units (Ref. Table 15).

IV.5.2 Such barriers in adoption of improved technology create hindrances for the units as regards their competitiveness in the domestic/international market with their products and the units feel backwardness overtaking them. As indicated earlier the productivity amongst the SSI units not using the modern technology is quite low.

IV.6 State wise analysis of barriers in adoption of new technology

IV.6.1 In Maharashtra the nature and inadequacy of financial capacity as barriers have been pointed by 40 SSI units whereas 37 units have indicated the financial aspects of new technology as a barrier making it difficult for adoption. 36 SSI units have indicated low level of R&D as the barrier in adoption of the improved technology whereas 35 units expressed their desire to avoid risk in adopting the improved technology. 31 units have pointed out that adoption of improved technology is economically not viable for them whereas 16 SSI units have pointed out lack of adaptability in the changing trends of economy. 9 units have indicated lack of awareness and lack of knowledge/information about the availability of the requisite technology (Ref. Table 15A).

IV.6.2 In the state of Delhi, 26 SSI units have pointed out the nature and inadequacy of financial capacity as the barriers in adoption of improved technology in their units whereas 25 units have expressed the barrier of financial aspects of technology making difficult to adopt by the unit. Economic non-viability has been expressed by 21 SSI units whereas 19 units have expressed their desire to avoid risk. 17 units have expressed the lack of management skill for adoption of improved technology whereas 11 units have expressed non-awareness or lack of knowledge/information about availability of requisite technology. 7 units have expressed the lack of adaptability to changing trends of the economy as the barrier for adoption of improved technology whereas 5 units have pointed out the low level of R&D for this purpose (Ref. Table 15B).

IV.6.3 In the state of Haryana, 15 units have pointed out that adoption of technology is economically not viable for them whereas 9 units have expressed the financial aspect of technology making it difficult for them to adopt new technology. 7 units have indicated the nature and inadequacy of financial capacity as the barrier for adoption of improved technology in their units whereas 6 units have expressed their desire to avoid risk in adoption of improved technology. 4 SSI units in the state have pointed out lack of adaptability to changing trends of economy whereas 3 units have pointed out the low level of R&D as the barrier in adoption of improved technology in the SSI units (Ref. Table 15C).

IV.6.4 In the State of Rajasthan, 17 SSI units have pointed out that adoption of improved technology is economically not viable for them whereas 14 units have indicated the financial aspect of technology making it difficult to adopt by the unit. 13 SSI units have indicated the non-awareness/lack of knowledge/information about the availability of requisite technology whereas 11 units have shown lack of management skill for adoption of the improved technology. 10 SSI units indicated nature and inadequacy of financial capacity as the barrier to technology adoption whereas 5 units have expressed their desire to avoid risk in adoption of

modern/improved technology. Only 3 units have indicated the low level of R&D as the reason for not adopting the improved technology (Ref. Table 15D).

IV.7 The analysis indicates that the most important barriers in adoption of improved technology are financial aspects either the nature and inadequacy of financial capacity, or the financial aspect of technology making it difficult for adoption by the unit or the technology being economically not viable. The other barriers are the non-awareness/lack of knowledge and information about the availability of requisite technology and the desire to avoid risk in adoption of improved technology. Low level of R&D is also a major reason not to adopt the improved technology in the SSI units. These barriers must be removed with the help of government policies and implementation thereof.

IV.8 The SSI sector has a very important role in the nation's economic development as it accounts for more than 6 percent of the GDP and about 35 percent of export earnings. As a measure of encouragement to this sector, the barriers in the adoption of improved technologies should be removed. The following points have emerged from the survey results and the discussion with the owners of the SSI units. These have been presented in descending order based on the number of units (Ref. Table 30).

- a) Taxation and excise duty should be reduced
- b) Marketing systems should be developed for creating general awareness about goods and services and Government subsidies available in different sectors
- c) SSI sector should be made aware of technology availability
- d) Provision for loan at cheaper rates for the SSI be made and loan amount be increased
- e) Loan to upgrade the technology should be made available on lower rate of interest
- f) Lower rate of electricity charges and assurance of continuous power supply be made
- g) Price and quality fluctuation of raw material be controlled

- h) New policy for SSI sector should be created to uplift the SSI sector
- i) Government should constitute a joint appraisal mechanism to evaluate the SSI promotion policies
- j) Planning for SSI should be liberal
- k) Time gap between loan application and sanction of loan should be reduced
- l) National entrepreneurship board should be strengthened
- m) Proper infrastructure should be developed for SSI
- n) Manpower management and power management should be eased
- o) Provision of award for good work and credit guarantee scheme should be made
- p) Government should provide full support in resettling of sick units
- q) Export policy should be liberal
- r) Training centers should be created for upgrading the skills of SSI employees
- s) Import duty on essentials items required for SSI sector should be reduced
- t) Services of professional consultants should be made available to the sector

IV.9 Above suggestions have also been observed in each state with minor changes. The state wise analysis may be seen in Tables 30A, 30B, 30C and 30D for Maharashtra, Delhi, Haryana and Rajasthan respectively.

IV.10 With the removal of these barriers indicated by the SSI units, the sector can adopt modern/improved technologies faster and grow significantly.

Chapter V

CONCLUSIONS AND RECOMMENDATIONS

V.1 Barriers to Technology Upgradation

V.1.1 The contribution of the small-scale industries sector in generating employment and in export performance is well recognised. The sector is often termed as the engine of growth for the national economy for this century. It is also felt that in this era of increasing global competition, the sector is not able to realize its full potential on account of a number of problems both internal and external. The most serious problem identified is the use of outdated and obsolete technology by a large number of units and the inability or even the unwillingness of the owners and managers to upgrade to modern and appropriate technologies which would enable them to improve the quality of their products to international standards, reduce production costs and improve the profitability of their units. The responses received in the study indicate that adoption of improved technology is a complex issue in which factors other than availability of finance and access to the desired technology are also involved. These include the pattern of ownership and management, the existing utilisation of capacity which could generate the surplus needed to finance improvements, the requirements and availability of manpower, the willingness to take risks and other related factors which could motivate and encourage the owner to upgrade the existing technology of his unit. These factors are briefly analyzed below. Specific problems of the nine categories of industries selected for the study are also stated briefly.

V.1.2 We have basically relied on the version of the owners / managers whether they have or have not adopted improved technology in their units. Accordingly, out of the 529 SSI units surveyed, we have noted that 356 units are using modern technology whereas 173 are still working either with traditional technology or

with technology which has been rendered obsolete with time. The salient features emerged from the study are described below

V.2 Ownership pattern

V.2.1 The results of the survey indicate that SSI units are primarily proprietary concerns numbering more than 55 percent of such units. This indicates the tendency of entrepreneurs to keep the ownership of the business within the bounds of the family. Most of these units are owned by individuals and the required investment has been provided by the property owners themselves. Such type of ownership pattern suffers from severe limitations. The main limitation that such units face is in their access to institutional finance and development of the units is restricted by non-availability of finance at the time of need. Employment is also not regulated with family members not having any managerial experience trying to manage the industry without appreciating the costs of low productivity. On the other hand, units under company management are better informed about the availability and advantages of adopting new technologies and have better access to institutional resources.

V.2.2 In order to encourage broad basing of the ownership of SSI enterprises, provision of some additional facilities for units going in for company formation could be considered.

V.3 Units Having Secondary Activities (Ancillary Activities)

V.3.1 Closer cooperation between large and small-scale sector is highly desirable to foster the growth of small units as ancillary to large units. Industries associations of both larger or smaller units should play a vital role in creation of such tie-ups. The members of such association may set-up sub-committees in collaboration with small industry service institute should chalk out a programme for encouraging ancillary relationship. Such relationship of the SSI unit with a large enterprise through manufacturing a specified item for the larger industry

would be beneficial to both. With this arrangement, the large industry would obtain quality components at a reasonable price without investing in infrastructure, equipment or personnel and the SSI unit will be assured of a market and can plan its production in the most economical manner. However, in our survey we found that only 10 percent units had this type of secondary activity with ancillary relationship with larger units.

V.3.2 It is further suggested that the smaller units should be given quality raw material by the larger units for turning it into quality finished goods. Payment for the services rendered by ancillary units must be prompt and accurate. There should be no exploitation of the smaller units by the larger ones in any way.

V.3.3 The tenth plan has also favoured the ancillary relationship of small sector with the larger one as this type of relationship provides mutual benefits to both. It is also suggested that policies should be framed to encourage ancillary relationships and to safeguard the interests of the SSI units. It is also reported that a number of large industries have started sourcing some of their components from external sources to the detriment of local SSI units. It is suggested that the associations of industries, which agitate against dumping and subsidies by other countries, should themselves set up mechanisms to ensure that capacities of SSI units set up as ancillaries are fully utilized while ensuring adherence to quality standards.

V.4 Capacity-utilisation

V.4.1 On analyzing data pertaining to capacity utilization of the units, it was observed that more than 75 percent of them were not able to utilize their full capacity. The reasons mentioned by the units related mostly to lack of finance and power shortage including high power rates. Some of the units also mentioned lack of demand, non-availability of raw materials, labour and marketing problems. Government procedures acting as a hindrance in full utilization of capacities were mentioned in less than 5 percent of the cases.

4.2 When we examined the economic implications of the problem of under-utilization of capacity in small units, we found that the real sufferers were the workers. Thus under-utilisation has serious consequences in the case of small industry both from the economic and social points of view. **Availability of assured power supply at reasonable rates, assisting the units in obtaining quality raw materials, assisting them in publicizing their products and advising them about new and emerging markets will improve the health of SSI units.**

V.4.3 Most of the entrepreneurs felt that continuous supply of power at cheaper rates is the only solution to their problem. Easy access to finance and quicker flow of credit from the financial institutions will, also ease the problems faced by SSIs to a great extent.

V.5 Employment pattern

V.5.1 While analyzing the employment pattern in the sector, it was observed that sector has 4 types of employees, these are technical persons, contract workers, daily wages workers, and family workers. Technical persons constitute around 18 per cent, as against 55 per cent of daily wages. Family workers constitute less than 4 per cent. With an inadequate number of technical persons and with large number of untrained workers the performance of the sector is bound to suffer, even if they adopt latest modern technology. There are limited training facilities for preparing trained manpower for the sector. Therefore, to meet such requirements vocational training institutes may be established in the major cities of India to cover the shortage of skilled workers in the related areas.

V.5.2 It has been noticed that women participation in the sector as entrepreneurs or as employees is very low. Only 7 per cent of women have been found as employees in 4 states. Their representation as employer or entrepreneur in the sector has been found nil in the survey. Employment participation of women in 4 states separately, are more or less in the same category, except in Maharashtra (14%). **In order to**

encourage women's participation in the sector special efforts have to be made including:

- **Identification of women's choice of industry, for instance, Garments and Hosiery. Printing, and household industries will be the ideal areas for women's participation**
- **Presently women are facing difficulties in holding, inheriting or bequeathing property. This needs to be modified in the light of these difficulties suitably.**
- **A single window clearance of the project with women officers ready to assist them in all areas of creating a unit should be attempted**
- **Attitude towards women's participation has to be modified by creating awareness for developing their active interest.**
- **Marketing assistance should be provided to SSI units owned by women entrepreneurs through preferential exposure of their products in Buyer-Seller Meets, Vender Development Programmes and Exhibitions.**

V.6 Productivity

V.6.1 One important handicap generally pointed out in case of the SSI sector is that its productivity is low. It is attributed to low capital application and the means of production being labour intensive. For SSI units even with better technology, productivity remains low as compared to large industry. However, data provided by the study have shown a growth of 15 percent in output during one year i.e. between 2001-02 to 2002-03. This good performance may be attributed to the fact that out of 529 units covered, as many as 356 units are working with modern technology. It indicates that substantial development in various dimensions of technology has occurred in these states.

V.6.2 The output per worker has been worked out as Rs. 4.6 lakhs in all the surveyed units. It was Rs. 5 lakhs in units with improved technology and Rs. 3.2 lakhs in units without improved technology.

V.6.3 The units belonging to Rubber and Plastic, Chemical, Electrical and Electronic products, Paper Printing, Garment and Food products were the best users of high technology. It is obvious that there is urgent need for increasing capitalization of SSIs to enable them to procure better technical equipment, training inputs, marketing management etc. in order to increase the efficiency of the units and their workers.

V.6.4 In order to get integrated into the international trade networks, these units have to satisfy buyer's standards in terms of quality, price and delivery schedules. It is, therefore, suggested that selected industries namely Garments, Electronics, Food products /processing, Leather products and Chemical and Chemical products should be equipped and strengthened with fully updated machines. Economic policies for the small scale sector should enable these industries to integrate with the global industry by getting into their global commodity chains for which they have to upgrade themselves in terms of improved technology, better management and marketing. Government must provide them with the facilities on priority basis towards financing, market networking, trained manpower and information technology.

V.7 Capital Adequacy

V.7.1 Majority of smaller units have indicated that their investment in fixed capital is much lower than what they are required to invest in their working capital. The low level of investment in fixed capital is an impediment in the production capacity of their units. Provision of well-equipped sheds for the new and socially backward entrepreneurs has been demanded.

V.8 Employment coefficients

- V.8.1** The average employment in SSI units surveyed in 4 states was found to be 17 (16 males and 1 female).
- V.8.2** There are minor differences in the average employment in the states. It is somewhat high in Maharashtra being 21 (18 males and 3 females) and Haryana being 18 (17 males and 1 female). The average employment in Delhi and Rajasthan is 13 and 15 persons respectively.
- V.8.3** It has been observed the average employment in a SSI unit employing improved technology is of the order of 19 whereas it is only 11 for units without improved technology. This situation exists in all the four states. It is therefore established that for the small-scale sector, use of improved technology has no adverse effect on employment and, in fact, leads to increase in employment. **The primary focus of the Tenth Plan being provision to increase employment opportunities, it is recommended that facilities of credit etc. provided to SSI units for improving their technologies should further be liberalised to create additional productive employment, particularly for the technically trained personnel.**
- V.8.4** As regards employment potential of different SSI categories, the maximum average employment has been found in Hosiery and Garment manufacturing units followed by units of Electrical Machinery and Apparatus, Chemical and Chemical products and Rubber and Plastic products. These units are trying to keep up with the latest technology. **They should be encouraged to keep track of the on going changes in respective technologies. Marketing facilities for such units also should be improved.**
- V.8.5** It has been observed that wherever concentration of workers is high, there is a danger of labour disputes and litigations. Consortia type organizations may be created to deal with such problems without costly and lengthy litigation.

V.9 Performance and problems of different categories of industries

The responses received in the survey revealed that in addition to some common features, problems and suggestions of owners / managers, there are some specific problems of different categories which are briefly mentioned below with suitable suggestions

V.9.1 Garments and Hosiery Industry

V.9.1.1 The industry manufactures a variety of goods like socks, stockings, sweaters, knitted goods for ladies wear, mufflers, jerseys, T- shirts, coats, trousers, children wear and many other items of fashion wear.

V.9.1.2 Garment exports from India started with low-cost and low-quality products whose market is now drying up. The growing demand now even in the domestic market is for high quality garments. This requires upgradation of technology at all levels, pre-sewing, sewing and post-sewing. Computer Aided Design (CAD) packages for development of weaves and prints are essential. In house tailoring with high quality power driven machinery is needed to ensure quality and timely delivery of the products. The small-scale electronic units must be assisted in updating to bring them at par with their international counterparts. This could be achieved by assisting such units with high quality testing facilities. Different agencies in charge of developing SSIs must also help these units to improve their organizational methods such as total quality management system and ISO-9000 certification, which is essential for the SSI units to ensure the supply of quality goods in time

V.9.1.3 Out of 56 units surveyed only a few were using the latest available technologies. We found that a large number of them were working with traditional technology. Technologies available in the area are Spreader, Cutter, Fusing, Compressing, Computer Aided Designs etc. Assistance for upgradation is available through SIDBI and other agencies. These are not very sophisticated machines and can be manufactured in India. The import of these machines is costly and our industries

desire that the Government must assist in their indigenous manufacture. Their maintenance, servicing and repairs will also be economic and timely.

V 9.1.4 Information technology is the backbone of apparel industry. The industries desire that information about latest trends and fashions should be collected centrally by the Government or other agency and passed on expeditiously to the manufacturers.

V.9.1.5 India's share in the global trade of ready-made garments is nearly 3 percent at present. The entrepreneurs feel that the inability of the sector to cater to foreign countries' changing tastes and preferences is mainly due to technological obsolescence of their units. The sector exporting garments to U.S.A, Latin America and Europe is facing tough competition from China, Pakistan and Sri Lanka. It is obligatory for the sector to keep on improving the quality of goods and innovate in new designs and products. If the Government facilitates provision of modern technology at reasonable rates and within reasonable time, the sector can achieve target of 5 percent business in the global market in spite of problems created due to phasing out of MFA. **The sector should be helped prepare to face the challenges created by the WTO regime in conducting global business. Greater R&D support for the sector should be provided under the guidance of CSIR and SIDBI**

V.9.1.6 The basic raw material required for this sector are textile fabrics, threads, buttons and other items. Cost of these items is high and their supply is erratic. **Supply channel pertaining to these materials must be quick and reliable. In order to reduce the cost of raw material, Government must reduce the excise duty.**

V.9.2 Food Processing Industry

V.9.2.1 Food processing covers a wide variety of industries including food and vegetable processing, dairy processing, spices and flavour foods, oilseeds and oil processing, sugar and confectionery products, beverage foods and baked foods. While we have mainly confined our study to two main categories having better representation in

the areas surveyed namely biscuits and bakery products, pulses and oil processing, we have interacted with owners regarding possibilities in other food related products also.

V.9.2.2 Products of SSI bakery units have to compete with the products of large-scale industries who take advantage of economies of scale and have the resources to acquire modern technologies to improve their quality.

V.9.2.3 Automated machines for manufacture of biscuits and other bakery products are costly and the best ones are imported. **The unit owners desire that these machines should be produced indigenously and made available at rates much cheaper as compared to those of imported ones. Their product can be absorbed in the local markets and they will get a profitable sale price for good quality.**

V.9.2.4 Processed foods in general have good export potential but the products have to be processed under very strict hygienic conditions.

V.9.2.5 Spices, of which India is one of the biggest producers, have been a valuable export of India for more than two millenniums past. They are now in demand for their antioxidant, digestive and curative properties. More attention needs to be given to higher value added products such as spice concentrates and spice emulsions. These products are suitable for small-scale industry with the availability of appropriate technologies. **Processed dried and frozen fruits and vegetables have a vast market but the common complaint is inadequate infrastructure of transport, cold storage and marketing. These inadequacies have to be rectified and strict quality controls observed to tap the vast potential of overseas markets.**

V.9.3 Leather products

V.9.3.1 The study covered 41 establishments in the 4 states. They are manufacturing footwear, leather dresses, bags and several other items. With production of 700 million pairs of footwear, India ranks second only to China. Lately, however, the Indian leather industry has not been able to make its presence felt in the international market mainly because of technological obsolescence and is losing to China in cost leadership. Major leather goods manufacturers are also shifting their production centres to south Asian countries posing stiff competition to Indian goods. East European countries are also taking over a part of the West European market due to proximity. Another problem for Indian manufacturers is that almost the entire range of machines for making quality leather goods are imported making them costly for small entrepreneurs. The availability of chemical inputs used in leather processing is also limited. With proper planning, India's leather industry can become a major export earner. **The sector should be made aware of new technologies and excise duty on chemical inputs used for leather processing must be reduced to achieve the target. Ancillary tie-ups of SSI units with large manufacturing houses in the sector should be encouraged.**

V.9.4 Electrical Machinery and Apparatus

V.9.4.1 It is one of the most important segments of the small-scale industrial fraternity. Seeing the potential of the sector, and associated demands of the products, the sector is required to get into mechanized and automated production with high quality testing instruments. **The sector should develop sales and marketing strategies to dispose off the variety of goods produced by it. The sector, also must develop ancillary relationships with the larger industries. It is also highly advisable that the sector must adopt organizational improvements such as total quality management system (ISO 9000). Ancillary tie-ups of SSI units in this sector with main manufacturers should be encouraged.**

V 9.5 Chemicals and Chemical Products

V 9.5.1 A large number of Chemicals and Chemical products are produced in the small sector. Most of the sector establishments are concentrated in Maharashtra. Drugs constitute the most important segment for the SSI sector. There are about 24,000 SSI units in the country producing mainly drug formulations. They have contributed through import substitution in making the pharmaceutical sector more self-reliant. The sector is also getting into herbal drugs.

V.9.5.2 The sector is now expected to have serious problems under our obligations under the Trade Related Intellectual Property Rights (TRIPS). The manufacturing processes of bulk drugs and drug intermediates are continuously changing with a view to reduce the cost of production and improve the quality of the product. The technology upgradation will aim at longer shelf life, more or less nil toxicity, sustained release etc. **Improved technology can be obtained through own R&D efforts, technical collaborations and purchase of know-how. Small scale units, in themselves, have little capacity for such efforts and need the assistance of the Government and national and regional research institutions for providing viable technologies at reasonable cost and training their personnel.**

V.9.6 Printing and Allied Activities

V.9.6.1 The rapid growth of the cities like Delhi, Mumbai, Jaipur etc. have created a huge demand for printing services. A variety of activities like publishing of books, magazines, posters etc. are undertaken by the printers. This is a very cost conscious and demanding segment and it is necessary to have the most modern technology to satisfy the demanding purchaser. Proven technologies which are being used in the sector are Offset printing machines and Computerized printers. The latest technology is that of Web Offset Printing machine which is known for its quality of printing and swift printing in sheet and books. This machine is very costly for SSI units and has to be imported. **Indigenous substitute needs to be developed.** The Indian version of these machines as available are reported to be

developed. The Indian version of these machines as available are reported to be qualitatively inferior to the imported ones. Entrepreneurs who want such printing technology in their industry must be financially helped. The repayment should be through lower installments. Servicing and maintenance must be the responsibility of the equipment supplying agencies for a reasonable period. Majority of the workers in this industry are trained on the job. For use of sophisticated equipment, these workers need special training for which adequate arrangements for off job training should be made through vocational institutions.

V.9.7 Metal Products

V.9.7.1 This sector manufactures a vast range of products. The sector has great export potential and is currently exporting their products to ASEAN countries as also to some European countries. Metal cutting machines, finishing and polishing machines, computer design machines, lathe and drilling machines. gas solder machines etc. are popular products in India and abroad.

V.9.7.2 Introduction of software driven technology even in the small industry sector is necessary. There is also need for skill upgradation for workers. Proper supply of raw material for this sector needs to be streamlined, so that every entrepreneur gets his quota on time.

V.9.8 Wood Products

V.9.8.1 This sector has been covered in all the four states. The sector is producing a variety of items like household and office furniture, chairs, tables, door and window frames, roof ceilings etc. They are using natural woods and plywood and other materials such as sun mica etc.

V.9.8.2 The sector works both with and without modern technology. However, the number of units working with traditional technology is much higher and their sizes

are also small. The number of units using modern technology for their processes is small. Automatic machines for cutting woods, mechanical benders, polishing and furnishing machinery of 2 BT system etc. are some high technical machines being used for manufacturing different varieties of luxury items and other goods. Majority of the entrepreneurs in the sector are not aware of the different facilities of technology upgradation available in the country. **Awareness about existence of these facilities should be developed through publicity and through wood manufacturing associations etc.**

V.9.8.3 The sector continues to remain a traditional one even though it has diversified its products to various types of demand in domestic and overseas markets. This has necessitated a change in the manpower requirements of the SSI units. The sector is no more comfortable with manpower trained on the job on the shop floor. The existing institutional capacity in training workers for the industry has to be expanded. With liberalization, this sector is also exposed to global competition. The only way to face competition would be to improve productivity and quality and to reduce cost. **In order to have success, modern technology has to be adopted even by the small units. Modern methods in management, marketing and finance need to be adopted.**

V.9.9 Plastic and Rubber Product

V.9.9.1 Due to multidimensional uses, Plastic and Rubber industry has been acknowledged as the 'sunrise industry' and has become an integral part of day-to-day life. A large number of processing units have been established in the country.

Plastic and rubber products are being used in areas like domestic use. They also find use in high technology spheres like space technology, and electronics. With more than 30,000 processing units in our country, number of plastic products has exceeded one lakh.

- 9.9.2 Investment has also increased tremendously. By the end of 2000, the investment in this sector had crossed Rs. 53,000 crores and is increasing further. The contribution of the sector towards generating employment is also substantial. The opportunities for direct employment in the sector are estimated to have crossed one million.
- 9.9.3 The development of the sector is linked with the country's economic development. The sector has ancillary relationship with several large industries including multinational companies both in India and abroad. The sector is a valuable source of foreign exchange. In India, the present per capita consumption of plastics is 4.5 kg as compared to about 50 kg in the developed countries. Even with this low consumption, most of cities in India are facing environmental problems because of the non-degradable nature of most of the plastic products like bags. R&D institutes in our country are developing technologies to create biodegradable plastics, which will reduce environmental pollution
- 9.9.4 The growth rate of plastic industry has been consistent at 12 to 15 percent. A steady supply of inputs is needed to continue such performance. It is hoped that by 2010 India will emerge as the third largest producer and consumer of polymers after US and China.
- 9.9.5 Thousand of products from toys to umbrellas to space ship components are manufactured in this sector. There is also scope for marketing these products in South East Asian countries and even European markets. It is necessary that the sector should make efforts to match prices of domestic products with world prices. This can be achieved by adopting methods to reduce wastage in production, making improvement in designs, use of better raw materials, improved inventory management etc.
- 9.9.6 It is also advised that the sector should expand areas of ancillarisation and develop linkages with other enterprises. The sector should have a vertical expansion by installing more modern machinery and tie-up with external

firms. Such tie-up will take care of export marketing through their external channels to encourage foreign exchange and having financial support.

V.10 Conclusion

V.10.1 India has a large infrastructural network to develop technology for use of industry and the small sector, yet only a handful of indigenous technologies could be developed. As a result our small-scale sector has to depend largely on imported technologies. Dependence on imported technology is very costly making it the privilege of a few richer entrepreneurs in this sector. Under this scenario, it is not surprising that more than 30 per cent of the units are not having the benefits of advanced technologies

V.10.2 The study has highlighted several barriers in the adoption of improved technologies. In addition to the known problems of lack of finance, lack of information on availability of the required technology, inadequate skills etc. the survey indicates that an important reason for not adopting it is the factor of uncertainty and apprehension.

V.10.3 Even if a new technology is tested and used somewhere else, the experience gained by that unit owner is hardly shared. The owner relies more upon experiences of their known persons rather than on results of the testing of technology, on official versions or demonstrations etc. There are psychological hurdles also which hold back the adoption of modern technology. The study further indicates that there is a certain account of secrecy with which the small entrepreneurs are surrounded, which make them reluctant to share or exchange technical, management or marketing information. Discrimination in sanction of loan to economically weaker and specially first generation entrepreneurs is also a hurdle in adoption of new technology. Such problems can be overcome through education, through discussions, dissemination through literature, workshops etc. and constant interaction amongst the entrepreneurs themselves as also with official functionaries of the Government and industry associations.

V.10.4 The survey results have indicated that the SSI units using improved technology have better employment potential as compared to the units which are not using such technology. This is reflected in the data on average employment in different sectors. As the use of technology has positive effect on employment generation, it should be a national priority to provide modern technology to all non-users so that employment at the national level could be accelerated.

V.10.5 The study has shown that investment in fixed capital is much lower than what is required for working capital. This factor also calls for assessment of technology to reduce high working capital costs to improve the profitability of the unit.

V.10.6 The study has shown that garments and hosiery units have higher employment content in all the four states followed by electrical machinery and apparatus, chemical and chemical products and plastic and rubber. Profitability of these units can be increased by assisting them through policy measures to get into global commodity chains which will also increase their export potentials. However, to get into international trade networks, they have to upgrade themselves with the latest modern technologies.

V.10.7 Policy measures will be effective only if the individual entrepreneurs are motivated, ready to take the risks and bear the costs involved in the adoption of the new technology. Industry associations have an important role to educate the small sector about the changes that are going in this sector, the necessity for technological changes and possible increases in profitability with such changes. It is necessary for both the Government and industry associations to change their attitude to inspire trust and confidence in the small units. The SSI owners should also be guided to bring about improvement in quality and efficiency with their own efforts

V.10.8 This exhaustive survey conducted in four states identifies and highlights the problems faced by the SSI units as perceived by them. The study also summarizes

the suggestions of the owners for removing bottlenecks and bringing about improvements specially as regards adoption of improved technologies. The implementable part of these suggestions have been included in our recommendations. The important recommendations emerging from the study are summarized below

V.11 (A) General Recommendations

- i. The SSI units going in for company formation should be provided some additional facilities like incentives to form cooperatives, concession to create infrastructure, increase in investment limit etc.
- ii. Small units performing ancillary role to large industrial units may be ensured prompt and effective payments by large units for supplies made by the SSI units as per purchase order and quality standard.
- iii. Continuous quality power supply at reasonable rates needs to be provided to SSI units.
- iv. Proper financial assistance could be provided to the SSI units for marketing their products so that they can withstand competition from large industries.
- v. To improve the profitability of SSI units inputs for marketing intelligence may be given to them about new and emerging markets.
- vi. Difficulty faced by women due to holding, inheriting, bequeathing property etc. should be removed to encourage women entrepreneurs.
- vii. Marketing assistance to women entrepreneurs should be provided through preferential exposure of their products in Exhibitions, Buyers - Sellers Meets and Vendor Development programmes.
- viii. SSI units should be provided facilities for upgrading their technology and also skill of their workers which would result in increasing productivity.
- ix. Adequate infrastructural facilities would help a lot, specially entrepreneurs belonging to economically and socially backward class/communities etc.
- x. Adequate credit at reasonable interest rates for modernization of SSI units would help them in creating new sustainable and productive employment.

V.11 (B) Industry-Specific Recommendations

Hosiery and Garments

- xi. R & D support under the guidance of CSIR and SIDBI should be provided to SSI units for quality improvement of their products
- xii. Quality and quantity wise raw material availability with reduced excise duty on raw material would help SSI units in achieving higher production and exports.

Food Products

- xiii Indigenous automated machines for manufacture of food products should be made available at competitive rates as compared to these of imported ones.

Leather Products

- xiv Excise duty on chemicals, used for leather processing by small units should be reduced and ancillary tie-up of SSI units with large manufacturers should be encouraged so as to bring in value addition and to cater exports of high value items.

Electrical Machinery & Apparatus

- xv Ancillary tie-ups of SSI units in this sector with large manufacturers should be encouraged so that these units are able to take up manufacture of standard and quality product in a planned manner.

Chemical and Chemical Products

- xvi Assistance should be provided by the national/regional research institutions for providing recent technologies at reasonable cost and for diversification into new products

Printing and Allied Activities

- xvii Indigenous Web-Offset Printing Machine presently imported needs to be developed in India to increase printing range of Small and Medium Enterprises
- xviii Adequate arrangement for special training to workers for using the sophisticated and recent technology based equipments should be made through vocational institutions.

Metal Products

- xix Supply of raw material should be streamlined. Simultaneously adequate arrangement for skill upgradation of workers should be made.

Wood Products

- xx SSI units engaged in manufacturing of wood and wood products are using outdated technology. These units need to be modernized by making them aware about modern technologies and fiscal incentives could also be provided.

Plastic and Rubber Products

- xxi Quality raw material should be used to achieve competitiveness in the international market and ancillary tie-up with large industries should be encouraged. Tie – up with external firms should also be developed to encourage exports.

V.12 It is felt that the recommendations of the study will provide a benchmark for assessment of the basic problems and these measures would be encouraging this sector for high growth. It is hoped that the study will thus be helpful to the policy planners as well as experts/entrepreneurs associated with this sector.

* * * *

Tables

ALL FOUR STATES
Table-1 Classification of sampled establishments by product and by year of establishment

Year of Establishment	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
Prior to 1970	7	8	3	6	9	4	3	8	6	54	
1971-1980	9	8	9	6	7	6	10	15	15	81	
1981-1990	15	25	19	16	17	9	22	20	15	152	
1991-2000	16	25	17	18	26	32	17	18	25	194	
After-2000	4	8	9	8	5	5	5	6	4	48	
Total----	51	74	41	54	64	56	57	67	65	529	

Table-2 Classification of sampled establishments by product and by main activity

Main Activity	Product/SSI Category										Total
	Chemicals Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garment Products	Food Products	Metal Products	Electrical Machinery & Apparatus		
Manufacturing	45	68	35	51	30	46	43	50	62	430	
Processing	2	3	1	5	14	7	20	6	2	60	
Electricity	0	1	0	0	1	0	0	0	0	2	
Repair	0	2	2	1	4	0	0	7	1	17	
Storage	0	0	0	0	0	0	1	0	0	1	
Other	4	4	4	0	25	5	0	7	0	49	
Total----	51	78	42	57	74	58	64	70	65	559	

Note: Some units are engaged in more than one activity and therefore the total may not tally with actual number.

Table-3 Classification of sampled establishments by product and by type of ownership

Type of Ownership	Product/SSI Category									Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
Self	4	5	3	2	0	2	3	2	23	
Partnership	11	19	4	10	14	15	9	16	122	
Prop.	23	37	30	39	43	27	39	35	306	
Company	13	12	4	3	7	12	5	12	75	
Total----	51	74	41	54	64	56	57	67	529	

Table-4 Classification of sampled establishments by product and by fixed capital

Fixed Capital (Rs.)	Product/SSI Category									Total
	Chemicals & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
<= 5 lakh	7	12	18	24	18	5	15	17	10	126
5-10 lakh	5	13	4	11	12	10	9	16	14	94
10-20 Lakh	20	20	7	7	12	11	13	9	7	106
20-50 Lakh	11	19	8	11	15	26	15	16	15	136
>50 Lakh	8	10	4	1	7	4	5	9	19	67
Total----	51	74	41	54	64	56	57	67	65	529

Table-5 Classification of sampled establishments by product and by working capital

Working Capital (Rs.)	Product/SSI Category									Total
	Chemicals & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
<= 5 lakh	12	20	17	21	26	10	19	15	11	151
5-20 lakh	17	26	14	27	25	25	23	32	22	211
20-50 Lakh	17	21	3	5	8	14	7	13	16	104
50-100 Lakh	4	5	5	0	5	5	6	6	10	46
>100 Lakh	1	2	2	1	0	2	2	1	6	17
Total----	51	74	41	54	64	56	57	67	65	529

Table-6 Classification of sampled establishments by product and by output

Output (Rs.)	Product/SSI Category----->									
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
<= 5 lakh	3	6	11	10	10	7	7	8	6	68
5-20 lakh	15	26	19	29	30	19	29	29	23	219
20-50 Lakh	17	22	4	7	12	14	9	14	14	113
50-100 Lakh	8	16	4	5	6	11	5	13	8	76
>100 Lakh	8	4	3	3	6	5	7	3	14	53
Total----	51	74	41	54	64	56	57	67	65	529

Table-7 Classification of sampled establishments by product and by size of employment

Size of Employment	Product/SSI Category----->						
	Chemicals & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Metal Products	Electrical Machinery & Apparatus
<= 5	10	12	10	14	2	13	12
6-10	15	29	11	21	10	20	17
11-15	7	12	7	7	4	9	6
16-20	5	11	4	12	13	4	7
21-25	2	2	4	5	4	5	2
More >25	12	8	5	5	23	6	21
Total----	51	74	41	64	56	57	65
							529

Table-8 Classification of sampled establishments not utilizing full capacity by product and by reason

Reasons	Product/SSI Category----->						
	Chemicals & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Metal Products	Electrical Machinery & Apparatus
Lack of demand	20	21	17	23	20	13	17
Power shortage	10	18	11	23	23	16	14
Equipment Problem	4	7	4	4	6	5	4
Non availability of raw material	13	16	8	5	5	7	9
Lack of funds	10	13	14	13	10	9	10
Labour Problem	6	10	5	6	6	3	4
Marketing Problem	25	31	30	30	25	22	26
Any Other Problem	0	1	0	0	0	1	0
Full capacity	17	23	11	22	19	19	24
Total----	105	140	61	126	114	95	108
							968

Note: Some units reported more than one reason and therefore the total may not tally with actual number

Table-9 Classification of sampled establishments by product and by nature of operation

Nature of Operation	<-----Product/SSI Category----->									
	Chemical & Chemical Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
Perennial	45	58	27	34	44	40	42	55	55	400
Seasonal	5	14	13	17	19	15	12	6	9	110
Casual	1	2	1	3	1	1	3	6	1	19
Total--->	51	74	41	54	64	56	57	67	65	529

Table-10 Classification of sampled establishments by product and by type of management

Product / SSI Category	<---Self Managed---><-Professionally Managed->			
	With Technical Quali.	Without Technical Quali.	With Technical Quali.	Without Technical Quali.
Chemical & Chemical products	11	33	6	1
Rubber & plastic products	19	37	9	9
Leather Products	13	23	2	3
Wood Products	8	39	1	6
Paper Product & Printing	22	34	4	4
Hosiery & Garments	16	27	6	7
Food Products	9	39	1	8
Metal Products	22	37	4	4
Electrical machinery & apparatus	21	29	9	6
Total--->	141	298	42	48
				529

Table-11 Classification of sampled establishments by product and by technology use

Product / SSI Category	Units Using Improved Technology	Units Without Improved Technology	Total
Chemical & Chemical products	42	9	51
Rubber & plastic products	54	20	74
Leather Products	19	22	41
Wood Products	29	25	54
Paper Products & Printing	41	23	64
Hosiery & Garments	45	11	56
Food Products	31	26	57
Metal Products	44	23	67
Electrical machinery & apparatus	51	14	65
Total--->	356	173	529

Table-12 Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category									Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
EXCLUDERS	1	1	0	0	0	0	0	1	3	
CLUSTER PUMP	0	0	0	0	0	0	0	1	1	
CNC MACHINE	0	0	1	0	0	0	0	1	2	
ROLLING MILL	0	1	0	0	1	1	1	1	5	
THREAD TRIMMING MACHINE	0	0	0	0	0	0	1	0	1	
SHEETING MACHINE	0	0	0	0	0	0	0	1	1	
WIPER MACHINE	0	0	0	0	1	0	0	0	1	
VALVE CONTROLLING	1	0	0	0	0	0	0	0	1	
GAS FUELING MACHINE	1	0	0	0	0	0	0	0	1	
VERTICAL INJECTION MACHINE	0	1	0	0	0	0	0	0	1	
DYE INJECTOR	0	1	0	0	0	0	0	1	2	
FORMING MACHINE	0	1	0	0	0	0	0	0	1	
PATTERN MAKER	0	0	1	0	0	0	0	0	1	
K-31MACHINE (TRADITIONAL)	0	0	1	0	0	0	0	0	1	
ANIMATION AND DESIGN MACHINE	0	0	0	0	2	1	0	0	3	
FIRE EXTINGUISHER	0	0	0	0	2	0	0	0	2	
MACHINERY MODIFICATION/REPAIRMENT	0	0	0	0	1	3	0	1	5	

Table-12 Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category									Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
BOILING TANK	4	2	0	0	1	2	1	0	10	
BURNERS AND GAS PI PE	3	0	0	0	0	0	0	0	3	
TRUMP AND WEIGHT MACHINE	2	0	0	2	1	0	0	1	6	
QUALITY TESTING MACHINE	0	1	0	1	3	1	0	5	11	
ROTARY MACHINE	2	3	0	1	0	1	0	0	8	
POLISTING MACHINE/	2	0	1	0	2	2	1	3	13	
POWER QATING MACHINE										
LATHE AND DRILL MACHINE	0	2	1	2	2	1	10	8	26	
KNITTING,WEAVING MACHINE,SPINNING MACHINE	0	0	0	0	4	0	0	0	4	
FOOD PROCESSOR AND	0	1	0	3	0	3	0	0	7	
ARTIFICIAL DEHYDRATION										
MULTI-COIL/WINDING MACHINE	0	0	0	1	0	0	0	0	2	
PNEUMATIC TOOLS	1	0	0	0	0	0	0	0	1	
PUNCH MACHINE	0	1	0	2	0	1	0	2	6	
ADHESIVE BONDING MACHINE	0	0	0	0	1	0	0	0	1	
LAMINATION MACHINE	0	1	0	0	2	0	0	0	3	
BORING MACHINE	0	0	0	0	3	0	0	0	3	
PARTING MACHINE	1	0	0	0	1	0	0	0	2	
ARA MACHINE	0	0	0	1	0	0	0	0	1	

Table-12 Classification of sampled establishment by product and by technology

Existing Technology	<-----Product/SSI Category----->	----->						
		Chemical & Rubber & Leather Products	Wood Products	Paper & Printing	Hosiery & Food Products	Metal Products	Electrical Machinery & Apparatus	Total
IRONING MACHINE	0	1	4	0	2	5	1	15
LEATHER MOULDER, MOULDING MACHINE	2	15	1	1	0	0	3	25
ZIGZAG, STITCHING, SPONGING AND SPRAYING MACHINE/EMBROIDARY MACH.	2	2	5	2	2	26	1	44
CUTTER MACHINE	8	5	7	17	13	9	1	78
FINISHING MACHINE	2	2	1	12	0	2	0	23
PRINTING MACHINE/C	2	1	0	0	26	0	0	29
COMPUTER PRINTER/WEB OFFSET PRINTING MACH.	1	3	2	3	4	2	1	27
MACHINERY (HAND MACHINERY & OTHER)	0	1	0	0	2	0	1	8
BINDING MACHINE	1	1	0	0	6	2	3	13
GRAPHIC BAR/COMPUTER SCALE	1	1	0	0	0	0	0	2
NEW TECHNOLOGY	1	1	0	0	0	1	2	14
FREEZER, COOLING TO	2	2	0	0	0	0	2	7
WET/DRY COLLING MACHINE/DRYING MECH.	11	19	3	3	2	1	10	63
BLENDER, GRINDER AND MIXTURE MACHINE	6	3	0	2	4	1	2	20
PACKING MACHINE/SEALING MACHINE/BENDER/COVER MACHINE	1	0	0	0	0	0	0	7
WELDING MACHINE	0	0	0	0	0	3	0	5
GENERATOR	3	0	0	0	0	0	2	6
FILTER	2	0	0	0	0	0	0	2
STORAGE TANK								

Table-12 Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
FUSING MACHINE	0	0	0	0	0	1	0	0	0	1	
COMPRESSOR	0	1	0	0	0	1	0	1	1	4	
WHEEL ADJUSTER	0	0	0	0	0	0	0	0	1	1	
COMPUTER AIDED DESIGN	0	0	0	0	0	2	0	1	0	3	
LOCK STITCH MACHINE	0	0	0	0	0	1	0	0	0	1	
SHAPING MACH.	0	0	0	0	0	0	0	1	0	1	
VOLT METER, WATT METER AND VARIOUS METERS	0	0	0	0	0	0	0	0	2	2	
HIGH VOLTAGE TESTER	0	0	0	0	0	0	0	0	1	1	
PNEUMATIC FIXES	0	0	0	0	0	0	0	0	1	1	
POWER PRESS	0	2	0	0	1	1	0	2	4	10	
HEADER MACHINE	0	0	0	0	0	0	0	1	0	1	
TURNER	0	0	0	0	0	0	0	2	1	3	
MOULDER	0	1	0	0	0	0	0	0	0	1	
COLOUR CODING	0	0	1	0	0	0	0	0	0	1	
BLOCKING SYSTEM PANEL MACHINE	0	1	0	0	0	1	0	0	0	2	
BRAISER CRUSHER	1	0	0	0	0	0	0	0	0	1	
REFINING MACHINE	1	0	0	0	0	0	1	0	0	2	

Table 12 Classification of sampled establishment by product and by technology

Existing Technology	<----->	Product/SSI Category----->										Total
		Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
PLANTING OF GREASE	1	0	0	0	0	0	0	0	0			1
DYES CHARGES	0	0	0	0	0	0	0	0	1			1
GAUGE MACHINE/ARA MACHINE	0	0	0	2	0	0	0	0	0			2
PLANERS	0	0	0	1	0	0	0	0	0			1
REFILLER PLANER	0	0	0	0	0	0	1	0	0			1
CHILLING MACHINE	0	0	0	0	0	0	1	0	0			1
MEALING	0	0	0	0	0	0	0	1	0			1
DISPERSION NEEDLES	0	0	1	0	0	0	0	0	0			1
OWEN MACHINE	1	1	0	0	0	0	0	0	0			2
Total----	66	78	30	53	74	85	41	73	72			572

note: some units are using more than one technology and therefore the total may not tally with actual number

Table-13 Classification of sampled establishment with improved technology by product and by source of technology

Table-13 Classification of sampled establishment with improved technology by product and by source of technology_s										
Source of Technology	Product/SSI Category-->									
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
TRADE SHOW (DOMESTIC/INTERNATIONAL)	9	9	1	3	3	5	2	2	6	40
REPRESENTATIVE CONSULTING ,CO EMPERPRIUR FRIEND	12	17	6	16	12	6	11	17	9	106
AWARENESS BY SSI	1	0	0	0	0	0	0	0	0	1
MAGAZINE /NEWS PAPER/INTERNET	15	18	9	13	14	22	6	21	12	130
TECHNICAL CONSULTANT/MARKET CONSULTATION/EXPORT	4	9	4	1	4	7	7	6	11	53
ADVERTISEMENT	7	12	4	4	14	8	6	9	16	80
OWN DECISION	3	2	0	3	3	0	2	0	0	13
PARTLY FINANCE/SELF FINANCE	0	1	2	0	0	1	0	0	0	4
TELEVISION	0	0	0	1	3	1	0	2	0	7
COMPANY SALESMAN	0	1	0	0	2	1	0	1	1	6
MANUFACTURER ASSN.	0	0	0	1	0	4	0	0	2	7
ANCILARY COMPANY	0	0	0	0	0	0	2	0	0	2
DOCTOR CONSULTANTS	0	0	0	0	0	0	0	0	1	1
OUT SOURCEING BY INDUSTRIAL GUIDELINE	0	1	0	0	0	0	0	0	2	3
RESEARCH PERSON/INSTITUTES	2	0	0	0	0	0	0	0	0	2
Total----	53	70	26	42	55	55	36	58	60	455
note: some units mentioned more than one source and therefore the total may not tally with actual number										

note: some units mentioned more than one source and therefore the total may not tally with actual number

Table-14 Classification of sampled establishments with advanced/improved technology by product and by impact on production

Product / SSI Category	Impact on Production/Output----->						Total
	<-----Improved Quality	Better capacity utilization	Increase in quantity	Increase in efficiency	Reduced cost of production	Achieved Competitiveness	
Chemical & Chemical products	22	21	25	16	24	14	122
Rubber & plastic products	42	17	31	18	29	15	152
Leather Products	19	14	12	9	5	6	65
Wood Products	19	8	13	8	13	6	67
Paper Products & Printing	33	24	32	26	22	10	147
Hosiery & Garments	26	21	28	17	17	9	118
Food Products	21	10	17	10	16	8	82
Metal Products	36	19	20	21	10	4	110
Electrical machinery & apparatus	37	19	32	21	26	14	149
Total--->	255	153	210	146	162	86	1012

Note: More than one impact on production have been pointed out by some units and therefore the total may not tally with actual number

Table-15 Classification of sampled establishments without improved technology by product and by barriers

Barriers in Technology Adoption	Product/SSI Category											Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Garments	Hosiery & Food Products	Metal Products	Electrical Machinery & Apparatus			
Lack of management skills/non availability of skills	0	4	3	6	3	3	7	6	2			34
Any Other Social reasons	1	1	2	0	1	1	2	2	3			13
Non awareness/lack of knowledge/information about the availability of the requisite technology	2	3	3	6	4	4	6	4	3			35
Nature and inadequacy of financial capacity	6	10	8	5	15	8	11	14	6			83
Financial aspects of technology making difficult to adopt by the unit	8	12	8	12	14	6	8	10	7			85
Economically not viable	5	9	10	16	10	3	13	10	8			84
The desire to "Avoid Risk"	5	12	6	6	5	7	10	9	5			65
Lack of adaptability to changing trends	2	5	3	2	1	4	4	4	3			30
Relative isolation from technology hubs	0	4	1	1	1	1	2	3	0			13
Low levels of R&D	5	9	3	2	4	5	3	5	11			47
Total----	34	69	47	56	58	42	66	67	50			489

Note: Some units have indicated more than one barrier and some have not mentioned any; therefore the total may not tally with actual number

Table-16 Classification of sampled establishment interested in modernizing of technology by products and by area for improvement

Area of Improvement	-----Product/SSI Category----->									
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total	
MARKETING PROFILE	2	0	0	1	4	1	3	0	0	11
LESS AND ENLARGEMENT AND TRANSPORTATION OF GOODS										
PRODUCTION AND MARKETING	4	9	5	4	2	3	4	9	45	
MACHINERY DEVELOPMENT	14	27	16	15	26	21	24	20	176	
ENT/MOULDING/GRINDING/RAW MATERIAL, COOLING BOX										
COLOUR EQUIPMENT A	0	1	1	1	2	0	0	0	6	
IND OPERAZATION SKILL										
MANAGEMENT	0	0	1	0	0	0	0	0	1	
CUTTING & DESINGNI	2	2	4	2	11	4	1	1	31	
NG/PACKAGING OF FINISHED GOODS, DYING										
COMPUTERIZATION W1	0	1	0	1	0	0	0	0	2	
TH NEW SOFTWARE TECHNOLOGY										
D.T.P.LASER SETER	0	0	0	2	0	0	0	0	2	
FINANCE AND OTHER	0	0	0	1	0	0	0	1	2	
SIGMENTS										
POLISHER	0	0	3	0	0	2	0	2	10	
FURNISHING	0	0	2	0	0	0	0	0	7	
LANS	0	1	0	0	0	0	1	0	2	
PRESS MACHINE	0	0	0	0	1	0	3	1	5	
THREAD MACHINE	0	1	0	0	0	0	1	0	2	
OFFSET PRINTING/EL	0	1	0	13	0	0	0	0	14	
ECTRONIC PRINT										
EXTRUSION LINE	0	1	0	0	0	0	0	0	1	
Total---->	22	44	28	43	43	33	34	34	317	

Note: All units did not respond and some have indicated more than one area for improvement therefore the total may not tally with actual number.

Table-17 Classification of sampled establishments by product and by relations with large industries

Product / SSI Category	Relation With Large Industries----->							Total
	Supplying finished/semi finished goods	Purchase of raw materials	Rendering services	Helped in marketing	Use of tech- nology	For technical know how	Others	
Chemical & Chemical products	2	4	1	2	4	1	0	14
Rubber & plastic products	9	5	1	3	5	5	0	28
Leather Products	3	2	3	0	0	1	0	9
Wood Products	1	3	3	0	1	0	0	8
Paper Products & Printing	11	1	6	2	2	0	1	23
Hosiery & Garments	3	4	3	2	1	0	0	13
Food Products	4	5	1	3	1	2	0	16
Metal Products	4	4	4	8	6	2	0	28
Electrical machinery & apparatus	3	3	2	1	0	0	0	9
Total---->	40	31	24	21	20	11	1	148

Note: All units are not associated with the large industries and some are associated in more than one area, therefore the total may not tally with actual number.

Table-18 Classification of sampled establishments by product and by Training needs

Product / Category	Training Needs-->			
	Technical know how	Marketing	Financial management	Other
Chemical & Chemical products	12	21	9	0
Rubber & plastic products	15	23	17	0
Leather Products	15	15	5	0
Wood Products	16	23	7	1
Paper Products & Printing	28	30	24	2
Hosiery & Garments	32	25	10	4
Food Products	17	20	15	0
Metal Products	25	20	18	0
Electrical machinery & apparatus	28	29	11	1
Total--->	180	206	116	8

Note: All units did not mention training needs and some units have indicated training needs in more than on field; therefore total may not tally with actual number.

Table-19 Classification of sampled establishment by product and by future planning of development

Plans for Development	Product/SSI Category----->										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
MANAGEMENT REFORM	4	0	0	2	3	3	3	0			20
MARKETING OUTSOURCING AND ADVERTISMENT											
MARKET SEGMENT/PRO	12	13	3	16	7	4	10	12			84
DUCTION OF SOAP IN HIGHER QUALITY/PRODUCTION LEVEL											
MACHENICAL SEGMENT	19	36	22	22	31	29	24	24			230
/MOULDING MACHINE/CUTTING MACHINE/PROCESSING MACHINE/GRINDING MACHINE											
ADVERTISMENT, POSTE	1	0	0	0	0	0	0	0			1
RS AND OTHER SIDE											
UPTODATE IN POWER	1	0	0	0	0	0	0	0			1
SUPLIER											
TECHNOLOGY	1	4	5	2	2	1	6	7			31
COMPUTER DESIGNER/	0	2	8	14	8	1	6	4			51
SOFTWARE/PRINTING/EMBROIDING											
AIR COOLER, PURIFI	0	2	3	2	6	2	3	1			20
ER, AIR-CONDITIONER, GRINDER											
ELECTRIC SET	0	0	1	1	1	1	3	1			8
PLANETU P-44	0	0	0	1	0	0	0	0			1
STRONG BALE PROMOT	0	0	0	0	0	0	1	0			1
ION/STRONG VILLAGE SCHEME											
OIL ELUVATION	0	0	0	0	0	0	0	1			1
TRAINING OF SALES	0	0	0	0	0	0	0	1			1
PEOPLE											
PRICE OF PRODUCT	0	0	0	0	0	0	0	1			1
WOOD DESIGNNER MAC	0	0	0	0	0	0	0	0			2
HINE											
FIRNISHING MACHINE	2	0	3	1	0	0	0	2			14
/POLISH MACHINE											
CLOUR COATES MACHI	0	0	1	1	1	0	0	0			5
NE											
FURING MACHINE	0	0	0	0	1	0	0	0			1
5 THREAD OVER LOCK	0	1	0	0	1	0	0	0			2
Total---->	40	58	46	62	61	41	56	54			475

Note: All units have not mention future planning and some have pointed out more than one area. Hence, the total may not tally with actual number.

Table-20 Classification of sampled establishments by product and by effect of social background on development

Product / SSI Category	<-----Social Background----->				Total
	Education, general and technical	Religion and caste	Cultural background	Any other	
Chemical & Chemical products	40	3	13	0	56
Rubber & plastic products	57	4	13	3	77
Leather Products	28	1	13	0	42
Wood Products	36	5	12	1	54
Paper Products & Printing	52	3	18	1	74
Hosiery & Garments	47	8	19	1	75
Food Products	48	3	9	0	60
Metal Products	41	10	18	0	69
Electrical machinery & apparatus	48	0	9	1	58
Total--->	397	37	124	7	565

Note: Some units have indicated the effect of social background on development in more than one area and therefore, the total may not tally with actual number.

Table-21 Classification of sampled establishment by product and by discriminatory factors and experience thereon

Discriminatory Factor	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
GENDER	0	1	0	0	1	1	1	1	0	5	
CASTE	0	0	0	0	0	0	0	1	0	1	
DOMICILE	0	2	0	0	0	0	0	2	0	4	
OTHER FACTORS	10	10	8	3	2	3	1	4	4	45	
NOT SUFFICIENT FOR GOVT./BANK/POLICY	14	11	7	5	8	13	7	8	9	82	
DON'T KNOW UNWARE	10	20	10	23	24	17	22	22	28	176	
PAPER WORK TAKING MORE TIME	1	2	0	1	3	1	0	1	2	11	
BRIBED	1	2	0	3	0	0	0	3	2	11	
IMPARTIAL POLICY BY SSI	1	2	0	9	6	4	13	8	2	45	
ALL	1	1	1	0	1	0	0	2	1	7	
GOVT. OFFICIAL GIVES MORE PREFERENCE TO THE ENTERPRISES HAVING GOOD RELATION	0	0	0	0	1	0	0	0	0	1	
Total---->	38	51	26	44	46	39	44	52	48	388	

Note: All units did not respond and more than one factor has been indicated by some units, therefore total may not tally with actual number.

Table-22 Classification of employees in sampled establishment by product and by category and sex

Product / SSI Category	<-----Number of employees----->											
	Technical		Contractual		Daily Wages		Honorary		Other		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
Chemical & Chemical products	146	3	157	13	514	32	0	0	49	5	866	53
Rubber & plastic products	157	7	361	16	530	51	0	0	38	3	1086	77
Leather Products	81	5	168	13	287	34	0	0	27	2	563	54
Wood Products	76	4	67	15	433	3	0	0	46	3	622	25
Paper Products & Printing	149	2	95	3	543	30	0	0	44	1	831	36
Hosiery & Garments	303	11	420	40	752	125	0	0	25	1	1500	177
Food Products	113	2	114	20	450	11	0	0	42	4	719	37
Metal Products	81	0	135	10	593	23	0	0	44	1	853	34
Electrical machinery & apparatus	355	81	185	24	688	64	0	0	54	3	1282	172
Total----	1461	115	1702	154	4790	373	0	0	369	23	8322	665

Table-23 Average employment in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	M	F	M	F	M	F
Chemical &	17	1	16	2	17	1
Chemical products						
Rubber & plastic	17	1	10	1	15	1
products						
Leather Products	19	1	9	2	14	1
Wood Products	13	0	9	1	12	0
Paper Products &	14	1	12	0	13	1
Printing						
Hosiery &	29	3	16	2	27	3
Garments						
Food Products	16	0	9	1	13	1
Metal Products	12	0	15	1	13	1
Electrical	20	3	18	3	20	3
machinery & apparatus						
Total--->	18	1	12	1	16	1

Table-24 Average working capital in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.290	0.169	0.269
Rubber & plastic products	0.844	0.209	0.672
Leather products	0.418	0.130	0.264
Wood Products	0.168	0.101	0.137
Paper Products & Printing	0.202	0.128	0.176
Textiles & Garments	0.310	0.220	0.292
Food Products	0.294	0.220	0.260
Metal Products	0.382	0.172	0.310
Electrical machinery & apparatus	0.830	0.654	0.792
Total--->	0.453	0.204	0.371

Table-25 Average output in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)
Chemical & Chemical products	0.820	0.981	0.444	0.759	0.753	0.942
Rubber & plastic products	1.720	1.854	0.340	0.383	1.347	1.456
Leather Products	0.657	0.787	0.153	0.174	0.387	0.458
Wood Products	0.312	0.792	0.158	0.165	0.241	0.502
Paper Products & Printing	0.387	0.380	0.172	0.190	0.310	0.312
Hosiery & Garments	0.527	0.580	0.238	0.254	0.470	0.516
Food Products	0.887	1.017	0.381	0.437	0.656	0.752
Metal Products	0.300	0.347	0.438	0.546	0.348	0.415
Electrical machinery & apparatus	1.343	1.383	0.944	1.291	1.257	1.363
Total--->	0.836	0.950	0.335	0.414	0.672	0.775

Table-26 Capital/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.016	0.010	0.015
Rubber & plastic products	0.048	0.019	0.043
Leather Products	0.021	0.012	0.018
Wood Products	0.012	0.010	0.011
Paper Products & Printing	0.014	0.010	0.013
Heslery & Garments	0.009	0.012	0.010
Food Products	0.018	0.022	0.020
Metal Products	0.031	0.011	0.023
Electrical machinery & apparatus	0.037	0.031	0.035
Total--->	0.024	0.016	0.022

Table-27 Output/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.054	0.044	0.052
Rubber & plastic products	0.106	0.035	0.093
Leather Products	0.040	0.016	0.030
Wood Products	0.058	0.017	0.042
Paper Product & Printing	0.027	0.015	0.023
Hosiery & Garments	0.018	0.014	0.017
Food Products	0.064	0.044	0.057
Metal Products	0.028	0.036	0.031
Electrical machinery & apparatus	0.061	0.061	0.061
Total--->	0.050	0.032	0.046

Table-28 Capital/Output Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category	Using Improved Technology	Without Improved Technology	Total
Chemical & Chemical products	0.296	0.223	0.285
Rubber & plastic products	0.455	0.545	0.462
Leather Products	0.531	0.749	0.576
Wood Products	0.212	0.612	0.273
Paper Products & Printing	0.533	0.671	0.563
Hosiery & Garments	0.534	0.867	0.567
Food Products	0.289	0.504	0.346
Metal Products	1.101	0.314	0.746
Electrical machinery & apparatus	0.600	0.506	0.581
Total--->	0.476	0.493	0.479

Table-29 Classification of sampled establishment by product and by different experience with the bank/ financing Institutions

Experience With Bank/ Financial Institutions	Product/SSI Category										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
NO NEED OF FINANCE	4	8	3	11	8	7	2	6			53
GOOD	20	30	23	29	22	11	32	30			21
HARD PAPER WORK/OT	2	4	3	3	3	2	3	4			27
HER DOCUMENTRY PROBLEM											
BIBES FROM US	1	0	0	1	0	0	0	0			2
POSITIVE SCENCE OF	1	2	2	0	1	0	1	1			8
RESPONCE TO ENLARGE SSI											
TO PROMOTE THE TEC	1	2	1	0	0	1	4	2			14
KNOLGY											
BANKS GIVE FINANCIAL	1	0	0	2	1	0	1	1			7
ADD											
NO INTEREST TO	0	1	0	0	0	0	0	0			1
IMPROVE THE SSI											
NON-COOPERATIVE	0	1	0	0	0	1	1	0			3
SAD EXPERIENCE, TAK	6	8	9	7	15	10	8	11			84
E. MORE TIME FOR PROCESSNG WORK INTEREST RATES ARE HIGH											
GIVES PROPER CO-OP	3	7	4	14	7	8	17	6			68
ERATION, CONSULTATION AND-OTHER FACILITIES											
DON'T HAVE SUCH TY	8	9	6	3	2	13	10	8			61
PE OF EXPERIENCE											
NATIONAL BANK ARE	0	2	0	0	0	0	0	3			5
BAISED IN COMPARISION TO FOREGIN BANK											
Total----	47	72	42	52	59	53	79	72			546

Note: Some units have indicated more than one experience and some have not mention any therefore, the total number may not tally with actual number.

Table-30 Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
CREATE AWARENESS ABOUT MARKET WANTS AND BUSINESS AND GOVT.SUBSIDES	16	25	12	11	23	27	17	17	27	175	
AWARD SCHEEM AND CREDIT GUARANTEE SCHEEM	2	4	2	2	1	2	2	3	1	19	
LOWER TAXATION AND EXCISE DUTY	24	24	10	23	23	20	26	18	24	192	
LOWER PAPER WORK	3	1	2	0	2	0	0	2	1	11	
TECHNOLOGY AWARENESS	14	12	12	17	17	13	7	12	14	118	
MARKETING IDENTIFICATION BY SSI OFFICIAL	3	7	0	6	3	5	3	1	3	31	
POLICIES FOR SSI SHOULD BE NOT HARDER THAN OTHER INDUSTRY	1	3	0	2	2	0	1	1	1	11	
PROVISION FOR LOAN AND CHEAPER GOODS FOR BUSINESS AND A GOOD POLICY AND LOAN AMOUNT SHOULD BE RISE	7	8	6	6	13	10	5	8	10	73	
TO CONTROL THE PRICE AND QUALITY FLUCTUATION OF RAW MATERIAL	13	11	5	3	6	9	6	4	4	61	
LEADING INSTITUTIONS SHOULD PROPERLY EVALUATE THE POTENTIAL	6	3	0	4	7	1	2	5	1	29	
FULL GOVT.HELPS IN RESETTING OF UNITS	4	4	0	0	1	0	2	5	0	16	
NO PROPER COUNSELLING TO THE NEW ENTREPRENURES BY THE GOVT.	1	0	0	1	1	3	1	3	0	10	

Table-30 Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	-----Product/SSI Category-----									Total
	Chemicals & Chemical Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
CONSIDERABLE DELAY IN SUBMEETING PROPOSAL TO SETUP SSI	2	0	0	0	1	1	0	0	0	4
LOWER RATE OF INTEREST AND SHORT PAPER WORK	5	11	7	11	10	6	6	5	10	71
DEVELOPMENT OF INFRASTRUCTURE LIKE ROADS, TRANSPORTATION, GENERATION, SUPPLY OF POWER AND WATER ETC.	3	5	0	5	3	5	0	3	4	28
OTHER LIBERAL PLANNING FOR SSI SHOULD BE DONE BY GOVT.	5	7	1	1	3	3	2	9	4	35
TAKE A PANEL OF INDUSTRIALIST	1	0	0	3	0	1	0	1	1	7
EXPORT POLICY SHOULD BE LIBERALISED	1	2	0	4	0	3	2	2	1	15
LOWER RATE OF ELECTRICITY AND ENSURE CONTINUOUS POWER SUPPLY	5	8	2	7	9	16	6	1	12	66
HUMAN POWER MANAGEMENT AND POWER MANAGEMENT	1	11	1	1	6	2	1	2	3	28
ASIAN MARKET VARIETY OF FASHIONABLE PLASTIC GOODS LIKE CHAIR, TABLE ETC., ITEMS FROM INDIA	0	1	0	0	0	0	0	0	0	1
TRAINING TO WORKERS	0	2	2	1	2	3	1	0	1	12
CREATING A NEW POLICY FOR SSI SECTOR AND GOVT. SHOULD KEEP GOOD RELATION WITH SSI	2	2	7	11	4	7	3	12	9	57
GOVT. SHOULD MAKE A JOINT APPRAISAL MECHANISM WHICH ENSURE EVALUATION OF PROMOTERS SKILL, EQUITY, RAW MATERIAL	2	2	0	7	7	7	4	2	10	41

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Table-30 Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper & Printing	Garments	Hosiery & Food Products	Metal Products	Mechanical Machinery & Apparatus			
WATER PROBLEM SHOULD SOLVE	4	2	3	5	2	5	1	8			32
AREA SHOULD BE APPROVED	0	0	0	0	0	1	2	2			5
OWN STARTING BY OWN CASH	0	0	0	1	0	0	0	1			2
PROVISION OF SERVICES OF PROFESSIONAL CONSULTANTS TO THE SECTOR AND PROVIDE INFORMATION ABOUT DIFFICULTIES	0	0	0	0	1	1	2	0			4
POLLUTING INDUSTRY MUST BE REMOVED FROM RESIDENTIAL AREA BUT SUFFICIENT COMPENSATION FOR UPROOTING THEM	0	0	0	0	1	1	0	0			2
INCREASE THE NO. OF WORKERS UNDER THE SHOP & ESTABLISHMENT TO MINIMUM 30	0	0	0	2	0	0	0	0			2
HIGHER ACCELERATION DEPRECIATION	0	1	0	2	0	1	0	3			7
FINISHED CUSTOMS DUTY FOR ALL GOODS IMPORTED FOR USE IN RDX PROJECT BY SSI	0	2	0	3	0	1	0	1			7
VENDOR DEVELOPMENT PROGRAMME FOR LINKAGES BETWEEN SMALL, MEDIUM AND LARGE INDUSTRIES	0	2	2	0	0	1	0	1			8
TRUST ON RURAL MARKETING	2	2	2	2	0	1	2	2			14
COMPREHENSIVE POLICY FOR INVESTMENT MARKETING, BRAND PROMOTION AND OVERSEAS MARKET ACCESS	0	2	3	0	1	1	0	0			8
REGISTRATION WORK SHOULD COMPLETE ON ONE WINDOW AND EXPLORING THE REVIVAL OF VIABLE SICK UNIT	2	1	3	2	3	0	3	1			17

Table-30 Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
POWER COMMITTEE FOR RECOMMENDING SINGLE COMPREHENSIVE LEGISLATION FOR SSI UNITS	2	3	1	4	0	0	1	0	0	11	
EXPLORING POSSIBILITIES OF RECURITISATION OF GUARANTEED LOANS	2	2	1	1	0	3	0	0	3	12	
SHOULD REDUCE THE LOANS AND TIME GAP BETWEEN SANCTION OF TERM LOAN AND WORKING CAPITAL LOANS	5	6	5	3	0	3	0	3	5	30	
PLACEMENT OF FOREIGN DIRECT INVESTMENT IN SSI SECTOR; UNDER AUTOMATIC RAUTE WITHIN THE ENHANCED EQUITY	0	1	0	2	0	1	1	1	1	7	
THE SCHEDULE OF DISBURSEMENT AND IMPLEMENTATION OF PROJECT SHOULD BE STRICTLY ADHERED TO	0	1	2	1	0	0	0	1	0	5	
ADOPTING OF "TURN-KEY CONCEPT" FOR ENTREPRENEURSHIP TRAINING	0	0	0	0	0	1	0	2	0	3	
SPECIAL FOCUS ON WOMEN ENTREPRENEURS WEAKER SACTIONS, HANDICAPPED AND EX-SERVICEMAN AND SC/ST ENTREPRENEURS	0	0	1	2	0	1	2	3	0	9	
SETTING UP DEBT RECOVERY TRIBUNALS AND MNC SHOULD BAN IN INDIA	0	0	1	0	0	0	0	1	1	3	
INTRODUCE STANDARD FOR TESTING AND FUNCTIONS INDUSTRIAL PARKS	0	0	1	0	0	0	0	1	1	3	
EFFORTS TO INTRODUCE UTILITY PATENT PROTECTION FOR SMALL INNOVATIONS AND MAKE A ATTENTION TO REAARCS	0	1	0	0	1	2	0	1	1	6	
PENSION FUNDS, INSURANCE COMPANIES AND MUTUAL FUNDS SHOULD BE ALLOWED TO CONTRIBUTE 5 PERCENT OF THEIR UNITS PUTTING UP SILVER AND COSTUME JEWELLERIES SHOUL BE GIVEN TAX INCENTIVES	0	0	0	0	0	0	0	0	1	1	

Table-30 Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category											Total
	Chemicals & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus				
CHANGING THE DEFINITION OF CLASSIFYING THE SSI UNITS AS SICK BY REDUCING THE NON-PERFORMING PERIOD	0	0	1	0	0	1	0	0	0	0	2	
POWER SHOULD COME IN PRIVATE SECTOR	0	1	1	0	0	0	0	0	0	0	2	
UNDER THE SCHEME OF CAPITAL SUBSIDY OF 12 PERCENT FOR INVESTMENT IN TECHNOLOGY UPGRADEATION IN SELECTED ENTERPRISES	1	3	0	0	0	1	2	2	1	0	9	
CONSIDERING THE LIMITED INVESTMENT IN THIS SECTOR THE ENTREPRENEURS MAY NOT FIND IT FEASIBLE TO ENGAGE	0	1	0	2	0	1	0	0	1	0	5	
THE SANCTION OF TERM LOAN AND WORKING CAPITAL ARE NOT TIED UP PROPERLY MORE OVER THE SANCTIONED AMOUNT	1	1	0	2	0	3	2	4	2	4	13	
STRENGTHENING NATIONAL ENTREPRENEURSHIP DEVELOPMENT BOARD	5	3	4	3	2	3	4	3	4	3	30	
SPECIAL THRUST ON SMALL AGRO INDUSTRIES	0	0	2	1	1	0	0	2	0	2	8	
FUND SHOULD MADE AVAILABLE FOR MODERNISATION OF SSI AT A CONCESSIONAL RATE ON INTEREST ON EASY INSTALLMENT	1	2	1	1	0	2	0	2	0	2	9	
CONSTITUTION OF STATE LEVEL ADVISORY BOARDS	1	0	0	0	0	1	0	0	0	0	2	
IMMEDIATE SERVICE BY GOVT/GOVT. BACKUP/REDUCE INSPECTOR	0	0	0	1	0	0	0	0	0	0	2	
Total----	147	190	101	159	165	167	147	190	147	190	1394	

Note: More than one suggestions were given by the SSI units and therefore, the total may not tally with actual number.

Table 31 Classification of establishment by product and by way of respondents as competition in domestic and international markets

Competition	Product/SSI Category													Total	
	Chemical & Rubber Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus							
Chemical & Rubber Products	8	8	13	9	3	9	5	11	13						79
Leather Products	1	2	0	1	0	0	0	0	0						4
Wood Products	1	0	0	0	0	0	0	0	0						1
Paper & Printing	1	4	2	1	3	1	1	2	1						16
Hosiery & Garments	0	6	0	0	2	0	4	2	3						17
Food Products	0	0	1	1	0	0	0	0	0						2
Metal Products	0	0	0	1	0	0	0	0	0						1
Electrical Machinery & Apparatus	0	0	0	0	1	0	0	0	0						1
DON'T GIVE BETTER RESULTS	0	0	0	0	1	0	0	0	0						1
MEDIA PUBLICITY AND D BY PRODUCING GOODS OF INTERNATIONAL STANDARD	0	0	0	0	0	1	0	0	0						1
TRADE FAIR	0	0	0	0	0	2	0	1	0						3
Total----	11	20	16	13	9	13	10	16	17						125

Note: A few units have responded to the question of competition.

Table-32 Classification of service provider establishments by product and by opinion with regards to improved technology for improving the productivity/ marketability of services.

Opinion	--Product/SSI Category-->										Total
	Chemicals & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
GOOD SALES	0	0	0	0	0	0	0	1	0		1
LABOUR PROBLEM	1	0	0	0	2	0	0	2	3		8
COST FACTOR	0	0	0	0	0	0	0	0	1		1
MANAGEMENT	0	0	0	0	0	0	0	0	1		1
LACK OF DEMAND	0	2	0	2	3	1	2	2	3		15
Total--->	5	16	4	10	29	9	10	22	15		120

Note: The data relates to service provider units only.

State->Maharashtra
Table-1A Classification of sampled establishments by product and by year of establishment

Year of Establishment	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
Prior to 1970	6	6	2	3	6	2	2	3	5		35
1971-1980	1	4	3	2	4	2	1	8	5		30
1981-1990	2	10	5	3	6	3	7	5	6		47
1991-2000	6	2	1	2	5	5	2	3	2		28
After-2000	0	0	0	0	0	2	2	0	0		4
Total---	15	22	11	10	21	14	14	19	18		144

Table-2A Classification of sampled establishments by product and by main activity

Main Activity	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garment Products	Food Products	Metal Products	Electrical Machinery & Apparatus			
Manufacturing	13	20	9	8	5	8	11	14	18		106
Processing	1	1	1	3	14	6	5	5	0		36
Repair	0	0	0	0	0	0	0	2	0		2
Storage	0	0	0	0	0	0	1	0	0		1
Other	1	2	2	0	7	1	0	0	0		13
Total---	15	23	12	11	26	15	17	21	18		158

Note: Some units are engaged in more than one activity therefore the total may not tally with actual number.

Table-3A Classification of sampled establishments by product and by type of ownership

Type of Ownership	Product/SSI Category										Total
	Chemical & Chemical Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
Self	3	4	3	1	0	1	1	2	2	17	
Partnership	4	9	2	2	8	2	2	8	6	43	
Prop.	0	4	6	4	10	8	10	6	5	53	
Company	8	5	0	3	3	3	1	3	5	31	
Total---	15	22	11	10	21	14	14	19	18	144	

Table-4A Classification of sampled establishments by product and by fixed capital

Fixed Capital (Rs.)	Product/SSI Category										Total
	Chemical & Chemical Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
< 5 Lakh	1	0	0	1	1	0	0	3	2	1	9
5-10 Lakh	2	3	0	1	2	2	2	3	0	3	16
10-20 Lakh	2	3	2	0	4	2	2	3	3	1	20
20-50 Lakh	4	10	7	7	10	9	9	5	10	7	69
>50 Lakh	6	6	2	1	4	1	1	0	4	6	30
Total----	15	22	11	10	21	14	14	14	19	18	144

Table-5A Classification of sampled establishments by product and by working capital

Working Capital (Rs.)	Product/SSI Category----->									
	Chemicals & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
<= 5 lakh	4	3	4	3	6	6	9	5	3	43
5-20 lakh	5	10	3	5	9	8	4	8	6	58
20-50 Lakh	5	5	0	2	3	0	0	6	7	28
50-100 Lakh	1	4	4	0	3	0	1	0	2	15
Total----	15	22	11	10	21	14	14	19	18	144

Table-6A Classification of sampled establishments by product and by output

Output (Rs.)	Product/SSI Category									Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
<= 5 lakh	2	1	1	1	3	6	3	0	2	19
5-20 lakh	2	6	6	5	8	6	8	11	5	57
20-50 Lakh	5	5	1	2	4	2	3	2	7	31
50-100 Lakh	4	10	3	2	3	0	0	6	3	31
>100 Lakh	2	0	0	0	3	0	0	0	1	6
Total---	15	22	11	10	21	14	14	19	18	144

Table-7A Classification of sampled establishments by product and by size of employment

Size of Employment	Product/SSI Category							Total
	Chemical, Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Prin- ting	Hosiery & Food Garments Products	Metal Products	Electrical Machinery & Appara- tus
<5	1	1	0	0	2	1	3	2
6-10	1	7	2	2	8	3	3	4
11-15	3	3	3	1	1	1	5	1
16-20	1	6	1	4	8	4	4	0
21-25	0	2	2	2	1	1	3	0
More >25	9	3	3	1	1	4	1	11
Total---	15	22	11	10	21	14	19	18

Table-8A Classification of sampled establishments not utilizing full capacity by product and by reason

Reasons	Product/SSI Category							Total
	Chemical, Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Prin- ting	Hosiery & Food Garments Products	Metal Products	Electrical Machinery & Appara- tus
Lack of demand	1	0	0	0	2	0	1	2
Power shortage	1	1	0	0	3	0	0	0
Equipment Problem	1	0	0	0	1	1	0	0
Non availability of raw material	1	1	0	0	1	0	1	1
Lack of funds	0	1	1	0	1	1	1	0
Labour Problem	0	0	1	0	1	1	1	1
Marketing Problem	1	1	0	0	3	0	1	0
Full capacity	10	17	8	6	11	11	16	13
Total---	15	21	10	6	23	14	23	15

Note: Some units mention more than one reason and some have not responded therefore the total may not tally with

Table-9A Classification of sampled establishments by product and by nature of operation

Nature of Operation	<-----Product/SSI Category----->								
	Chemical& Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
Perennial	14	21	10	9	13	11	17	17	124
Seasonal	0	0	1	1	7	2	1	0	14
Casual	1	1	0	0	1	1	1	1	6
Total----	15	22	11	10	21	14	19	18	144

Table-10A Classification of sampled establishments by product and by type of management

Product / SSI Category	<---Self Managed---><---Professionally Managed-->			
	With Technical Quali.	Without Technical Quali.	With Technical Quali.	Without Technical Quali.
Chemical & Chemical products	7	2	6	0
Rubber & plastic products	9	3	7	3
Leather Products	8	2	0	1
Wood Products	5	2	1	2
Paper Product & Printing	10	6	3	2
Hosiery & Garments	10	0	3	1
Food Products	4	6	1	3
Metal Products	13	3	2	1
Electrical machinery & apparatus	9	2	6	1
Total----	75	26	29	14

Table-11A Classification of sampled establishments by product and by technology use

Product / SSI Category	Units Using Improved Technology	Units Without Improved Technology	Total
Chemical & Chemical products	11	4	15
Rubber & plastic products	14	8	22
Leather Products	5	6	11
Wood Products	6	4	10
Paper Products & Printing	13	8	21
Hosiery & Garments	11	3	14
Food Products	8	6	14
Metal Products	9	10	19
Electrical machinery & apparatus	15	3	18
Total--->	92	52	144

Table-12A Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
LEATHER MOULDER, MOULDING MACHINE	0	1	0	1	0	0	0	0	0	2	
ZIGZAG, STITCHING, SPOUGING AND SPRAYING MACHINE/EMBROIDARY MACH.	0	0	0	1	0	7	1	0	0	9	
CUTTER MACHINE	0	0	2	1	1	0	0	0	0	4	
FINISHING MACHINE	1	0	0	2	0	0	0	0	0	3	
PRINTING MACHINE/COMPUTER PRINTER/WEB OFFSET PRINTING MACH.	1	0	0	0	4	0	0	0	0	5	
MACHINERY (HAND MACHINERY & OTHER)	0	2	2	2	2	0	0	2	5	15	
BINDING MACHINE	0	0	0	0	0	0	0	0	1	1	
GRAPHIC BAR/COMPUTER SCALE	0	1	0	0	2	0	1	0	0	4	
NEW TECHNOLOGY	1	0	0	0	0	1	1	5	3	11	
FREEZER, COOLING TOWER/DRY COLLING MACHINE/DRYING MECH.	0	0	0	0	0	0	1	0	0	1	
BLENDER, GRINDER AND MIXTURE MACHINE	4	9	1	0	2	0	1	2	3	22	
PACKING MACHINE/SEALING MACHINE/BENDER/COVER MACHINE	0	1	0	1	0	0	0	0	0	2	
FILTER	3	0	0	0	0	0	1	0	0	4	
BOILING TANK	1	0	0	0	0	0	0	0	0	1	
BURNERS AND GAS PIPING	1	0	0	0	0	0	0	0	0	1	

Table-12A Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category										Total
	Chemicals & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
QUALITY TESTING MACHINE	0	0	0	1	0	3	0	0	1	5	
CHINE											
ROTARY MACHINE	2	2	0	1	1	0	0	0	0	6	
POLISHING MACHINE/ POWER QATING MACHINE	2	0	0	0	0	2	0	0	0	4	
LATHE AND DRILL MACHINE	0	0	0	1	0	0	0	0	1	2	
CHINE											
FOOD PROCESSOR AND ARTIFICIAL DEHYDRATION	0	0	0	0	0	0	3	0	0	3	
VOLT METER, WATT METER AND VARIOUS METERS	0	0	0	0	0	0	0	0	1	1	
Total---	16	16	5	11	12	13	9	9	15	106	

Note: Some units are using more than one technology and therefore the total may not tally with actual number.

Table-13A Classification of sampled establishment with improved technology by product and by source of technology

Source of Technology	Product/SSI Category									Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
TRADE SHOW (DOMESTIC/INTERNATIONAL)	6	8	1	2	2	0	2	6	32	
REPRESENTATIVE CONSULTING ,CO EMPERPRIUR FRIEND	3	3	3	1	1	4	2	3	20	
MAGAZINE /NEWS PAPER/INTERNET	0	0	0	0	0	0	0	1	1	
TECHNICAL CONSULTANT/RT/MARKET CONSULTATION/EXPORT	0	0	0	0	0	2	0	0	2	
ADVERTISEMENT	1	2	1	1	4	2	3	2	16	
OWN DECITION	2	0	0	1	1	1	0	0	5	
COMPANY SALESMAN	0	1	0	0	0	1	0	0	2	
MANUFACTURER ASSN.	0	0	0	1	0	3	0	2	6	
ANCILARY COMPANY	0	0	0	0	0	1	0	0	1	
Total----	12	14	5	6	8	11	7	14	85	

Note: Some units did not mention the source and some mention more than one therefore the total may not tally with actual number.

Table-14A Classification of sampled establishments with advanced/improved technology by product and by impact on production

Product / SSI Category	Impact on Production/Output----->					
	Better capacity utilization	Increase in quantity	Increase in efficiency	Reduced cost of production	Achieved Competiti- veness	Total
Chemical & Chemical products	11	11	11	11	10	65
Rubber & plastic products	14	11	10	14	11	72
Leather Products	5	5	5	5	5	30
Wood Products	6	6	6	6	3	33
Paper Products & Printing	13	13	13	13	8	72
Hosiery & Garments	11	11	11	11	8	63
Food Products	8	8	8	8	8	48
Metal Products	9	7	9	6	2	42
Electrical machinery & apparatus	14	15	15	12	11	81
Total--->	91	87	88	86	66	506

Note: More than one impact has been mentioned by the units and therefore the total may not tally with actual number.

Table-15A Classification of sampled establishments without improved technology by product and by barriers

Barriers in Technology Adoption	<-----Product/SSI Category----->										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
Lack of management skills/non availability of skills	0	0	0	0	1	1	1	2	0	5	
Any Other Social reasons	1	0	0	0	1	0	0	2	1	5	
Non awareness/lack of knowledge/information about the availability of the requisite technology	1	1	1	1	2	1	1	0	1	9	
Nature and inadequacy of financial capacity	5	5	2	0	10	4	3	7	4	40	
Financial aspects of technology making difficult to adopt by the unit	5	6	2	2	11	3	1	4	3	37	
Economically not viable	2	4	3	3	5	0	6	5	3	31	
The desire to "Avoid Risk"	3	10	3	2	1	4	5	4	3	35	
Lack of adaptability to changing trends	0	5	1	1	1	1	0	3	4	16	
Relative isolation from technology hubs	0	3	0	0	1	0	1	0	0	5	
Low levels of R&D	5	9	3	1	1	4	1	4	8	36	
Total--->	22	43	15	10	34	18	19	31	27	219	

Note: Some units have pointed out more than one barriers and therefore the total may not tally with actual number.

Table-16A Classification of sampled establishment interested in modernizing of technology by products and by area for improvement_8

Area of Improvement	Product/SSI Category										Total
	Chemical & Rubber Products	Chemical Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
PRODUCTION AND MARKETING	1	2	1	2	0	1	3	1	3	14	
MACHINERY DEVELOPMENT/MOULDING/GRINDING/RAW MATERIAL, COOLING BOX	2	2	1	2	2	4	4	4	4	25	
COLOUR EQUIPMENT AND NO OPERATION SKILL	0	0	0	0	1	0	0	0	0	1	
CUTTING & DESIGNING/PACKAGING OF FINISHED GOODS, DYEING	0	0	1	0	0	0	1	0	0	2	
COMPUTERIZATION WITH NEW SOFTWARE TECHNOLOGY	0	1	0	0	0	0	0	0	0	1	
OFFSET PRINTING/ELECTRONIC PRINT	0	0	0	0	3	0	0	0	0	3	
EXTRUSION LINE	0	1	0	0	0	0	0	0	0	1	
Total---	3	6	3	4	6	5	8	5	7	47	

Note: All units did not respond and therefore the total may not tally with actual number.

Table-17A Classification of sampled establishments by product and by relations with large industries

Product / SSI Category	<-----Relation With Large Industries----->								Total
	Supplying finished/semi finished goods	Purchase of raw materials	Rendering services	Helped in marketing	Use of tech- nology	For technical know how	Others		
Chemical & Chemical products	2	4	1	2	4	1	0	14	
Rubber & plastic products	6	5	0	3	5	5	0	24	
Leather Products	0	2	0	0	0	1	0	3	
Wood Products	1	2	1	0	1	0	0	5	
Paper Products & Printing	6	0	4	1	1	0	0	12	
Hosiery & Garments	1	2	1	1	0	0	0	5	
Food Products	1	4	0	2	0	2	0	9	
Metal Products	1	1	1	5	2	2	0	12	
Electrical machinery & apparatus	0	3	1	1	0	0	0	5	
Total--->	18	23	9	15	13	11	0	89	

Note: All units are not associated with the large industry and some are associated with more than one field therefore the total may not tally with actual number.

Table-18A Classification of sampled establishments by product and by Training needs

Product / Category	Training Needs-->				Total
	Technical know how	Marketing	Financial management	Other	
Chemical & Chemical products	3	7	2	0	12
Rubber & plastic products	8	12	5	0	25
Leather Products	3	6	3	0	12
Wood Products	7	8	2	0	17
Paper Products & Printing	11	10	11	1	33
Hosiery & Garments	9	6	2	1	18
Food Products	7	7	8	0	22
Metal Products	8	5	4	0	17
Electrical machinery & apparatus	9	14	6	0	29
Total--->	65	75	43	2	185

Note: Training needs are assessed in more than one field by some units and therefore the total may not tally with actual number.

Table-19A Classification of sampled establishment by product and by future planning of development

Plans for Development	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
MANAGEMENT REFORM	0	0	0	0	0	1	1	0	0	2	
MARKETING OUTSOURCING AND ADVERTISMENT											
MARKET SEGMENT/PRODUCTION OF SOAP IN HIGHER QUALITY/PRODUCTION LEVEL	5	12	2	3	8	4	3	7	8	52	
MACHENICAL SEGMENT /MOULDING MACHINE/CUTTING MACHINE/PROCESSING MACHINE/GRINDING MACHINE	3	2	4	3	4	2	7	0	2	27	
TECHNOLOGY	1	2	5	2	0	1	0	5	6	22	
COMPUTER DESIGNER/SOFTWARE/PRINTING/EMBROIDING	0	0	0	0	3	2	1	0	2	8	
AIR COOLER, PURIFIER, AIR-CONDITIONER, GRINDER	0	0	0	0	0	0	0	1	0	1	
FIRNISHING MACHINE /POLISH MACHINE	1	0	0	0	0	0	0	0	0	1	
CLOUR COATES MACHINE	0	0	0	0	1	0	0	0	0	1	
Total-->	10	16	11	8	16	10	12	13	18	114	

Note: All units did not respond and some units mentioned more than one planning therefore the total may not tally with actual number

Table-20A Classification of sampled establishments by product and by effect of social background on development

Product / SSI Category	Social Background----->				Total
	Education, general and technical	Religion and caste	Cultural background	Any other	
Chemical & Chemical products	13	2	5	0	20
Rubber & plastic products	21	4	6	1	32
Leather Products	10	0	6	0	16
Wood Products	10	1	2	1	14
Paper Products & Printing	20	0	6	0	26
Hosiery & Garments	12	3	6	0	21
Food Products	14	0	5	0	19
Metal Products	16	5	5	0	26
Electrical machinery & apparatus	17	0	5	0	22
Total--->	133	15	46	2	196

Note: Effect on development of more than one social background has been mentioned by some units and therefore the total may not tally with actual number.

Table-21A Classification of sampled establishment by product and by discriminatory factors and experience thereon

Discriminatory Factor	Product/SSI Category----->								
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
GENDER	0	0	0	0	0	1	0	0	1
CASTE	0	0	0	0	0	0	1	0	1
OTHER FACTORS	0	2	0	0	0	0	1	0	3
NOT SUFFICIENT FOR GOVT./BANK/POLICY	0	0	0	0	1	1	0	0	2
DON'T KNOW UNAWARE	2	0	0	1	0	0	1	0	4
PAPER WORK TAKING MORE TIME	0	0	0	0	1	0	0	1	2
ALL	1	1	0	1	0	0	2	1	6
Total--->	3	3	0	2	2	2	5	2	19

Note: Only a few units responded.

Table-22A Classification of employees in sampled establishments by product and by category and sex

Product / SSI Category	<-----Number of employees----->		Technical		Contractual		Daily Wages		Honorary		Other		Total	
	M		F		M		M		M		M		M	
	M		F		M		F		M		F		M	
Chemical & Chemical products	102	3	109	13	225	30	0	0	7	5	443	51		
Rubber & plastic products	82	6	128	16	105	29	0	0	12	1	327	52		
Leather Products	44	3	167	13	26	9	0	0	18	2	255	27		
Wood Products	42	4	60	13	56	3	0	0	13	3	171	23		
Paper Products & Printing	45	2	36	3	159	16	0	0	18	1	258	22		
Hosiery & Garments	59	7	65	24	143	19	0	0	14	1	281	51		
Food Products	32	2	89	20	58	5	0	0	19	4	198	31		
Metal Products	31	0	52	10	136	23	0	0	11	1	230	34		
Electrical machinery & apparatus	205	70	106	24	142	59	0	0	27	3	480	156		
Total--->	642	97	812	136	1050	193	0	0	139	21	2643	447		

Table-23A Average employment in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	M	F	M	F	M	F
Chemical &	30	3	28	4	30	3
Chemical products						
Rubber & plastic	16	3	13	2	15	2
products						
Leather Products	34	1	14	4	23	2
Wood Products	17	2	18	3	17	2
Paper Products &	13	1	12	1	12	1
Printing						
Hosiery &	21	4	16	3	20	4
Garment:						
Food Product:	18	0	9	5	14	2
Metal Products	13	2	11	1	12	2
Electrical	25	8	35	13	27	9
machinery & apparatus						
Total---->	20	3	15	3	18	3

Table-24A Average working capital in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.221	0.250	0.229
Rubber & plastic products	0.261	0.284	0.270
Leather Products	0.314	0.227	0.266
Wood Products	0.132	0.165	0.145
Paper Products & Printing	0.295	0.108	0.224
Hosiery & Garments	0.074	0.073	0.074
Food Products	0.049	0.170	0.101
Metal Products	0.206	0.109	0.155
Electrical machinery & apparatus	0.197	0.590	0.262
Total--->	0.199	0.197	0.198

Table-25A Average output in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)
Chemical & Chemical products Rubber & plastic products	1.693	1.887	0.785	1.473	1.451	1.777
Leather Products	0.472	0.560	0.370	0.428	0.435	0.512
Wood Products	0.236	0.296	0.287	0.338	0.264	0.319
Paper Products & Printing	0.220	0.262	0.245	0.258	0.230	0.260
Hosiery & Garments	0.589	0.530	0.128	0.160	0.413	0.389
Food Products	0.098	0.120	0.063	0.073	0.091	0.110
Metal Products	0.076	0.128	0.255	0.143	0.153	0.134
Electrical machinery & apparatus	0.304	0.374	0.243	0.280	0.272	0.325
	0.255	0.263	0.780	1.043	0.342	0.393
Total--->	0.474	0.524	0.314	0.397	0.416	0.478

Table-26A Capital/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.007	0.008	0.007
Rubber & plastic products	0.014	0.019	0.016
Leather Products	0.009	0.013	0.010
Wood Products	0.007	0.008	0.007
Paper Products & Printing	0.022	0.008	0.017
Hosiery & Garments	0.003	0.004	0.003
Food Products	0.003	0.013	0.006
Metal Products	0.013	0.009	0.011
Electrical machinery & apparatus	0.006	0.012	0.007
Total--->	0.009	0.011	0.009

Table-27A Output/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SST Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.057	0.046	0.054
Rubber & plastic products	0.030	0.029	0.030
Leather Products	0.008	0.019	0.012
Wood Products	0.014	0.012	0.013
Paper Product & Printing	0.039	0.012	0.029
Woolery & Garments	0.005	0.004	0.005
Food Products	0.007	0.011	0.008
Metal Products	0.024	0.022	0.023
Electrical machinery & apparatus	0.008	0.022	0.011
Total--->	0.023	0.022	0.022

Table-28A Capital/Output Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category	Using Improved Technology	Without Improved Technology	Total
Chemical & Chemical products	0.117	0.170	0.129
Rubber & plastic products	0.467	0.664	0.527
Leather Products	1.061	0.670	0.835
Wood Products	0.503	0.641	0.558
Paper Products & Printing	0.557	0.672	0.575
Hosiery & Garments	0.614	1.000	0.669
Food Products	0.382	1.186	0.750
Metal Products	0.549	0.389	0.476
Electrical machinery & apparatus	0.747	0.565	0.667
Total--->	0.379	0.496	0.414

Table-29A Classification of sampled establishment by product and by different experience with the bank/ financing Institutions.

Experience With Bank/ Financial Institutions	Product/SSI Category----->										Total
	Chemical& Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
NO NEED OF FINANCE	0	1	1	2	1	1	1	0	8		
GOOD	3	9	2	2	9	3	1	8	8	45	
HARD PAPER WORK/OTHER DOCUMENTRY PROBLEM	0	0	0	0	0	0	2	0	2	4	
TO PROMOTE THE TECHNOLOGY	0	0	0	0	0	0	0	1	1	2	
NON-COOPERATIVE	0	0	0	0	0	0	1	1	0	2	
BAD EXPERIENCE, TAKE MORE TIME FOR PROCESSING WORK INTEREST RATES ARE HIGH	5	4	5	4	5	6	6	2	2	39	
GIVES PROPER CO-OPERATION,CONSULTATION AND OTHER FACILITIES	2	6	1	1	5	2	2	6	2	27	
NATIONAL BANK ARE BAISED IN COMPARISION TO FOREGIN BANK	0	0	1	0	0	0	0	0	3	4	
Total---->	10	20	10	9	20	12	13	19	18	131	

Note: Some units did not respond and some have pointed out more than one experience therefore the total may not tally with actual number.

Table-30A Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
CREATE AWARENESS ABOUT MARKET WANTS AND BUSINESS AND GOVT.SURSIDES	8	9	4	3	5	6	6	5	10	66	
AWARD SCHEEM AND CREDIT GUARANTEE SCHEEM	0	0	0	0	0	0	0	1	0	1	
LOWER TAXATION AND EXCISE DUTY	8	9	4	3	7	1	7	4	3	46	
TECHNOLOGY AWARENESS	1	1	0	2	3	2	2	3	4	18	
MARKETING IDENTIFICATION BY SSI OFFICIAL	0	3	0	1	0	4	0	1	0	9	
POLICIES FOR SSI SHOULD BE NOT HARDER THAN OTHER INDUSTRY	0	0	0	1	0	0	0	1	1	3	
PROVISION FOR LOAN AND CHEEPER GOODS FOR BUSINESS AND A GOOD POLICY AND LOAN AMOUNT SHOULD BE RISE	1	0	0	0	1	0	1	0	0	3	
TO CONTROL THE PRICE AND QUALITY FLUCTUATION OF RAW MATERIAL	4	1	2	1	1	2	3	0	2	16	
LEADING INSTITUTIONS SHOULD PROPERLY EVALUATE THE POTENTIAL	1	0	0	0	2	0	1	0	0	4	
LOWER RATE OF INTEREST AND SHORT PAPER WORK	1	6	6	3	4	1	4	0	7	32	
OTHER LIBERAL PLANING FOR SSI SHOULD BE DONE BY GOVT.	0	0	0	0	0	0	0	2	0	2	
TAKE A PANEL OF INDUSTRIALIST	0	0	0	1	0	0	0	0	1	2	

Table-30A Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
LOWER RATE OF ELECTRICITY AND ENSURE CONTINUOUS POWER SUPPLY	1	3	0	0	0	0	0	0	0	4	
MAN POWER MANAGEMENT AND POWER MANAGEMENT	0	0	0	0	1	0	0	0	0	1	
TRAINING TO WORKERS	0	0	0	0	0	1	0	0	0	1	
CREATING A NEW POLICY FOR SSI SECTOR AND GOVT.SHOULD KEEP GOOD RELATION WITH SSI	1	0	2	0	0	1	0	4	2	10	
GOVT.SHOULD MAKE A JOINT APPRISAL MECHANISM WHICH ENSURE EVALUATION OF PROMOTERS SKILL, EQUITY, RAW MATERIAL INCREASE THE NO.OF WORKERS UNDER THE SHOP & ESTABLISHMENT TO MINIMUM 30	2	0	0	2	0	0	0	0	4	8	
IMMEDIATE SERVICE BY GOVT/GOVT. BACKUP/REDUCE INSPECTOR	0	0	0	0	2	0	0	0	0	2	
	0	0	0	1	0	0	0	0	0	1	
Total----	28	32	18	18	26	18	24	21	34	219	

Note: More than one suggestions have been provided by some units and therefore the total may not tally with actual number.

Table-31A Classification of establishment by product and by way of experience as a competition in domestic/international market.

Competition	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
CHEAPER PRICE TO SATISFIED CLIENT AND DIFFERENT QUALITY OF PRODUCT WE COULD ARRANGE GOOD THINGS AGAIN	3	1	1	0	0	1	0	1			8
GOVT. INDUSTRIES IMPROVE TECHNOLOGY KNOWLEDGE/IMPROVE QUANTITY IN PRODUCTION/BETTER QUALITY/GOOD THIN TRY TO REDUCE COAST T/LOWER PRICE RATES&SMALL TIME INTERVAL	1	0	0	1	0	0	0	0			2
	0	5	0	0	0	2	1	0			8
Total---->	4	6	1	1	0	3	1	1			18

Note: Only a few units reponded.

Table-32A Classification of service provider establishments by product and by opinion with regards to improved technology for improving the productivity/ marketability of services.

Opinion	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
MORE COMPETITION	0	0	0	1	1	0	0	0			2
MARKETING	1	1	0	1	0	0	2	0			5
FINANCIAL	1	3	2	4	2	6	5	2			25
NOT TAKE RISK	0	1	0	1	0	0	0	0			2
HIGH SERVICE TAX	0	0	0	0	0	1	0	0			1
RAW MATERIAL	0	0	0	3	0	0	0	1			4
LABOUR PROBLEM	1	0	0	2	0	0	1	2			6
LACK OF DEMAND	0	2	2	1	1	1	2	3			12
Total---->	3	7	4	13	4	8	10	8			57

Note: Data relates to service provider units only.

State-> Delhi
Table-1B Classification of sampled establishments by product and by year of establishment

Year of Establishment	Product/SSI Category----->									Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
Prior to 1970	1	2	0	3	2	0	1	4	1	14
1971-1980	4	1	0	2	3	3	6	2	7	28
1981-1990	8	6	3	6	6	4	9	8	1	51
1991-2000	0	4	5	1	4	7	4	5	3	33
After-2000	0	1	0	0	2	0	0	0	2	5
Total----	13	14	8	12	17	14	20	19	14	131

Table-2B Classification of sampled establishments by product and by main activity

Main Activity	Product/SSI Category										Total
	Chemical & Rubber Products	Chemical Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garment Products	Food Products	Metal Products	Electrical Machinery & Apparatus		
Manufacturing	11	13	8	11	10	12	15	14	13	107	
Processing	0	0	0	2	0	0	6	0	1	9	
Electricity	0	1	0	0	1	0	0	0	0	2	
Repair	0	0	0	0	1	0	0	2	0	3	
Other	2	1	0	0	7	2	0	3	0	15	
Total---	13	15	8	13	19	14	21	19	14	136	

Note: More than one activity is perform by some units and therefore the total may not tally with the actual number.

Table-3B Classification of sampled establishments by product and by type of ownership

Type of Ownership	Product/SSI Category							Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Garments	Food Products	Metal Products	Electrical Machinery & Apparatus
Self Partnership Prop. Company	0 5 8 0	0 2 11 1	0 4 8 0	0 6 10 1	0 6 6 2	2 4 13 1	0 8 10 1	0 4 10 0
Total----	13	14	12	17	14	20	19	14
								131

Table-4B Classification of sampled establishments by product and by fixed capital

Fixed Capital (Rs.)	Product/SSI Category-->								Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
<= 5 lakh	0	1	8	7	4	3	6	4	39
5-10 lakh	2	4	0	1	5	1	4	4	29
10-20 Lakh	11	6	0	2	4	3	4	2	37
20-50 Lakh	0	2	0	2	3	5	4	2	18
>50 Lakh	0	1	0	0	1	2	2	2	8
Total-->	13	14	8	12	17	14	20	14	131

Table-5B Classification of sampled establishments by product and by working capital

Working Capital (Rs.)	-----Product/SSI Category----->										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
<= 5 lakh	3	6	5	1	5	3	4	1	4	32	
5-20 lakh	5	4	3	9	8	5	11	13	7	65	
20-50 Lakh	4	4	0	2	4	6	3	5	2	30	
50-100 Lakh	1	0	0	0	0	0	1	0	0	2	
>100 Lakh	0	0	0	0	0	0	1	0	1	2	
Total---->	13	14	8	12	17	14	20	19	14	131	

Table-6B Classification of sampled establishments by product and by output

Output (Rs.)	Product/SSI Category									Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
<= 5 lakh	0	1	6	0	2	1	1	0	2	13
5-20 lakh	5	6	1	7	8	5	12	10	9	63
20-50 Lakh	3	3	1	3	6	4	3	7	0	30
50-100 Lakh	3	3	0	2	1	4	1	2	1	17
>100 Lakh	2	1	0	0	0	0	3	0	2	8
Total	13	14	8	12	17	14	20	19	14	131

Table-7B Classification of sampled establishments by product and by size of employment

Size of Employment	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
<= 5	4	3	1	6	1	0	3	2	3		23
6-10	4	6	3	5	6	3	12	9	8		56
11-15	2	3	2	1	2	0	3	3	1		17
16-20	1	2	2	0	3	4	2	3	0		17
21-25	1	0	0	0	3	2	0	1	0		7
More >25	1	0	0	0	2	5	0	1	2		11
Total----	13	14	8	12	17	14	20	19	14		131

Table-8B Classification of sampled establishments not utilising full capacity by product and by reason

Reasons	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
Lack of demand	8	8	3	4	9	7	5	7	2		53
Power shortage	3	5	3	4	6	12	10	7	3		53
Equipment Problem	3	5	0	0	1	1	2	1	1		14
Non availability of raw material	9	7	0	2	2	3	3	0	4		30
Lack of funds	6	5	2	8	5	5	1	7	5		44
Labour Problem	5	5	0	4	1	2	1	2	1		21
Marketing Problem	9	10	2	8	9	10	5	8	6		67
Any Other Problem	0	1	0	0	0	0	0	0	0		1
Full capacity	3	1	1	2	8	2	6	7	3		33
Total----	46	47	11	32	41	42	33	39	25		316

Note: Some units indicated more than on reason and therefore the total may not tally with the actual number.

Table-9B Classification of sampled establishments by product and by nature of operation

Nature of Operation	-----Product/SSI Category----->								Total	
	Chemical & Rubber Chemical Plastic Products Products	Leather Products	Wood Products	Paper Products & Prin- ting	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Appara- tus		
Perennial	10	5	1	7	7	8	15	17	8	78
Seasonal	3	8	7	5	10	6	3	2	6	50
Casual	0	1	0	0	0	0	2	0	0	3
Total---->	13	14	8	12	17	14	20	19	14	131

Table-10B Classification of sampled establishments by product and by type of management

Product / SSI Category	<---Self Managed--->			<---Professionally Managed--->		
	With Technical Quali.	Without Technical Quali.	Total	With Technical Quali.	Without Technical Quali.	Total
Chemical & Chemical products	0	13	0	0	13	
Rubber & plastic products	4	8	1	1	14	
Leather Products	0	8	0	0	8	
Wood Products	2	9	0	1	12	
Paper Product & Printing	9	8	0	0	17	
Hosiery & Garments	3	11	0	0	14	
Food Products	2	17	0	1	20	
Metal Products	2	15	1	1	19	
Electrical machinery & apparatus	4	8	2	0	14	
Total--->	26	97	4	4	131	

Table-11B Classification of sampled establishments by product and by technology use

Product / SSI Category	Units Using Improved Technology	Units Without Improved Technology	Total
Chemical & Chemical products	11	2	13
Rubber & plastic products	8	6	14
Leather Products	1	7	8
Wood Products	7	5	12
Paper Products & Printing	12	5	17
Hosiery & Garments	8	6	14
Food Products	7	13	20
Metal Products	11	8	19
Electrical machinery & apparatus	12	2	14
Total--->	77	54	131

Table-12B Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category										Total
	Chemicals & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
IRONING MACHINE	0	0	1	0	2	3	0	1	1	8	
LEATHER MOULDER, MO	1	6	1	0	0	0	0	2	1	11	
ULDING MACHINE											
ZIGZAG, STICHING, SP	2	0	2	0	2	7	0	0	1	14	
OUGHING AND SPRAYING MACHINE/EMBRODARY MACH.											
CUTTER MACHINE	6	2	1	6	6	3	0	10	0	34	
FINISHING MACHINE	0	0	0	6	0	0	0	2	1	9	
PRINTING MACHINE/C	0	0	0	0	13	0	0	0	0	13	
OMPUTER PRINTER/WEB OFFSET PRINTING MACH.											
MACHINERY (HAND MAC	0	1	0	1	2	0	1	0	0	5	
HINERY & OTHER)											
BINDING MACHINE	0	1	0	0	2	0	0	0	1	4	
GRAPHIC BAR/COMPUT	0	0	0	0	2	0	1	0	0	3	
ER SCALE											
NEW TECHNOLOGY	0	0	0	0	0	0	1	1	0	2	
FREEZER, COOLING TO	2	0	0	0	0	0	1	0	0	3	
WER/DRY COLLING MACHINE/DRYING MECH.											
BLENDER, GRINDER AN	2	2	0	1	0	0	3	4	2	14	
D MIXTURE MACHINE											
PACKING MACHINE/SE	3	0	0	1	0	0	2	1	1	8	
ALING MACHINE/BENDER/COVER MACHINE											
WELDING MACHINE	0	0	0	0	0	0	0	4	0	4	
GENERATOR	0	0	0	0	0	3	0	1	0	4	
FILTER	0	0	0	0	0	0	1	0	0	1	
STORAGE TANK	2	0	0	0	0	0	0	0	0	2	
BOILING TANK	1	0	0	0	0	0	0	0	0	1	
BURNERS AND GAS PI	2	0	0	0	0	0	0	0	0	2	
PE											
TROMP AND WEIGHT M	2	0	0	0	0	0	0	0	1	3	
ACHINE											
QUALITY TESTING MA	0	0	0	0	0	0	1	0	0	1	
CHINE											
ROTARY MACHINE	0	1	0	0	0	0	1	0	0	2	
POLISHING MACHINE/	0	0	0	1	0	0	2	1	1	5	
POWER OATING MACHINE											
LATHE AND DRILL	0	1	0	0	0	0	1	1	4	7	
MACHINE											

Table-12B Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category								Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus
KNITTING, WEAVING MACHINE, SPINNING MACHINE	0	0	0	0	0	1	0	0	1
SHEETING MACHINE	0	0	0	0	0	0	0	0	1
VALVE CONTROLLING	1	0	0	0	0	0	0	0	1
GAS FUELING MACHINE	1	0	0	0	0	0	0	0	1
VERTICAL INJECTION MACHINE	0	1	0	0	0	0	0	0	1
DYE INJECTOR	0	1	0	0	0	0	0	0	2
FORMING MACHINE	0	1	0	0	0	0	0	0	1
PATTERN MAKER	0	0	1	0	0	0	0	0	1
K-31 MACHINE (TRADITIONAL)	0	0	1	0	0	0	0	0	1
ANIMATION AND DESIGN MACHINE	0	0	0	0	2	1	0	0	3
FIRE EXTINGUISHER	0	0	0	0	2	0	0	0	2
MACHINERY MODIFICATION/REPAIRMENT	0	0	0	0	1	3	0	1	5
FUSING MACHINE	0	0	0	0	0	1	0	0	1
COMPRESSOR	0	0	0	0	0	1	0	1	2
WHEEL ADJUSTER	0	0	0	0	0	0	0	1	1
COMPUTER AIDED DESIGN	0	0	0	0	0	2	0	0	3
LOCK STITCH MACHINE	0	0	0	0	0	1	0	0	1
SHAPING MACH.	0	0	0	0	0	0	0	1	1
VOLT METER, WATT METER AND VARIOUS METERS	0	0	0	0	0	0	0	1	1
HIGH VOLTAGE TESTER	0	0	0	0	0	0	0	1	1
PNEUMATIC FIXES	0	0	0	0	0	0	0	1	1
Total--->	25	17	7	16	34	26	15	30	22
									192

Note: Some units mention more than one technology in use and therefore the total may not tally with the actual number.

Table-13B Classification of sampled establishment with improved technology by product and by source of technology

Source of Technology	<-----Product/SSI Category----->										Total	
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
TRADE SHOW (DOMESTIC/INTERNATIONAL)	3	0	0	1	0	0	2	0	0		6	
REPRESENTATIVE CONSULTING, CO EMPERPRIOR FRIEND AWARENESS BY SSI MAGAZINE /NEWS PAPER/INTERNET	7	5	0	6	9	1	4	11	5		48	
TECHNICAL CONSULTANT/MARKET CONSULTATION/EXPORT ADVERTISEMENT	1	0	0	0	0	0	0	0	0		1	
OWN DECISION	3	5	0	4	7	4	1	6	5		35	
PARTLY FINANCE/SELF FINANCE	1	1	0	0	2	2	0	0	2		8	
TELEVISION	0	0	0	1	3	1	0	2	0		7	
COMPANY SALESMAN	0	0	0	0	2	0	0	1	1		4	
MANUFACTURER ASSN. AUXILIARY COMPANY	0	0	0	0	0	1	0	0	0		1	
DOCTOR CONSULTANTS	0	0	0	0	0	0	1	0	0		1	
OUT SOURCING BY INDUSTRIAL GUIDELINE	0	0	0	0	0	0	0	0	1		1	
Total---	15	17	2	13	26	10	11	21	18		133	

Note: Some units indicated more than one source and therefore the total may not tally with the actual number.

Table-14B Classification of sampled establishments with advanced/improved technology by product and by impact on production

Product / SSI Category	<-----Impact on Production/Output----->					----->	
	Improved Quality	Better capacity utilization	Increase in quantity	Increase in efficiency	Reduced cost of production	Achieved Competi- veness	Total
Chemical & Chemical products	7	7	11	3	9	4	41
Rubber & plastic products	8	3	8	4	6	4	33
Leather Products	1	1	1	1	0	0	4
Wood Products	3	1	4	2	2	1	13
Paper Products & Printing	10	9	11	10	6	2	48
Hosiery & Garments	8	7	7	4	1	1	28
Food Products	7	1	3	2	2	0	15
Metal Products	10	7	8	10	0	0	35
Electrical machinery & apparatus	12	3	6	5	7	2	35
Total---->	66	39	59	41	33	14	252

Note: Some units indicated more than one impact and therefore the total may not tally with the actual number.

Table-15B Classification of sampled establishments without improved technology by product and by barriers

Barriers in Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
Lack of management skills/non availability of skills	0	3	1	3	2	3	2	1			17
Any Other Social reasons	0	0	2	0	1	0	0	0			3
Non awareness/ lack of knowledge/information about the availability of the requisite technology	0	1	1	2	1	2	3	0			11
Nature and inadequacy of financial capacity	0	4	2	5	3	4	3	0			26
Financial aspects of technology making difficult to adopt by the unit	2	3	3	2	2	5	5	1			25
Economically not viable	2	3	3	3	0	1	4	0			21
The desire to "Avoid Risk"	1	2	1	1	3	3	3	0			19
Lack of adaptability to changing trends	1	0	0	0	0	3	1	0			9
Relative isolation from technology hubs	0	1	0	0	0	1	1	0			4
Low levels of R&D	0	0	0	1	1	2	0	0			5
Total--->	6	17	13	17	12	20	22	2			140

Note: More than one barriers have been pointed out some units and therefore the total may not tally with the actual number.

Table-16B Classification of sampled establishment interested in modernising of technology by products and by area for improvement

Area of Improvement	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
MARKETING PROFILE	2	0	0	1	3	1	2	0	0	9	
EXPANSION AND ENLARGEMENT AND TRANSPORTATION OF GOODS											
PRODUCTION AND MARKETING	2	1	0	3	3	0	0	3	5	17	
MACHINERY DEVELOPMENT/ MOULDING/GRINDING/RAW MATERIAL, COOLING BOX	1	8	6	5	9	5	8	10	4	56	
COLOUR EQUIPMENT AND OPERATION SKILL	0	1	0	0	0	0	0	0	0	1	
MANAGEMENT	0	0	0	1	0	0	0	0	0	1	
CUTTING & DESIGNING/PACKAGING OF FINISHED GOODS, DYEING	0	0	0	1	0	7	0	0	0	8	
COMPUTERIZATION WITH NEW SOFTWARE TECHNOLOGY	0	0	0	0	1	0	0	0	0	1	
D.T.P.LASER SETTER	0	0	0	0	1	0	0	0	0	1	
FINANCE AND OTHER SIGMENTS	0	0	0	0	1	0	0	0	0	1	
POLISHER	0	0	0	0	0	0	1	0	0	1	
Total---	5	10	6	11	18	13	11	13	9	96	

Note: Some units have not responded and some mention more than one area for improvement and therefore the total may not tally with the actual number.

Table-17B Classification of sampled establishments by product and by relations with large industries

Product / SSI Category	Relation With Large Industries----->						Total
	<----- Supplying finished/semi finished goods	Purchase of raw materials	Rendering services	Helped in marketing	Use of tech- nology	For technical know how	
Chemical & Chemical products	0	0	0	0	0	0	0
Rubber & plastic products	1	0	0	0	0	0	1
Leather Products	1	0	2	0	0	0	3
Wood Products	0	1	2	0	0	0	3
Paper Products & Printing	3	1	2	1	1	0	8
Hosiery & Garments	1	2	2	1	1	0	7
Food Products	3	1	0	1	1	0	6
Metal Products	3	3	3	2	3	0	14
Electrical machinery & apparatus	1	0	1	0	0	0	2
Total----	13	8	12	5	6	0	44

Note: All units are not associated with large industries and some have more than one relations therefore the total may not tally with the actual number.

Table-18B Classification of sampled establishments by product and by Training needs

Product / Category	<-----Training Needs----->			
	Technical know how	Marketing	Financial management	Other
Chemical & Chemical products	4	9	5	0
Rubber & plastic products	2	3	5	0
Leather Products	8	2	0	0
Wood Products	5	5	3	1
Paper Products & Printing	13	12	9	0
Hosiery & Garments	14	9	4	2
Food Products	6	3	6	0
Metal Products	12	10	9	0
Electrical machinery & apparatus	9	7	2	1
Total--->	73	60	43	4
				180

Note: Some units desired training needs in more than one field and therefore the total may not tally with the actual number.

Table-19B Classification of sampled establishment by product and by future planning of development

Plans for Development	<-----Product/SSI Category----->										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Garments	Hosiery & Food Products	Metal Products	Electrical Machinery & Apparatus		
MANAGEMENT REFORM	3	0	0	5	2	2	2	1	0	15	
MARKETING OUTSOURCING AND ADVERTISMENT											
MARKET SEGMENT/PRO	7	0	1	4	7	3	1	3	4	30	
DUCTION OF SOAP IN HIGHER QUALITY/PRODUCTION LEVEL											
MACHENICAL SEGMENT	5	11	4	8	9	8	11	8	6	70	
/MOULDING MACHINE/CUTTING MACHINE/PROCESSING MACHINE/GRINDING MACHINE											
ADVERTISMENT, POSTE	1	0	0	0	0	0	0	0	0	1	
RS AND OTHER SIDE											
UPTODATE IN POWER	1	0	0	0	0	0	0	0	0	1	
SUPPLIER											
TECHNOLOGY	0	1	0	1	2	0	1	1	1	7	
COMPUTER DESIGNER/	0	0	8	3	2	6	0	5	2	26	
SOFTWARE/PRINTING/EMBROIDING											
AIR COOLER, PURIFI	0	0	3	0	2	5	1	2	1	14	
ER, AIR-CONDITIONER, GRINDER											
ELECTRIC SET	0	0	1	0	1	1	0	2	0	5	
PLANETU P-44	0	0	0	0	1	0	0	0	0	1	
STRONG BALE PROMOT	0	0	0	0	0	0	0	1	0	1	
ION/STRONG VILLAGE SCHEME											
OIL ELUVATION	0	0	0	0	0	0	0	0	1	1	
TRAINING OF SALES	0	0	0	0	0	0	0	0	1	1	
PEOPLE											
PRICE OF PRODUCT	0	0	0	0	0	0	0	0	1	1	
Total----	17	12	17	21	26	25	16	23	17	174	

Note: Some units mention more than one area for future planning and therefore the total may not tally with the actual number.

Table-20B Classification of sampled establishments by product and by effect of social background on development

Product / SSI Category	Social Background----->				Total
	Education, general and technical	Religion and caste	Cultural background	Any other	
Chemical & Chemical products	13	0	8	0	21
Rubber & plastic products	11	0	7	0	18
Leather Products	8	1	7	0	16
Wood Products	8	4	6	0	18
Paper Products & Printing	15	2	11	0	28
Hosiery & Garments	14	4	13	0	31
Food Products	20	3	4	0	27
Metal Product .	15	5	13	0	33
Electrical machinery & apparatus	12	0	4	0	16
Total--->	116	19	73	0	208

Note: Effect of more than one social background on development has been indicated by some units and therefore the total may not tally with the actual number.

Table-21B Classification of sampled establishment by product and by discriminatory factors and experience thereon

Discriminatory Factor	Product/SSI Category----->										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
GENDER	0	1	0	0	1	0	1	0	0	4	
DOMICILE	0	1	0	0	0	0	2	0	0	3	
OTHER FACTORS	10	6	7	3	1	1	2	1		14	
NOT SUFFICIENT FOR GOVT./BANK/POLICY	1	0	0	1	0	0	1	0	0	3	
DON'T KNOW UNAWARE	2	2	0	4	10	5	10	8		49	
PAPER WORK TAKING MORE TIME	0	1	0	0	0	0	0	0	0	1	
BRIBED	0	1	0	0	0	0	0	0	0	1	
IMPARTIAL POLICY BY SSI	0	1	0	5	5	4	3	2		30	
ALL	0	0	1	0	0	0	0	0	0	1	
Total----	13	13	8	13	17	11	19	13		126	

Note: Some units did not respond and some have indicated more than one factor therefore the total may not tally with the actual number.

Table-22B Classification of employees in sampled establishment by product and by category and sex

Product / SSI Category	<-----Number of employees----->											
	Technical		Contractual		Daily Wages		Honorary		Other		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
Chemical & Chemical products	8	0	17	0	91	0	0	0	23	0	139	0
Rubber & plastic products	23	0	10	0	93	10	0	0	3	0	129	10
Leather Products	5	0	0	0	66	23	0	0	0	0	71	23
Wood Products	6	0	4	2	55	0	0	0	7	0	72	2
Paper Products & Printing	55	0	11	0	223	11	0	0	6	0	295	11
Hosiery & Garments	85	0	15	0	262	56	0	0	0	0	362	56
Food Products	39	0	0	0	136	2	0	0	7	0	182	2
Metal Products	33	0	32	0	156	0	0	0	9	0	230	0
Electrical machinery & apparatus	30	1	7	0	93	3	0	0	5	0	135	4
Total--->	284	1	96	2	1175	105	0	0	60	0	1615	108

Table-23B Average employment in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	M	F	M	F	M	F
Chemical & Chemical products	12	0	6	0	11	0
Rubber & plastic products	11	0	7	1	9	1
Leather Products	7	5	9	3	9	3
Wood Products	6	0	6	0	6	0
Paper Products & Printing	16	1	20	0	17	1
Hosiery & Garments	33	6	16	2	26	4
Food Products	10	0	8	0	9	0
Metal Products	11	0	14	0	12	0
Electrical machinery & apparatus	11	0	3	0	10	0
Total-->	14	1	10	1	12	1

Table-24B Average working capital in the sampled establishments by product and by improved technology use

Product / SSI Category	Using improved Technology Rs. (Cr.)	Without improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.271	0.095	0.244
Rubber & plastic products	0.146	0.107	0.129
Leather Products	0.050	0.056	0.055
Wood Products	0.169	0.108	0.143
Paper Products & Printing	0.187	0.140	0.173
Hosiery & Garments	0.248	0.217	0.234
Food Products	0.576	0.153	0.301
Metal Products	0.154	0.176	0.163
Electrical machinery & apparatus	0.966	0.040	0.834
Total-->	0.349	0.134	0.261

Table-25B Average output in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)
Chemical & Chemical products	0.569	0.672	0.210	0.230	0.514	0.604
Rubber & plastic products	2.773	3.035	0.257	0.273	1.694	1.851
Leather Products	0.020	0.150	0.063	0.074	0.058	0.084
Wood Products	0.274	0.349	0.150	0.172	0.223	0.275
Paper Products & Printing	0.288	0.243	0.176	0.190	0.255	0.227
Hosiery & Garments	0.346	0.423	0.218	0.237	0.291	0.343
Food Products	1.814	2.263	0.283	0.232	0.819	0.943
Metal Products	0.236	0.284	0.260	0.264	0.246	0.275
Electrical machinery & apparatus	1.080	1.514	0.070	0.090	0.936	1.311
Total-->	0.842	1.009	0.208	0.206	0.581	0.678

Table-26B Capital/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total
Chemical & Chemical products	0.023	0.017	0.023
Rubber & plastic products	0.013	0.014	0.013
Leather Products	0.004	0.005	0.005
Wood Products	0.027	0.018	0.023
Paper Production & Printing	0.011	0.007	0.010
Hosiery & Garments	0.006	0.012	0.008
Food Products	0.055	0.018	0.033
Metal Products	0.014	0.013	0.013
Electrical machinery & apparatus	0.086	0.016	0.084
Total--->	0.024	0.012	0.020

Table-27B Output/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.058	0.042	0.056
Rubber & plastic products	0.261	0.036	0.186
Leather Products	0.013	0.006	0.007
Wood Products	0.055	0.029	0.045
Paper Product & Printing	0.014	0.010	0.013
Hosiery & Garments	0.011	0.013	0.011
Food Products	0.217	0.027	0.102
Metal Products	0.026	0.019	0.023
Electrical machinery & apparatus	0.136	0.036	0.132
Total --->	0.069	0.018	0.052

Table-28B Capital/Output Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category	Using Improved Technology	Without Improved Technology	Total
Chemical & Chemical products	0.403	0.413	0.404
Rubber & plastic products	0.048	0.390	0.070
Leather Products	0.333	0.750	0.657
Wood Products	0.484	0.628	0.521
Paper Products & Printing	0.770	0.737	0.762
Hosiery & Garments	0.586	0.915	0.683
Food Products	0.254	0.661	0.319
Metal Products	0.542	0.668	0.593
Electrical machinery & apparatus	0.638	0.444	0.636
Total--->	0.346	0.649	0.384

Table-29B Classification of sampled establishment by product and by different experience with the bank/ financing Institutions.

NO NEED OF FINANCE	4	3	0	0	1	1	6	1	4	20
GOOD	4	6	5	9	16	8	4	10	6	68
HARD PAPER WORK/OT	1	1	0	0	2	1	0	3	1	9
HER DOCUMENTRY PROBLEM										
BRIBES FROM US	1	0	0	0	1	0	0	0	0	2
POSITIVE SCENCE OF	1	2	0	2	0	1	0	1	1	8
RESPONCE TO ENLARGE SSI										
TO PROMOTE THE	1	0	3	0	0	0	0	1	0	5
TECHHNOLOGY										
BANKS GIVE FINANCIAL	1	0	1	0	2	1	0	1	0	6
ADD										
NO INTEREST TO IMPROVE	0	1	0	0	0	0	0	0	0	1
THE SSI										
NON-COOPERATIVE	0	1	0	0	0	0	0	0	0	1
BAD EXPERIENCE, TAKE	0	0	0	3	0	2	2	2	6	15
MORE TIME FOR PROCESSNG WORK										
INTEREST RATES ARE HIGH										
GIVES PROPER CO-OP	0	0	0	1	5	2	3	6	2	19
ERATION,CONSULTATION AND OTHER FACILITIES										
DON'T HAVE SUCH	0	0	0	0	0	0	2	4	2	8
TYPE OF EXPERIENCE										
Total----	13	14	9	15	27	16	17	29	22	162

Note: Some units mention more than one experience and therefore the total may not tally with the actual number.

Table-30B Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Production	Electrical Machinery & Apparatus		
CREATE AWARENESS ABOUT MARKET WANTS AND BUSINESS AND GOVT.SUBSIDES	3	3	2	2	5	7	6	5	4	37	
AWARD SCHEEM AND CREDIT GUARANTEE SCHEEM	1	0	1	0	0	1	0	0	0	3	
LOWER TAXATION AND EXCISE DUTY	10	6	1	6	5	5	11	8	6	58	
LOWER PAPER WORK	1	0	0	0	2	0	0	1	0	4	
TECHNOLOGY AWARENESS	8	7	6	8	8	6	2	6	2	53	
MARKETING IDENTIFICATION BY SSI OFFICIAL	2	1	0	1	0	0	2	0	2	8	
POLICIES FOR SSI SHOULD BE NOT HARDER THAN OTHER INDUSTRY	1	1	0	1	1	0	0	0	0	4	
PROVISION FOR LOAN AND CHEEPER GOODS FOR BUSINESS AND A GOOD POLICY AND LOAN AMOUNT SHOULD BE RISE	2	4	3	3	2	6	2	4	5	31	
TO CONTROL THE PRICE AND QUALITY FLUCTUATION OF RAW MATERIAL	5	6	1	0	2	4	2	2	1	23	
LEADING INSTITUTIONS SHOULD PROPERLY EVALUATE THE POTENTIAL	5	1	0	2	3	1	1	3	1	17	
FULL GOVT.HELPS IN RESETTING OF UNITS	3	2	0	0	0	0	1	1	0	7	
NO PROPER COUNSELLING TO THE NEW ENTREPRENURES BY THE GOVT.	1	0	0	0	1	0	1	1	0	4	
CONSIDERABLE DELAY IN SUBMEETING PROPOSAL TO SETUP SSI	2	0	0	0	1	0	0	0	0	3	
LOWER RATE OF INTEREST AND SHORT PAPER WORK	1	1	0	2	1	1	2	3	2	13	
DEVELOPMENT OF INFRASTRUCTURE LIKE ROADS, TRANSPORTATION, GENERATION, SUPPLY OF POWER AND WATER ETC.	2	0	0	0	2	3	0	0	0	7	
OTHER LIBERAL PLAN FOR SSI SHOULD BE DONE BY GOVT.	2	1	0	0	2	2	2	0	3	12	
TAKE A PANEL OF INDUSTRIALIST	1	0	0	0	0	0	0	0	0	1	

Table-30B Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
EXPORT POLICY SHOULD BE LIBERALISED	0	1	0	2	0	1	2	1	1	8	
LOWER RATE OF ELECTRICITY AND ENSURE CONTINUOUS POWER SUPPLY	0	1	0	5	3	3	4	1	1	18	
MAN POWER MANAGEMENT AND POWER MANAGEMENT	0	3	1	0	2	1	0	2	3	12	
ASIAN MARKET VARIETY OF FASHIONABLE PLASTIC GOODS LIKE CHAIR, TABLE ETC., ITEMS FROM INDIA	0	1	0	0	0	0	0	0	0	1	
TRAINING TO WORKERS	0	0	2	0	1	0	0	0	1	4	
CREATING A NEW POLICY FOR SSI SECTOR AND GOVT. SHOULD KEEP GOOD RELATION WITH SSI	0	0	0	10	3	5	2	6	1	27	
GOVT. SHOULD MAKE A JOINT APPRAISAL MECHANISM WHICH ENSURE EVALUATION OF PROMOTERS SKILL, EQUITY, RAW MATERIAL	0	0	0	0	3	6	0	0	1	10	
WATER PROBLEM SHOULD SOLVE	0	0	0	0	2	0	4	0	0	6	
AREA SHOULD BE APPROVED	0	0	0	0	0	0	1	2	2	5	
OWN STARTING BY OWNERS	0	0	0	0	0	0	0	0	1	1	
PROVISION OF SERVICES OF PROFESSIONAL CONSULTANTS TO THE SECTOR AND PROVIDE INFORMATION ABOUT DIFFICULTY IN POLYMER INDUSTRY	0	0	0	0	0	0	1	0	0	1	
MUST BE REMOVED FROM RESIDENTIAL AREA BUT SUFFICIENT COMPENSATION FOR UPROOTING, IT											
Total - >	50	39	17	42	49	52	47	46	37	379	

Note: More than one suggestion have been provided by some units and therefore the total may not tally with the actual number.

Table-31B Classification of establishment by product and by way of experience as a competition in domestic/international market

Competition	<-----Product/SSI Category----->										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
CHEAPER PRICE TO SATISFIED CLIENT AND DIFFERENT QUALITY OF PRODUCT WE COULD ARRANGE GOOD THINGS AGAIN	2	5	8	4	2	2	3	7	5	38	
GOVT. POLICY FOR SS I/ELECTRIC/RAW MATERIAL/TRANSPORT FACILITY	1	2	0	1	0	0	0	0	0	4	
NO SUCH TYPE PROBLEM OF MARKETING	1	0	0	0	0	0	0	0	0	1	
GOVT. INDUSTRIES IMPROVE TECHNOLOGY KNOWLEDGE/IMPROVE QUANTITY IN PRODUCTION/BETTER QUALITY/GOOD THIN	0	3	1	1	2	0	1	2	1	11	
TRY TO REDUCE COSTS & LOWER PRICE RATES & SMALL TIME INTERVAL	0	1	0	0	2	0	2	1	2	8	
FINANCIAL PROBLEM SOLVE	0	0	0	1	0	0	0	0	0	1	
EXPORT POLICY	0	0	0	1	0	0	0	0	0	1	
DON'T GIVE BETTER RESULTS	0	0	0	0	1	0	0	0	0	1	
MEDIA PUBLICITY AND BY PRODUCING GOODS OF INTERNATIONAL STANDARD	0	0	0	0	0	1	0	0	0	1	
TRADE FAIR	0	0	0	0	0	2	0	1	0	3	
Total---->	4	11	9	8	7	5	6	11	8	69	

Notes: All units did not respond and some mention more than one experience therefore the total may not tally with the actual number.

Table-32B Classification of service provider establishments by product and by opinion with regards to improved technology for improving the productivity/ marketability of services.

Opinion	Product/SSI Category									Total
	Chemical& Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
LESS PROFITABILITY	1	1	0	0	1	0	0	0	0	3
MORE COMPETITION	1	0	0	0	0	0	0	0	0	1
MARKETING	0	1	0	2	0	1	0	1	1	6
FINANCIAL	0	1	1	3	2	1	0	3	2	13
NOT TAKE RISK	0	1	1	0	0	0	0	0	0	2
SHORTAGE OF POWER	0	1	0	0	0	0	0	1	0	2
HIGH SERVICE TAX	0	1	0	0	0	0	0	1	0	2
PRODUCT SPECIFIC	0	1	0	0	0	0	0	0	0	1
DUE TO GOVT.POLICIES	0	1	0	0	0	0	0	0	0	1
NON-REGULARMENT OF SUCH PRODUCT BY PEOPLE	0	1	0	0	0	0	0	0	0	1
AWARENESS ABOUT NEW TECHNOLOGY	0	0	0	1	0	0	0	0	0	1
ADVANCE TECHNOLOGY	0	0	0	0	2	2	0	2	0	6
NO KNOW HOW	0	0	0	0	1	0	0	0	0	1
SMALL ENTERPRISES	0	0	0	0	1	0	0	0	0	1
COMPUTER	0	0	0	0	0	1	0	0	0	1
RAW MATERIAL, INDUSTRIES	0	0	0	0	0	0	0	1	0	1
GOOD SALES	0	0	0	0	0	0	0	1	0	1
LABOUR PROBLEM	0	0	0	0	0	0	0	1	1	2
COST FACTOR	0	0	0	0	0	0	0	0	1	1
MANAGEMENT	0	0	0	0	0	0	0	0	1	1
Total-->	2	9	2	6	7	5	0	12	6	49

Note: All units did not respond and therefore the total may not tally with the actual number.

State-> Haryana
Table-1C Classification of sampled establishments by product and by year of establishment

Year of Establishment	-----Product/SSI Category----->									Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Prin- ting	Hosiery & Food Garments	Metal Products	Electrical Machinery & Appara- tus		
Prior to 1970	0	0	1	0	1	1	0	0	3	
1971-1980	0	1	0	1	0	0	0	1	3	
1981-1990	1	5	1	3	1	1	3	4	20	
1991-2000	7	7	6	6	12	13	6	2	72	
After-2000	1	7	3	5	3	2	1	5	28	
Total--->	9	20	11	15	17	17	10	8	126	

Table-2C Classification of sampled establishments by product and by main activity

Main Activity	Product/SSI Category-->									Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garment Products	Food Products	Metal Products	Electrical Machinery & Apparatus		
Manufacturing	9	17	8	15	9	16	10	2	19	105
Processing	0	2	0	0	0	0	0	0	0	2
Repair	0	2	2	1	1	0	0	3	0	9
Other	0	1	1	0	8	2	0	3	0	15
Total-->	9	22	11	16	18	18	10	8	19	131

Note: More than one activity is performed by some units and therefore total may not tally with actual number.

Table-3C Classification of sampled establishments by product and by type of ownership

Type of Ownership	Product/SSI Category								Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
Self	1	0	0	0	1	0	0	0	2
Partnership	1	2	1	0	4	1	1	3	13
Prop.	4	14	14	14	5	7	6	12	85
Company	3	3	0	3	7	2	1	4	25
Total---	9	20	15	17	17	10	8	19	126

Table-4C Classification of sampled establishments by product and by fixed capital

Fixed Capital (Rs.)	Product/SSI Category								Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
<= 5 lakh	2	10	5	8	1	6	4	3	49
5-10 lakh	1	4	2	2	1	1	2	5	21
10-20 Lakh	3	2	3	4	4	1	0	4	22
20-50 Lakh	1	2	1	2	10	1	1	2	20
>50 Lakh	2	2	1	1	1	1	1	5	14
Total---	9	20	11	17	17	10	8	19	126

Table-5C Classification of sampled establishments by product and by working capital

Working Capital (Rs.)	Product/SSI Category----->									
	Chemical& Rubber & Chemical Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
< 5 lakh	1	11	5	12	9	1	6	3	2	50
5-20 lakh	3	5	3	3	5	4	1	4	6	34
20-50 Lakh	3	2	1	0	1	6	1	0	5	19
50-100 Lakh	1	1	1	0	2	4	2	1	3	15
>100 lakh	1	1	1	0	0	2	0	0	3	8
Total--->	9	20	11	15	17	17	10	8	19	126

Table-6C Classification of sampled establishments by product and by output

Output (Rs.)	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
<- 5 lakh	0	4	3	8	5	0	3	4	1	28	
5-20 lakh	2	8	5	6	5	2	4	3	6	41	
20-50 lakh	4	6	0	0	2	6	1	0	5	24	
50-100 lakh	0	1	1	0	2	4	1	0	3	12	
>100 lakh	3	1	2	1	3	5	1	1	4	21	
Total----	9	20	11	15	17	17	10	8	19	126	

Table-7C Classification of sampled establishments by product and by size of employment

Size of Employment	Product/SSI Category								Total
	Chemical& Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
<= 5	3	7	12	7	0	8	5	4	51
6-10	4	8	1	4	0	1	2	2	24
11-15	0	3	1	2	0	0	0	1	8
16-20	0	1	0	1	4	0	0	4	10
21-25	0	0	0	1	1	0	0	2	6
More >25	2	1	1	2	12	1	1	6	27
Total--->	9	20	11	17	17	10	8	19	126

Table-8C Classification of sampled establishments not utilizing full capacity by product and by reason

Reasons	Product/SSI Category								Total
	Chemical& Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
Lack of demand	2	4	1	4	5	1	1	5	27
Power shortage	4	9	4	10	7	6	5	8	59
Equipment Problem	0	2	0	2	0	0	1	1	7
Non availability of raw material	2	3	3	2	1	0	0	1	13
Lack of funds	3	7	4	7	3	5	0	4	38
Labour Problem	0	3	0	2	3	1	3	2	15
Marketing Problem	6	9	11	10	9	8	3	11	74
Full capacity	2	3	1	2	6	1	2	5	24
Total--->	19	40	26	39	34	22	15	37	257

Note: Some units have indicated more than one reason and therefore total may not tally with actual number.

Table-9C Classification of sampled establishments by product and by nature of operation

Nature of Operation	Product/SSI Category----->							
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Metal Products	Electrical Machinery & Apparatus	Total
Perennial	9	20	11	9	14	7	17	110
Seasonal	0	0	0	6	3	1	2	16
Total--->	9	20	11	15	17	8	19	126

Table-10C Classification of sampled establishments by product and by type of management

Product / SSI Category	<---Self Managed---><-Professionally Managed->			
	With Technical Quali.	Without Technical Quali.	With Technical Quali.	Without Technical Quali.
Chemical & Chemical products	1	7	0	1
Rubber & plastic products	0	18	0	2
Leather Products	1	6	2	2
Wood Products	0	13	0	2
Paper Product & Printing	3	11	1	2
Hosiery & Garments	1	7	3	6
Food Products	0	9	0	1
Metal Products	0	7	1	0
Electrical machinery & apparatus	5	9	1	4
Total--->	11	67	8	20

Table-11C Classification of sampled establishments by product and by technology use

Product / SSI Category	Units Using Improved Technology	Units Without Improved Technology	Total
Chemical & Chemical products	7	2	9
Rubber & plastic products	17	3	20
Leather Products	9	2	11
Wood Products	7	8	15
Paper Products & Printing	13	4	17
Hosiery & Garments	17	0	17
Food Products	8	2	10
Metal Products	6	2	8
Electrical machinery & apparatus	16	3	19
Total--->	100	26	126

Table-12C Classification of sampled establishment by product and by technology

Existing Technology	< Chemical Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Product/SSI Category					Electrical Machinery & Apparatus	Total
						Hosiery & Garments	Food Products	Metal Products				
IRONING MACHINE	0	1	2	0	0	2	1	0	0	0	0	6
LEATHER MOULDER, MOULDING MACHINE	0	5	0	0	0	0	0	1	0	0	0	6
ZIGZAG, STITCHING, SPRAYING AND SPRAYING MACHINE/EMBROIDARY MACH.	0	1	3	0	0	9	0	0	0	1	0	14
CUTTER MACHINE	1	1	2	4	3	5	1	0	0	1	0	18
FINISHING MACHINE	0	1	1	1	0	2	0	0	0	0	0	5
PRINTING MACHINE/COMPUTER PRINTER/WEB OFFSET PRINTING MACH.	1	0	0	0	6	0	0	0	0	0	0	7
MACHINERY (HAND MACHINERY & OTHER)	0	0	0	0	0	2	0	0	0	3	0	5
BINDING MACHINE	0	0	0	0	0	0	1	0	0	1	0	2
GRAPHIC BAR/COMPUTER SCALE	1	0	0	0	2	2	1	0	0	0	0	6
FREEZER, COOLING TOWER/DRY COLLING MACHINE/DRYING MECH.	0	1	0	0	0	0	0	0	0	0	0	1
BLENDER, GRINDER AND MIXTURE MACHINE	1	4	1	0	0	0	1	2	0	0	0	9
PACKING MACHINE/SEALING MACHINE/BENDER/COVER MACHINE	1	2	0	0	4	0	0	0	0	0	0	7
WELDING MACHINE	0	0	0	0	0	0	0	0	0	2	0	2

Table-12C Classification of sampled establishment by product and by technology

Existing Technology	Product/881 Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Garments	Hosiery & Food Products	Metal Products	Electrical Machinery & Apparatus		
FILTER	0	0	0	0	0	0	0	1	0	1	
BOILING TANK	1	0	0	0	0	1	2	0	0	4	
TRUMP AND WEIGHT MACHINE	0	0	0	2	0	1	0	0	0	3	
QUALITY TESTING MACHINE	0	1	0	0	0	0	0	0	3	4	
POLISHING MACHINE/CHINE	0	0	0	0	0	0	0	0	2	2	
POWER COATING MACHINE											
LATHE AND DRILL MACHINE	0	1	1	1	0	0	0	3	1	7	
KNITTING, WEAVING MACHINE, SPINNING MACHINE	0	0	0	0	0	3	0	0	0	3	
FOOD PROCESSOR AND ARTIFICIAL DEHYDRATION	0	1	0	0	3	0	0	0	0	4	
MULTI-COIL/WINDING MACHINE	0	0	0	1	1	0	0	0	0	2	
PNEUMATIC TOOLS	1	0	0	0	0	0	0	0	0	1	
PUNCH MACHINE	0	1	0	0	2	0	1	0	2	6	
ADHESIVE BONDING MACHINE	0	0	0	0	0	1	0	0	0	1	
LAMINATION MACHINE	0	1	0	0	0	2	0	0	0	3	

Table-12C Classification of sampled establishment by product and by technology

Existing Technology	<-----Product/SSI Category----->										----->	
	Chemical& Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery	Total			
BORING MACHINE	0	0	0	0	0	3	0	0	0	0	3	
PARTING MACHINE	0	0	0	0	0	1	0	0	0	0	1	
ARA MACHINE	0	0	0	1	0	0	0	0	0	0	1	
EXCLUDERS	1	0	0	0	0	0	0	0	0	0	1	
CLUSTER PUMP	0	0	0	0	0	0	0	0	1	0	1	
CNC MACHINE	0	0	1	0	0	0	0	0	0	0	1	
ROLLING MILL	0	0	0	0	0	0	0	0	1	0	1	
WIPER MACHINE	0	0	0	0	0	1	0	0	0	0	1	
COMPRESSOR	0	1	0	0	0	0	0	0	0	0	1	
POWER PRESS	0	0	0	0	0	0	0	0	3	0	3	
TURNER	0	0	0	0	0	0	0	0	1	0	1	
OWEN MACHINE	1	0	0	0	0	0	0	0	0	0	1	
Total----	9	22	11	10	21	35	8	8	21	8	145	

Note: Some units were using more than one technology and therefore total may not tally with actual number.

Table-13C Classification of sampled establishment with improved technology by product and by source of technology

Source of Technology	Product/SSI Category										Total
	Chemical & Rubber Products	Chemical Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
TRADE SHOW (DOMESTIC/INTERNATIONAL)	0	1	0	0	1	0	0	0	0	2	
REPRESENTATIVE CONSULTING ,CO EMPERPRIUR FRIEND	1	0	2	3	1	3	0	0	1	11	
MAGAZINE /NEWS PAPER/INTERNET	3	4	7	3	5	13	3	1	3	42	
TECHNICAL CONSULTANT/MARKET CONSULTATION/EXPORT	0	6	4	1	2	3	3	4	7	30	
ADVERTISEMENT	3	5	2	2	5	5	1	2	7	32	
OWN DECITION	1	1	0	1	2	0	1	0	0	6	
OUT SOURCEING BY INDUSTRIAL GUIDELINE	0	1	0	0	0	0	0	0	1	2	
RESEARCH PERSON/INSTITUTES	1	0	0	0	0	0	0	0	0	1	
Total---	9	18	15	10	16	24	8	7	19	126	

Note: Some units have mentioned more than one source and therefore total may not tally with actual number.

Table-14C Classification of sampled establishments with advanced/improved technology by product and by impact on production

Product / SSI Category	<----- Improved Quality	-----Impact on Production/Output----->				Reduced cost of production	Achieved Competiti- veness	Total
		Better capacity utilization	Increase in quantity	Increase in efficiency				
Chemical & Chemical products	1	0	2	1		2	0	6
Rubber & plastic products	10	1	10	2		5	0	28
Leather Products	9	6	4	1		0	0	20
Wood Products	5	1	1	0		3	1	11
Paper Products & Printing	7	2	7	2		3	0	21
Textile & Garments	5	1	10	2		5	0	23
Food Products	2	1	4	0		3	0	10
Metal Products	5	1	2	2		4	1	15
Electrical machinery & apparatus	7	2	7	0		6	0	22
Total---->	51	15	47	10		31	2	156

Note: Some units have mentioned more than one impact and therefore total may not tally with actual number.

Table-15C Classification of sampled establishments without improved technology by product and by barriers

Barriers in Technology Adoption	Product/SSI Category										Total
	Chemicals & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
Lack of management skills/non availability of skills	0	1	0	0	0	0	0	0	0	1	
Any Other Social reasons	0	0	0	0	0	0	1	0	0	1	
Non awareness/ lack of knowledge/information about the availability of the requisite technology	0	0	0	0	1	0	1	0	0	2	
Nature and inadequacy of financial capacity	0	1	2	0	1	0	1	1	1	7	
Financial aspects of technology making difficult to adopt by the unit	1	2	2	3	0	0	0	0	1	9	
Economically not viable	1	1	0	7	2	0	0	1	3	15	
The desire to "Avoid Risk"	0	0	1	3	1	0	0	0	1	6	
Lack of adaptability to changing trends	1	0	1	1	0	0	0	0	1	4	
Relative isolation from technology hubs	0	0	0	0	0	0	0	1	0	1	
Low levels of R&D	0	0	0	0	1	0	0	1	1	3	
Total----	3	5	6	14	6	0	3	4	8	49	

Note: Some units pointed out more than one barrier and therefore total may not tally with actual number.

Table-16C Classification of sampled establishment interested in modernizing of technology by products and by area for improvement

Area of Improvement	-----Product/SSI Category----->										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
MARKETING PROFILE ESS AND ENLARGEMENT AND TRANSPORTATION OF GOODS	0	0	0	1	0	1	0	0	2		
PRODUCTION AND MARKETING	0	1	0	0	0	0	0	0	2		
MACHINERY DEVELOPMENT/MOULDING/GRINDING/RAW MATERIAL, COOLING BOX	4	9	4	4	13	3	2	9	53		
CUTTING & DESIGNING/PACKAGING OF FINISHED GOODS, DYING	2	0	2	1	3	3	1	1	16		
D.T.P. LASER SETTER	0	0	0	1	0	0	0	0	1		
POLISHER	0	0	0	0	0	0	0	2	4		
THREAD MACHINE	0	1	0	0	0	0	0	0	1		
OFFSET PRINTING/ELECTRONIC PRINT	0	1	0	5	0	0	0	0	6		
Total---->	6	12	7	12	16	7	3	12	85		

Note: Some units mentioned more than one area for improvement and some did not respond therefore total may not tally with actual number.

Table-17C Classification of sampled establishments by product and by relations with large industries

Product / SSI Category	Supplying finished/semi finished goods	Purchase of raw materials	Rendering services	Helped in marketing	Use of tech- nology	For technical know how	Others	Total
Chemical & Chemical products	0	0	0	0	0	0	0	0
Rubber & plastic products	1	0	1	0	0	0	0	2
Leather Products	2	0	1	0	0	0	0	3
Wood Products	0	0	0	0	0	0	0	0
Paper Products & Printing	0	0	0	0	0	0	0	0
Hosiery & Garments	1	0	0	0	0	0	0	1
Food Products	0	0	1	0	0	0	0	1
Metal Products	0	0	0	0	0	0	0	0
Electrical machinery & apparatus	2	0	0	0	0	0	0	2
Total----	6	0	3	0	0	0	0	9

Note: All units are not associated with large industries.

Table-18C Classification of sampled establishments by product and by Training needs

Product / Category	<-----Training Needs----->					Total
	Technical know how	Marketing	Financial management	Other		
Chemical & Chemical products	2	3	1	0		6
Rubber & plastic products	2	6	6	0		14
Leather Products	2	5	2	0		9
Wood Products	1	7	1	0		9
Paper Products & Printing	3	6	4	0		13
Hosiery & Garments	6	6	4	1		17
Food Products	3	6	0	0		9
Metal Products	2	2	4	0		8
Electrical machinery & apparatus	7	7	2	0		16
Total--->	28	48	24	1		101

Note: All units did not desire training needs but some units desire training needs in more than therefore total may not tally with actual number.

Table-19C Classification of sampled establishment by product and by future planning of development

Plans for Development	Product/SSI Category										Total
	Chemicals & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
MARKET SEGMENT/PRODUCTION OF SOAP IN HIGHER QUALITY/PRODUCTION LEVEL	0	1	0	0	1	0	0	0	0	2	
MACHENICAL SEGMENT /MOULDING MACHINE/CUTTING MACHINE/PROCESSING MACHINE/GRINDING MACHINE	5	10	8	7	4	13	6	2	10	65	
TECHNOLOGY	0	1	0	0	0	1	0	0	0	2	
COMPUTER DESIGNER/SOFTWARE/PRINTING/EMBROIDING	0	1	0	2	6	0	0	1	0	10	
AIR COOLLER, PURIFIER, AIR-CONDITIONER, GRINDER	0	0	0	0	0	0	1	0	0	1	
FIRNISHING MACHINE /POLISH MACHINE	1	0	0	3	1	0	0	0	2	7	
CLOUR COATES MACHINE	0	0	0	1	0	0	0	0	0	1	
FURING MACHINE	0	0	0	0	0	1	0	0	0	1	
5 THREAD OVER LOCK	0	0	0	0	0	1	0	0	0	1	
Total----	6	13	8	13	12	16	7	3	12	90	

Note: All units did not mention and some mentioned more than one area of future development therefore total may not tally with actual number.

Table-20C Classification of sampled establishments by product and by effect of social background on development

Product / SSI Category	<-----Social Background----->				Total
	Education, general and technical	Religion and caste	Cultural background	Any other	
Chemical & Chemical products	9	0	0	0	9
Rubber & plastic products	19	0	0	1	20
Leather Products	5	0	0	0	5
Wood Products	10	0	3	0	13
Paper Products & Printing	14	0	1	1	16
Hosiery & Garments	16	0	0	1	17
Food Products	7	0	0	0	7
Metal Products	6	0	0	0	6
Electrical machinery & apparatus	14	0	0	0	14
Total--->	100	0	4	3	107

Note: All units did not respond.

Table-21C Classification of sampled establishment by product and by discriminatory factors and experience thereon

Discriminatory Factor	Product/SSI Category									Total
	Chemicals & Rubber & Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
OTHER FACTORS	0	2	1	0	1	0	0	1	5	
NOT SUFFICIENT FOR GOVT./BANK/POLICY	4	3	3	1	5	10	1	6	34	
DON'T KNOW UNAWARE	3	14	7	11	8	7	8	10	75	
PAPER WORK TAKING MORE TIME	1	1	0	1	2	0	0	1	6	
BRIBED	0	0	0	0	0	0	0	1	1	
IMPARTIAL POLICY BY SSI	1	0	0	2	0	0	1	0	4	
GOVT. OFFICIAL GIVES MORE PREFERENCE TO THE ENTERPRISES HAVING GOOD RELATION	0	0	0	0	1	0	0	0	1	
Total----	9	20	11	15	17	17	10	19	126	

Table-22C Classification of employees in sampled establishment by product and by category and sex

Product / SSI Category	<-----Number of employees----->											
	Technical		Contractual		Daily Wages		Honorary		Other		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
Chemical & Chemical products	27	0	6	0	84	2	0	0	6	0	123	2
Rubber & plastic products	20	1	5	0	140	10	0	0	11	2	176	13
Leather Products	22	2	1	0	89	0	0	0	5	0	117	2
Wood Products	12	0	3	0	119	0	0	0	9	0	143	0
Paper Products & Printing	49	0	47	0	99	3	0	0	11	0	206	3
Hosiery & Garments	155	4	320	4	222	48	0	0	2	0	699	56
Food Products	37	0	0	0	38	2	0	0	7	0	82	2
Metal Products	2	0	4	0	90	0	0	0	5	0	101	0
Electrical machinery & apparatus	112	10	18	0	299	2	0	0	6	0	435	12
Total----	436	17	404	4	1180	67	0	0	62	2	2082	90

Table-23C Average employment in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	M	F	M	F	M	F
Chemical &	16	0	5	0	14	0
Chemical products						
Rubber & plastic	9	1	6	1	9	1
products						
Leather Products	12	0	5	0	11	0
Wood Products	15	0	5	0	10	0
Paper Products &	13	0	10	0	12	0
Printing						
Hosiery &	41	3	*****			
Garments						
Food Products	9	0	5	0	8	0
Metal Products	5	0	35	0	13	0
Electrical	25	1	11	0	23	1
machinery & apparatus						
Total--->	19	1	9	0	17	1

Table-24C Average working capital in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.516	0.135	0.431
Rubber & plastic products	1.890	0.070	1.617
Leather Products	0.338	0.090	0.293
Wood Products	0.043	0.031	0.037
Paper Products & Printing	0.158	0.265	0.184
Hosiery & Garments	0.552	*****	0.552
Food Products	0.265	0.020	0.216
Metal Products	0.060	0.540	0.180
Electrical machinery & apparatus	0.613	0.103	0.533
Total--->	0.628	0.131	0.525

Table-25C Average output in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)
Chemical & Chemical products	0.660	1.096	0.180	0.190	0.553	0.894
Rubber & plastic products	2.524	2.852	0.197	0.203	2.175	2.455
Leather Products	0.497	0.500	0.105	0.110	0.425	0.429
Wood Products	0.264	0.346	0.085	0.069	0.169	0.198
Paper Products & Printing	0.351	0.425	0.405	0.410	0.364	0.422
Hosiery & Garments	1.021	1.099	*****	*****	1.021	1.099
Food Products	0.401	0.445	0.060	0.065	0.333	0.369
Metal Products	0.190	0.060	2.540	3.550	0.778	0.933
Electrical machinery & apparatus	1.566	1.168	0.133	0.147	1.339	1.006
Total--->	1.032	1.099	0.948	0.426	0.907	0.960

Table-26C Capital/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.031	0.030	0.031
Rubber & plastic products	0.194	0.009	0.171
Leather Products	0.028	0.020	0.027
Wood Products	0.003	0.007	0.004
Paper Products & Printing	0.012	0.027	0.015
Hosiery & Garments	0.012	*****	0.012
Food Products	0.029	0.004	0.026
Metal Products	0.012	0.015	0.014
Electrical machinery & apparatus	0.024	0.009	0.023
Total---->	0.032	0.015	0.030

Table-27C Output/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.066	0.042	0.064
Rubber & plastic products	0.292	0.027	0.260
Leather Products	0.041	0.024	0.040
Wood Products	0.023	0.015	0.021
Paper Product & Printing	0.033	0.042	0.034
Hosiery & Garments	0.025	*****	0.025
Food Products	0.048	0.013	0.044
Metal Products	0.012	0.101	0.074
Electrical machinery & apparatus	0.045	0.013	0.043
Total--->	0.057	0.048	0.056

Table-28C Capital/Output Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category	Using Improved Technology	Without Improved Technology	Total
Chemical & Chemical products	0.471	0.711	0.482
Rubber & plastic products	0.663	0.344	0.659
Leather Products	0.676	0.818	0.682
Wood Products	0.124	0.455	0.185
Paper Products & Printing	0.373	0.646	0.435
Hosiery & Garments	0.502	*****	0.502
Food Products	0.596	0.308	0.585
Metal Products	1.000	0.152	0.193
Electrical machinery & apparatus	0.525	0.705	0.529
Total--->	0.572	0.307	0.547

Table-29C Classification of sampled establishment by product and by different experience with the bank/ financing Institutions.

Experience With Bank/ Financial Institutions	Product/SSI Category										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
NO NEED OF FINANCE	0	3	3	1	6	5	0	0	1		19
GOOD	5	5	5	4	4	5	3	2	11		44
HARD PAPER WORK/OTHER DOCUMENTARY PROBLEM	0	1	2	1	1	0	0	0	0		5
TO PROMOTE THE TECHNOLOGY	0	0	0	0	0	0	0	0	1		1
BAD EXPERIENCE, TAKE MORE TIME FOR PROCESSING WORK INTEREST RATES ARE HIGH	1	2	2	0	2	6	1	0	1		15
GIVES PROPER CO-OPERATION, CONSULTATION AND OTHER FACILITIES	0	0	1	0	0	1	0	0	2		4
DON'T HAVE SUCH TYPE OF EXPERIENCE	2	7	0	3	2	1	6	3	3		27
Total--->	8	18	13	9	15	18	10	5	19		115

Note: Some units did not mention and some mentioned more than one experience and therefore total may not tally with actual number.

Table-30C Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	<-----	Product/SSI Category										Total
		Chemicals & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
CREATE AWARENESS ABOUT MARKET WANTS AND BUSINESS AND GOVT. SUBSIDES	2	11	3	4	11	11	3	3	8			56
AWARD SCHEM AND CREDIT GUARANTEE SCHEM	1	2	1	1	1	1	1	1	0			9
LOWER TAXATION AND EXCISE DUTY	4	7	5	8	9	13	6	2	12			66
LOWER PAPER WORK	0	1	2	0	0	0	0	0	1			4
TECHNOLOGY AWARENESS	2	1	3	3	4	2	2	1	8			26
MARKETING IDENTIFICATION BY SSI OFFICIAL	1	3	0	3	3	1	0	0	1			12
POLICIES FOR SSI SHOULD BE NOT HARDER THAN OTHER INDUSTRY	0	0	0	0	1	0	0	0	0			1
PROVISION FOR LOAN AND CHEAPER GOODS FOR BUSINESS AND A GOOD POLICY AND LOAN AMOUNT SHOULD BE RISE	3	1	1	0	8	3	0	0	2			18
TO CONTROL THE PRICE AND QUALITY FLUCTUATION OF RAW MATERIAL	1	0	0	0	1	2	0	0	0			4
LEADING INSTITUTIONS SHOULD PROPERLY EVALUATE THE POTENTIAL	0	1	0	0	2	0	0	0	0			3
FULL GOVT. HELPS IN RESETTling OF UNITS	0	1	0	0	1	0	0	1	0			3
NO PROPER COUNSELLING TO THE NEW ENTREPRENURES BY THE GOVT.	0	0	0	1	0	2	0	2	0			5

Table-30C Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
CONSIDERABLE DELAY IN SUBMEETING PROPOSAL TO SETUP SSI	0	0	0	0	0	1	0	0	0	1	
LOWER RATE OF INTEREST AND SHORT PAPER WORK	2	2	0	4	5	4	0	1	1	19	
DEVELOPMENT OF INFRASTRUCTURE LIKE ROADS, TRANSPORTATION, GENERATION, SUPPLY OF POWER AND WATER ETC.	1	1	0	1	1	2	0	1	4	17	
OTHER LIBERAL PLANING FOR SSI SHOULD BE DONE BY GOVT.	2	1	1	1	1	0	0	2	1	9	
EXPORT POLICY SHOULD BE LIBERALISED	0	0	0	0	0	1	0	0	0	1	
LOWER RATE OF ELECTRICITY AND ENSURE CONTINUOUS POWER SUPPLY	4	3	2	1	5	12	2	0	10	39	
HUMAN POWER MANAGEMENT AND POWER MANAGEMENT	0	2	0	0	2	1	0	0	0	5	
TRAINING TO WORKERS	0	1	0	0	1	2	0	0	0	4	
CREATING A NEW POLICY FOR SSI SECTOR AND GOVT.SHOULD KEEP GOOD RELATION WITH SSI	1	1	4	1	1	1	0	0	6	15	
GOVT.SHOULD MAKE A JOINT APPRAISAL MECHANISM WHICH ENSURE EVALUATION OF PROMOTERS SKILL, EQUITY, RAW MATERIAL	0	2	0	4	2	1	3	1	5	18	
WATER PROBLEM SHOULD SOLVE	3	2	2	3	3	2	0	1	8	24	
OWN STARTING BY OWN CASH	0	0	0	0	1	0	0	0	0	1	

Table-30C Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
PROVISION OF SERVICES OF PROFESSIONAL CONSULTANTS TO THE SECTOR AND PROVIDE INFORMATION ABOUT DIFFICULTIES	0	0	0	0	1	0	2	0			3
POLLUTING INDUSTRY MUST BE REMOVED FROM RESIDENTIAL AREA BUT SUFFICIENT COMPENSATION FOR UPROOTING THEM	0	0	0	0	1	0	0	0			1
HIGHER ACCELERATION DEPRECIATION	0	0	0	2	0	0	0	1			3
FINISHED CUSTOMS DUTY FOR ALL GOODS IMPORTED FOR USE IN RDX PROJECT BY SSI	0	2	0	3	0	1	0	1			7
VENDOR DEVELOPMENT PROGRAMME FOR LINKAGES BETWEEN SMALL, MEDIUM AND LARGE INDUSTRIES	0	2	2	0	0	1	0	1			8
TRUST ON RURAL MARKETING	0	0	1	2	0	0	0	0			3
COMPREHENSIVE POLICY FOR INVESTMENT MARKETING, BRAND PROMOTION AND OVERSEAS MARKET ACCESS	0	2	2	0	0	0	0	0			5
REGISTRATION WORK SHOULD COMPLETE ON ONE WINDOW AND EXPLORING THE REVIVAL OF VIABLE SICK UNIT	1	0	2	0	3	0	0	1			9
POWER COMMITTEE FOR RECOMMENDING SINGLE COMPREHENSIVE LEGISLATION FOR SSI UNITS	2	3	1	3	0	0	0	0			9
EXPLORING POSSIBILITIES OF RECURITISATION OF GUARANTEED LOANS	2	2	0	0	0	0	0	2			7
SHOULD REDUCE THE LOANS AND TIME GAP BETWEEN SANCTION OF TERM LOAN AND WORKING CAPITAL LOANS	2	2	3	0	3	0	0	1			12
PLACEMENT OF FOREIGN DIRECT INVESTMENT IN SSI SECTOR; UNDER AUTOMATIC ROUTE WITHIN THE ENHANCED EQUITY	0	1	0	0	1	0	1	0			3
THE SCHEDULE OF DISBURSEMENT	0	1	2	0	0	0	1	0			4

Table-30C Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category									Total
	Chemicals & Chemical Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper & Printing	Textiles & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
ADOPTING OF "TURN-KEY CONCEPT" FOR ENTREPRENEURSHIP TRAINING	0	0	0	0	0	0	0	1	0	1
SPECIAL FOCUS ON WOMEN ENTREPRENEURS MEAKER SACTIONS, HANDICAPPED AND SC/ST ENTREPRENEURS	0	0	0	1	0	1	2	2	0	6
SETTING UP DEBT RECOVERY TRIBUNALS AND MNC SHOULD BAN IN INDIA	0	0	1	0	0	0	0	1	1	3
INTRODUCE STANDARD FOR TESTING AND FUNCTIONS INDUSTRIAL PARKS	0	0	1	0	0	0	0	1	1	3
EFFORTS TO INTRODUCE UTILITY PATENT PROTECTION FOR SMALL INNOVATIONS AND MAKE A ATTENTION TO REAEARC PENSION FUNDS, INSURANCE COMPANIES AND MUTUAL FUNDS SHOULD BE ALLOWED TO CONTRIBUTE 5 PERCENT OF THEIR UNITS PUTTING UP SILVER AND COSTUME JEWELLERIES SHOULD BE GIVEN TAX INCENTIVES	0	1	0	0	1	1	0	1	1	5
CHANGING THE DEFINITION OF CLASSIFYING THE SSI UNITS AS SICK BY REDUCING THE NON-PERFORMING PERIOD	0	0	0	0	0	0	0	0	1	1
POWER SHOULD COME IN PRIVATE SECTOR	0	0	0	0	0	0	0	0	3	3
UNDER THE SCHEME OF CAPITAL SUBSIDY OF 12 PERCENT FOR INVESTMENT IN TECHNOLOGY UPGRADATION IN SELECTED	0	0	1	0	0	0	0	0	0	1
THE SANCTION OF TERM LOAN AND WORKING CAPITAL ARE NOT TIED UP PROPERLY MORE OVER THE SANCTIONED AMOUNT	0	1	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	0	0	1	2
	0	0	0	0	0	0	0	0	0	1
Total---->	34	66	41	50	69	73	21	26	82	462

Note: More than one suggestions have been received from some units and therefore total may not tally with actual number.

Table-31C Classification of establishment by product and by way of experience as a competition in domestic/international market

Competition	Product/SSI Category											Total
	Chemical& Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
CHEAPER PRICE TO SATISFIED CLIENT AND DIFFERENT QUALITY OF PRODUCT WE COULD ARRANGE GOOD THINGS AGAIN	2	2	4	4	1	6	1	1	6			27
GOVT. INDUSTRIES IM PROVE TECHNOLOGY KNOWLEDGE/IMPROVE QUANTITY IN PRODUCTION/BETTER QUALITY/GOOD THIN	0	1	1	0	0	1	0	0	0			3
TRY TO REDUCE COAST/LOWER PRICE RATES&SMALL TIME INTERVAL	0	0	0	0	0	0	0	0	1			1
FINANCIAL PROBLEM SOLVE	0	0	1	0	0	0	0	0	0			1
Total---	2	3	6	4	1	7	1	1	7			32

Note: All units did not respond.

Table-32C Classification of service provider establishments by product and by opinion with regards to improved technology for improving the productivity/ marketability of services.

Opinion	Product/SSI Category							Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Metal Products	Electrical Machinery & Apparatus
MARKETING	0	0	0	0	1	0	0	0
FINANCIAL	0	0	0	0	1	0	0	0
Total-->	0	0	0	0	2	0	0	0
								2

Note: A few units responded.

State : Rajasthan

Table-1D Classification of sampled establishments by product and by year of establishment

Year of Establishment	Product/SSI Category						
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Electrical Machinery & Apparatus
Prior to 1970	0	0	0	0	1	0	1
1971-1980	4	2	1	0	1	3	5
1981-1990	4	4	4	4	1	3	6
1991-2000	3	12	9	5	7	5	8
After-2000	3	0	3	0	1	2	1
Total----	14	18	17	9	11	13	21
							14
							128

Table-2D Classification of sampled establishments by product and by main activity

Main Activity	Product/SSI Category						
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garment Products	Food Products	Electrical Machinery & Apparatus
Manufacturing	12	18	17	6	10	7	20
Processing	1	0	0	0	1	9	1
Repair	0	0	0	2	0	0	0
Other	1	0	0	3	0	0	1
Total----	14	18	17	11	11	16	22
							14
							134

Note: Some units are engaged in more than one activity and therefore the total may not tally with actual number.

Table-3D Classification of sampled establishments by product and by type of ownership

Type of Ownership	Product/SSI Category								Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
Self Partnership Prop. Company	0 1 11 2	1 6 8 3	0 2 7 2	1 3 13 0	0 0 9 0	0 3 8 0	0 2 9 1	0 7 11 2	2 3 8 3
Total----	14	18	11	17	9	11	13	21	128

Table-4D Classification of sampled establishments by product and by fixed capital

Fixed Capital (Rs.)	Product/SSI Category								Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
<= 5 lakh 5-10 lakh 10-20 Lakh 20-50 Lakh >50 Lakh	4 0 4 6 0	1 2 9 5 1	5 2 2 1 1	6 6 4 1 0	5 3 0 0 1	1 6 2 2 0	0 1 5 5 2	5 6 1 5 4	2 2 0 4 6
29 28 27 29 15									
Total----	14	18	11	17	9	11	13	21	128

Table-5D Classification of sampled establishments by product and by working capital

Working Capital (Rs.)	Product/SSI Category----->									Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
<= 5 lakh	4	0	3	5	6	0	0	6	2	26
5-20 lakh	4	7	5	10	3	8	7	7	3	54
20-50 Lakh	5	10	2	1	0	2	3	2	2	27
50-100 Lakh	1	0	0	0	0	1	2	5	5	14
>100 Lakh	0	1	1	1	0	0	1	1	2	7
Total--->	14	18	11	17	9	11	13	21	14	128

Table-6D Classification of sampled establishments by product and by output

Output (Rs.)	-----Product/SSI Category----->									
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
<= 5 Lakh	1	0	1	1	0	0	0	4	1	8
5-20 Lakh	6	6	7	11	9	6	5	5	3	58
20-50 Lakh	5	8	2	2	0	2	2	5	2	28
50-100 Lakh	1	2	0	1	0	3	3	5	1	16
>100 Lakh	1	2	1	2	0	0	3	2	7	18
Total----	14	18	11	17	9	11	13	21	14	128

Table-7D Classification of sampled establishments by product and by size of employment

Size of Employment	Product/SSI Category								Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
<= 5	2	1	4	3	1	1	4	3	23
6-10	6	8	4	3	4	3	7	3	42
11-15	2	3	1	6	3	5	4	3	29
16-20	3	2	1	1	1	0	3	3	14
21-25	1	0	0	2	0	0	1	0	4
More >25	0	4	1	1	2	4	2	2	16
Total----	14	18	11	17	9	11	21	14	128

Table-8D Classification of sampled establishments not utilizing full capacity by product and by reason

Reasons	Product/SSI Category								Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	
Lack of demand	9	9	3	12	8	6	7	10	72
Power shortage	2	3	1	3	4	0	7	3	27
Equipment Problem	0	0	0	4	4	3	3	2	16
Non availability of raw material	1	5	1	3	0	3	6	3	23
Lack of funds	1	0	0	2	0	2	4	1	11
Labour Problem	1	2	1	1	0	1	2	0	10
Marketing Problem	9	11	3	11	6	9	11	9	77
Any Other Problem	0	0	0	0	0	1	0	0	1
Full capacity	2	2	5	1	0	1	2	3	17
Total----	25	32	14	37	23	24	42	31	254

Note: Some units indicated more than on reason and therefore the total may not tally with actual number.

Table-9D Classification of sampled establishments by product and by nature of operation III

Nature of Operation	<-----Product/SSI Category----->									Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
Perennial	12	12	5	9	8	7	8	14	13	88
Seasonal	2	6	5	5	1	4	4	3	1	31
Casual	0	0	1	3	0	0	1	4	0	9
Total---->	14	18	11	17	9	11	13	21	14	128

Table-10D Classification of sampled establishments by product and by type of management

Product / SSI Category	<---Self Managed---><---Professionally Managed-->							
	With Technical Quali.	Without Technical Quali.	With Technical Quali.	Without Technical Quali.	Total			
Chemical & Rubber & plastic products	3	11	0	0	14			
Leather Products	4	7	0	0	11			
Wood Products	1	15	0	1	17			
Paper Product & Printing	0	9	0	0	9			
Hosiery & Garments	2	9	0	0	11			
Food Products	3	7	0	3	13			
Metal Products	7	12	0	2	21			
Electrical machinery & apparatus	3	10	0	1	14			
Total--->	29	88	1	10	128			

Table-11D Classification of sampled establishments by product and by technology use

Product / SSI Category	Units Using Improved Technology	Units Without Improved Technology	Total
Chemical & Chemical products	13	1	14
Rubber & plastic products	15	3	18
Leather Products	4	7	11
Wood Products	9	8	17
Paper Products & Printing	3	6	9
Hosiery & Garments	9	2	11
Food Products	8	5	13
Metal Products	18	3	21
Electrical machinery & apparatus	8	6	14
Total--->	87	41	128

Table-12D Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
IRONING MACHINE	0	0	1	0	0	0	0	0	0	1	
LEATHER MOULDER, MOULDING MACHINE	1	3	0	0	0	0	0	2	0	6	
ZIGZAG, STITCHING, SPOUGING AND SPRAYING MACHINE/EMBROIDARY MACH.	0	1	0	1	0	3	0	1	1	7	
CUTTER MACHINE	1	2	2	6	3	1	0	2	5	22	
FINISHING MACHINE	1	1	0	3	0	0	0	0	1	6	
PRINTING MACHINE/COMPUTER PRINTER/WEB OFFSET PRINTING MACH.	0	1	0	0	3	0	0	0	0	4	
MACHINERY (HAND MACHINERY & OTHER)	1	0	0	0	0	0	0	0	1	2	
BINDING MACHINE	0	0	0	0	0	0	0	0	1	1	
NEW TECHNOLOGY	0	1	0	0	0	0	0	0	0	1	
FREEZER, COOLING TOWER/DRY COLLING MACHINE/DRYING MECH.	0	1	0	0	0	0	0	1	0	2	
BLENDER, GRINDER AND MIXTURE MACHINE	4	4	1	2	0	1	5	1	0	18	
PACKING MACHINE/SEALING MACHINE/BENDER/COVER MACHINE	2	0	0	0	0	1	0	0	0	3	
WELDING MACHINE	1	0	0	0	0	0	0	0	0	1	
GENERATOR	0	0	0	0	0	0	0	1	0	1	
BOILING TANK	1	2	0	0	0	0	0	1	0	4	
QUALITY TESTING MACHINE	0	0	0	0	0	0	0	0	1	1	

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Table-12D Classification of sampled establishment by product and by technology

Existing Technology	Product/SSI Category										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
DYES CHARGES	0	0	0	0	0	0	0	1		1	
GAUGE MACHINE/ARA MACHINE	0	0	2	0	0	0	0	0		2	
PLANERS	0	0	1	0	0	0	0	0		1	
REFILLER PLANER	0	0	0	0	0	1	0	0		1	
CHILLING MACHINE	0	0	0	0	0	1	0	0		1	
MEALING	0	0	0	0	0	0	1	0		1	
DISPERSION NEEDLES	0	0	1	0	0	0	0	0		1	
OWEN MACHINE	0	1	0	0	0	0	0	0		1	
Total----	16	23	7	16	7	11	9	26	14	129	

Note: Some units reported more than on technology in use and therefore the total may not tally with actual number.

Table-13D Classification of sampled establishment with improved technology by product and by source of technology

Source of Technology	Product/SSI Category										Total
	Chemical & Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
REPRESENTATIVE CONSULTING ,CO EMPERPRIUR FRIEND	1	9	1	6	1	2	3	4	0	27	
MAGAZINE /NEWS PAPER/INTERNET	9	9	2	6	2	5	2	14	3	52	
TECHNICAL CONSULTANT/MARKET CONSULTATION/EXPORT	3	2	0	0	0	0	4	2	2	13	
ADVERTISEMENT	3	1	1	1	2	3	0	3	4	18	
RESEARCH PERSON/INSTITUTES	1	0	0	0	0	0	0	0	0	1	
Total----	17	21	4	13	5	10	9	23	9	111	

Note: Some units mention more than on source and therefore the total may not tally with actual number.

Table-14D Classification of sampled establishments with advanced/improved technology by product and by impact on production

Product / SSI Category	<-----Improved Quality	Better capacity utilization	Impact on Production/Output----->	Increase in quantity	Increase in efficiency	Reduced cost of production	Achived Competitiveness	Total
Chemical & Chemical products	3	3		1	1	2	0	10
Rubber & plastic products	10	1		2	2	4	0	19
Leather Products	4	2		2	2	0	1	11
Wood Products	5	0		2	0	2	1	10
Paper Products & Printing	3	1		1	1	0	0	6
Hosiery & Garments	2	2		0	0	0	0	4
Food Products	4	0		2	0	3	0	9
Metal Products	12	2		3	0	0	1	18
Electrical machinery & apparatus	4	0		4	1	1	1	11
Total---->	47	11		17	7	12	4	98

Note: Some units have indicated more than one impact and therefore the total may not tally with actual number.

Table-15D Classification of sampled establishments without improved technology by product and by barriers

Barriers in Technology Adoption	Product/SSI Category										Total
	Chemical & Chemical Products	Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
Lack of management skills/non availability of skills	0	0	2	3	0	0	3	2	1	11	
Any Other Social reasons	0	1	0	0	0	0	1	0	2	4	
Non awareness/lack of knowledge/information about the availability of the requisite technology	1	1	1	3	0	1	3	1	2	13	
Nature and inadequacy of financial capacity	1	0	2	0	1	0	2	3	1	10	
Financial aspects of technology making difficult to adopt by the unit	0	1	1	5	1	1	2	1	2	14	
Economically not viable	0	1	4	3	3	2	2	0	2	17	
The desire to "Avoid Risk"	1	0	1	0	0	0	0	2	1	5	
Lack of adaptability to changing trends	0	0	1	0	0	0	0	0	0	1	
Relative isolation from technology hubs	0	0	1	1	0	0	0	1	0	3	
Low levels of R&D	0	0	0	0	1	0	0	0	2	3	
Total-->	3	4	13	15	6	4	13	10	13	61	

Note: Some units have pointed out more than one barriers and therefore the total may not tally with actual number.

Table-16D Classification of sampled establishment interested in modernizing of technology by products and by area for improvement

Area of Improvement	<-----Product/SSI Category----->									Total
	Chemical& Rubber & Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
PRODUCTION AND MARKETING	1	5	3	0	1	0	0	1	12	
MACHINERY DEVELOPMENT	7	8	2	4	4	6	8	3	42	
ENT/MOULDING/GRINDING/RAW MATERIAL, COOLING BOX	0	0	1	1	2	0	0	0	4	
COLOUR EQUIPMENT AND OPERATION SKILL	0	2	1	0	1	0	0	0	5	
CUTTING & DESIGNING/PACKAGING OF FINISHED GOODS, DYING	0	0	0	0	0	0	0	1	1	
FINANCE AND OTHER SIGMENTS	0	0	3	1	0	1	0	0	5	
POLISHER	0	0	2	5	0	0	0	0	7	
FURNISHING	0	1	0	0	0	0	1	0	2	
LAWS	0	0	0	0	1	0	3	1	5	
PRESS MACHINE	0	0	0	0	0	0	1	0	1	
THREAD MACHINE	0	0	0	0	0	0	1	0	1	
OFFSET PRINTING/ELECTRONIC PRINT	0	0	0	0	5	0	0	0	5	
Total---->	8	16	12	11	7	7	13	6	89	

Note: Some units mention more than one area for improvement and some does not repond therefore the total may not tally with actual number.

Table-17D Classification of sampled establishments by product and by relations with large industries

Product / SSI Category	Relation With Large Industries						For technical know how			Total
	Supplying finished/semi finished goods	Purchase of raw materials	Rendering services	Helped in marketing	Use of tech- nology					
Chemical & Chemical products	0	0	0	0	0	0	0	0	0	0
Rubber & plastic products	1	0	0	0	0	0	0	0	0	1
Leather Products	0	0	0	0	0	0	0	0	0	0
Wood Products	0	0	0	0	0	0	0	0	0	0
Paper Products & Printing	2	0	0	0	0	0	0	1	0	3
Hosiery & Garments	0	0	0	0	0	0	0	0	0	0
Food Products	0	0	0	0	0	0	0	0	0	0
Metal Products	0	0	0	1	1	0	0	0	0	2
Electrical machinery & apparatus	0	0	0	0	0	0	0	0	0	0
Total--->	3	0	0	1	1	0	0	1	0	6

Note: Very few units were associated with large industries.

Table-18D Classification of sampled establishments by product and by Training needs

Product / Category	<-----Training Needs----->					Total
	Technical know how	Marketing	Financial management	Other		
Chemical & Chemical products	3	2	1	0		6
Rubber & plastic products	3	2	1	0		6
Leather Products	2	2	0	0		4
Wood Products	3	3	1	0		7
Paper Products & Printing	1	2	0	1		4
Hosiery & Garments	3	4	0	0		7
Food Products	1	4	1	0		6
Metal Products	3	3	1	0		7
Electrical machinery & apparatus	1	1	1	0		5
Total----	22	23	6	1		52

Note: All units did not mention the training needs and some mention more than one field for training therefore the total may not tally with actual number.

Table-19D Classification of sampled establishment by product and by future planning of development

Plans for Development	-----Product/SSI Category-----										Total
	Chemical & Chemical Products	Rubber & plastic Products	Leather Products	Wood Products	Paper & Printing	Household Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
MANAGEMENT REFORM	1	0	0	0	0	0	0	2	0	3	
MARKETING OUTSOURCING AND ADVERTISMENT											
MACHENICAL SEGMENT	6	13	6	5	5	8	5	14	6	68	
/MOULDING MACHINE/CUTTING MACHINE/PROCESSING MACHINE/GRINDING MACHINE											
COMPUTER DESIGNER/	0	1	0	3	3	0	0	0	0	7	
SOFTWARE/PRINTING/EMBROIDING											
AIR COOLLER, PURIFI	0	2	0	1	0	1	0	0	0	4	
ER, AIR-CONDITIONER, GRINDER											
ELECTRIC SET	0	0	0	0	0	0	1	1	1	3	
WOOD DESIGNNER MAC	0	0	0	2	0	0	0	0	0	2	
HINE											
FIRNISHING MACHINE	0	0	3	3	0	0	0	0	0	6	
/POLISH MACHINE											
CILOUR COATES MACHI	0	0	1	1	0	1	0	0	0	3	
NE											
5 THREAD OVER LOCK	0	1	0	0	0	0	0	0	0	1	
Total----	7	17	10	15	8	10	6	17	7	97	

Note: All units did not point out and some have indicated future planning of development in more than one area therefore the total may not tally with actual number.

Table-20D Classification of sampled establishments by product and by effect of social background on development

Product / SSI Category	Social Background->				Total
	Education, general and technical	Religion and caste	Cultural background	Any other	
Chemical & Chemical products	5	1	0	0	6
Rubber & plastic products	6	0	0	1	7
Leather Products	5	0	0	0	5
Wood Products	8	0	1	0	9
Paper Products & Printing	3	1	0	0	4
Hosiery & Garments	5	1	0	0	6
Food Products	7	0	0	0	7
Metal Products	4	0	0	0	4
Electrical machinery & apparatus	5	0	0	1	6
Total--->	48	3	1	2	54

Note: All units did not respond.

Table-21D Classification of sampled establishment by product and by discriminatory factors and experience thereon

Discriminatory Factor	Product/SSI Category----->										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
DOMICILE	0	1	0	0	0	0	0	0	0	1	
OTHER FACTORS	0	0	0	0	2	0	1	0	0	3	
NOT SUFFICIENT FOR GOVT./BANK/POLICY	9	8	4	3	2	5	6	3		43	
DON'T KNOW UNAWARE	3	4	3	5	5	6	4	10		48	
PAYER WORK TAKING MORE TIME	0	0	0	1	0	0	1	0		2	
BRIBED	1	1	0	0	0	0	3	1		9	
IMPARTIAL POLICY BY SSI	0	1	0	1	0	2	5	0		11	
Total---->	13	15	7	10	9	13	20	14		117	

Note: Some units indicated more than one factor and some did not respond therefore the total may not tally with actual number.

Table-22D Classification of employees in sampled establishment by product and by category and sex

Product / SSI Category	<-----Number of employees----->											
	Technical		Contractual		Daily Wages		Honorary		Other		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
Chemical & Chemical products	9	0	25	0	114	0	0	0	13	0	161	0
Rubber & plastic products	32	0	218	0	192	2	0	0	12	0	454	2
Leather Products	10	0	0	0	106	2	0	0	4	0	120	2
Wood Products	16	0	0	0	203	0	0	0	17	0	236	0
Paper Products & Printing	0	0	1	0	62	0	0	0	9	0	72	0
Hosiery & Garments	4	0	20	12	125	2	0	0	9	0	158	14
Food Products	5	0	25	0	218	2	0	0	9	0	257	2
Metal Products	15	0	47	0	211	0	0	0	19	0	292	0
Electrical machinery & apparatus	8	0	54	0	154	0	0	0	16	0	232	0
Total----	99	0	390	12	1385	8	0	0	108	0	1982	20

Table-23D Average employment in the sampled establishments by product and by improved technology used

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	M	F	M	F	M	F
Chemical &	12	0	7	0	12	0
Chemical products						
Rubber & plastic	28	0	10	0	25	0
products						
Leather Products	19	1	6	0	11	0
Wood Products	15	0	12	0	14	0
Paper Products &	9	0	8	0	8	0
Printing						
Hosiery &	14	2	14	0	14	1
Garments						
Food Products	25	0	12	0	20	0
Metal Products	14	0	14	0	14	0
Electrical	15	0	19	0	17	0
machinery & apparatus						
Total--->	17	0	11	0	15	0

Table-24D Average working capital in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.244	0.060	0.231
Rubber & plastic products	0.575	0.350	0.538
Leather Products	0.823	0.133	0.384
Wood Products	0.289	0.134	0.216
Paper Products & Printing	0.053	0.053	0.053
Nonlery & Garments	0.198	0.450	0.244
Food Products	0.320	0.536	0.403
Metal Products	0.717	0.123	0.632
Electrical machinery & apparatus	2.250	1.165	1.785
Total--->	0.610	0.350	0.527

Table-25D Average output in the sampled establishments by product and by improved technology use

Product / SSI Category	Using Improved Technology		Without Improved Technology		Total	
	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)	01-02 Rs. (Cr.)	02-03 Rs. (Cr.)
Chemical & Chemical products	0.378	0.414	0.080	0.100	0.357	0.391
Rubber & plastic products	1.413	1.302	0.570	0.660	1.272	1.195
Leather Products	1.705	2.208	0.143	0.150	0.711	0.898
Wood Products	0.441	1.839	0.193	0.210	0.324	1.072
Paper Products & Printing	0.070	0.083	0.072	0.085	0.071	0.084
Hosiery & Garments	0.278	0.302	0.560	0.575	0.329	0.352
Food Products	1.374	1.388	0.914	1.474	1.197	1.421
Metal Products	0.374	0.468	0.163	0.183	0.344	0.427
Electrical machinery & apparatus	3.333	3.716	1.723	2.387	2.643	3.146
Total--->	0.966	1.178	0.519	0.700	0.823	1.025

Table-26D Capital/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.021	0.009	0.020
Rubber & plastic products	0.020	0.035	0.021
Leather Products	0.042	0.022	0.035
Wood Products	0.019	0.011	0.016
Paper Products & Printing	0.006	0.007	0.007
Hosiery & Garments	0.012	0.032	0.016
Food Products	0.013	0.046	0.020
Metal Products	0.052	0.009	0.045
Electrical machinery & apparatus	0.154	0.061	0.108
Total----	0.035	0.031	0.034

Table-27D Output/Labour Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category Rs. (Cr.)	Using Improved Technology Rs. (Cr.)	Without Improved Technology Rs. (Cr.)	Total Rs. (Cr.)
Chemical & Chemical products	0.035	0.014	0.034
Rubber & plastic products	0.046	0.066	0.047
Leather Products	0.112	0.024	0.081
Wood Products	0.121	0.017	0.077
Paper Product & Printing	0.009	0.011	0.011
Hosiery & Garments	0.019	0.041	0.023
Food Products	0.055	0.127	0.071
Metal Products	0.034	0.013	0.031
Electrical machinery & apparatus	0.254	0.125	0.190
Total--->	0.067	0.061	0.066

Table-28D Capital/Output Ratio in the sampled establishments by product and by improved technology use.

Product / SSI Category	Using Improved Technology	Without Improved Technology	Total
Chemical & Chemical products	0.589	0.600	0.589
Rubber & plastic products	0.442	0.530	0.450
Leather Products	0.373	0.886	0.427
Wood Products	0.157	0.637	0.201
Paper Products & Printing	0.640	0.627	0.632
Hosiery & Garments	0.654	0.783	0.693
Food Products	0.231	0.364	0.284
Metal Products	1.533	0.673	1.480
Electrical machinery & apparatus	0.605	0.488	0.567
Total--->	0.518	0.501	0.514

Table-290 Classification of sampled establishment by product and by different experience with the bank/ financing institutions.

Experience With Bank/ Financial Institutions	Product/SSI Category										Total
	Chemical & Rubber Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
NO NEED OF FINANCE	0	1	0	0	3	1	0	0	1		6
GOOD	8	10	4	8	0	6	3	12	5		56
HARD PAPER WORK/OTHER DOCUMENTRY PROBLEM	1	2	1	2	0	2	0	0	1		9
TO PROMOTE THE TECHNOLOGY	0	2	0	1	0	0	1	2	0		6
BANKS GIVE FINANCIAL ADD	0	0	0	0	0	0	0	0	1		1
BAD EXPERIENCE, TAKE MORE TIME FOR PROCESSING WORK INTEREST RATES ARE HIGH	0	2	2	3	0	1	1	4	2		15
GIVES PROPER CO-OPERATION, CONSULTATION AND OTHER FACILITIES	1	1	0	2	4	2	3	5	0		18
DON'T HAVE SUCH TYPE OF EXPERIENCE	6	2	2	3	1	1	5	3	3		26
NATIONAL BANK ARE RAISED IN COMPARISON TO FOREIGN BANK	0	0	1	0	0	0	0	0	0		1
Total-->	16	20	10	19	8	13	13	26	13		138

Note: Some units did not mention and some have mention more than one experience therefore the total may not tally with actual number.

Table-30D Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
CREATE AWARENESS ABOUT MARKET WANTS AND BUSINESS AND GOVT.SUBSIDES	3	2	3	2	2	3	2	4	5	26	
AWARD SCHEEM AND CREDIT GUARANTEE SCHEEM	0	2	0	1	0	0	1	1	1	6	
LOWER TAXATION AND EXCISE DUTY	2	2	0	6	2	1	2	4	3	22	
LOWER PAPER WORK	2	0	0	0	0	0	0	1	0	3	
TECHNOLOGY AWARENESS	3	3	3	4	2	3	1	2	0	21	
MARKETING IDENTIFICATION BY SSI OFFICIAL	0	0	0	1	0	0	1	0	0	2	
POLICIES FOR SSI SHOULD BE NOT HARDER THAN OTHER INDUSTRY	0	2	0	0	0	0	1	0	0	3	
PROVISION FOR LOAN AND CHEEPER GOODS FOR BUSINESS AND A GOOD POLICY AND LOAN AMOUNT SHOULD BE RISE	1	3	2	3	2	1	2	4	3	21	
TO CONTROL THE PRICE AND QUALITY FLUCTUATION OF RAW MATERIAL	3	4	2	2	2	1	1	2	1	18	
LEADING INSTITUTIONS SHOULD PROPERLY EVALUATE THE POTENTIAL	0	1	0	2	0	0	0	2	0	5	
FULL GOVT.HELPS IN RESETTING OF UNITS	1	1	0	0	0	0	1	3	0	6	

Table-30D Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemicals & Rubber & Plastic Products	Leather Products	Wood Products	Paper & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus			
NO PROPER COUNSELLING TO THE NEW ENTREPRENURES BY THE GOVT.	0	0	0	0	1	0	0	0	1		
LOWER RATE OF INTEREST AND SHORT PAPER WORK	1	2	1	2	0	0	0	1	0	1	
DEVELOPMENT OF INFRASTRUCTURE LIKE ROADS, TRANSPORTATION, GENERATION, SUPPLY OF POWER AND WATER ETC.	0	0	0	2	0	0	0	2	0	4	
OTHER LIBERAL PLAN FOR SSI SHOULD BE DONE BY GOVT.	1	5	0	0	1	0	0	5	0	12	
TAKE A PANEL OF INDUSTRIALIST	0	0	0	2	0	1	0	1	0	4	
EXPORT POLICY SHOULD BE LIBERALISED	1	1	0	2	0	1	0	1	0	6	
LOWER RATE OF ELECTRICITY AND ENSURE CONTINUOUS POWER SUPPLY	0	1	0	1	1	1	0	0	1	5	
HUMAN POWER MANAGEMENT AND POWER MANAGEMENT	1	6	0	1	1	0	1	0	0	10	
TRAINING TO WORKERS	0	1	0	1	0	0	1	0	0	3	
CREATING A NEW POLICY FOR SSI SECTOR AND GOVT.SHOULD KEEP GOOD RELATION WITH SSI	0	1	1	0	0	1	2	0	0	5	
GOVT.SHOULD MAKE A JOINT APPRAISAL MECHANISM WHICH ENSURE EVALUATION OF PROMOTERS SKILL, EQUITY, RAW MATERIAL	0	0	0	1	0	1	1	0	0	5	
WATER PROBLEM SHOULD BE SOLVED	1	0	0	0	0	1	0	0	0	2	

Table-30D Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
HIGHER ACCELERATION DEPRECIATION	0	1	0	0	0	0	1	0	2	4	
TRUST ON RURAL MARKETING	2	2	0	0	2	0	1	2	2	11	
COMPREHENSIVE POLICY FOR INVESTMENT MARKETING, BRAND PROMOTION AND OVERSEAS MARKET ACCESS	0	0	1	0	0	1	1	0	0	3	
REGISTRATION WORK SHOULD COMPLETE ON ONE WINDOW AND EXPLORING THE REVIVAL OF VIABLE SICK UNIT	1	1	1	0	2	0	0	3	0	8	
POWER COMMITTEE FOR RECOMMENDING SINGLE COMPREHENSIVE LEGISLATION FOR SSI UNITS	0	0	0	1	0	0	1	0	0	2	
EXPLORE POSSIBILITIES OF RECURITISATION OF GUARANTEED LOANS	0	0	1	0	0	3	0	0	1	5	
SHOULD REDUCE THE LOANS AND TIME GAP BETWEEN SANCTION OF TERM LOAN AND WORKING CAPITAL LOANS	3	4	2	2	0	0	0	3	4	18	
PLACEMENT OF FOREIGN DIRECT INVESTMENT IN SSI SECTOR; UNDER AUTOMATIC ROUTE WITHIN THE ENHANCED EQUITY	0	0	0	2	0	0	1	0	1	4	
THE SCHEDULE OF DISBURSEMENT AND IMPLEMENTATION OF PROJECT SHOULD BE STRICTLY ADHERED TO	0	0	0	1	0	0	0	0	0	1	
ADOPTING OF "TURN-KEY CONCEPT" FOR ENTREPRENEURSHIP TRAINING	0	0	0	0	0	1	0	1	0	2	
SPECIAL FOCUS ON WOMEN ENTREPRENEURS WEAKER SACTIONS, HANDICAPPED AND EX-SERVICEMAN AND SC/ST ENTREPRENEURS	0	0	1	1	0	0	0	1	0	3	
EFFORTS TO INTRODUCE UTILITY PATENT PROTECTION FOR SMALL INNOVATIONS AND MAKE A ATTENTION TO RESEARCH	0	0	0	0	0	1	0	0	0	1	

Table-30D Classification of sampled establishment by product and by suggestions for technology adoption

Suggestions for Technology Adoption	Product/SSI Category										Total
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus		
CHANGING THE DEFINITION OF CLASSIFYING THE SSI UNITS AS SICK BY REDUCING THE NON-PERFORMING PERIOD	0	0	0	0	0	0	1	0	0	1	
UNDER THE SCHEME OF CAPITAL SUBSIDY OF 12 PERCENT FOR INVESTMENT IN TECHNOLOGY UPGRADEATION IN SELECT F	1	2	0	0	0	0	1	2	1	7	
CONSIDERING THE LIMITED INVESTMENT IN THIS SECTOR THE ENTREPRENEURS MAY NOT FIND IT FEASIBLE TO ENGAGE	0	1	0	2	0	0	1	0	1	5	
THE SANCTION OF TERM LOAN AND WORKING CAPITAL ARE NOT TIED UP PROPERLY MORE OVER THE SANCTIONED AMOUNT	1	0	0	2	0	0	3	2	4	12	
STRENGTHENING NATIONAL ENTREPRENEURSHIP DEVELOPMENT BOARD	5	3	4	3	2	3	3	4	3	30	
SPECIAL THRUST ON SMALL AGRO INDUSTRIES	0	0	2	1	1	0	2	0	2	8	
FUND SHOULD MADE AVAILABLE FOR MODERNISATION OF SSI AT A CONCESSIONAL RATE ON INTEREST ON EASY INSTALL	1	2	1	1	0	0	2	0	2	9	
CONSTITUTION OF STATE LEVEL ADVISORY BOARDS	1	0	0	0	0	0	1	0	0	2	
IMMEDIATE SERVICE BY GOVT./GOVT. BACKUP/REDUCE INSPECTOR	0	0	0	0	0	1	0	0	0	1	
Total-->	35	53	25	49	21	24	36	54	37	334	

Note: More than one suggestion have been received by some units and therefore the total may not tally with actual number.

Table-31D Classification of establishment by product and by way of experience as a competition in domestic/international market

Competition	Product/SSI Category									
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
CHEAPER PRICE TO SATISFIED CLIENT AND DIFFERENT QUALITY OF PRODUCT WE COULD ARRANGE GOOD THINGS AGAIN	1	0	0	0	0	1	0	3	1	6
Total---	1	0	0	0	0	1	0	3	1	6

Note: Only a few units responded.

Table-32D Classification of service provider establishments by product and by opinion with regards to improved technology for improving the productivity/ marketability of services.

Opinion	Product/SSI Category									
	Chemical & Rubber Products	Plastic Products	Leather Products	Wood Products	Paper Products & Printing	Hosiery & Garments	Food Products	Metal Products	Electrical Machinery & Apparatus	Total
MARKETING	0	0	1	0	3	0	1	0	0	5
FINANCIAL	0	0	1	0	2	0	0	0	1	4
LACK OF DEMAND	0	0	0	0	2	0	1	0	0	3
Total---	0	0	2	0	7	0	2	0	1	12

Note: Only few units responded.

Bibliography

1. **Special Group on Targeting Ten Million Employment Opportunities Per Year. Employment Generation Growth. Govt. of India Planning Commission, New Delhi, May 2002**
2. **Small-Scale Units in the Era of Globalisation, Problems and prospects. T. A. Bhavani, Institute of Economic Growth, University Enclave, Delhi 110007.**
3. **Plastic Foundation: A journal by Plastic Industry/Association, October, 2002. Vol. 18 and Feb- 2003. Vol 19**
4. **Economic & Political Weekly: -Vol 37. No.39. Sept-Oct, 2002.**
5. **India – 2002. A Reference Annual compiled by Research. Reference and Training Division, Ministry of Information and Broadcasting, Govt. of India, New Delhi.**
6. **Technology for Small Scale Industries, Current Status and Emerging Needs, SIDBI. Tata Mcgraw Hills Publishing Company Ltd, New Delhi, 2002.**
7. **India's Small Scale Manufacturing Sector, Deepak Majumdar. Indian Economy. Agenda for the 21st Century. Essays in Honour of Prof. P. R. Brahmananda. Edited by Raj Kumar Sen, B. Chatterjee. 2002.**
8. **Economic Survey – 2002, Govt. of India. Ministry of Finance, Economic Division, New Delhi.**
9. **SIDBI Report on Small-Scale Industries sector-2001, – Small Industries Development Bank of India New Delhi.**
10. **Financing Development of Small Scale Enterprises, 2001, Somu Griappa, Mohit Publications-New Delhi.**
11. **Delhi Footwear Market News, Nov.2001.**
12. **Comprehensive Policy Package for SSI and Tiny Sector Announced by the Hon. Prime Minister of India, on 30th August. 2000, Ministry of Small Scale Industries and Agro Rural Industries, Govt. of India, New Delhi.**

13. SSI IN INDIA The Growth sector for The Millennium.
Development Commissioner (Small Scale Industries), August 2000.
Ministry of Small Scale Industries and Agro & Rural Industries,
Government of India, Nirman Bhavan New Delhi.
14. Small Enterprise:
Views And Vistas,
Silver Jubilee-Commemorative Special, 1998,
National Institute of Small Industries Extension Training (NISIET), Hyderabad
15. India. 2020. A vision For the New Millennium by A.P.J. Abdul Kalam with
Y.S.Rajan, 1998. Penguin Books, New Delhi
16. India An Economic Overview 1991 Edited by Chakradhar Agarwal. Published
by World Assembly of Small Scale & Medium Enterprises, New Delhi
17. Small Industry Development Programme; Ram K. Vepa. Oct. 1983.
Indian Institute of Public Administration New Delhi,
18. Small Industry: The Challenges of the Eighties, Ram. K. Vepa. 1983
Vikash Publishing House Pvt. Ltd. New Delhi.
19. Incentives For Small-Scale Industries-An Evaluation;
S. K. Tulsi,
Economic and Scientific Research Foundation. New Delhi, 1980.
20. Small Scale Industries. Socio- Economic Aspects.
Ch. Uma Maheshwara Rao. Bombay Popular Prakashan. 1965.
21. Small Scale Industries in Delhi
A Study in Investment, Output and Employment Aspects:
P. N. Dhar, Reader, Delhi School of Economic, University of Delhi.
Asia Publishing House. New Delhi, July 1965.



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