

**PERFORMANCE OF SMALL SCALE INDUSTRIES
IN INDIA**

SUBMITTED BY

K.CHITRA

(12PEC003)

**A DISSERTATION SUBMITTED TO THE
AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND
HIGHER EDUCATION FOR WOMEN, UNIVERSITY
COIMBATORE-641043**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
DEGREE OF MASTER OF ARTS IN ECONOMICS**

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CERTIFIED AS BONAFIED RESEARCH WORK

P. Ambekar Devi / 25.3.14

SIGNATURE OF THE HEAD

OF THE DEPARTMENT

S. Kamal / Chandh
25.3.14

SIGNATURE OF

THE SUPERVISOR

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INTRODUCTION

CHAPTER I

INTRODUCTION

India is predominantly an agricultural economy. But the demand of immediate self-reliance needs rapid industrialization. With limited scope of extension of agriculture to more areas, rapid development of the industrial sector is vital for the overall economic development of the country (Shrivastava, 2000).

Within the industrial sector, the small scale sector has emerged as the most vital and dynamic sector of the Indian economy. The functional vibrance of the sector is visible from its contribution of 40 per cent in the industrial production, 35 per cent in the country's total export and providing employment to 167 lakh persons in over 30 lakh small scale industrial units. The sector produces a wide range of more than 7500 products and has grown phenomenally during the past four and a half decades (Singh, 1998). In the words of Prasad (1999), "A growing economy always needs the presence of small enterprises". The small scale sector proved its worth by contributing to the growth and development of the economy by generating employment and correcting regional imbalance. The sector has also shown advancement in absorption of competitive technology and as a result, foreign exchange is being earned. Juneja (2000) has observed that small scale industries are the backbone of our economy and since independence, small scale industries have become 'jewels' of our economy, by being embedded in every aspect. Small scale industries create immense wealth through gainful utilization of natural resources, available within the country, by generating large scale employment for the rural and urban population, in the manufacturing and services sectors.

The importance of the small scale sector was clearly brought out by the Industrial Policy Resolution of 1956 as "The Government of India would, in this context, stress the role of cottage, village and small scale industries in the development of the national economy. In relation to some of the problems that need urgent solution, they offer some distinct advantages. They provide immediate large scale employment, they offer a method of ensuring a more equitable distribution of national income, and they facilitate an effective mobilization of resources, capital and skill, which might otherwise remain unutilized. Some of the problems that unplanned urbanization tends to create will be avoided by the establishment of small centers of industrial production all over the country" (Prasad and Kaushik, 1997). The central claim made

for small scale enterprises in developing countries is on the ground that they are good for employment. As there is scope or appropriate choice and adoption of labour-using, capital-saving technology, small industries produce a unit of output, with less capital, but more labour than large enterprises. In the dynamic sense, small industries have to undergo a process of 'technological transformation', which renders them competitive and growth dynamic, in the context of the fast changing technological frontiers, in the industrial world. Technical progress lies at the heart of development and small scale industries have to rest on the technical dynamism to ensure efficiency-based growth (Subramanian, 1995).

To put it very specified the small-scale sector plays a pivotal role in the Indian economy in terms of employment, output, and exports. The production, number of units and exports from small-scale sector has increased in 2010. Since independence the growth and development of the small-scale sector has been favored on the following grounds: generation of employment opportunities; mobilization of capital and entrepreneurship skills; regional dispersal of industries; equitable distribution of national income. The number of small-scale units stood at 67.87 lakhs in 1990-91 and at rose to 298.08 lakhs in 2009-10. As far as the output of small-scale units is concerned, it was Rs.63,518 crores in 1990-91 and this rose considerably to Rs.9,82,919 crores in 2009-10. The small-scale units employed 158.34 in lakhs people in 1990-91 and this number has consistently risen to 695.38 people in 2009-10. (sundaram, 2007). With the establishment of a large number of modern small-scale industries in the post-independence period, the contribution of the small-scale sector in exports earnings had increased by leaps and bounds. What is heartening to observe is that the bulk of the exports of the small-scale industries consist of such non-traditional items like readymade garments, sports-goods, and finished leather products. Woolen garments and knitwear, processed foods, chemicals and allied products, and a large number of engineering goods. The total exports of the small-scale industry products increased from Rs.155 crores during 1971-72 to Rs.2,23,572 crores in 2009-10. (Ruddhar Dutt, 2007). The small-scale sector has been assigned an important role in the industrialization of the country by the previous and current government of India. The overall analysis of growth and development of entrepreneurship in India indicates that in different states, the number of small-scale units is increasing manifold. The small sector is growing fast and is capable to address to the basic problems of Indian economy. There is ample evidence to suggest that it will continue to play an increasingly important role in industrial development of the country. The sector is ideally poised to attract both technology and fund to generate growth and sustained development during

the pre-reform era. The onset of reforms in 1991, when the government announced its policy towards small sector necessitated a change in the direction for small-scale units. To combat the emerging competitive environment, redefining the small sector industrial policy became imperative. The new industrial policy introduced in August 1991, marked the beginning of economic reforms in India. In other words primary objective of small-scale industrial policy during the 1990's was to impart more and growth impetus to this sector. The new industrial policy comprised the elimination of all the entry barriers, to most industries as well as the associated constraints on scale and technology. Industrial liberalization was complemented by trade liberalization in the form of drastic reduction in customs duties and removal of restrictions on imports of raw materials, intermediates and capital goods. The policy has specified guidelines to deal with the three major areas of concern for the sector-finance, marketing and technology. (Hermitic, 2000).

The existing studies on small scale industry have not sufficiently dealt with the dynamic behavior of firms under conditions of change. The growth performance and factor productivities and of the small scale industry were not examined in depth. The studies that exist, have tended to be historical cum descriptive, examining the economics of a particular industry group, especially engineering industries- [Cartillier (1975), Jeyachandran (1978), Goviindarajan (1978), Mary Rathna (1980)]. Many others have concentrated on financing and credit [Ramakrishna (1960), Pareek (1978), Murthy (1980), Neelamegam (1982), AppaRao (1982), Natarajan (1984)]. Some others dealt only with employment [Dhananjayan (1979), Kalpagam (1981), Kerk (1981), Harris (1982)]. From time to time many researchers have studied the different aspects of small scale industries, such as growth, employment potential, wage differentials, financing and credit, etc., and the problems connected with these aspects at the All-India level.

More over Bhattacharjees (2000) observed that economic liberalization has reduced the employment generation of small sector and the rate of growth of employment was minimum during post liberalization period. On the contrary Bala Subramanian (2005) confirmed in his attempt that employment, production and even export had increased considerably after the adoption of new economic policy of 1991. Ayana Nair (2004) was upset in mentioning that the liberalization policies failed to bring about significant changes in the technical efficiency of the industrial sector during the post liberalization period. In other words no identical finding was

provided by the earlier studies. Each one has dealt with the problem of industry from different directions. But the performance of small scale industries at macro level was not adequate.

With this background, the study focuses on analyzing the Performance of Small Scale Industries in India with the following objectives:

- a. Measuring the trends and growth of the major parameters of the small scale industries during the period under consideration.
- b. Locating the attributory factors of the small scale industries during the reference period.
- c. Estimating the factor intensity of the selected industry through functional relationship during the study period.

Limitations:

- a. The money values of fixed capital and output have not been deflated.
- b. This study is a macro analysis of the small scale industries in India. Variations in the performance of the individual enterprises are not considered by this study.
- c. The present study considered only the registered small scale units.
- d. All categories of workers viz., skilled, unskilled, educated, uneducated were collected together for the purpose of analysis.

The present study would highlight the pattern of growth and performance of the small-scale industries in India. Given the public policies and government assistance, the study would analyze the reasons behind uneven growth of small-scale industries in India. The relationship between output, labour and capital would also be highlighted. The changes in inputs and its impact on intensity of output i.e. elasticity would also be estimated. The findings would offer suitable suggestions to accelerate the growth of small-scale units in India.

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

Review of literature related to the topic “Performance of Small Scale Industries in India” is discussed with the following headings

- A. Globalization and Small Scale Industries in India
- B. Studies Done Earlier

A. GLOBALIZATION AND SMALL SCALE INDUSTRIES IN INDIA

After the execution of second generation economic reforms i.e. LPG, many key sector are gaining momentum with more relaxed regulatory framework to provide further impetus to growth over the past decade. Indian economy has undergone transition phase witnessing the challenges of more free and market oriented environmental of the liberalized era. Being one of the major growth drivers of the economy, the biggest challenge before SSI is not only to survive but also grow and compete on a sustainable basis in a new environment.

Small scale industries have been playing a noticeable role in overall economic development of a country like India where millions of people are unemployed or under employed. Poverty and unemployment are two burning problems of the country. This Sector solves these two problems through providing immediate large-scale employment, with lower investments. According to Dr.manmohan Singh, “the key to our success in employment which lies in the success of manufacturing small scale sector”. The economic development of any country primarily depends upon the establishment of industries, which require sufficient amount of capital. In a country like India, where capital is scarce and unemployment is wide spread, growth of small-scale industries is vital in order to achieve balanced of economic growth. The strength of small-scale enterprise lies in their wide spread dispersal in rural, semi-urban and urban area, fostering entrepreneurial base, shorter gestation period, and equitable distribution of income and wealth.

Having recognized the significance of SSI sector, the government of India has set up various agencies and institutions at different levels. Central, State and the local government has been pursuing the policy of protection and promotion of this sector since independence and also

offered several incentives and concessions for their promotion and development. Since the launching of five-year plan in our country, the SSI sector has grown at a phenomenal rate. This sector comprises 95 per cent of the total industrial units in the country, accounting for 40 per cent of the total industrial production, 34 per cent of the national exports, and employment of 250 lakhs persons. So, this sector emerged as a dynamic and vibrant sector of the Indian economy. (Mohan and Savithri, 2013)

Till independence, only cottage industries, village industries were considered to be small industries. The national planning committee set up in 1938 under the chairmanship of Pandit Jawaharlal Nehru constituted a panel to study this problem. With the drawn of the planned era in the country, the government has been following a policy of promotion as well as protection of small industry. The government of India and state government have been trying to provide the infrastructure for the development of small scale industries. The Indian government has given importance to small scale industries in the five-year plans because of their immense advantages. All our five year plans have stressed the need to develop small scale industry is undoubtedly better now than it was sixty years ago.

The small scale industries sector's nomenclature has been changed to Micro, Small and Medium Enterprises in the year 2006. In accordance with the provision of Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two classes in terms of investment in equipment. (a) manufacturing enterprises (b) service enterprises. The amount allotted for SSI during plan period has been increasing tremendously indicating the need to improve SSI. A glance at the amount spends by five year plan for the growth of SSI in presented by Table 1.

TABLE-1**FIVE YEAR PLAN OUTLAYS IN INDIA****(Rs in crore)**

Five year plans	Period	Public sector outlay	Outlay to industries	Outlay to village and small scale industries	Outlay to small scale industries
First plan	1951-56	1960	120	42	5.20
Second plan	1956-61	4672	1080	187	56.00
Third plan	1961-66	8577	1970	241	113.06
Annual plan	1966-69	6625	1510	126	53.48
Fourth plan	1969-74	15779	3630	243	96.19
Fifth plan	1974-79	39426	9580	593	221.74
Annual plan	1979-80	12177	2383	256	104.81
Sixth plan	1980-85	109290	16950	1945	616.10
Seventh plan	1985-90	218730	29220	3249	1120.50
Annual plan	1990-91	58369	6374	878	392.13
Annual plan	1991-92	64751	6564	941	482.86
Eighth plan	1992-97	485457	47890	7094	2862.14
Ninth plan	1997-02	859200	65140	8812	4303.85
Tenth plan	2002-07	1525639	58939	7754	2085.00
Eleventh plan	2007-12	3644719	153600		10430.00

Source: various issues of five year plans

Before the introduction of economic reforms in 1991, SSI was over protected. With globalization, they are now more exposed to severe competitions both from large scale sector domestic, foreign and from MNCs. Today they account for at least 45per cent of the country's industrial production. In 1991, there were only 19 lakhs small scale units. In seven years their number increased to 31 lakhs. It is no exaggeration to state that the success and failure of the economy depends on the state of health of industries in general and the small scale industries in particular.

The human society around the world, over a period of time, has established greater contact, but the tempo has increased rapidly since the mid 1980's. The term globalization means international integration. It includes an array of social, political and economic changes. Unimaginable progress in modes of communication, transportation and computer technology gave the process a new face of life. The world is more interdependent now than ever before. Multinational companies manufacture products across many countries and sell to consumers across the globe. Money, technology and raw materials have broken the international barriers. Not only products and finances, but also ideas and cultures have crossed the national boundaries. Performance of small scale industries 2001-07 is presented in Table-2.

TABLE-2

PERFORMANCE OF SMALL SCALE SECTOR (Rs in crore)

Year	No of units in (million)	Employment in (million)	Investment in (Rs in crore)	Value of output in (Rs in crore)	Export from SSS in (Rs in crore)
2001-02	10.5	25.2	160673	282270	7124411
2006-07	12.8	31.3	207307	n.a	n.a

Source: ministry of small scale sector, government of India

Small scale sectors continued to record steady progress during 2006-07. The sector plays a vital role in the growth of the country as it accounts for about 40 percent of the industrial output in the Indian economy. About 47 percent of total manufactured exports of the country are directly accounted for by the small scale sector.

In 1947 after gaining independence, India initiated a path of industrialization to achieve economic prosperity. India focused on developing the manufacturing base. Much of the countries development was done through the five year plans. Sectors like iron and steel, oil refineries, cement and fertilizer were brought under the control of public sector enterprises. The decision makers then encouraged the development of small scale sectors. They perceived that Indian small scale sectors would play a vital role in the economic progress of the country and had immense potential for employment generation. Developing small scale sector would alresult in decentralized industrial expansion, better distribution of wealth and to encourage investment and entrepreneurial talent. The government has initiated several policies for the growth and

development of small scale sectors. They included reservation of certain items to manufacture only by the small scale sector. Other measures include credit marketing, technology, and entrepreneurship development, fiscal, financial and infrastructural support. In 1999, the government established the ministry of small scale sectors and agro and rural sectors to make policy decisions for the development and wellbeing of the small scale sectors.

In spite of expected result the globalization had brought many colourful and dark impacts on small scale industries. So it is here worth mentioning those reactions too. Initially the small scale sector was characterized as traditional labour intensive units with out-dated machineries and inefficient production techniques. But in the recent past the condition of the small scale units has improved. They have installed modern machines, applied better management techniques and are much more productive than before.

Development of SSI is difficult task, because 100 percent capital is also allowed without any restrictions. Further quantity restrictions on imports were also lifted so that any commodity to any extent can be imported which resulted in heavy competition to the SSI. Minimisation of import duties resulted the entry of multinational products which threw the SSI sector from the field; In the competitive economy, one has to find out new market to stand in the global field in turn the quality of the SSI should be world class at competitive price for their survival; Due to globalization process, the needs of the people are highly increased. To satisfy this need innovation in the products as well as in the price should be in accordance with the competitive manner; To stand in the globalised economy, the SSI can enter into merger with main industries. So that, the SSI can be treated as part and parcel to main industries in turn the SSI can stand in the marketing field in turn competition also could be reduced considerably; Role of ancillary units is very important to promote the main industry. Without these tiny sectors the very big segment cannot expand its activities. In the globalization era, importance may be given to improve the development of small units, to promote big industries; Due to globalisation, invariably in all segments of activities, the work has been mechanized, in turn it creates unemployment situation in the industrial field.

Points to be underlined-LPG and SSI

Greater chance of reactions for globalization being violent in an attempt to preserve cultural heritage; Greater risk of diseases being transported unintentionally between nations; Spread of a materialistic lifestyle and attitude that sees consumption as the path to prosperity ;International bodies like the world trade organization infringe on national and individual sovereignty ;Increase in the chances of civil war within developed countries and open war between developing countries as they knew for resources ;Decreases in environmental integrity as polluting corporations take advantage of weak regulatory rules in developing countries.

To set right the problem of small scale industries valuable recommendation were offered by LPG that are mention below

Suggestion offered by LPG

To enable more focused attention on the problems of the SSI sector, a new ministry of small scale industries and Agro and Rural industries was created on 14th October 1999 and later on, the government announced new credit insurance scheme for SSI unit; The working capital limit for SSI unit is determined by the banks on the basis of 20 per cent of their annual turnover. The turnover limit for this purpose has been enhanced from Rs.4crores; A national programme for rural industrialization has been announced, with a mission to set up 100 rural clusters every year, to give a boost to rural industrialization; To coordinate the latest developments with regard to World Trade Organisation, a cell has been setup in the office of DC(SSI) to disseminate information to SSI Association regarding recent developments, prepare policies for SSI in turn with the WTO agreements and organizing WTO sensitization, seminars, workshop etc; Steps have been taken to accelerate the programme of SSI branches to ensure that every district are served by at least one specialized SSI bank branch. To further help SSI entrepreneur, the National Equity Fund Scheme was introduced under which equity support is provided for projects up to the limit of Rs.15 lakhs which was further raised to Rs.25 lakhs; The single window scheme of small industries development bank of India is also being extended to all districts. Thus, under new policy emphasis has been laid on development of small-scale sector by providing different facilities instead of providing different types of protection.

Aids expected from the government

Government should ensure that SSI units are provided with adequate power supply at concessional rate; Incentives and subsidies should be offered adequately to SSI units for diversification and growth; Adequate Research and development activities should be encouraged by the government to develop SSI; Adequate Industrial Training Centre should be developed; Government may take necessary steps to supply the required amount of quality and quantity of raw material at reasonable prices to SSI; Government may take necessary steps to reduce the lending rate to small scale Industries; Steps may be taken to reduce the quantity restrictions while importing goods to protect the SSI; Government must freely allow the country to transfer technology from developed countries without any restrictions.

To sum up, the benefits of the effects of globalization in the Indian industry are that many foreign companies set up sectors in India and this helped to provide employment to many people in the country. This helped to reduce the level of unemployment and poverty in the country. The negative effects of globalization on Indian industry are that with the coming of technology, the number of labor required decreased and this resulted in many people being removed from their jobs. The effects of globalization on Indian industry have proved to be positive as well as negative. The government of India must try to make such economic policies with regard to Indian industry's globalization that are beneficial and not harmful. Though it is the reason for handicaps of our SSS s, it can be confronted by the innovativeness, novelty in products and the development of lean technologies in the manufacturing sector. Number of innovative entrepreneurs having strong need for achievement can surely ensure success and tackle the challenges of open competitions at global level. Having recognized the significance of SSI sector, the Govt. of India has set up various agencies and institutions at different levels- central, state and the local government has been pursuing the policy of protection and promotion of this sector since independence and also offered several incentives and concessions for their promotion and development. Since the launching of five-year plans in our country, the SSI sector has grown at a phenomenal rate. This sector comprises 95 per cent of the total industrial units in the country, accounting for 40 per cent of the total industrial production, 34percent of the national exports, and employment of 250 lakh persons. So, this sector emerged as a dynamic and vibrant sector of the Indian economy. There needs to be special focus on the service sector so that its potential to create employment and growth is fully realized.

STUDIES DONE EARLIER

A study on “Economics of Scale and Productivity Change in the Indian manufacturing Industry” for the period 1959-69, by Oomen (1975) examined output elasticity’s, and productivity change in the manufacturing sector, using Cobb-Douglas production function. The result revealed a high degree of economies of scale. The elasticity response of output to labour was also high in this industry. Considering the efficiency parameter as an index of productivity change, the study concluded that the manufacturing sector in India had registered moderate improvements in productivity.

Arup Mitra (1980), Pravin Krishna and Devashish Mitra (1998) Shuji Uchikawa (1999) and Sunil Kumar (2000-2001) were reported a positive impact of economic reforms and statistically significant productivity growth in Indian manufacturing industries after 1991.

Mehta (1980) undertook a study on “productivity, production function and technical change-A study of some Indian Industries” with the objective of identifying the growth patterns, for the period 1953 -63. Growth rates were estimated from regression with growth indicators such as fixed capital, working capital, employment, value-added and wages. The study found that, in food products, the rate of growth of output and employment was positive, with 6.64 per cent and 5.22 per cent.

A study on “Growth, and structure of Small Scale Industries in Coimbatore District” for the period 1970-1980 was undertaken by Anbumani (1985), with the objective of analysing the growth and economic viability of small scale industries, including food-processing industries. Using all conventional statistical tools, he concluded that the food processing industries registered a positive growth. The study suggested that food products should reduce capital intensity by inducting more labour force, so as to increase capital productivity

Sahu (1989) in his study “Export Performance and Constraints of some Leading Food-Processing Industries” attempted to explain the declining trend in exports of a few leading food-processing industries. In 1960-61, 13 selected food-processing industries accounted for 69 per cent of the total exports. In 1977-78, their share declined to about 38 per cent. The study stated that, due to severe competition faced by India, in several export markets, the position slipped down and this was attributed to poor quality, high prices, tariff and non-tariff barriers. The study pointed out that stagnation in domestic output, rising domestic consumption, low level of

technology were the major handicaps that depressed the export potential of the food-processing sector in India. An improvement in technology was emphasized, to accelerate foreign exchange earnings.

A study on “Employment and Productivity in Agro- Industries” was attempted by Sudhakar Rao (1991) for the period 1974-75 to 1982-83, in Indian manufacturing sector. The aim of the study was to analyse the growth rate, trends in employment and value-added, to identify productive efficiency. Apart from compound growth rates and factor productivity ratios, multiplier analyses based on location quotient methodology were adopted to analyse the impact of agro-industrial expansion on employment. The results of the study revealed that the basic multiplier coefficient increased from 15.17 to 37.19, in urban areas, implying that food products had a high employment multiplier effect.

Bandaria (1991) in his study on “Marketing Problems of Fruit Canning Units-A Case Study”, for the period 1989, examined the major problems of fruit canning units with reference to each element of marketing mix viz., product, place, price and promotional activities, and also determined the means to overcome marketing problems faced by the industry in Andhra Pradesh. The investigation revealed that 79.31 per cent of the units had come across impediments. The study found that 65.52 per cent of the units had failed marketing strategies, 10.34 per cent faced problems in packaging, 55 per cent in branding, 89.64 per cent in product promotion.

Sahay (1991) made a study on “pulse Milling: Availability, Constraints and Prospects”. The study assessed the problems faced by pulse milling industries in India. The study estimated that there are 10,000 pulse milling units in India, with an annual yield of 12millions tones. The study found that high cost of processing, conventional technology; bad storage and lack of modernization were some of the problems faced by pulse milling units. The storage facilities were so poor, that insects and rodents caused 80 per cent loss during storage period. The study suggested that protective measures should be taken, to cut losses at the processing stage. The need for modernization of the units was stressed by the study, to obtain higher yields.

Kumar and Murthy (1992) undertook a study on “impact of Dairy Co-operatives on income and Employment in Chittoor District, Andhra Pradesh” during 1980-81 to 1987-88, with the aim of examining the impact of dairy enterprise on income and employment, created to different groups of people. The technique of tabular analysis was employed. The investigation

revealed that members of dairy societies earned an average income of 58.20 per cent, and average employment generated was 120 man days, substantiating that income earned from dairy was comparatively more than other source of income.

The study “Impact of Co-operatives on Dairy Development in Andhra Pradesh” was undertaken by Rao and Singh (1993), examined the growth performance of dairy co-operatives in Guntur District of Andhra Pradesh, for the period 1978-79. Linear trend equations were established and tested. A low growth rate of 6 per cent was recorded and the study suggested that concerted efforts ought to be made to achieve high growth, by increasing the quantum of cattle feed production, so as to bring about desirable socio-economic change in rural areas through dairy development efforts.

HariKumar (1994) examined the sickness in small scale industries in Kerala. The author enquired the magnitude and the cause of sickness. The socio-economic profile of the entrepreneurs of the SSI units and its relation with the success or failure of the business was also studied. The study reported that industrial sickness spreading in the country was at an alarming rate both in terms of the number of units and the amount of bank over-dues and compared with other sectors. The incidence of sickness was significantly higher in the SSI sector. The study also reveals that working capital was one of the major problems of SSI sector. This problem of the sick units did not mainly stem from the short supply of assistance from the commercial bank but from the delay in realizing it and from the malfunctioning of the units.

Swamy (1995) undertook a study on “Eighth Five Year Plan: Role of Small Industry”, for the period 1973-1990, with the principal objective of estimation of growth and productivity of small scale industry, in the context of employment generation. Compound growth rates, factor productivity ratios and regression estimates were adopted for data analysis. The study revealed that employment generation in the small scale industries grew at a rate of 7.35 per cent annum, and employment generated in this industry was positively and significantly related to the value of output.

Vikramchadha (1995) undertook a study on “Technological Modernisation of Small Sector in India”, with the aim of examining the Government’s policies and programs towards uplifting the technological levels of the small industrial sector. The study pointed out that the fundamental reason behind technical inefficiency was the use of outdated capital equipment and

a low level of knowledge of productive techniques. The study concluded that, in the face of liberalization and economic reforms, in India, the small manufacturing sector had to modernize production techniques to withstand competition.

Bamgboye and Atijosan (1997) attempted to study “Demand Variables for Soft-Drinks as a Guide to Formulating Marketing Strategies”, for the soft-drinks industry of Nigeria for the year 1994. Consumer decision models were used by the study. The essence of this study was to identify the demand variables for soft-drink consumption. The findings of the study showed that factors such as sex and age were major determinants of soft-drink consumption. In conclusion, the study asserted that social, psychological and economic variables impinged on consumer’s demand for soft-drinks products in Nigeria.

Jhala (1997) attempted to study “Demand, Supply and Prices of Edible oils: An Analysis of Past Trends and projections for the Future” for the period 1978 to 2000, with the aim of analyzing the past trends in edible oils production and to analyse the demand and supply position. Time-series analysis was adopted by the study. The results of the study indicated that the compound growth rate of edible oil was 8.81 per cent. Domestic production was estimated to be 16 lakh tonnes and demand for edible oils was found to be increasing steadily.

Shah and Shah (1999) attempted to study “The Change Structure of Milk Production in Maharashtra”, with an aim of examining the structural change in milk production for the period 1985-86 to 1993-94. Exponential trend equations were fitted to the time series data, in order to compute compound rate of growth. The result of the study showed a high rate of growth in milk production for this state, which was estimated to have grown at the rate of 8.68 per cent per annum.

Bhattacharjee and Bhattacharjee (2000), PulpreBalakrishnan et al (2000), M.Mallikarjun and KashyapThakar (2001) in various studies found no significant shifts in productivity growth while comparing pre and post reform period.

Satyaprasad (2000) did a study on “Growth of Small Scale Industries in Karnataka”. A study on shown 60 units of SSI in Karnataka and adopted secondary data. The study concluded that through comprehensive knowledge of rules, regulations and incentives of SSI and by providing innovative professional management skills, marketing research the level of growth of SSI could be enhanced.

Anil Kumar (2002) did a study on “Role of State Financial Corporation (SFCs) in Financing SSI in India during Post-Reform Period. The study analyzed the loans sanctioned and disbursed by SFCs from 1991-92 to 1998-99. Report on development banking in India of different years had been used. For the study growth rates and percentages had been used to analyze the data.

SubashC.Ray (2002) observed an improvement in technical efficiency as well as faster rates of technical progress in Indian manufacturing.

B.N.Goldar and Anita Kumari (2002) observed a notable decrease in the growth rate of TFP in Indian manufacturing industries during reform period.

KuldipKaur (2002) observed that the overall performance of Indian firms was not as good as expected after economic reforms.

Krishnamurthy and Maria John (2002) did a study on “Small Scale Industries” with the objective of studying the change in tastes and fashions of consumer of the products of SSI. The study quoted that SSI sector accounts for 80 per cent total industrial development and it concluded that the process of liberalization and globalization may be implemented gradually by the Indian government for the sake of the small scale sector. Such measures and supports on the part of the government are required for the SSIs to ensure their continuous existence and their prosperous development

Krishnamurthy and Atonally (2002) did a study on “Small Scale Sector- Production to competition”, with the objective of understanding the comparative advantage of small scale industries with medium and large scale sector. The study concluded that the policies adopted by the government for the development of SSI were not favorable and protective measures were also inadequate.

Mulla and Bannur (2002) did a study on “Industrial Sickness in SSIs: An Empirical Study”. The study was confined to small scale industrial units in Hubli-Dharwar city as there were a few large size units. The objective of the study was to identify the causes directly responsible for the industrial sickness and to assess the measures initiated by the management. Covering different areas like engineering, chemical, food and other industries, the size of the sample was 500 units. The study followed comprehensive questionnaire schedule. The study

concluded that lack of understanding between management and worker and of course, the absences of following suitable measures were the main reasons for the sickness of industries.

Kusum Das (2003) was of an emphatic view that there is no evidence of much change in TFP growth following liberalization initiated in the early 1990s.

PushpaTrivedi (2004) found that the policy reforms do not seem to have impacted positively most of the industries, except in metal industry. TFPG in most of the industries were found to be decelerated during the post reform period.

Muralikrishna (2006) did a study on “Entrepreneurship in Small Scale Engineering Units”. They trade to examine the socio-economic origins of entrepreneurs in small scale engineering industries. To study the entrepreneurial spirit and motivation. To analyse the entrepreneurial efforts in the promotion of enterprises. To evaluate the entrepreneurial performance. The sample respondents had been selected on the basis of information provided by the District Industries Centre (DIC). The entrepreneurs were personally interviewed with the help of detailed pretested interview schedule. The study found that the spirit of the entrepreneurs of SSI was satisfactory and the effort of the entrepreneurs of SSI was to be encouraged by the state and central government.

Poovordhiran (2010) did a study on “Problems and Prospects of Entrepreneurs in SSI”, with the objective of identifying the entrepreneurial skills required to start a small scale industry unit and examining the specific problems faced by small scale industry to assess the level of government intervention in small scale industries. The required data was collected by applying a questionnaire and it was found that the government interventions were not satisfactory and so the skills available among the work force are to be enhanced.

Paramasivan (2010) did a study on “Economic of Small Scale Textile Industries: A Micro study” The study tried to identify the various major components of SSU at Tirupur. The study was based on both primary and secondary data and it was found the sick factors of SSI could be curable by adopting modern actions and by following precautionary measures.

Yogesh Madhu Karrao Kulkarni (2011) did a study on “role of SSI in Employment Generation”. The present study aims to analyze the role of small scale industries in employment generation. The present study is based on the data obtained from secondary sources. The

secondary data has been collected from published and unpublished annual reports, Govt manuals/orders, websites etc. The study concluded that the small scale industries sector has shown considerable resilience and in built strength and is in a position to make much greater contribution to national economy as well as to meet the competition from large industries including multinational corporations.

Mohan and Savithri (2013) did a study on “growth performance of Small Scale Industries with the objective of locating the overall performance of SSI in India from 1990-2010. The specific objective of the paper was to analyze the overall growth of SSI in terms of number of units registered, production recorded, employment generated and exports. The study had followed descriptive analysis. The study had concluded that the performance of SSI in terms of parameters shown were found be satisfactory.

Mohan and Savithri (2013) the examined “Small Scale Industries in India during Five Year Plans”. The paper focused on plan outlays on small scale industries in India from first year plan to eleventh five year plan. The specific objective of the paper is to analyze the public sector outlay to industries in general and to small scale industries in particular from first five year plan to eleventh five year plan. The study is based on descriptive analysis. The variables such as public sector outlay, plan outlay to industries, plan outlay to village and small scale industries, plan outlays to small scale industries were used to evaluate the outlays to small scale industries from first five year plan to eleventh five year plan. For the purpose of the study, the required information was collected from various issues of five year plans. The study concluded that having recognized significance of SSI the government of India has to set up various agencies and institution and different levels in order to introduce policy of protection and promotional measure and providing incentives and compensation for the overall the growth of industries.

Nagaraju and Gundegowde (2013) did a study on “Role of SSI in Alleviation of Poverty: A Case Study”, with the objective of analyzing the role of SSI in alleviating poverty. There present study exclusively uses 50 live units data. The percent study aims at identifying the performance of SSI units as to how it solves the problem of poverty and unemployment in Tumkurtaluk. In order to ascertain the performance of SSI units, the study avails primary data from sampled units. Providing the financial assistance, training programme through the Industrial Promotional Agencies (IPAs) at national and state level could generate employment opportunity which would result in eradicating poverty has the conclusion provided by the state.

George Mathew (2013) did a study on “Changing Scenario of Small Enterprises in India”. The analysis reveals that although, the small enterprises have exhibited a low growth of output, employment, number of units and exports during the post-reform period compared to that of the pre-reform period, their efficiency has gone up since they have registered an increase in terms of labour productivity, output per units and exports per unit during the post-reform period. Moreover, the labour input has been efficiently utilized in these industries particularly during the post- reform period since its contribution to the growth of output has increased. However, the study observed that these industries have not experienced an increase in terms of employment per unit; in fact they have shown a sharp decline.

METHODOLOGY

CHAPTER III

METHODOLOGY

The methodology of the present study on, “Performance of Small Scale Industries in India” is discussed under the following heads:

A. Selection of the topic

B. Collection of data

C. Tools of analysis

A. Selection of the topic:

India is predominantly an agricultural economy. The agricultural sector contributes 33 percent of the gross national product of the economy. The green revolution has enhanced agricultural output and employment for rural population. But still, the demand of immediate self-reliance needs rapid industrialization with limited scope of extension of agriculture to more areas. In the words of Prasad (1999), “A growing economy always needs the presence of small enterprises”. The small sector proved its worth, by contributing to the growth and development of the economy, by generating employment and correcting regional imbalances. This sector has shown advancement in absorption of competitive technology and, as a result foreign exchange in being earned. Junya (2000) has observed that, small-scale industries are the backbone of our economy, by being embedded in every aspect. Small scale units create immense wealth through gainful utilization of natural resources available within the country generating large scale employment with the rural and urban population in the manufacturing and service sectors. With this banner of small scale units the author had focused her attention on the topic “Performance of Small Scale Industries in India. Since New Economic Policy was introduced in the year 1991 the author had chosen the period 1990-2010 for his analysis.

B. Collection of data:

Since the data required to fulfill the objectives of this study is secondary in nature the needed facts and figures were collected from the published sources that are mentioned below

1. Annual reports of MSME, New Delhi
2. Directory of Industries and Commerce, Chennai
3. Economic Survey of India, various issues
4. Ministry of small scale industries, Annual Report 2011-12
5. RBI Hand Book 2009 Pert trust report 2009
6. Reserve bank of India, Annual Report from 2001 to 2012

C. Tools of Analysis

a. Annual Growth Rate

Annual growth rate is a tool used to measure the rate of change in growth, for a particular year. This method of measuring growth gives a better account of the dynamics of transition from the previous year to the current and subsequent years than other methods (Goldar and Seth,1989) In order to calculate the annual growth rate of the selected parameter, the following formula was used:

$$AGR = \frac{P_2 - P_1}{P_1} \times 100$$

Where

AGR=Annual Growth Rate.

P₂ = Current year's value of the selected parameter.

P₁ = previous year's value of the selected parameter.

b. Exponential Trend Analysis

Growth of an industry depends upon the growth of the firms in the industry. The major factors that influence the growth of a firm are the economics of scale, market demand, financial policies, and factors of production. The compound growth rate or the compound rate of change in growth rates can be obtained from the first – order and the second order differentiation of log-quadratic equations. Sandesara (1982), Thenmozhi (1992), Kumar (1997) have analyzed the growth of various industries, using compound growth rates, with references to the growth indicators viz., fixed assets, employment, output, value-added, sales, wages and profits. In the present study the following method was adopted.

The regression equation of the form:

$$Y = a (b)^t$$

In terms of logarithms,

$$\text{Log } Y = \text{log } a + t \text{ log } b$$

Where

Y= variables and

t= time period

Compound growth rate = $\text{Antilog } (b-1) \times 100$.

c. Variability index:

Degree of variability helps to compare the variations among the variables used over the study period. The formula adopted was:

—

Where

C.V = Coefficient of Variation

σ = Standard deviation

\bar{x} = Arithmetic mean

d. Solow index:

Productivity is interrupted as the efficiency with which output is produced by the use of resources. Productivity measurement helps to identify the areas for corrective actions towards planning, better utilization of resources, and other management controls to achieve better performance. Total factor productivity provides an attempt to relate the aggregate impact of all inputs to output. If all factors of production are considered in gross output function, it refers to measure as total factors productivity. Total factor productivity measured as difference between the rate of growth of value added and the rate of growth of total factor inputs. As remarked by swamy (1995) the study of factor productivity is an important aspect of the analysis of development, since it quantifies the contribution of the different factors of production. Selvi(1991) observed that productivity is an important factor influencing the profitability and output growth of an industry. Hinasindu (1995) used the Solow index for estimating total factor productivity in the consumer goods industry. Solow index one of the total factor productivity indices is an essential instrument of growth, and plays a key role in ascertaining the contribution of different factor inputs to growth in output. Solow index being based on Cobb-Douglas production function assumes the elasticity of substitution to be unity.

The formula used in this study to calculate the total factor productivity and partial factor productivity are shown below

And

= _____

Where

$V(t)$ = Production for the year t ;

$K(t)$ = Investment for the year t ;

$L(t)$ = Employment for the year t ;

$TEPI = \sqrt{[PEPI(K) \times PEPI(L)]}$

e. Regression analysis

The method of OLS (ordinary least squares) or the simple linear regression model was used to derive estimates of the parameters of economic relationships from statistical observations. In the present study the following method was used.

Multiple Regression:

$$L = a_0 + b_1x_1 + b_2x_2 + \mu$$

Where

L = Employment

X_1 = Production

X_2 = Investment

b = Parameter co-efficient

μ = Random term

To find out the relation between the number of units and production of SSI in India, the simple linear regression model was used.

$$Q = a + b_1 \times 1$$

Where

Q=Production

X₁=Investment

a = Constant

b = Parameter coefficient.

f. Cobb-Douglas production function:

Production function is purely a technical relation, connecting factor input and output. Economic growth has a strong connection with the structure of production that characterizes the industrial growth of any economy. The aggregate production function describes the laws of proportion, i.e., the transformation of factor inputs into products at any particular time period. The production function represents the technology of a firm, or an industry, or of the economy as a whole. The production function, in short, includes all the technically efficient method of production (Baumol, 1982).

Cobb- Douglas production function is one of the most widely used production functions in applied-economic research [(Nirmala, 1983), Singh and Singhal (1987), Shalla Devi (1987), Shanthi (1993), Thangaraju (1993)]. Cobb-Douglas production function satisfies the basic economic laws, and also renders easy for computation and interpretation of the estimated parameters. The following form of Cobb-Douglas production function was applied in the current study.

$$\text{Log } V = \text{Log } A + \alpha \text{Log } k + \beta \text{Log } L + \mu$$

Where

V=Production;

K=Investment;

L=Employment;

α =Elasticity of production with respect to capital;

β = Elasticity of production with respect to employment;

If $\alpha + \beta = 1$ Constant returns to scale;

If $\alpha + \beta > 1$ Increasing returns to scale;

If $\alpha + \beta < 1$ Decreasing returns to scale;

In a Cobb-Douglas production function, factor –intensity is measured by the capital / labor (K/L)
the higher this ratio, the more labour- intensive, the lower the ratio, the more capital-intensive.

RESULT AND DISCUSSION

CHAPTER IV

RESULT AND DISCUSSION

Results and Discussion of the topic entitled “Performance of Small Scale Industries in India” is discussed as follows:

- A. Growth performance of small-scale industries in India during 1990-2010.
- B. Factor intensity of small scale industries in India during the period under consideration.
- C. Attributory factors towards the output of small scale industries in India over the reference period.

A. Growth performance of small scale industries in India

Growth performance of small scale industries in India is discussed with the major parameters of small scale industries and is discussed in the following paragraphs.

a. Trends in the number of units of small-scale industries in India during 1990-2010:

Small-scale industries occupy an important role in the development of India. Small-scale industries have special advantages of low capital requirement and high potential for employment generation. Available literature on “Performance of Small Scale industries” supports the fact that the number of units have increased considerably after LPG. To establish this fact an attempt had been made by the author to study the trends in the number of units available and the rate of growth of units in India and is presented in Table-3.

TABLE-3**TRENDS IN THE NUMBER OF UNITS OF SMALL SCALE INDUSTRIES IN INDIA**

(Base year 1990-91)

NUMBER OF UNITS		(Rs in lakhs)
YEAR (1)	NUMBER OF UNITS (2)	INDEX (3)
1990-1991	67.87	100
1991-1992	70.63	104
1992-1993	73.51	108
1993-1994	76.49	113
1994-1995	79.60	117
1995-1996	82.84	122
1996-1997	86.21	127
1997-1998	89.71	132
1998-1999	93.36	138
1999-2000	97.15	143
2000-2001	101.10	149
2001-2002	105.21	155
2002-2003	110.10	162
2003-2004	113.95	168
2004-2005	118.59	175
2005-2006	123.42	182
2006-2007	261.12	385
2007-2008	272.79	402
2008-2009	285.16	420
2009-2010	298.08	439
MEAN	130.3445	
C.V	0.03562	
CGR	78.149	
AAGR	9.79526	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

Table -3 reveals that the total number of small scale units in India had increased to 289.08 lakhs in 2009-2010 from 67.87 lakhs in 1990-1991. It is a pleasure to note that over the period of reference, the units had been increasing continuously. To support this information index value for number of units had been calculated for India and it shows clearly that the number of units had multiplied by nearly 4.3 times in India. The coefficient of variations was 60.03562 over the reference period. The compound growth rate of number of units was 78.149. The performance of small scale industries in India at mean value 130.3445 in 1991-91 to 2009-10.

To compare the rate of growth of number of units of individual years separately, annual growth rate was also calculated and is given in Table.

TABLE-4

ANNUAL GROWTH RATE OF SMALL SCALE UNITS IN INDIA

(Base year 1990-91)

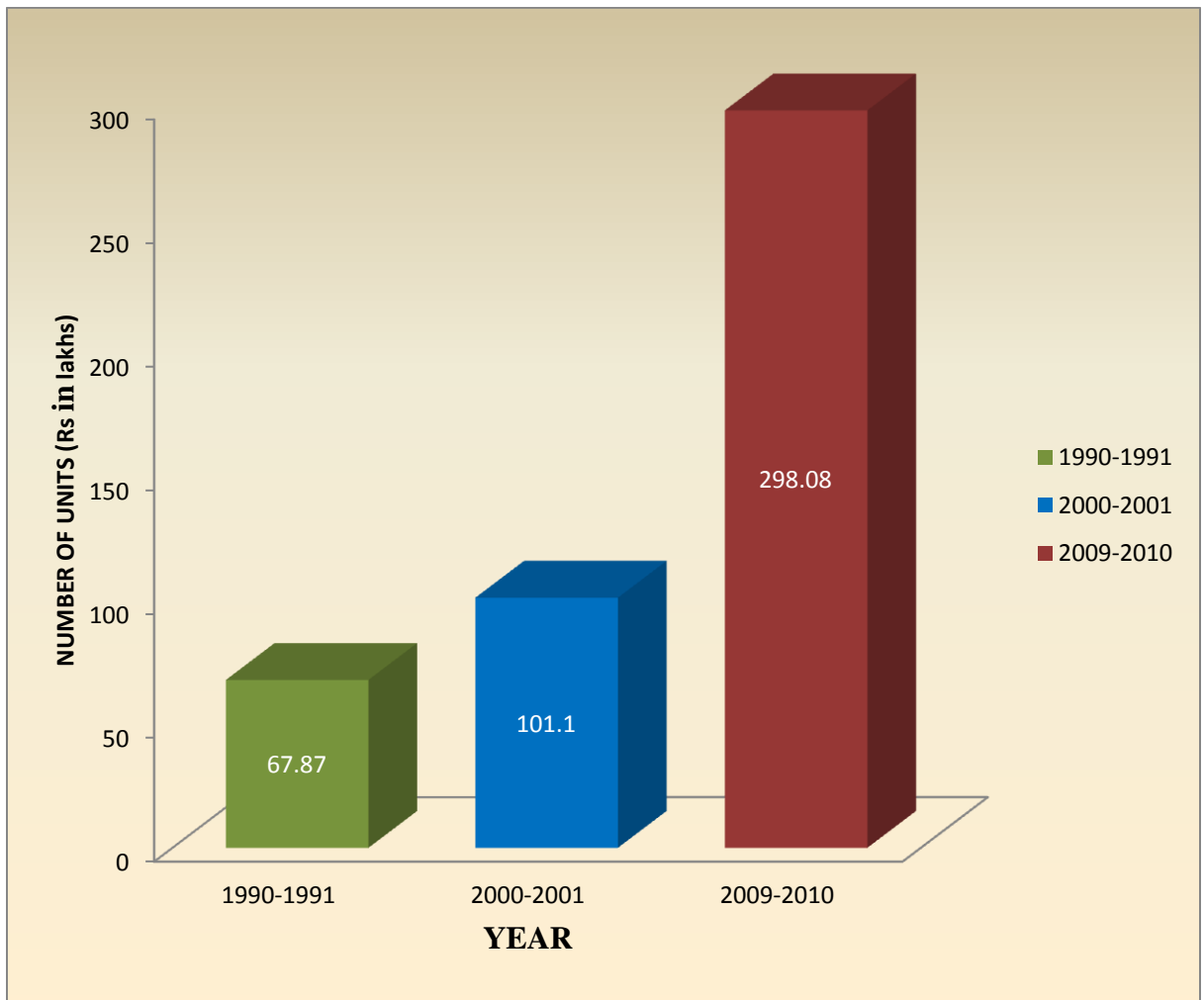
	NUMBER OF UNITS	(Rs. in lakhs)
YEAR (1)	NUMBER OF UNITS (2)	ANNUAL GROWTH RATE (3)
1990-1991	67.87	-
1991-1992	70.63	4.07
1992-1993	73.51	4.08
1993-1994	76.49	4.05
1994-1995	79.60	4.07
1995-1996	82.84	4.07
1996-1997	86.21	4.07
1997-1998	89.71	4.05
1998-1999	93.36	4.07
1999-2000	97.15	4.06
2000-2001	101.10	4.07
2001-2002	105.21	4.07
2002-2003	110.10	4.65
2003-2004	113.95	3.49
2004-2005	118.59	4.07
2005-2006	123.42	4.07
2006-2007	261.12	111.57
2007-2008	272.79	4.47
2008-2009	285.16	4.53
2009-2010	298.08	4.53
MEAN	130.3445	
C.V	60.03562	
CGR	78.149	
AAGR	9.79526	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

Table-4 exhibits that over the reference period the year 2006-07 had realized the maximum annual growth rate (111.57), witnessed a rising trend in back with a decreasing rate. The favorable policies of India had accelerated the performance of small scale industries and this fact is well supported by the finding of the study. The general declining trend of number of units of small scale units in India could be viewed as general recession of Indian economy.

FIGURE-1

GROWTH OF NUMBER OF SMALL SCALE UNITS IN INDIA



b. Trends in employment of small scale industries in India

Bhattacharjee (2000) observed that economic liberalization has reduced the employment generation ability of the factory sector and the rate of growth of employment was minimum during post liberalization period. To check this observation an attempt was made by the investigators to have a discussion on employment potentiality of small scale units in India by using index method considering 1990-1991 as the base year and is given in Table-5.

TABLE-5**EMPLOYMENT POTENTIAL OF SMALL SCALE UNITS**

(Base year 1990-91)

NUMBER OF LABOUR FORCE		(Rs in lakhs)
YEAR (1)	NUMBER OF LABOUR FORCE (2)	INDEX (3)
1990-1991	158.34	100
1991-1992	165.99	105
1992-1993	174.84	110
1993-1994	182.64	115
1994-1995	191.40	121
1995-1996	197.93	125
1996-1997	205.86	130
1997-1998	213.16	135
1998-1999	220.55	139
1999-2000	229.10	145
2000-2001	239.09	150
2001-2002	249.09	157
2002-2003	261.38	165
2003-2004	271.42	171
2004-2005	282.35	178
2005-2006	294.91	186
2006-2007	595.66	376
2007-2008	626.34	396
2008-2009	659.35	416
2009-2010	695.38	439
MEAN	305.739	
C.V	58.36847	
CGR	83.541	
AAGR	9.56421	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

In India the employment status of SSI had continuously increased and the figure shows that employment had increased by 4.3 times in India. The coefficient of variation representing employment was 58.36847. And the compound growth rate of employment was 83.541. The coefficient of variation and compound growth rate had shown a significant growth of SSI in India during the reference period.

The annual growth rate of employment in small scale unit in India is presented in Table-6.

TABLE-6

ANNUAL GROWTH RATE OF EMPLOYMENT IN SMALL SCALE UNITS

(Base year 1990-91)

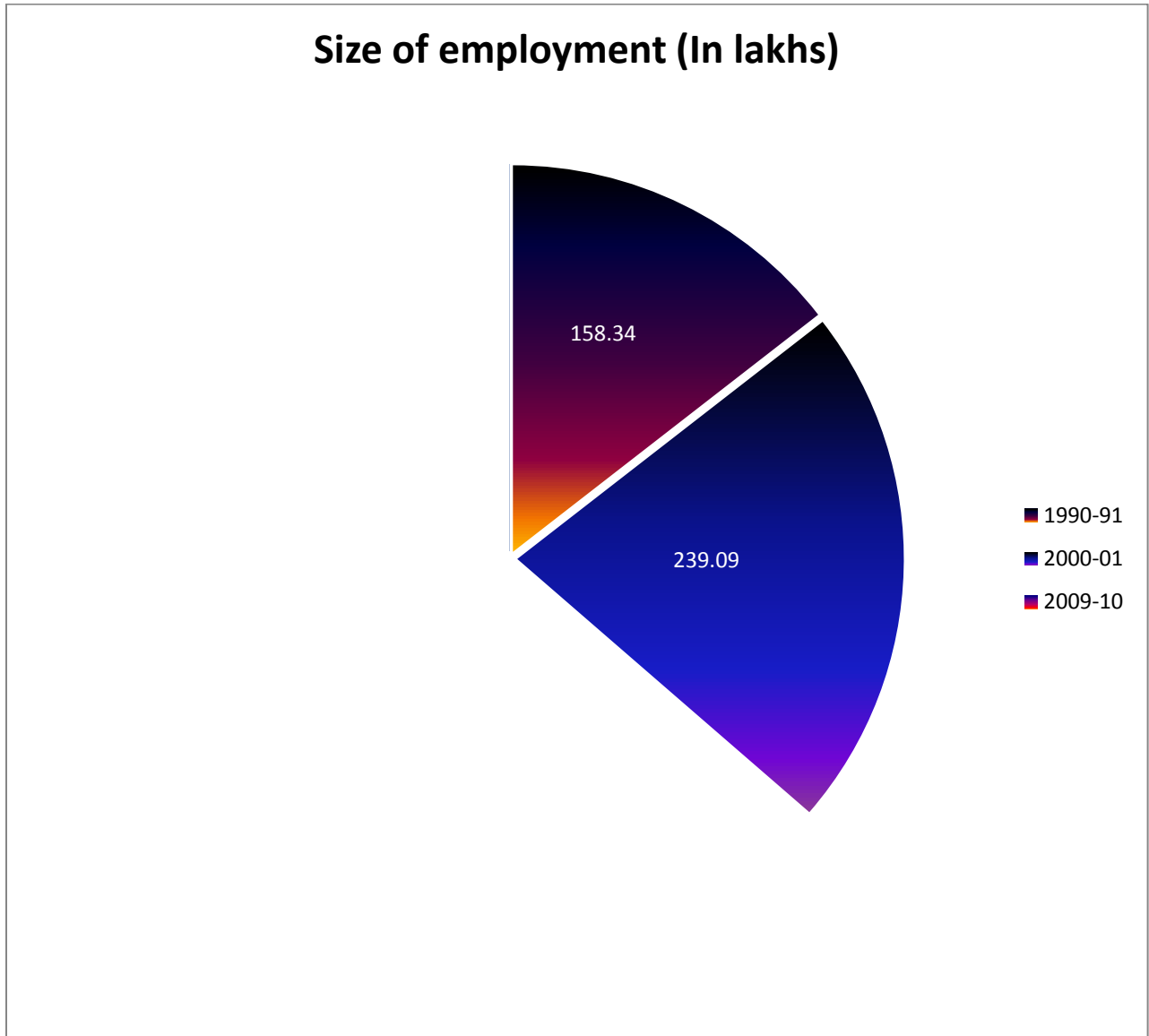
EMPLOYMENT IN SMALL SCALE UNITS		(Rs in lakhs)
YEAR	SIZE OF EMPLOYMENT	ANNUAL GROWTH RATE
1990-1991	158.34	-
1991-1992	165.99	4.83
1992-1993	174.84	5.33
1993-1994	182.64	4.46
1994-1995	191.40	4.80
1995-1996	197.93	3.41
1996-1997	205.86	4.00
1997-1998	213.16	3.55
1998-1999	220.55	3.47
1999-2000	229.10	3.88
2000-2001	239.09	4.36
2001-2002	249.09	4.18
2002-2003	261.38	4.93
2003-2004	271.42	3.84
2004-2005	282.35	4.03
2005-2006	294.91	4.43
2006-2007	595.66	101.98
2007-2008	626.34	5.51
2008-2009	659.35	5.27
2009-2010	695.38	5.46
MEAN	305.739	
C.V	58.36847	
CGR	83.541	
AAGR	9.56421	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

Table -6 reveals that the year 1995-1996 had witnessed minimum growth rate in (3.41). After the year 2006-2007 annual growth rate had increased by 101.98. This could be because of modernization and the technology upgradation of small scale units, which was stressed by the integration of small scale industries and this finding mirrors the findings of Nambiar, Mungekar and Traders (1999).

FIGURE-2

SIZE OF EMPLOYMENT IN SMALL SCALE UNITS IN INDIA



c. Trends in investment in small scale industries in India:

Investment is the backbone of any enterprise. So it is a must that adequate credit is made available to small scale units. Procedures for credit approval and disbursement in the public sector bank need to be modernized to ensure quick response. In the post-reform period, government took a number of steps including partial dereservation, flexible in investment limits, facilities for foreign participation, established of growth centers, export promotion, marketing assistance and incentives for quality improvement etc.,(Khan,2004). In connection with this, an attempt was made to quantity the growth of investment of small scale industries in India by the investigator considering the year 1990-91 as base year and is presented in Table-7

TABLE-7**GROWTH OF INVESTMENT OF SMALL SCALE INDUSTRIES**

(Base Year 1990-91)

AMOUNT OF INVESTMENT		(Rs. in crore)
YEAR	AMOUNT OF INVESTMENT	INDEX
1990-1991	93555	100
1991-1992	100351	107
1992-1993	109623	117
1993-1994	115795	124
1994-1995	123790	132
1995-1996	125750	134
1996-1997	130560	140
1997-1998	133242	142
1998-1999	135482	145
1999-2000	139982	150
2000-2001	146845	157
2001-2002	154349	165
2002-2003	162317	173
2003-2004	170219	182
2004-2005	178699	191
2005-2006	188113	201
2006-2007	207307	222
2007-2008	216721	232
2008-2009	203149	217
2009-2010	209252	224
MEAN	152255.1	
C.V	25.00155	
CGR	830.883	
AAGR	5.79053	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

The Table-7 shows that the annual growth rate is 5.79053 and compound growth rate is 830.883. And co-efficient of variation is 25.00155 and mean value of investment in small scale unit in India is 152255.1.

To differentiate the individual year in terms of investment small scale units for India annual growth rate of investment for the reference period was also calculated and is presented in Table-8

TABLE-8

ANNUAL GROWTH RATE OF INVESTMENT IN INDIA

(Base year 1990-91)

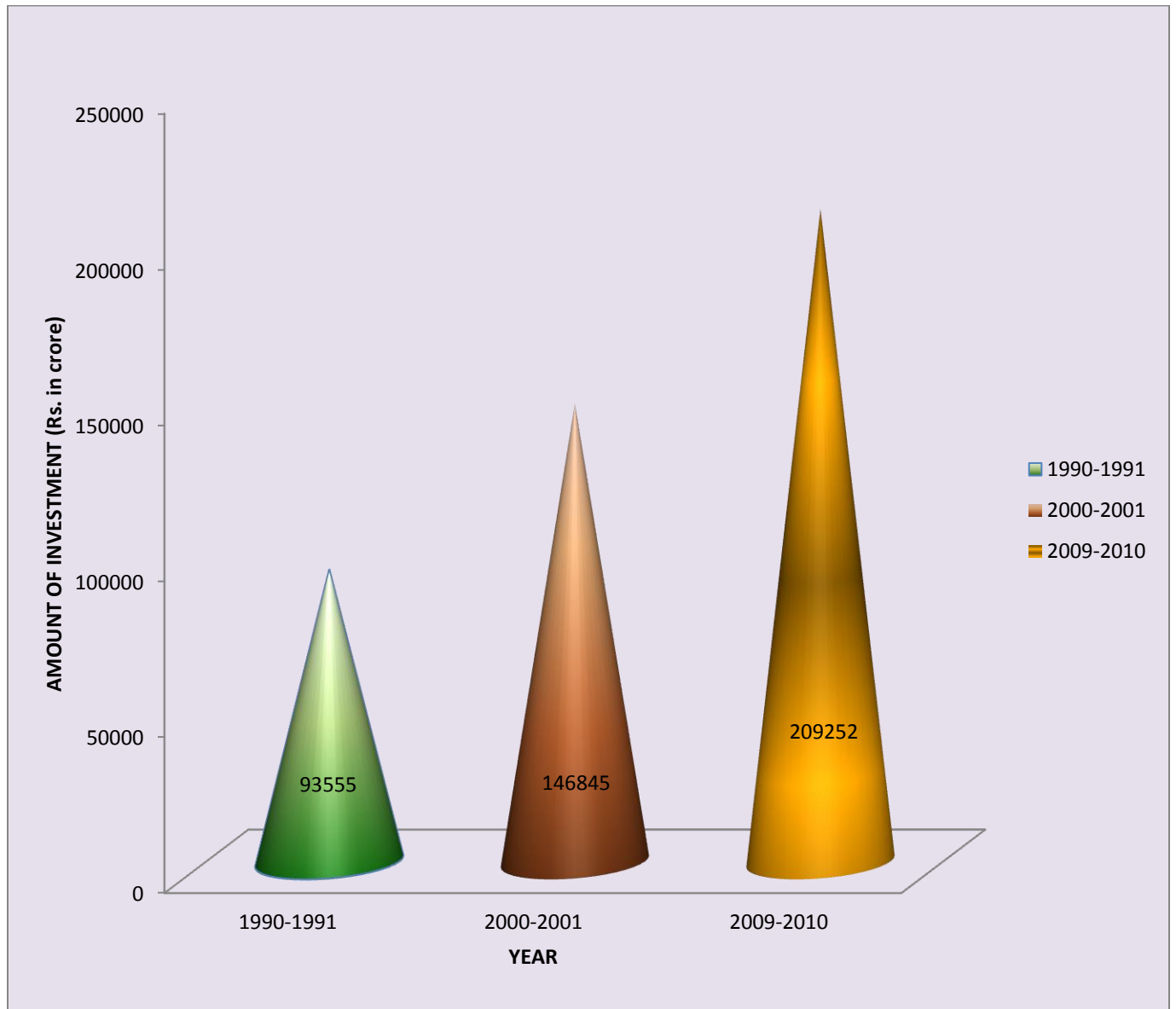
INVESTMENT		(Rs In crore)
YEAR	AMOUNT OF INVESTMENT	ANNUAL GROWTH RATE
1990-1991	93555	-
1991-1992	100351	7.26
1992-1993	109623	9.24
1993-1994	115795	5.63
1994-1995	123790	6.90
1995-1996	125750	15.83
1996-1997	130560	3.82
1997-1998	133242	2.05
1998-1999	135482	1.68
1999-2000	139982	3.32
2000-2001	146845	4.90
2001-2002	154349	5.11
2002-2003	162317	5.16
2003-2004	170219	4.87
2004-2005	178699	4.98
2005-2006	188113	5.27
2006-2007	207307	10.20
2007-2008	216721	4.54
2008-2009	203149	6.26
2009-2010	209252	3.00
MEAN	152255.1	
C.V	25.00155	
CGR	830.883	
AAGR	5.79053	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

Table -8 reveals that the amount of investment in India of small scale units had been continuously increasing. The year 1995-96 had shown a rising trend with the tune of 15.83. Having seen the disinterest in the field of investment on the part of entrepreneurs, the successful working of the Ministry of Small Scale Industries and agro industries which was created on 14th October 1999, and the scheme named “Agenda for the millennium” could be the reasons for the better level of investment in small scale units in India.

FIGURE-3

AMOUNT OF INVESTMENT IN SMALL SCALE UNITS IN INDIA



d. Trends in production of small scale units of India:

The second industrial revolution was formulated under a new environment, when a number of reforms in industrial, fiscal, trade and foreign investment policies were introduced in the economy-commonly called as economic Liberalization, Privatization and Globalization (LPG). In this background, there was emphasis on quantitative targets and planning had become more “Indicative”. Here the investigators had made an attempt to study the trends in production of small scale units in India by using index method. Added to this an attempt was also made to measure the annual growth rate of production of small scale units in India and is given in Table-9

TABLE-9**TRENDS IN PRODUCTION OF SMALL SCALE UNITS IN INDIA**

(Base Year 1990-91)

VALUE OF PRODUCTION		(Rs in crore)
YEAR	VALUE OF PRODUCTION	INDEX
1990-1991	63518	100
1991-1992	73072	115
1992-1993	85581	136
1993-1994	98804	156
1994-1995	122210	192
1995-1996	148290	233
1996-1997	168413	265
1997-1998	189178	298
1998-1999	212901	335
1999-2000	234255	369
2000-2001	261289	411
2001-2002	282270	444
2002-2003	311998	491
2003-2004	364547	574
2004-2005	429796	677
2005-2006	497882	784
2006-2007	709398	1117
2007-2008	790759	1245
2008-2009	880805	1387
2009-2010	982919	1547
MEAN	345394.3	
C.V	81.97286	
CGR	1963.371	
AAGR	15.72	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

Table -9 shows in India production had increased by 15.47 times. The compound growth rate was 1963.371 with the coefficient of variation of 81.97286, showing tremendous changes in the value of production in SSI in India during the reference period.

TABLE-10**ANNUAL GROWTH RATE OF PRODUCTION OF SMALL SCALE UNITS
IN INDIA**

(Base year 1990-91)

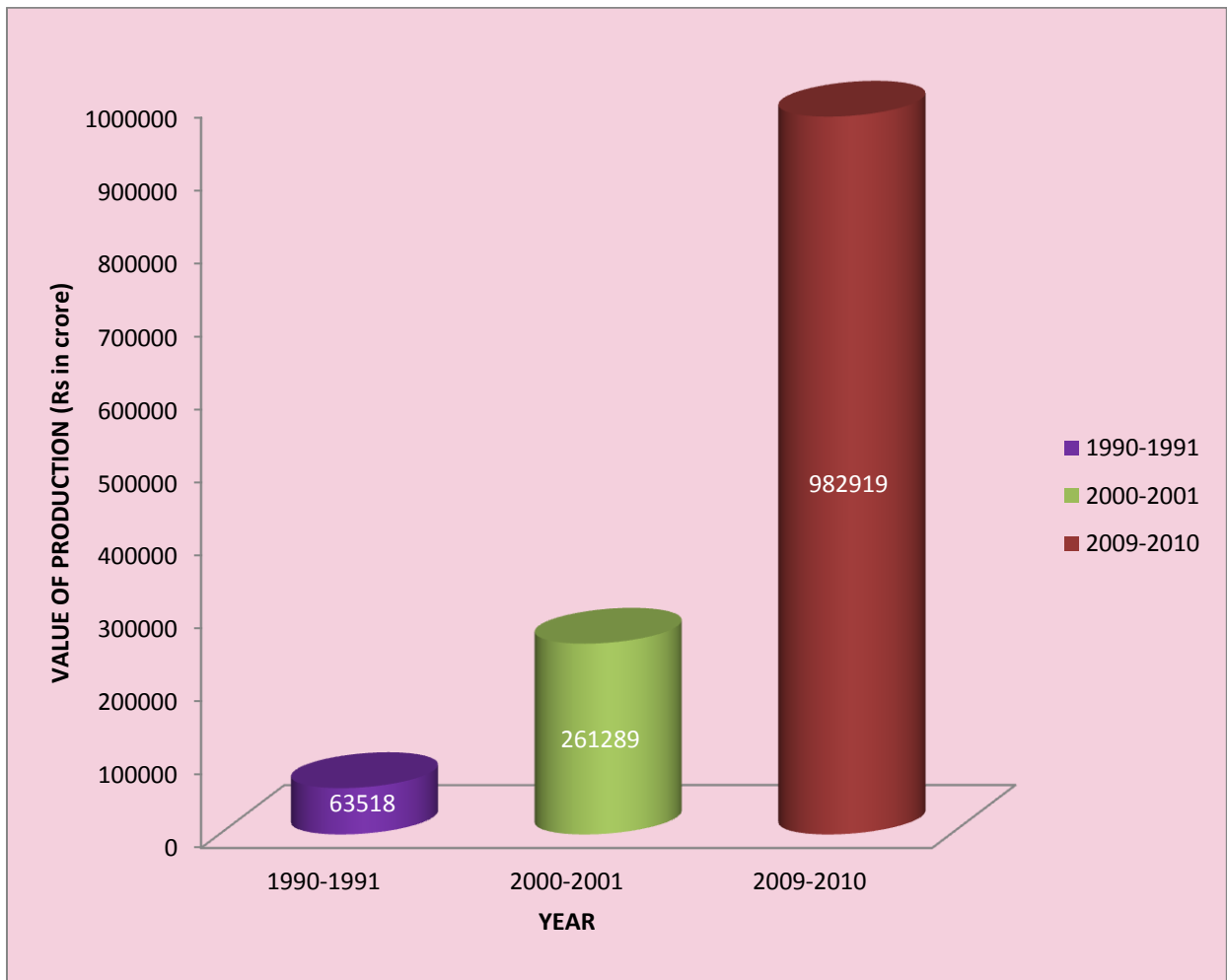
VALUE OF PRODUCTION		(Rs in crore)
YEAR	VALUE OF PRODUCTION	ANNUAL GROWTH RATE
1990-1991	63518	-
1991-1992	73072	15.04
1992-1993	85581	17.11
1993-1994	98804	15.45
1994-1995	122210	23.69
1995-1996	148290	21.34
1996-1997	168413	13.57
1997-1998	189178	12.32
1998-1999	212901	12.54
1999-2000	234255	10.03
2000-2001	261289	11.54
2001-2002	282270	8.03
2002-2003	311998	10.53
2003-2004	364547	16.84
2004-2005	429796	17.89
2005-2006	497882	15.84
2006-2007	709398	42.48
2007-2008	790759	11.46
2008-2009	880805	11.39
2009-2010	982919	11.59
MEAN	345394.3	
C.V	81.97286	
CGR	1963.371	
AAGR	15.72	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

The annual average growth rate was 15.72 exhibits the success and the excellent performance of small scale unit in India.

FIGURE-4

VALUE OF PRODUCTIONS OF SMALL SCALE UNIT IN INDIA



The goods produced by small scale units have a sizeable demand in foreign countries. The demand offered by foreigners for the small scale sector goods is presented in Table-11

TABLE-11

TRENDS IN EXPORT OF SMALL SCALE UNITS IN INDIA

(Base Year 1990-91)

VALUE OF EXPORT		(Rs in crore)
YEAR	EXPORTS	INDEX
1990-1991	9664	100
1991-1992	13883	144
1992-1993	17784	184
1993-1994	25307	262
1994-1995	29068	301
1995-1996	36470	377
1996-1997	39248	406
1997-1998	44442	460
1998-1999	48979	507
1999-2000	54200	561
2000-2001	69797	722
2001-2002	71244	737
2002-2003	86013	890
2003-2004	97644	1010
2004-2005	124417	1287
2005-2006	150242	1555
2006-2007	177600	1838
2007-2008	182538	1888
2008-2009	202017	2090
2009-2010	223572	2313
MEAN	85206.45	
C.V	79.71551	
CGR	920.262	
AAGR	18.5089	

Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India (various issues)

The figures of Table-11 was really encouraging to the small scale entrepreneurs concentrating more on export. The year wise trend of parameter could be much more useful to research, with the form of correcting our commercial policy etc. and so an attempt was made and presented in Table-12.

TABLE-12**ANNUAL GROWTH RATE OF EXPORTS OF SMALL SCALE UNITS**

(Base year 1990-91)

VALUE OF EXPORT		(Rs in crore)
YEAR	EXPORTS	ANNUAL GROWTH RATE
1990-1991	9664	-
1991-1992	13883	43.66
1992-1993	17784	28.10
1993-1994	25307	42.30
1994-1995	29068	14.86
1995-1996	36470	25.46
1996-1997	39248	7.61
1997-1998	44442	13.23
1998-1999	48979	10.21
1999-2000	54200	10.66
2000-2001	69797	28.77
2001-2002	71244	2.07
2002-2003	86013	20.73
2003-2004	97644	13.52
2004-2005	124417	27.42
2005-2006	150242	20.75
2006-2007	177600	18.21
2007-2008	182538	2.78
2008-200	202017	10.67
2009-2010	223572	10.66
MEAN	85206.45	
C.V	79.71551	
CGR	920.262	
AAGR	18.5089	

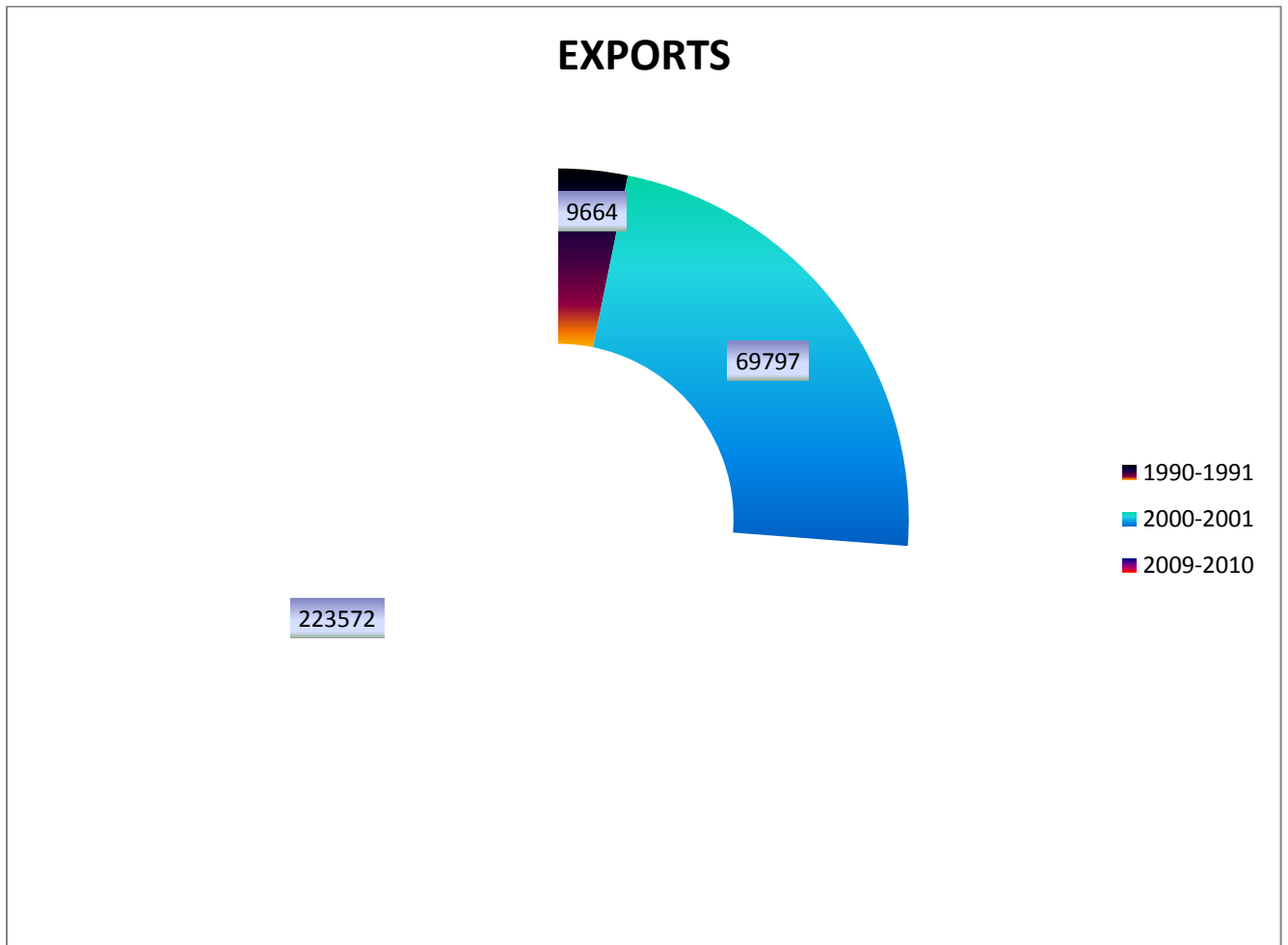
Source: Ministry of Small Scale Industries, Annual Reports Economic survey of India

(various issues)

Table -12 reveals that the year 2001-02 had witnessed minimum growth rate witnessing that the unfavorable export policy of our government and the favorable export policy was witnessed in the year 2004-05.

FIGURE-5

VALUE OF EXPORT IN SMALL SCALE UNITS IN INDIA



B. Factors intensity of small scale industries in India during the period under consideration:

a. Estimation of production function:

Production function expresses the technological relationship between factor input and total output. It describes the laws, which govern the transformation of factor inputs into outputs at any particular time period. In order to find out whether the small scale industry is labour intensive or capital intensive the Cobb-Douglas production function was used. The results arrived at is as follows

TABLE-13
COBB-DOUGLAS PRODUCTION FUNCTION

Model	Unstandardized-Co-efficient		Standardized Co-efficient beta	t
	B	Std. error		
Constant(a) Independent variable	-22.221	2.063		-10.772
Log K(α)	2.771	.222	.836	12.488
Log L(β)	.299	.117	.171	2.550

Cobb-Douglas production function equation

$$\text{Log } V = \text{Log } A + \text{Alpha } \text{Log } K + \text{Beta } \text{Log } L + U$$

$$\text{Log } \text{Alpha} + \text{Log } \text{Beta} = 2.771 + .299$$

$$= 3.07$$

(N=20)

The results of Cobb-Douglas production function of India explained that the sum of independent variable Log K (Alpha) and Log L (Beta) is 3.07 showed that the small scale industries had realized increasing returns to scale and they were labour-intensive.

b. Relative share of input towards output of small scale units of India:

The term ratio refers to numerical or quantitative relationship between two items /variables so also labor output and capital output ratio. These labor-capital output ratios are used to explain the relationship between the factor productivity and output growth. The output is influenced mainly by capital and labor inputs. Hence, the present study had tried to find the labour output and capital output and is present in Table-14

TABLE-14**CAPITAL-OUTPUT AND LABOR OUTPUT RATIO OF
SMALL SCALE UNITS IN INDIA**

YEAR (1)	INVESTMENT AND PRODUCTION (2)	EMPLOYMENT AND PRODUCTION (3)
1990-1991	1.4729	0.0025
1991-1992	1.3733	0.0023
1992-1993	1.2809	0.0021
1993-1994	1.1719	0.0018
1994-1995	1.0129	0.0016
1995-1996	0.8480	0.0013
1996-1997	0.7752	0.0012
1997-1998	0.7043	0.0011
1998-1999	0.6364	0.0010
1999-2000	0.5975	0.0009
2000-2001	0.5620	0.0009
2001-2002	0.5468	0.0008
2002-2003	0.5203	0.0008
2003-2004	0.4669	0.0007
2004-2005	0.4158	0.0006
2005-2006	0.3778	0.0006
2006-2007	0.2922	0.0008
2007-2008	0.2740	0.0007
2008-2009	0.2306	0.0007
2009-2010	0.2129	0.0007
MEAN	0.68863	0.001155

Source: column (2) and (3) shows the capital-output ratio and labor output-ratio in India.

Table -14 had implied that India revealed a consistent fluctuation in column 2 and 3 and it had proved that the employment/production was more in general as compared with investment/production. It also supports the view that the small-scale units are labour intensive.

c. Trends in partial and total factor productivity of small scale units in India:

Productivity growth is important and is the only suitable route to have better standard of living. Total factor productivity is the contribution of partial factor productivity of labor and capital. Partial factor productivity is the difference between the index values of output for the time period and index value of the capital and labor employed for the time period 't'. The present study had tried to analyze the trends in partial and total factor productivity of small-scale units Table15- shows the trends in partial and total factor productivity of small-scale units in India.

TABLE-15

**TRENDS IN PARTIAL AND TOTAL FACTOR PRODUCTIVITY OF
SMALL SCALE INDUSTRIES IN INDIA**

YEAR (1)	V(t) (2)	K(t) (3)	L(t) (4)	PEPI(K)	PEPI(L)	TFPI
1990-1991	100	100	100	1.0000	1.0000	1.0000
1991-1992	115	107	105	1.0748	1.0952	1.0849
1992-1993	136	117	110	1.1624	1.2364	1.1988
1993-1994	156	124	115	1.2558	1.3565	1.3051
1994-1995	192	132	121	1.4545	1.5868	1.5192
1995-1996	233	134	125	1.7388	1.864	1.8003
1996-1997	265	140	130	1.8928	2.0384	1.9642
1997-1998	298	142	135	2.0986	2.2074	2.1523
1998-1999	335	145	139	2.3103	2.4101	2.3596
1999-2000	369	150	145	2.46	2.5448	2.5020
2000-2001	411	157	150	2.6178	2.74	2.6781
2001-2002	444	165	157	2.6909	2.8280	2.7585
2002-2003	491	173	165	2.8381	2.9757	2.9061
2003-2004	574	182	171	3.1538	3.3567	3.2536
2004-2005	677	191	178	3.5445	3.8033	3.6716
2005-2006	784	201	186	3.9004	4.2150	4.0546
2006-2007	1117	222	376	5.0315	2.9707	3.8661
2007-2008	1245	232	396	5.3664	3.1439	4.1074
2008-2009	1387	217	416	6.3917	3.3341	4.6163
2009-2010	1547	224	439	6.9062	3.5239	4.9332
MEAN		-	-	2.944465	2.511545	2.686595

V (t) =Value of Production, K (t) =Investment, L (t) =Size of employment:

PEPI (K) and (L) = Partial Productivity of Production and Employment: TFPI= Total Factor Productivity.

Table-15 reveals that the average partial productivity of labor was estimated as (2.944465) and is higher than capital. The higher estimated average (2.944465) showed that during the period 1990-2010 the small scale industries were worked as labour- intensive units.

C. Attributory factors of the output of small scale industries in India over the reference period 1990-2010.

a. Determinants of production-Simple Regression Model

To know the influence of number of units on production simple regression analysis had been attempted. Production is taken as dependent variable and the number of units as independent variable. Production was significantly affected by the level of number of units, because of the promotion measures taken by the government. The estimated equations is

$$Y = 3511.752 + .982X$$

$$R^2 = .982$$

$$N = 20$$

The result of the simple regression showed that there is a significant relationship between production and the number of units (R^2 is .982) which statistically significant at 1 percent level.

b. Multiple regression model:

To know the influence of investment (x_1), employment (x_2) and production (Y) multiple regression analysis had been attempted. Production is taken as dependent variable and investment, employment as independent variables and the estimated equations is given below

$$Y = -396926 + 2.841x_1 + 1012.975x_2$$

$$R^2 = .942$$

$$N = 20$$

The result of the multiple regression showed that there is a significant relationship between production, investment and employment, which are statistically significant at 1 percent level.

SUMMARY AND CONCLUSION

CHAPTER –V

SUMMARY AND CONCLUSION

The findings of the topic entitled “Performance of Small Scale Industries in India” is discussed as follows:

- A. Growth performance of small-scale industries in India during 1990-2010.
- B. Factor intensity of small scale industries in India during the period under consideration.
- C. Attributory factors towards the output of small scale industries in India over the reference period.

A. Growth performance of small scale industries in India

The total number of small scale units in India had increased to 298.08 lakhs in 2009-10 from 67.87 in 1990-91. It is pleasure to note that over the period of reference the units had been increasing continuously.

The compound growth rate of number of units in India is 78.149. The growth in the number of small scale enterprises had been mainly due to the declaration of government policies like elimination of all entry barriers etc.

Over the reference period the year 2006-07 had realized the maximum annual growth rate of number of units (111.57). The year 2003-04 had shown a size of decreasing annual growth rate (3.49).

In India the level of accommodation to labour force by small scale industries had continuously increased and the study had shown that employment had increased by 4.3 times in India over the reference period. The coefficient of variation representing employment was 58.36847. And the compound growth rate of employment was 83.541. The coefficient of variation and compound growth rate had shown a significant growth of SSI in India during the reference period showing the remarkable and welcoming changes that had taken place in small scale industries in India.

In terms of annual growth rate the year 1995-96 had witnessed only minimum growth rate (3.41)

In the field of investment of small scale units in India it had been continuously increasing had increased by 2.24 times over the reference period. The compound growth rate of investment was 830.883. The co-efficient of variation was 25.00155 showing the tremendous changes in investment.

In terms of annual growth rate of investment the year 1995-96 had shown a rising trend with the tune of 15.83. Having seen the disinterest in the field of investment on the part of entrepreneurs, the successful working of the Ministry of Small Scale Industries and Agro Industries which was created on 14th October 1999, and the scheme named “Agenda for the millennium” could be the reasons for the better level of investment in small scale units in India.

B. Factors intensity of small scale industries in India during the period under consideration

Estimation of production function

The results of Cobb-Douglas production function explained that the sum of independent variable $\log k$ (Alpha) and $\log L$ (Beta) was 3.07 showed that the small scale industries had realized increasing returns to scale and they were labour-intensive.

Capital output and labour output ratio of small scale units in India had revealed a consistent fluctuations and it had proved that the employment/production was more as compared with investment/production. It also supports the view that the small-scale unit during the reference period was labour intensive.

Trends in partial and total factor productivity of small scale industries had revealed that the average partial productivity of labor was estimated as (2.944465) and was higher than capital. The higher estimated average (2.944465) showed that during the period 1990-2010 the small scale industries were worked as labour- intensive units.

A. Attributory factors of the output of small scale industries in India over the period 1990-2010.

Determinants of production-Simple Regression Model

The result of the simple regression showed that there was a significant relationship between production and the number of units (R^2 is .982) and was statistically significant at 1 percent level.

The result of the multiple regression showed that there was a significant relationship between production, investment and employment, and was statistically significant at 1 percent level.

Areas for further research:

1. "Causes for the slow growth of small scale units" could be an interesting area for further research.
2. "Regional disparity in the growth of small scale industries" could be considered as another area for further research.

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