

PERFORMANCE OF SMALL-SCALE INDUSTRY IN THE
CONTEMPORARY INDIA: AN ANALYSIS WITH SPECIAL
REFERENCE TO ORISSA

Dissertation submitted to the Jawaharlal Nehru University in partial
fulfillment of the requirements for the award of the degree of

Master of Philosophy

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DECLARATION

I declare that the dissertation entitled “**PERFORMANCE OF SMALL-SCALE INDUSTRY IN THE CONTEMPORARY INDIA : AN ANALYSIS WITH SPECIAL REFERENCE TO ORISSA,**” submitted by me for the award of the degree of **Master of Philosophy** of Jawaharlal Nehru University is my own work. The dissertation has not been submitted for any other degree of this University or any other university.

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CERTIFICATE

We recommend that this dissertation be placed before the examiners for evaluation.

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dedicated to

MAA & BAPA

and

Brothers & Sisters

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Abbreviations

ACGR1	:	Average Compound Growth Rate over 1972-73 to 1987-88
ACGR2	:	Average Compound Growth Rate over 1987-88 to 2001-02
ACGR3	:	Average Compound Growth Rate over 1972-73 to 2001-02
ANC	:	Ancillary Industrial Units.
CSSI	:	Census of Small Scale Industrial Units
DC (SSI)	:	Development commissioner of Small Scale Industry
Emp	:	Employment
FI	:	Fixed Investment
OGL	:	Open General License
QRs	:	Quantitative Restrictions
SIDBI	:	Small Industries Development Bank Of India
SIDO	:	Small Industry Development Organisation
SSEs	:	Small Scale Enterprises
SSI	:	Small Scale Industry
SSSBes	:	Small Scale Service Business Enterprises

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Motiniva Nayak

The Indian economy set on the path of planned economic development with the establishment of planning commission in the year 1950. In 1956, the Planning Commission announced its decision about the strategy for development of the Indian Economy in a policy statement titled “the Industrial Policy Resolution 1956”. This is based on the Mahalanobis model. It favoured priority to heavy industry. Nevertheless, it reserved a place for the small-scale industries. They were supposed to be able to supply the increased demand for consumer goods with very little investment but greatly increased employment. Large-scale enterprises were to make only investment good and intermediaries and small-scale enterprises were to be protected against them. In some measure, this policy has continued ever since even if less starkly.¹The Mahalanobis model is able to give a theoretical justification for the existence of the small-scale industry sector: it would supply consumer goods needed to support workers in the large-scale sector of heavy industries. Thus, the Industrial Policy of 1956 tried to adopt a combination of labour intensive and capital-intensive methods. Capital-intensive methods were adopted in the capital goods sector while labour intensive methods were adopted to the small-scale sector. However, what promoted the government to favour the development of small-scale industry instead of production of consumer goods in large factories using modern methods of mass production? The Karve Committee Report (1956) explains this emphasis on small-scale industry. It is focus on three objectives,

- to avoid technological unemployment
- to increase employment as much as possible through village and small industries
- to provide the basis of the structure of an essentially decentralised society.

This is because; the small-scale industry plays following important roles

- (**Generation of employment**) Provides large scale employment opportunities at lower capital cost than large scale industries,
- Exploits latent resources, both human and material,

¹ littel, Mazumdar, page (1987)

- Helps in industrialization of rural and backward areas,
- (*Balanced Regional Development*) Thereby reduces regional imbalance,
- (*Equitable Distribution of Income*) Assures more equitable distribution of national income and wealth,
- SSI units are also supplementing and complimentary to large and medium scale units as ancillary units.

In recent time, same objectives about small-scale sector have been repeated in some of recent reports as follows –

The Planning Commission's special group on employment generating growth has noted that "even if the organised sector grew at 20 per cent per annum and the private organised sector at 30 per cent per annum, their contribution to total employment would increase hardly by 1.5 to 2.0 per cent of the total over the Tenth Plan."²

As per Report of the study on Development of Small Scale Enterprises, "Today, small industry occupies a position of strategic importance in the Indian economic structure due to its significant contribution in terms of output, exports and employment. At the end of March 2002, there were 3.4 million small industry units, accounting for more than 40 per cent of gross value of output in the manufacturing sector, about 35 per cent of total exports, and providing employment to over 19.2 million people, which is second only to agriculture".³

The Third Census of Small Scale Industry presents that 10.5 million units by 31st March 2001 created 24.9 million of employment by producing Rs28.2 million of total gross output and exported Rs 1.4 million.

THE ISSUE

The growth of small industries ensures maximum exploitation of latent resources, both human and material. It also results in employment intensive industrialisation and wider dispersal of economic activities. A positive growth of small sector in the states will greatly help in spreading employment-oriented pattern of industrialisation. Therefore, it is desirable to design strategies and implement policies and programmes in the states for the growth of small industry. This will help in reduction in the spatial

² Quoting from Rani, Uma and Unni, Jeemol (2004), pp- 4568

³ Quoting from Bala Subrahmanya (2004) , pp- 1826

concentration of industrial activities and thereby help in promoting development across regions in the country. Therefore, there are indeed very important roles on the part of states government.

An analysis of growth performance of the small industry will be very helpful here. It will not only explore problems and constrains that the sector facing if any but also its prospects. It gives the path for framing strategies for enhancing small industry in performing its functions and roles in the most productive ways.

OBJECTIVES

- To analyse growth performance and structural change that has occurred over the study period.
- To also analyse current status and problems of small enterprise.
- To compare the performance of reserved sector with that of unreserved sector of small-scale industry.

Such exercise will be state (Orissa) Vs state, state (Orissa) Vs Eastern India and state (Orissa) Vs All-India average comparison with reference to Orissa state and across industries in Orissa. The other states are the neighbouring ones (Bihar and West Bangle) and the industrially developed states (Maharashtra and Gujarat). Eastern India comprises Orissa, Bihar and West Bengal.

From the review of literatures (mentioned subsequently), it comes out that - literatures already exist dealing with performance of small enterprise on macro perspective, whereas there is no literature dealing with small enterprises in Orissa using the recent statistics.

Therefore, the study may become a valuable addition and new literature to the exiting literatures on small enterprises.

METHODOLOGY AND DATA SOURCE

Data source is the *Reports of Census of Small Scale Industrial units (CSSI)*. These are published by Development Commissioner (SSI), Ministry of SSI, New Delhi by covering the units registered with Directorate of Industries. Until now three CSSI have been undertaken by the SIDO (small Industry Development Organisation). The first two censuses have provided statistics on units small-scale industrial units

registered with DC (SSI). However, besides these units, the third census has also provided the statistics on the units that are not registered through sample survey calling them unregistered sector. The definition adopted by this data source is based on the investment in plant and machinery. It provides data on different aspects of SSI.

The First CSSI was done in the year 1973-74 for the reference year 1972-73. The definition of *small-scale units* was as those with Rs. 7.5 lakhs or less investment in plant and machinery (original value) and Rs. 10 lakhs or less in case of *ancillary small-scale units*.⁴ It provided data on employment, investment, working capital, gross output, export, capacity utilisation (of selected industries), dispersal of small scale units, energy consumption etc.

The Second CSSI was done in the year 1989-91 for reference period 1987-88. The definition of *small-scale unit* was unit with investment in plant and machinery not exceeding Rs. 35 lakhs and not exceeding of Rs. 45 lakhs for *ancillary units*. *Small service establishment* (SSE) is defined as personal or household service oriented enterprises located in urban, semi-urban or rural with investment in fixed asset in plant and machinery does not exceed Rs. 2 lakhs.⁵ Besides providing information on above-mentioned variables, the census had also provided information of closure of unit and reasons for closure also.

The Third CSSI was carried out in the year 2002-03 for reference year 2001-02. As mentioned above, this Census also provides information on the Unregistered SSI sector comprising of all those units, which are eligible to be registered but are not registered because the registration is voluntary. "This includes those units which were temporarily registered on or before 31st March 2001 provided they are not permanently registered till 31st March 2001." The definition of *Small Scale Industrial Unit* (SSI) is the units with investment in fixed asset in plant and machinery of Rs 100 lakhs. *Ancillary Unit* is an industrial undertaking engaged in- (i) manufacturing of parts , components, sub-assemblies, tooling or intermediates; or (ii) rendering of services, or supplying not less than 50% of its production or its services to other units for production of other articles and whose investment in fixed asset in plant and

⁴ *All-India Report on the Census of Small Scale Industrial Units, Vol. I, pp1*

⁵ *Report on the second All-India Census of Small Scale Industrial Units, pp. D-2 & D-3*

machinery does not exceed Rs. 100 lakhs. So, as per limit on investment in fixed asset in plant and machinery there is no difference between SSI and ancillary unit. However, there is functional difference between them. *Small Scale Service & Business Enterprises* (SSSBEs) is an enterprise with investment in fixed asset in plant and machinery, excluding land and building, Rs. 10 lakhs irrespective location.⁶ This census has provided information on various aspects of small scale enterprises like on sickness, cluster, employment, output, investment etc.

The changes in the definitions always raise the question on the comparability of data. With the change in the upper limit of investment in plant and machinery for industrial unit to be regarded as small-scale unit, the general price level has also increased many folds in 2001-02 compared to the level of 1972-73. Across region, comparison can always be made. Across time, comparison can also be very indicative even though it might not give the complete picture.

By taking the reference periods of the three CSSI, three-time points are taken i.e., 1972-73, 1987-88 and 2001-02. Mostly two period analyses from 1972-73 to 1987-88 and 1987-88 to 2001-03 have been done. To have appreciation of performance over 1972-73 to 2001-02, the entire period (1972-73 to 2001-02) analysis has been done.

Methodology

Performance of small-scale industry has been analysed by growth performance, percentage contribution to total, average size of the industrial unit and structural ratios.

1. Overall Growth performance of different variables: Analysis of Growth performance has been done by using average compound growth of no. of units, employment, fixed asset, production, export. The growth performance of Orissa with regard to above mentioned variables has been compared with its own performance in previous period, with that of neighbouring states (Bihar and West Bengal), with that of industrially developed states (Maharashtra and Gujarat), with that of eastern India and with that of all-India across time periods. Growth performance has also been analysed across industry, across the relevant regions, across time periods. Time periods are 1972-73 to 1987-88

⁶ *Final Results: Third All India Census of Small Scale Industries 2001-02, pp 95-96.*

(first period), 1987-88 to 2001-02 (second period) and 1972-73 to 2001-02 (the entire period).

Performance in terms of size: Size analysis means analysis of performance of each unit in terms of different variables. Here too, the same exercise has been followed as mentioned in the above paragraph. Performance in terms of ratio: The ratios like output per employment, output per fixed asset, fixed asset per employment and employment per fixed asset are analysed. Here too, the same exercise is followed except industry wise analysis is done only for Orissa.

2. Structural change: Analysis of structural change has been undertaken by discussing Distribution of units by categories (small-scale, ancillary and service establishment), Industry Structure of Orissa, Industrial Base and Diversification in Orissa and Select Ratios by industry wise in Orissa.

- Distribution of units by categories - Discussion of distribution of units by categories has been done looking at percentage share of each category in the total units both in 1987-88 and in 2001-02 across the relevant states, Eastern India and All-India.
- Industry Structure of Orissa has been analysed by relative position of indicators like number of working units, employment, production, fixed asset and export on proportion contribution to total by industry in all the three time points.
- Industrial Base and Diversification in Orissa – This has been analysed by using some concepts called locational quotient (LQ) and specialisation quotient (SQ) respectively.⁷

$$LQ = (X_{ij} / X_j) / (X_i / X_N),$$

$$SQ = \pm \sum \{(X_{ij} / X_j) - (X_i / X_N)\}$$

Here, X = relevant growth variable

i = ith industry

j = jth region

N = national total

LQ could be used as measure of relative regional concentration of a given industry compared to national magnitude. Industries with high LQ could constitute the industrial base of the region.

⁷ For detail analysis refer Ch-II

SQ could give more precise idea of the extent of industrial diversification relative to national level, which measures the extent to which a region showed a diversified pattern as compared to all-India. SQ nearer the zero more diversified the region and vice versa.

The analysis of LQ and SQ has been done by using data both on production and employment with three time point analysis (1972-73, 1987-88 and 2001-02) and two time point analysis(1987-88 and 2001-02) respectively..

- Select Ratios by industry wise in Orissa - Review of performance of industries in terms of ratios. The ratios like output per employment, output per fixed asset, fixed asset per employment and employment per fixed asset are analysed in 1987-88 and 2001-02. This shows the changes in performance of different industries.
3. Current status : Analysis of current status has been done by placing the relative position of the small scale industry in both registered and unregistered sector of Orissa in terms of all-India and relevant states in 2001-02.⁸
 4. Problems have been analysed by –
 - dispersal of units over time and over location in terms of percentages distribution in 1972-73, 1987-88 and 2001-02;
 - Closure has been discussed in terms of closed units as percentage to total in the three time points, closed units as percentage to working units in the three time points, distribution of closed units by location in 1987-88 and 2001-02 and reasons for closure in 1987-88 and in 2001-02.
 - Sickness in 2001-02 has been analysed in the registered and unregistered sector and the reasons for sickness in both registered and unregistered sectors.
 5. The comparative performance of reserved and unreserved sector for each of relevant states and All-India across broad industry groups has been done by using following statistics

⁸ For detail analysis refer to Ch-III

- capacity utilisation in 1987-88 across the relevant states and all-India.
- annual compound growth rate of production across the relevant states and all-India over 1987-88 to 2001-02.
- Contribution of broad industry group to the total of each sector in terms of variables number of working units, fixed asset, Employment, Gross output and Export across the relevant states and all-India in 2001-02.

Few points related to data adjustment:

- As mentioned already that the third CSSI provided data both on registered and unregistered sectors, whereas the first and second census provided data only on registered sector. Unless mentioned, the statistics of 2001-02 is only of registered sector.
- The third CSSI has provided data on both Bihar and Jharkhand separately. But, first CSSI and second CSSI have provided data on Bihar (Bihar + Jharkhand). The data on relevant variables for third CSSI of Bihar and Jharkhand have been added for comparability of data with first CSSI and second CSSI. In some cases, this adjustment has not been done because of non-availability of data. Notes are being provided there.
- The data on rupee value has been adjusted to 1993 prices.
- How the across industry (2-digit NIC code) analysis has been done since first CSSI and second CSSI have used NIC-1970 whereas third CSSI has used NIC-1998? Due to the non-availability of unit level data, exact concordance is not possible. The following attempt has been done. The comparison of the industry by 2-digit product group is made across the industry groups, which are common and have the same or more or less the same nomenclatures in both 2-digit NIC-1970 and NIC-1998. Therefore, the numbers against these products are comparable.⁹

Literature Review

Some studies on small scale industry are by Sandesara, J.C (1993); Subrahmanian and Pillai (1994); Ramaswamy K.V (1994); Narayana, M.R (2003); Bala Subrahmanya (2004), Uma Rani and Jeemol Unni (2004), Mukherjee, D (2004a), Mukherjee, D

⁹ Refer to Table-A, Table-B and Table-C in annex to introduction.

(2004b), Singh and Jain (2006) etc, All these studies do macro-level study of small-scale industry except Subrahmanian and Pillai (1994) and Singh and Jain (2006) with Kerala and Punjab respectively as their study area who have done a micro level study.

Some aspects of growth and structural change in modern small scale industry at all-India level over the 15-year period between *1972 and 1987-88* are being highlighted by Sandesara, J.C (1993). It used the data from the First and Second Census of Small Scale Industrial units. Major findings of the study are - relatively the growth of employment is slower; both capital and labour productivity increased over the period but capital intensity has increased; sharp decline in the share of the small and the medium sizes with increase in the share of the large size; very high closure of the units; poor performance of the reserved sector compared to the unreserved sector over the period 1972 to 1987-88.

A survey of small industry in Kerala is being reported and comparison of the performance of small-scale industry in Kerala with the performance of the sector in the major states and with the all-India has been undertaken by Subrahmanian and Pillai (1994). The study used the statistics from the First and Second Census of Small Scale Industrial units with reference period *1972-73 and 1987-88* respectively. Key findings are that the small-scale industry is in performance crisis in terms of relatively small size, low capacity utilisation, low factor productivity, unfavourable wage-productivity relationship and industrial sickness due to financial and marketing problems.

An analysis of small-scale sector is studied by Ramaswamy K. V (1994) for the period *1981 to 1991*. The study used the statistics from Census of Small-scale Industrial units and other sources like Census of population, ASI, National account of statistics. The findings are that - the small-scale units as small but growing segment of manufacturing sector, it is significant source of manufacturing sector employment; the production of reserved items is not found to be a dominant activity of SSI units.

Impact of select changes in the reservation and de-reservation policy, the open general licensing policy and import tariff policy on small-scale industries in India is studied by Narayana, M.R (2003). The study used the statistics from the Quick Results of the III All-India census of Small Scale Industries- *2002-03*. The major findings are

incompatibility of the continuation of reservation policy for the SSIs with the removal of quantitative restrictions on imports and decline protection to the SSIs under the import tariff policy.

Impact of globalisation and domestic economic reforms on small industry is being studied by Bala Subrahmanya (2004). The study used the data from different sources like SIDBI Report-1999, RBI- Handbook of statistics, 2001 and GOI. It analysed for the period *1980-81 to 2000-01*. Small industry has suffered in terms of growth of units, employment, output and exports. But, the policy changes have also thrown open new opportunities and markets for the sector. To avail of these, the focus must be turned to technology development and strengthening of financial infrastructure in order to make Indian small industry internationally competitive and contribute to national income and employment.

An analysis of impact of reforms on the organised and unorganised manufacturing sectors is done by Uma Rani and Jeemol Unni (2004). The study used statistics from ASI for organised manufacturing sector and from NSSO for unorganised manufacturing sector. The period of analysis is *1984-85 to 2000-02*. It seeks an explanation for the growth trends observed by looking at specific trade and industrial policies. The major conclusions are - firstly, the liberalisation policy helped the organised manufacturing sector to grow for more than a decade, before slowing down and secondly, at the beginning, unorganised sector and employment growth therein was affected badly but in the 1990's it performed better with the promotional policies towards small-scale industries of expanding their capacities and raising their investment limits. The analysis indicates that economic reforms policies had a differential impact on various industry groups. In particular, the growth in the automobile industry and the infrastructure sector helped the growth of the manufacturing industry, especially in the unorganised segment and the generation of quality employment.

The growth dynamics of informal manufacturing sector (IMS) in India over the period *1984 to 2000* has been explored by Mukherjee, D (2004a) with special reference to the Structural Adjustment Programme (SAP) and plausible factors determining the growth pattern are sought to be identified. The study used the data from NSSO and CSO. This growth is observed to be neither smooth nor uniform. The IMS cannot be

labelled either a distress driven sink or a dynamic alternative economic avenue in blanket term as existences of both the segments are detected. While sustainability of the distress driven segment is questionable, the dynamic segment is likely to act as the engine of future growth.

Important determinants of productivity level in Small Manufacturing Enterprises (SMEs) are being identified by Mukherjee, D (2004b). The study used the data from NSSO and CSO for the period *1984 to 2000*. It suggests appropriate policies for augmenting productivity levels therein. Factors like technology, access to resources and inputs, general macroeconomic atmosphere, etc. emerge as important determinants of productivity.

The performance of small-scale unorganised industries in the period of globalisation has been enquired by Singh and Jain (2006). The study also tries to examined the growth propelling experience. The study used the statistics from NSSO of the time point *1994-95 and 2001-02*. This has been done with reference to Punjab. The major findings are small units constitute a majority of the unorganised sector, they provide employment to a large set of people but do not contribute much in terms of output. The production process has become capital intensive, the level of labour productivity is high because of capital deepening process. However, the productivity of capital has remained very low.

Thus, some of the studies make analysis of performance of small-scale industry with the change in the macro policies. Other studies highlight some aspects of growth and structural change in modern small-scale industry. While some of those report survey of small industry in state as compared to other states and all-India average, others enquire as to how are small-scale unorganised industries performing in the period of globalisation in the study area. Whereas, two of those study the growth dynamics of informal manufacturing sector (IMS) and important determinants of productivity level in Small Manufacturing Enterprises.

Some of them undertake the study for the period early 70's to late 80's, while other does for early 80's to early 90's whereas some of them have been undertaken for early 80's to 2001 or 2002. Studies with the study period early 80's to 2001 or 2002 have mostly used the statistics from the NSSO and CSO.

Not a single study has made the analysis of performance of small-scale industry with study period of early 70's to 2001-02. Moreover, the Third Census of Small Scale Industry (2001-02) has rarely been used for the analysis of performance of small-scale industry especially for state level study. The present study is going to use the statistics of all the three CSSI and make analysis of performance of small-scale industries for the period 1972-73 to 2001-02 with reference to Orissa.

ORISSA ECONOMY

The economy of Orissa is dominated by agriculture. This sector provides employment to most of the workforce (73 per cent of total main workers) and contributes 30 percent to the Net State Domestic Product (NSDP).¹⁰ The contribution of agriculture to NSDP has been declining from 67 percent in 1951 to 30 percent in 1998. The workforce supported by the sector is more or less same (In 1960, workforce engaged in agriculture was 73.8 per cent and in 1998, it was 73 percent). Thus, disguised unemployment keeps on increasing in the sector since contribution of agriculture to NSDP has declined without any reduction of the engagement of the workforce in the sector.

Moreover, Orissa continued to be one of the least industrially developed states in India. It hardly contributes 2 per cent of the industrial output, employment and manufacturing value added at the national level according to the Annual Survey of Industries: factory sector 1997-98.¹¹ Whatever industrial structure presents is mostly concentrated in natural resource (metals and minerals, forest produce and water for electricity generation) based industries. However, the metal industries (iron and steel industries) are not showing any kind of positive change in terms of growth rate over the years. Engineering industries has very less share in the total industrial sector. It shows backwardness of the state's industrialisation because engineering industries stimulate technical progress and industrial dynamism. Absence of both the diversification in industrial structure and regional dispersal of industries was found to be the critical problem.

Industrial sector, especially a vibrant and dynamic small-scale industrial sector can play a crucial role as an alternative source of augmenting economic activity and

¹⁰ Orissa development report 2001

¹¹ Orissa development report 2001 pp 200

generating decent and gainful local employment and livelihood. It can also provide forward linkages to the agricultural sector and backward linkage to the large-scale industries. Over all, it can provide diversified industrial base and hence, lead to optimum utilisation of economic resources of Orissa.

However, the position of Orissa's small-scale industry sector in the context of Eastern India and All-India is not good (refer to Table-D and Table-E in annex to Introduction). Percentage contribution of small-scale sector of Orissa to that of Eastern India and All-India in terms of number of working units, employment, production, fixed asset and export is very low. It shows poor contribution of Orissa's small-scale industry in income, employment, production etc to Small Scale Industry at the eastern India level and all-India level.

From Orissa development report (2001), some statements about the policies towards small-scale sector are

“Starting in 1968, till the beginning of the Sixth Plan (i.e., 1980), a number of industrial policies had been announced in the state, offering to promote small scale and village and khadi industries. However, those have been essentially *ad hoc* and *piece-meal* measures and lacked any intelligible "vision" for the future industrialisation.”¹²

“The neglect of the small enterprises is one of the most unfortunate features of Orissa's industrialisation during the 1990s, especially at a time when even industrially advanced nations have realised the tremendous potential of this sector.”¹³

In this background, the study has been done in the coming chapters.

Chapter one of the dissertation, ‘Size and Growth of Small Scale Industry: State-wise Analysis’ is an attempt to analyse performance of small scale industry in All-India, Eastern India, and Orissa. The analysis has been undertaken by doing comparative analysis across the relevant states (Orissa, Bihar, WB, Gujarat and Maharashtra), Orissa Vs All-India and Orissa Vs Eastern India.

¹² Orissa development report 2001 pp 216

¹³ Orissa development report 2001 pp 212

Second chapter, 'Size, growth and structure of small scale sector: industry-wise analysis' has attempted to make industry wise analysis of performance of small scale sector in the relevant states , Eastern India and All-india.

Third chapter, 'Status and problems of small-scale industry: recent trends' analyses the current status of small scale industries and discusses problems of small scale sector exist there in.

Fourth chapter, 'Policy support and reservation of products for small scale industry' is an attempt to analyse the performance of reserved and unreserved sector of small-scale sector.

**SIZE AND GROWTH OF SMALL SCALE INDUSTRY:
STATE-WISE ANALYSIS**

1.1 Introduction

A comparison of the performance of small-scale industry in Orissa relative to neighbouring states (Bihar and WB), industrially developed states (Maharashtra and Gujarat), the Eastern India average and all-India average is necessary to review and assess the position and performance of small-scale industry in Orissa. The performance is measured in terms of changes over three periods viz. first period: 1972-73 to 1987-88, second period: 1987-88 to 2001-02 and the entire period: 1972-73 to 2001-02. This exercise will be about variables like number of working units, employment, production, fixed asset and export.

The chapter makes analysis of performance of small-scale industry in terms of growth, performance in absolute numbers, average size of the units and select ratios of various variables over the three time periods across the above-mentioned states, the eastern India and all-India. *Firstly*, performance of All-India, of Eastern India and that of Orissa is analysed. *Secondly*, Comparisons of performance of Orissa with neighbouring states Bihar and West Bengal and with industrially developed states like Maharashtra and Gujarat has been undertaken.

1.2 Growth performance

Table-1.1 presents the growth rate of different variables in the first period, second period and the entire period.

All-India: The annual compound growth rate of both census frame and number of working unit for which data collected is 9% over 1972-73 to 1987-88(ACGR1), 6% over 1987-88 to 2001-02(ACGR2) and 8% over 1972-73 to 2001-02(ACGR3). Both for production and export, ACGR1 is 12%, ACGR2 is 5% and ACGR3 is 8%. Employment has grown at the rate of 5% over the first period, 4% during the second period and 5% over the entire period. Fixed asset has grown at the rate 7%, 10% and 9% during the first period, during second period and over the entire period.

During the first period, all the variables have grown but during the second period, all the variables except fixed asset have grown but at a slower rate compared to the first period. Over the entire period too, growth rate of fixed asset is higher than the

TABLE- 1.1, GROWTH OF SMALL SCALE INDUSTRY, 1972-73, 1987-88 AND 2001-02 (in %)

Variables	Years	Orissa	Bihar	WB	Eastern India	Maha rashtra	Gujarat	All-India
No of units in census frame (lakhs)	ACGR1	10	12	9	10	4	9	9
	ACGR2	3	3	-2	1	7	8	6
	ACGR3	7	8	3	5	6	8	8
No. of working units for which data collected(lakhs)	ACGR1	9	12	7	9	4	8	9
	ACGR2	3	5	-1	2	8	10	6
	ACGR3	6	9	3	6	6	9	8
Employment(lakh)	ACGR1	9	7	4	5	13	6	5
	ACGR2	1	1	-1	0	4	5	4
	ACGR3	5	4	1	3	8	6	5
Fixed Asset(Rs crore,1993-94 prices)	ACGR1	12	9	3	6	4	8	7
	ACGR2	6	-3	5	3	13	9	10
	ACGR3	9	3	4	4	8	9	9
Production(Rs crore,1993-94 prices)	ACGR1	16	10	8	9	11	12	12
	ACGR2	5	-2	5	2	13	9	5
	ACGR3	11	4	5	6	8	7	8
Export(Rs. Crore, 1993-94 prices)	ACGR1	18	4	15	12	22	5	12
	ACGR2	21	-6	5	7	3	-17	5
	ACGR3	19	-1	10	9	13	-7	8

Notes: Note: rupees values are at 1993-94 prices

ACGR1=annual compound growth rate between 1972-73 and 1987-88,

ACGR2=annual compound growth rate between 1987-88 and 2001-02, and

ACGR3=annual compound growth rate between 1972-73 and 2001-02.

Source: Report on Census of Small Scale Industrial Units, I, 1977; Report on Census of Small Scale Industrial Units for All-India, Orissa, Bihar, WB, Gujarat and Maharashtra, 1992; Final Results: Third All India Census of Small Scale Industries 2001-02, for All-India, Orissa, Bihar, WB, Gujarat and Maharashtra, 2004.

DCSSI, GOI, New Delhi.

other variables. This is because ACGR2 of fixed asset is very higher. The lowest growth is recorded with respect to employment in all the three period.

Eastern India: During the first period, all the variables, except production, have grown either at the same rate or higher than that of All-India. However, during the second period Eastern India is in slump as compared to the earlier period and as compared to All-India.

The growth in all variables over the second period is much less than half of its growth in the previous period performance. Its position in employment during the second period is more or less same as in the first period. Employment is stagnant in the second period.

Over the second period Eastern India's growth performance is much less than half of the growth of All-India in all variables except in export. In case of employment, All-India has grown at 4% whereas Eastern India has registered no growth. Working units have grown at 6% in All-India whereas in Eastern India it has grown only at 2%. In case of fixed asset, its growth rate is one third of growth of All-India.

Naturally, Eastern India's share in all-India has declined in 2001-02 as compared to 1987-88 in respect of almost all relevant variables. Over the entire period i.e., from 1972-73 to 2001-02, Eastern India has grown at a slower rate than All-India except export and the lowest growth is recorded with respect to employment.

Orissa: During the first period, growth recorded in all the variables in Orissa was either greater than or same as that in All-India. It is true in comparison to Eastern India too. However, during the second period, Orissa's growth performance in all the variables was less than as compared to its own performance in the earlier period and in comparison to All-India except for in export. In employment, the growth rate is only 1% in Orissa whereas in All-India, it is 4%. However, during this period, Orissa's performance is better in almost all the variables as compared to Eastern India. Over the entire period, the lowest growth is recorded with respect to employment among all variables of Orissa. In employment and in fixed asset, both Orissa and All-India have grown at the same rate. In production and export, Orissa has grown better than All-India whereas in number of working unit, Orissa has grown less than All-India. As compared to Eastern India, Orissa has grown at higher rate in almost all the variables.

Comparison (with neighbouring states and industrially developed states):

During the first period, Orissa has grown at a higher rate compared to Bihar and West Bengal (WB) in all variables except number of working units. Bihar has grown at a higher rate in number of working units than Orissa and WB. In number of working units, fixed asset, production and export, Orissa has grown at a higher rate

than both Maharashtra and Gujarat but Maharashtra has grown at higher rate than Orissa in employment. **During the second period**, all variables have grown at lower rate in all Eastern Indian States as compared to their own growth rate in the first period. Orissa has grown at a higher rate in almost all variables compared to them. However, in Bihar, fixed investment, production and export have declined at the rate of 3%, 2% and 6 % respectively. WB has shown 1% declining growth rate both in employment and in number of working units. In most of the indicators, Orissa has grown at lesser rate as compared to Maharashtra and Gujarat except export. **Over the entire period**, Orissa has grown at higher rate compared to Bihar and WB in all the variables except number of working units in which case Bihar has performed better than Orissa and WB. Except production and export, Orissa has grown at slower rate compared to Maharashtra and Gujarat.

To sum up, over the second and the entire period, the lowest growth is recorded in employment. This is true in Orissa, Bihar, WB, and Eastern India and in all-India too. Eastern India's share in all-India has decline in 2001-02 as compared to 1987-88 in respect of almost all relevant variables. During the second period, Orissa's performance is better in almost all the indicators as compared to Eastern India. However, as compared to all-India, Orissa's growth performance is poor.

Over the entire period (from 1972-73 to 2001-02), Eastern India has grown at slower rate than All-India. Over the same period, Orissa has grown at higher rate compared to Bihar and WB in all the variables except for number of working units in which case Bihar has performed better than Orissa and WB. Except production and export, Orissa has grown at slower rate compared to Maharashtra and Gujarat.

1.3 Performance in Absolute numbers and in proportion to all-India and Eastern India:

In all the variables like number of working units, employment, fixed asset, production and export, Eastern India has shown a declining trend as a proportion to all-India in 1987-88 and 2001-02 as compared to 1972-73 [refer to Table – D in annex to Introduction]. Orissa's proportions in all-India have increased in all variables in 1987-88. However, those have declined in 2001-02 in respect of all indicators except export. In case of Bihar, except working unit, in all other variables its proportion to all-India has declined in 1987-88 and 2001-02 as compared 1972-73. In all variables,

WB has recorded a rise in its proportion in 1987-88, however they have declined in 2001-02 except export.

However, as compared to neighbouring states - Bihar, WB, and industrially developed states Gujarat and Maharashtra, Orissa's proportions to all-India are quite less in all the variables and that too in all periods. It can be said that Orissa's contribution to all-India is insignificant whether it is production, or employment or fixed asset or number of working units or even export. In absolute terms too, Orissa's performance in all variables is also very less as compared to its neighbouring states, and Maharashtra and Gujarat also.

Orissa's share in Eastern India is also always less in all variables in all the three-time points as compared to its neighbouring states, Bihar and WB. In absolute value also, Orissa has always less value in all the variables compared to its neighbouring states. WB always has the highest proportion in Eastern India in all the variables. Bihar is coming in between WB and Orissa [Refer to Table-E, annex to Introduction].

Therefore, it is better to analyse Orissa's progress in the development of the small-scale industries not only by looking at only growth rates in different indicators but also by looking at their proportionately poor contribution in income, employment, production etc.

To sum up, as compared to neighbouring states - Bihar, WB, and industrially developed states Gujarat and Maharashtra, Orissa's proportionate contribution to all-India are quite less in every variable and that too in every period. Orissa's share in Eastern India is also always less in all variables in all the three-time points as compared to its neighbouring states, Bihar and WB. Therefore, it shows proportionately poor contribution of Small industry of Orissa in income, employment, production etc to Small Scale Industry at the eastern India level and all-India level.

1.4 Size

Table-1.2 presents the average size (employment per unit, production per unit, fixed asset per unit, and export per unit) of the SSIs. The percentage change in the average size over time is presented in table-1.3.

All-India: Over the first period, the growth in number of working units is high relative to the growth in employment and fixed investment except production and export (Table-1.1). This means employment per unit and fixed investment per unit

TABLE-1.2, AVERAGE SIZE OF SMALL SCALE INDUSTRY, 1972-73, 1987-88 AND 2001-02

Indicators	Years	Orissa	Bihar	WB	Eastern India	Maha rashtra	Gujarat	All-India
Employment (NOs)	1972-73	10	12	13	12	4	12	12
	1987-88	8	5	7	6	12	8	6
	2001-02	7	3	6	4	8	4	4
Production (Rs thousand)*	1972-73	668	739	1047	938	1861	1137	1007
	1987-88	1393	443	967	801	4418	1828	1296
	2001-02	1818	175	1399	751	2887	521	1024
FI(Rs thousand)*	1972-73	264	326	356	341	797	524	408
	1987-88	332	168	164	181	741	452	280
	2001-02	494	56	350	198	1555	401	463
Export (Rs thousand)*	1972-73	7	40	17	22	18	95	58
	1987-88	17	11	42	27	180	54	75
	2001-02	161	2	93	48	108	1	62

Notes: '**' value at 1993-94 prices

Source: Cited in table 1.1

TABLE-1.3, PERCENTAGE CHAGE IN AVERAGE SIZE OF SMALL INDUSTRY

		Orissa	Bihar	WB	Eastern India	Maharashtra	Gujarat	All-India
Employment (NOs)	%Change1	-19	-55	-46	-48	207	-30	-47
	%Change2	-22	-43	-11	-31	-36	-48	-29
	%Change3	-37	-75	-52	-64	95	-64	-62
Production (Rs thousand)	%Change1	109	-40	-8	-15	137	61	29
	%Change2	31	-60	45	-6	-35	-71	-21
	%Change3	172	-76	34	-20	55	-54	2
FI(Rs thousand)	%Change1	26	-48	-54	-47	-7	-14	-31
	%Change2	49	-67	113	10	110	-11	65
	%Change3	87	-83	-2	-42	95	-23	13
Export (Rs thousand)	%Change1	154	-73	141	24	903	-43	29
	%Change2	859	-78	122	77	-40	-98	-18
	%Change3	2335	-94	435	119	502	-99	7

Notes: '**' value at 1993-94 prices;

Per Cent Change1: per cent change in 1987-88 over 1972-73;

Per Cent Change2; per cent change in 2001-02 over 1987-88;

Per Cent Change; per cent change in 2001-02 over 1972-73

Source: Cited in table 1.1

declined whereas production per unit, export per unit has increased. Over the first period, employment per unit declined from 12 persons to 6 persons and fixed investment per unit from Rs 408,000 to Rs 280,000, showing 31 to 47 per cent decline on these measures **between 1972-73 to 1987-88**. Production per unit increased from Rs 10, 07,000 to Rs 12, 96,000, export per unit from Rs 58,000 to Rs 75,000, showing by 29 per cent increase on these measures each over 1972-73 to 1987-88. **Over second period**, a high growth in number of working units relative to the growth in other variables except fixed investment has reduced the average size of the units in terms of all other variables from 18 per cent to 29 percent whereas fixed investment per unit increased by 65 per cent. Only employment per unit declined over 1972-73 to 2001-02. This is because high growth of number of working units relative to employment from 12 persons to four persons by 62 per cent. However, production per unit, fixed asset per unit and export per unit increased by 2 per cent to 13 per cent.

During the first period, employment per unit and fixed investment per unit declined but in the second period employment per unit, production per unit and export per unit declined except for fixed investment. Fixed investment per unit has declined by 31 per cent in the first period but it has increased by 65 per cent in the second period. However, over the entire period only employment per unit has declined but at very high declining rate (62%).

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Eastern India: **Over the first period**, the high growth in number of working unit without any commensurate growth in other variables except export resulted in decline of average size of the units in 1987-88 as compared to 1972-73 from 15 per cent to 48 per cent. **Over the second period**, the growth in number of working units is higher only in case of employment and is equal with production. Therefore, employment per unit has declined by 31 per cent and production per unit by 6 per cent. However, fixed investment per unit and export per unit increased by 10 per cent and 77 per cent respectively. **Over the entire period (1972-73 to 2001-02)**, the average size is declining in all variables except export because the growth rate of number of working units is less than that of export. The decline in employment per unit is 64 per cent, that of production per unit 20 per cent and that of fixed asset per unit 42 per cent. Over the entire period, employment per unit and production per unit keep on

declining. Whereas export per unit keeps on increasing over the first period and second period, but fixed investment per unit declined in the first period, then increased in the second period and over the entire period, it has declined. Rate of decline of employment per unit is the highest.

Orissa: During the first period, the growth in number of working units is either the same or greater than the growth in employment, production, fixed asset and export in the first period. The average sizes of the units have not reduced except in terms of employment. Production per unit has increased from Rs 668000 to Rs 1393000, fixed asset per unit from Rs 264000 to Rs 332000 and export per unit from Rs. 7000 to Rs 17000, showing an increase from 26 per cent to 156 per cent. Employment per unit has declined from 10 persons to 8 persons, showing a decline of 19 per cent. During the second period, like in the previous period, average size has declined only in employment by 22 per cent but it has increased in other respect from 31 per cent to 859 per cent. However, the decrease in employment per unit in second period is higher as compared to first period and increase in production per unit in the second period is slower as compared to the first period; fixed investment per unit and export per unit have increased at increasing rate over the entire period. Over the entire period, production per unit, fixed asset per unit and export per unit increased except for employment per unit, that declined by 37 per cent.

Comparison:

The average sizes (employment per unit, production per unit, fixed asset per unit, and export per unit) in Orissa are higher in most of the variables compared to that of All-India. This is due to firstly; higher rate of growth of number of working units in all-India relative to the growth of number of working units in Orissa and the growth rate in employment, production, fixed asset and export in all-India is also higher than that of Orissa. Secondly, rate of growth of employment, production, fixed asset and export in all-India is lower to that of number of working units in all-India but in case of Orissa, the reverse is true. Similarly, compared to Eastern India, Orissa has higher average sizes in all the variables for the same reasons described above in the case between Orissa and all-India.

In Bihar, the average sizes keep on declining in all variables starting from employment to export in all the three periods. The growth of number of working units

is very high compared to the growth rate of employment, production, fixed investment and export. However, in case of WB, the average sizes have declined in the first period in terms of all variables except export and in the second period, those have increased in all variables except employment. In comparison to WB and Bihar, Orissa has higher average sizes in all variables in all time points except in 1972-73 in both employment and export and in 1987-88 in terms of export only.

To sum up, over the entire period, employment per unit is declining in Orissa, all-India and the Eastern India at ascending higher rate. The average sizes in most of the variables in Orissa were higher as compared to that of all-India, the eastern India and its neighbouring states in 1987-88 and 2001-02. This is happening even though in some of the variables, growth performance in other states and regions was better than in Orissa. This is because - *firstly*, slower rate of growth of number of working units compared to the rate of growth of employment, production, fixed asset and export in Orissa. *Secondly*, growth in number of working units in Orissa is slower as compared to the relevant states and regions. Therefore, average sizes are higher in Orissa but it is not because that small industry in the state is performing better in all the variables. So only by observing the average sizes, it cannot be said that small-scale industry is performing better in Orissa.

1.5 Ratios

Table-1.4 presents the ratio. The percentage change in these ratios over time is presented in table-1.5.

All-India: The productivity of capital and the productivity of labour are represented by ratio of production to fixed investment and ratio of production to employment respectively. **In the first period**, productivity of capital and productivity labour has increased. The ratio of production per person employed increased from Rs 0.8 lakh to Rs 2.1 lakhs by 148 per cent and the ratio of production to fixed investment from 2.5 to 4.6 by 87 per cent. However, capital intensity has gone up from Rs 0.3 lakh to Rs 0.4 lakh by 29 per cent. A lakh rupee investment in fixed investment, which employed three persons in 1972-73, employed two persons in 1987-88, is showing a decline of 23 percent. **In the second period**, productivity of capital declined by 52 percent, productivity of labour increased by only 11 per cent and capital intensity increased by

TABLE- 1.4, IMPORTANT RATIOS IN SMALL SCALE INDUSTRY

Ratios	Year	Orissa	Bihar	WB	Eastern India	Maharashtra	Gujarat	All-India
Employment per rupees one lakh of FI	1972-73	3.9	3.6	3.6	3.6	0.5	2.2	2.9
	1987-88	2.5	3.1	4.1	3.5	1.6	1.8	2.2
	2001-02	1.3	5.3	1.7	2.2	0.5	1.0	1.0
FI/Emp (Rs.lakhs)	1972-73	0.3	0.3	0.3	0.3	2.1	0.5	0.3
	1987-88	0.4	0.3	0.2	0.3	0.6	0.6	0.4
	2001-02	0.8	0.2	0.6	0.5	2.0	1.0	1.0
Production/Emp (Rs.lakhs)	1972-73	0.6	0.6	0.8	0.8	4.8	1.0	0.8
	1987-88	1.7	0.8	1.4	1.3	3.7	2.3	2.1
	2001-02	2.8	0.6	2.3	1.7	3.8	1.2	2.3
Production/FI	1972-73	2.5	2.3	2.9	2.8	2.3	2.2	2.5
	1987-88	4.2	2.6	5.9	4.4	6.0	4.0	4.6
	2001-02	3.7	3.1	4.0	3.8	1.9	1.3	2.2
% share of export production	1972-73	1.0	5.4	1.7	2.4	1.0	8.4	5.8
	1987-88	1.2	2.4	4.3	3.4	4.1	3.0	5.8
	2001-02	8.8	1.3	6.6	6.5	3.7	0.2	6.1

Source: Cited in table 1.1 Note: rupees values are at 1993-94 prices

TABLE-1.5, PERCENTAGE CHANGE IN RATIOS

Indicator		Orissa	Bihar	WB	Eastern India	Maharashtra	Gujarat	All-India
Employment/FI	%Change1	-36	-13	16	-3	230	-20	-23
	%Change2	-47	70	-58	-37	-70	-41	-57
	%Change3	-66	47	-51	-39	0	-53	-67
FI/Emp(Rs.lakhs)	%Change1	56	15	-14	3	-70	24	29
	%Change2	90	-41	139	59	230	70	132
	%Change3	196	-32	105	63	0	112	200
Production/Emp (Rs.lakhs)	%Change1	158	34	72	65	-23	131	142
	%Change2	67	-30	62	36	3	-45	11
	%Change3	331	-6	179	125	-21	27	169
Production/FI	%Change1	66	16	100	61	155	86	87
	%Change2	-12	19	-32	-14	-69	-68	-52
	%Change3	45	38	36	37	-21	-40	-10
% share of export to production	%Change1	22	-55	161	45	323	-65	1
	%Change2	635	-45	53	90	-8	-94	4
	%Change3	795	-75	300	174	288	-98	5

Source: Cited in table 1.1 Note: rupees values are at 1993-94 prices

132 per cent. Over the entire period (1972-73 and 2001-02), productivity of capital has declined by 10 per cent, productivity of labour has increased by 169 per cent, capital intensity has increased by 200 per cent. It can be said that a lakh rupees

investment in fixed asset, which employed three persons in 1972-93, employed only one person in 1987-88.

Eastern India: The productivity of labour keeps on increasing while productivity of capital over the entire period increased - increased in the first period and declined in the second period. The capital intensity also keeps on increasing. The ratio of production to fixed investment has increased from 2.8 to 4.4 by 61 per cent from 1972-73 to 1987-88 and then declined from 4.4 to 3.8 by 14 per cent from 1987-88 to 2001-02; over the entire period it has increased by 37 per cent. The ratio of production per person employed keeps on increasing in the first period from Rs 0.8 lakh to 1.3 lakh by 65 per cent, in the second period from Rs 1.2 lakh to 1.7 lakh by 36 per cent; over the entire period, it has increased by 125 per cent. However, the capital intensity has gone up by 3 per cent in the first period, by 59 per cent during second period, over the entire period by 63 per cent. To put it differently, a lakh rupees investment in fixed asset, which employed four persons in 1972-73, employed three persons in 1987-88 and that employed only two persons in 2001-02 showing a decline of 39 percent.

Orissa: Here too, the productivity of capital increased during the first period, declined during the second period and over the entire period, it has increased. The productivity of labour and capital intensity has increased over the entire period. The ratio of production to fixed investment has increased from 2.5 to 4.2 by 66 percent from 1972-73 to 1987-88, declined from 4.2 to 3.7 by 12 per cent from 1987-88 to 2001-02 and over the whole period it has increased by 45 per cent. The ratio of production per person employed keeps on increasing in the first period from Rs 0.6 lakh to Rs 1.7 lakhs by 158 per cent, in the second period from 1.7 lakh to Rs 2.8 lakh by 67 per cent, so over the entire period it has increased by 331 per cent. However, the capital intensity has also increased by 56 per cent in the first period, 90 per cent in the second period and by 196 per cent over the entire period. A lakh rupees investment in fixed asset, which employed 4 persons in 1972-73, employed 2 persons in 1987-88 and that employed only 1 person in 2001-02 showing a decline of 66 per cent over the entire period.

Comparison- The comparison will be with respect to neighbouring states and industrially developed states. *In Bihar*, unlike Orissa, the productivity of capital

keeps on increasing over the entire period. However, productivity of labour did increase in 1987-88 over 1972-73 and finally declined in 2001-02. Capital intensity increased in the first period and declined in the second period. The ratio of production to fixed investment increased by 16 per cent in the first period, by 19 per cent in the second period, and over the entire period increased by 38 per cent. The ratio of production to employment increased by 34 per cent in the first period but declined by 30 per cent in the second period. The capital intensity i.e., the ratio of fixed asset per employment increased in the first period by 15 per cent, declined by more than 40 per cent in the second period, and over the entire period, it has declined by 32 per cent. In other words, a lakh rupees investment in fixed asset that employed four persons in 1972-73, employed three persons in 1987-88 and that employed five persons in 2001-02 showing a rise by 47 per cent. Productivity of capital is not only increasing but it is also generating more employment over the years. Possibly, this could be the bright facet in Bihar.

In WB, like Orissa, productivity of labour keeps on increasing while productivity of capital increased at the end of first period but it declined at the end of the second period but over the entire period, it has increased. Capital intensity has also increased. Over the entire period, the ratio of production to employment increased by 179 per cent. Over the same period, the ratio of production to capital increased by 36 per cent. The capital intensity declined at the end of the first period by 14 per cent but it increased by 139 per cent at the end of second period and over the entire period it has increased by 105 per cent. Accordingly, number of employment generated by a lakh rupees of investment in fixed capital increased from three persons in 1972-73 to four persons in 1987-88 by 16 per cent and then declined to two persons in 2001-02 by 58 per cent.

Broadly, in *Maharashtra and Gujarat* the productivity of capital increased at the end of first period but declined at the end of second period and over the entire period, it has continue to decline. Over the entire period, Productivity of labour had increased in Gujarat and declined in Maharashtra. Over the same period, capital intensity increased, so employment per rupees one lakh of investment declined in Gujarat but in Maharashtra, capital intensity is decreasing.

The direction of change in all the ratios in Orissa, WB, and Gujarat is more or less same in all periods except the ratio of production to fixed investment. However, the magnitude is different.

Productivity of Capital: In all the Eastern Indian states, Maharashtra and Gujarat, the ratio of production to capital increased at the end of the first period but declined at the end of second period except for Bihar. Over the entire period, it has increased in all the Eastern Indian states but declined in Maharashtra and Gujarat.

Productivity of Labour: The ratio of production to employment increased at the end of first period in all the Eastern Indian states and Gujarat, whereas in Maharashtra it declined. Over the second period, it kept increasing in Orissa, WB; it did increase in Maharashtra but it declined in Bihar and Gujarat. Over the entire period, it increased in Orissa by 331 per cent, in WB by 179 per cent and in Gujarat by 27 per cent; it declined in Bihar by 6 per cent and in Maharashtra by 21 per cent.

Capital Intensity: During the first period, the ratio of fixed investment to employment increased in Orissa, Bihar and Gujarat, declined in WB and Maharashtra. During the second period, it increased in all the states except in Bihar. Over the entire period, it has increased in Orissa, WB and Gujarat; declined in Bihar and Maharashtra.

To sum up, the productivity of labour is increasing over the entire period - increased between 1972-73 and 1987-88 and increased between 1987-88 and 2001-02. The productivity of capital is also increasing over the entire period except all-India - increased between 1972-73 and 1987-88 and declined between 1987-88 and 2001-02. The rate of increase in productivity of labour is greater than the increase in productivity of capital. However, the process is becoming more capital intensive. This is true in Orissa, Eastern India, and All-India. Compared to all-India and the eastern India, productivity of labour is higher in Orissa. Compared to all-India, the productivity of capital in Orissa is higher but it is lower in Orissa compared to the eastern India. Productivity of capital in Orissa is always higher than Bihar, Gujarat, and less than WB. Productivity of labour in Orissa is always higher than Bihar and WB, less than Maharashtra but less than Gujarat in 1972-73 and 1987-88 and greater than Gujarat in 2001-02. The capital intensity in Orissa is always higher than Bihar and WB, less than Maharashtra and Gujarat. Employment per rupees one lakh of fixed

investment in Orissa is always less than WB and Bihar except in 1972-73 but greater than Maharashtra and Gujarat.

1.6 Conclusion

Overall Growth performance is slower in the second period compared to the first period in almost all the variables. This is true in all-India, Eastern India, Orissa, Bihar and WB with few exceptions. Fixed investment and export has grown at higher rate in the second period in All-India and Orissa respectively. *Employment has grown at the lowest rate over the second and the entire period in all the relevant states and the Eastern India and all-India.* Over the entire period, Orissa has grown at higher rate in all the variables (employment, production, fixed asset and export) except number of working of units compared to the neighbouring states (Bihar and WB) but less than Maharashtra and Gujarat. Over the second period, Orissa's growth performance is better in almost all the variables as compared to Eastern India. However, *as compared to all-India, Orissa's growth performance is poor.*

Orissa's *proportionate share* in eastern India and all-India is always less compared to its neighbouring states, Maharashtra and Gujarat. Therefore, *Orissa's small-scale industry has proportionately poor contribution in terms of income, employment, production etc to Small Scale Industry at the eastern India level and all-India level.*

The *employment per unit* is declining in all-India, the Eastern India and Orissa over the entire period. The average sizes in most of the variables in Orissa were higher compare to that of all-India, the eastern India and its neighbouring states in 1987-88 and 2001-02. This is happening even though for some of the variables, growth performance in other states and regions was better than Orissa. This is because *firstly*, slower rate of growth of number of working units compared to the rate of growth of employment, production, fixed asset and export in Orissa and *secondly*, growth in number of working units in Orissa is slower as compared to the relevant states and regions.

Therefore, average sizes are higher in Orissa but it is not because that small industry in the state is performing better in all the variables compared to other relevant states but because slower rate of growth of number of working units compared to the growth

rate of other variables. So only by observing the average sizes of Orissa, it cannot be said that small-scale industry is performing better in Orissa.

Over the entire period, the *productivity* of labour and the productivity of capital are increasing except at all-India level. The rate of increase in productivity of labour is greater than the increase in productivity of capital. However, at the same time, capital intensity is also increasing. In the second period, capital productivity declined but labour productivity and capital intensity kept on increasing. This is true in Orissa, Eastern India, and All-India.

Compared to all-India, the eastern India and the neighbouring states, productivity of labour is higher in Orissa but less than Maharashtra and Gujarat. Compared to all-India and Bihar, the productivity of capital in Orissa is higher, but it is lower in Orissa as compared to the eastern India and WB. However, the process is becoming more capital intensive in Orissa as compared to the neighbouring states.

This analysis of performance of small scale industries at the aggregate level in All-India, Orissa and other relevant states raises the question, how is the small scale industries performing at the disaggregate level? This has been analysed in the next chapter to get clearer picture about the performance of small-scale industry.

***SIZE, STRUCTURE AND GROWTH OF SMALL SCALE INDUSTRY:
INDUSTRY-WISE ANALYSIS***

2.1 Introduction

The performance of small-scale industry can also be discussed by doing industry-wise analysis. It will provide disaggregate level picture. It will not only give idea about structure of the industry but also convey the changes that are taking place in industrial structure. Performance of different industries has been analysed at All-India level, at eastern India level and in Orissa and subsequently a comparison of performance of different industries in Orissa is compared with their counterparts in the Eastern India and All-India. The analysis spans over three time periods, first period: 1972-73 to 1987-88, second period: 1987-88 to 2001-02 and the entire period: 1972-73 to 2001-02.

The chapter has been divided into two sections. First section comprises the analysis of performance of small-scale industry at disaggregate level (industry wise) in Orissa, Eastern India, and All-India. The following analysis have been done,

- growth performance of different industries in the relevant regions in variables like number of working units, employment, production, fixed asset and export,
- performance in terms of employment per unit, production per unit, fixed asset per unit and export per unit

The second section comprises a discussion of structural change. This has been undertaken by analysing

- distribution of units by categories
- industrial structure of Orissa by discussion of proportionate contribution of different industries to the total
- industrial base and diversification in Orissa
- Select ratios by industry wise in Orissa.

The first CSSI and second CSSI have used NIC-1970 and third CSSI has used NIC-1998. So, the comparison of the industry by 2-digit product group is made across the industry groups over 1972-73, 1988-89 and 2001-02, which are common and have the

same or more or less the same nomenclatures. Therefore, the numbers against these products are comparable.

SECTION-I

2.2 Growth performance

Data at 2-digit NIC is available for all the variables (number of working units, production, employment, fixed asset and export) for 1987-88 and 2001-02 but for 1972-73, it is available only for number of units and production. Given the availability of data, comparative analysis of growth performance across periods and across regions is possible only in case of number of working units and production but in other variables the analysis will be across regions only.

2.2.1 Number of working units

Table 2.1 reveals the disaggregated level picture of growth performance of number of working units.

All-India: - No. of working units grew at the rate of 9% over the period 1972-73 and 1987-88(ACGR1), at 6 per cent over the period 1987-88 and 2001-02(ACGR2) and 8 per cent over the period 1972-73 and 2001-02 (ACGR3) at the aggregate level in All-India (table-1.1). At the disaggregate level, all the industries grew at slower rate in the second period compared to their own performance in the first period. **During the first period**, seven industries (food products, beverages, tobacco & products, hosiery & readymade garments, wood products, paper & paper products and leather & leather products, repair & services) grew at higher rate than the aggregate level. **During the second period**, four industries (manufacturing of textile, hosiery & readymade garments, wood products and repair & services) grew at higher rate than the aggregate level. **Over the entire period**, four industries (food products, hosiery & readymade garments, wood products and repair & services) had outperformed compared to the aggregate level.

Eastern India: - Number of working units had grown at 9 per cent, 2 per cent and 6 per cent over the first period, second period and the entire period respectively at the aggregate level in Eastern India (Table – 1.1). Here too, growth rate declined in the

TABLE-2.1 GROWTH IN NO. OF WORKING UNITS OF INDUSTRIES

NIC-1970	Orissa			Eastern India			All-India		
	ACGR1	ACGR2	ACGR3	ACGR1	ACGR2	ACGR3	ACGR1	ACGR2	ACGR3
20 & 21	22	2	12	17	3	10	20	5	12
22	34	-5	14	20	0	10	15	-2	6
23+24+25		10			14			25	
26	6	4	5	14	2	8	13	10	11
33	20	3	11	6	1	4	7	4	6
34	6	3	5	6	3	4	5	6	5
35	7	2	4	9	-1	4	8	2	5
36	12	3	8	6	3	4	7	5	6
37	8	-13	-2	7	-10	-2	4	-6	-1
27	6	2	4	11	4	8	11	8	9
28	12	3	8	10	1	5	10	4	7
29	3	-2	1	13	2	8	11	3	7
30	9	-2	4	9	-3	3	8	4	6
31	5	2	4	3	1	2	5	4	4
97	7	-2	3	16	3	10	17	7	12

Source: Cited in table 1.1 Note: Industry group code at 2 digit NIC

NIC-1970	NIC(1998)	
20 & 21	15	food products
22	16	Beverages, tobacco and products
23+24+25=17	17	mfrg of textiles
26	18	hosiery and readymade garments
33	27	basic metal products
34	28	metal products
35	29	machinery and parts
36	31	electrical machinery and apparatus
37	35	transport equipment and parts
27	27=20+36	wood products
28	28=21+22	paper and paper products
29	19	leather and leather products
30	25	rubber and plastic products
31	24	chemical and chemical products
97	97=50+52	repair & services

second period.

At the disaggregated level, all the industries grew at slower rate in the second period as compared to the first period, even for some industries growth rate declined in the second period. **During the first period**, out of the 15 industries, the growth was higher in seven industries than the aggregate level: food products, beverages, tobacco & products, hosiery & readymade garments, wood products, paper & paper products and leather & leather products. **During the second period**, in six industries, the growth was higher than the aggregate level. **Over the entire period**, six industries grew at higher rate than the aggregate level: food products, beverages, tobacco &

products, hosiery & readymade garments, wood products and leather & leather products and repair & services.

Orissa: - Number of working units grew at 9 per cent over the first period, at 3 per cent over the second period and 6 per cent over the entire period at the aggregate level in Orissa (table-1.1). During the second period, there was decline in growth rate compared to the first period.

During the first period, five industries had grown at rate higher than the aggregate level: food products, beverages, tobacco & products, basic metal products, electrical machinery & apparatus and paper & paper products. **During the second period**, like at the aggregate level, every industry grew at less than half of their own growth rate in the first period. In some industries, growth rate declined. Transport equipment & parts had declined by 13 percent. Leather & leather product, rubber & plastic products and repair & services declined by 2 per cent each. Only two industries (manufacturing of textiles and hosiery & readymade garments) grew higher than the aggregate level of 3 per cent growth rate. **Over the entire period**, five industries grew at higher rate than the aggregate level of 6 per cent growth rate. These same industries outperformed with respect to growth of number of working units at the aggregate level in the first period. Transport equipment & parts declined at 2 per cent rate over the entire period.

Comparison: Both over the first period and over the entire period, the industries in Orissa that were growing better than the Eastern India, All-India are food products, beverages, tobacco & products, basic metal products, electrical machinery & apparatus and paper & paper products. The highest growing industry is **beverages, tobacco & products**.

During the second period, not a single industry in Orissa performed better than their counterpart in the Eastern India and that in All-India. In all the regions, the industry that performed very poorly in this period is **transport equipment & parts**. It performed very badly in Orissa compared to its counterpart in Eastern India and All-India. The best performing industry was **manufacturing of textiles** in all the regions in this period. However, its growth was slower in Orissa as compared to All-India and Eastern India. The industries in Orissa that grew better than Eastern India were

hosiery and readymade garments, basic metal products, machinery & parts, paper & paper products and chemical & chemical products.

2.2.2 Employment:

The data on employment at the disaggregated level for 1972-73 is not available from the data source. Therefore, table-2.2 presents the growth rate of employment for the second period only.

TABLE-2.2, GROWTH IN EMPLOYMENT IN INDUSTRIES

NIC-1970	Orissa	Eastern India	All-India
	ACGR2	ACGR2	ACGR2
20 & 21	3	3	4
22	-9	-4	-4
23+24+25	11	10	19
26	1	-1	6
33	0	-3	1
34	1	0	4
35	0	-3	0
36	0	-2	0
37	-15	-10	-6
27	0	2	7
28	2	-2	3
29	-7	0	4
30	0	-4	3
31	2	-1	2
97	2	1	6

Source: Cited in table 1.1

All-India: During the second period, employment grew at 4 per cent at the aggregate level. Four industries grew at higher than the aggregate level. These industries are manufacturing of textiles, hosiery and readymade garments, wood products and repair & services. **Eastern India:** - During the second period, employment did not grow at aggregate level. Food products, manufacturing of textiles, wood products and repair & services grew better than the aggregate level. Growth rate of most of the industries is declining. **Orissa:** - At the aggregate level, employment in Orissa grew at only one per cent rate during the second period. At the disaggregated level, four industries (food products, manufacturing of textiles, paper & paper products and chemical & chemical products) grew better than the aggregate level.

The best and worst performing industries were manufacturing of textiles and transport equipment & parts respectively in all the regions. Not a single industry in Orissa grew

better than as compared to its counterparts in All- India. Situation was very poor both in Orissa and in Eastern India with respect to employment.

2.2.3 Production

The disaggregated level picture is presented in table-2.3.

TABLE-2.3, GROWTH IN PRODUCTION OF INDUSTRIES (Rs.1000) (in percentage)

NIC-1970	Orissa			Eastern India			All-India		
	ACGR1	ACGR2	ACGR3	ACGR1	ACGR2	ACGR3	ACGR1	ACGR2	ACGR3
20 & 21	29	4	16	21	3	12	22	4	13
22		-7		21	19	20	22	5	13
23+24									
+25		12			9			17	
26	12	1	7	11	-1	5	11	3	7
33	20	5	12	7	-2	3	11	4	8
34	7	3	5	4	4	4	6	4	5
35	13	2	8	6	1	3	9	4	7
36	13	2	7	8	-3	2	12	1	6
37	4	-13	-5	6	-8	-1	7	-2	3
27	10	-2	4	10	1	5	13	4	9
28	9	7	8	7	0	4	10	4	7
29	7	-8	-1	12	7	9	9	5	7
30	15	10	13	11	3	7	12	6	9
31	10	4	7	8	-1	4	11	3	7
97	6	3	4	11	2	7	12	11	12

Source: Cited in table 1.1, Notes: rupees value are at 1993 price

All-India: Production had grown at 12 per cent, 5 per cent and 8 per cent over the first, second and the entire period respectively at aggregate level in All India (table-1.1). The growth rate was quite slower in the second period as compared to the first period at the aggregate level. This is the case at the disaggregate level too. **During the first period**, three industries (food products, beverages, tobacco & products and rubber & plastic products) grew at a higher rate than the aggregate level. **During the second period**, two industries (manufacturing of textiles, repair & services) grew at higher rate than the aggregate level. **Over the entire period**, four industries (food products, beverages, tobacco & products, rubber & plastic products and repair & services) grew at higher rate than the aggregate level.

Eastern India: - Production grew at 9 per cent, 2 per cent and 6 per cent over the first, second and the entire period respectively at the aggregate level in the Eastern India (table-1.1). Here too, the second period's growth performance with respect to

production of small industries is less than half of the growth performance during the first period. This is the case at the disaggregate level too except for the industry beverages, tobacco & products.

During the first period, six industries grew at higher rate than the aggregate level: (food products, beverages, tobacco & products, hosiery & readymade garments, wood products, leather & leather products, rubber & plastic products and repair & services).

During the second period, six industries did better than the aggregate level (food products, beverages, tobacco & products, manufacturing of textiles, metal products and leather & leather products). The remaining nine industries were either growing at slower rate or at declining rate. **Over the entire period**, five industries grew at higher rate than the aggregate level (food products, beverages, tobacco & products leather & leather products, rubber & plastic products and repair & services).

Orissa: - Production grew at 16 per cent, 5 per cent and 11 per cent in the first, second and third period respectively at the aggregate level (table-1.1). The growth performance of Orissa during the second period was less than the first period at the aggregate level. This is true at the disaggregate level too. Some of the industries performed very poor. These are *transport equipment & parts, beverages, tobacco & products and leather & leather products*.

During the first period, only food products grew at higher rate and the remaining 14 industries grew at slower rate than the aggregate level. **During the second period**, manufacturing of textiles and rubber & plastic products grew at higher rate than aggregate growth rate. **Over the entire period**, three industries (food products, basic metal products and rubber & plastic products) grew at higher rate than the aggregate level. The best performing industries in the first and third period were food products, basic metal products and rubber & plastic products, whereas in the second period, manufacturing of textiles and rubber & plastic products in Orissa.

Comparison: **During the first period**, six industries in Orissa were performing better as compared to their corresponding counterparts than in Eastern India and in All-India. These were food products, hosiery & readymade garments, basic metal products, machinery & parts, electrical machinery & apparatus and rubber & plastic products. Among these, the highest growing industry is *food products*.

During the second period, five industries in Orissa were performing better as compared to their counterparts in Eastern India and all-India. These were basic metal products, electrical machinery & parts, paper & paper products and rubber & plastic products. The best performer among these was *rubber & plastic products*.

Over the entire period, six industries in Orissa were performing better as compared to their counterparts in the Eastern India and in All-India. These are food products, basic metal products, machinery and parts, electrical machinery & parts, electrical machinery & apparatus, paper & paper products and rubber & plastic products. Among these top three best performing industries were *food products, basic metal products and rubber & plastic products*.

2.2.4 Fixed Asset

The disaggregated level picture is presented in table-2.4.

TABLE-2.4 GROWTH IN FIXED ASSET OF INDUSTRIES (Rs. 1000) (in %)

NIC-1970	Orissa	Eastern India	All-India
	ACGR2	ACGR2	ACGR2
20 & 21	9	8	11
22	-7	11	5
23+24+25=17	14	13	25
26	-5	-2	9
33	6	2	9
34	4	6	11
35	2	-1	7
36	3	-1	7
37	-17	-7	1
27	2	3	12
28	4	1	8
29	-5	5	10
30	6	3	10
31	9	4	9
97	1	0	9

Source: Cited in table 1.1, Notes: rupees value is at 1993 price

In all-India, fixed asset had grown at the rate of 10 per cent at the aggregate level during the second period and four industries grew at higher rate than the aggregate level in the second period: *food products, manufacturing of textiles, metal products, wood products, leather & leather products and paper & paper products*. In Eastern India, fixed asset had grown at the rate of 3 per cent at the aggregate level during the second period. At the disaggregated level, six industries grew better than aggregate level. Among these, the industries with highest growth in fixed asset was

manufacturing of textiles. Four industries grew at declining rate in Eastern India, whereas, not a single industry had grown at declining rate in All- India. In Orissa, fixed asset grew at 6 per cent at the aggregate level during the second period and three industries grew at higher rate than the aggregate level. Among these the industries with highest growth rate was *manufacturing of textiles* in Orissa. This was the industry with highest growth even in Eastern India and in all-India.

2.2.5 Export

The disaggregated level picture is presented in table-2.5.

TABLE- 2.5, GROWTH EXPORT OF INDUSTRIES (Rs. 1000) (in %)

NIC-1970	Orissa	Eastern India	All-India
	ACGR2	ACGR2	ACGR2
20 & 21	18	11	3
22			11
23+24+25		0	29
26		13	3
33	11	12	4
34		-7	8
35	N.E	6	1
36		-6	9
37		-9	2
27	15	7	16
28		17	2
29		8	0
30			7
31		4	2
97		N.E	-34

Source: Cited in table 1.1, Notes: rupees value is at 1993 price

In all-India, export grew at 5 per cent at the aggregate level during the second period and six industries performed better than aggregated level in All-India. The industry with the highest growth rate was *manufacturing of textiles*. In Eastern India, the growth rate of export was 7 per cent at the aggregate level during the second period and five industries grew at higher rate than the aggregate level. The best performing among these was *paper & paper products*. At aggregate level in Orissa, the growth rate of export was 21 per cent during the second period. The data is not available for all industries except four industries at the disaggregated level for Orissa. Among these, not a single industry performed better than the aggregate level. Compared to other industries and the industries in Eastern India and in all-India, *food products* grew at higher rate in Orissa.

2.2.6

To sum up, there is poor growth performance over second period compared to the first period in number of working units and production in all the regions at the disaggregated level too.

In all the regions, the industry that did very poor with respect to number of units, employment, production, fixed asset in the second period is **transport equipment & parts**. It did very badly in Orissa compared to its counterpart in Eastern India and All-India, the registered declining growth rate in Orissa being at two digit. Transport equipment & parts, beverages, tobacco & products and leather & leather products are those industries experienced negative growth rate in Orissa over the second period with respect to production and their performance is very poor as compared to their counterparts in the Eastern India and all-India.

With respect to employment, growth rate of most of the industries in Orissa and Eastern India declined between 1987-88 and 2001-02.

In all-India, during the first period, the growth rates of *food products and beverages, tobacco & products* are higher in both number of working units and production. However, during the second period, it is *manufacturing of textiles* that enjoyed the status of being highest in growth rate in all variables (number of units, employment, production, fixed asset and export). *Hosiery & readymade garments, wood products, rubber & plastic products, food products* did better in terms of growing at higher rate in generating employment, producing output, exporting the goods and in fixed asset.

In Eastern India, the industries, those are growing at higher rate in number of working units and production, are *beverages, tobacco & products and food products* during the first period. During the second period, *manufacturing of textiles* is growing at the highest rate in number of units, in generating employment and in fixed asset. Beverages, tobacco & products and paper & paper products are producing output and exporting goods at the highest rate respectively during the second period.

In Orissa, *beverages, tobacco & products and food products* are the industries growing at the highest rate in number of working units and production respectively during the first period. The other industries doing good in these variables during the first period are basic metal products, food products. However, during the second

period, it is *manufacturing of textiles* that enjoyed the status of being highest in growth rate in all variables (number of working units, employment, production, fixed asset). Other industries doing better in this period in different variables are food products, hosiery & readymade garments, rubber & plastic products and chemical products.

The industries those are growing at higher rate in Orissa as compared to their counterparts in The Eastern India and all-India: a) **with respect to number of working units** (both during first period and during the entire period) - food products, beverages, tobacco & products, basic metal products, paper & paper products and electrical machinery & apparatus with beverages, tobacco & products the highest growth. b) **With respect to production** (both during first period and second period) – food products, hosiery & readymade garments, basic metal products, machinery & apparatus and rubber & plastic products with food product the highest growth; only in the second period - basic metal products, electrical machinery & parts, paper & paper products, rubber & plastic products with rubber & plastic products having the highest growth rate. c) **With respect to export:** food products during the second period.

2.3 Size

Size analysis means analysis of performance of each unit in terms of different variables.

2.3.1 Employment

The disaggregated level picture is presented in table- 2.6.

All-India: Employment per unit at aggregate level was 12 persons, 6 persons and 4 persons in 1972-73, 1987-88 and 2001-02 respectively in All-India. In 1987-88, seven industries had their employment per unit above the aggregate level: beverages, tobacco & products, manufacturing of textiles, basic metal products, machinery & parts, electrical machinery & apparatus, rubber & plastic products, chemical & chemical products. Other five industries had less than and two had the same as at the aggregate level. *Beverages, tobacco & products* had the highest employment per unit with 20 persons and repair & services, the lowest with two persons. In 2002-01, nine industries had employment per unit above the aggregate level, three industries had less than the aggregate level and three industries had the same as the aggregate level.

TABLE-2.6, AVERAGE SIZE OF EMPLOYMENT IN INDUSTRIES

NIC-1970	Orissa		Eastern India		All-India	
	1987-88	2001-02	1987-88	2001-02	1987-88	2001-02
20 & 21	5	5	5	4	5	4
22	22	13	12	7	20	15
23+24+25	8	9	9	6	14	7
26	7	5	5	3	5	3
33	22	16	15	8	14	9
34	8	5	5	4	6	4
35	10	8	7	5	7	5
36	11	7	9	5	11	6
37	7	5	7	6	9	8
27	8	6	5	4	4	3
28	6	5	6	4	6	5
29	8	4	4	3	3	4
30	8	10	7	7	7	6
31	10	10	9	7	12	9
97	5	8	3	2	2	2

Source: Cited in table 1.1

Beverages, tobacco & products had the highest with 15 persons and *repair & services* the lowest with two persons.

Eastern India: Here too, the employment per unit at aggregate level was 12 persons, 6 persons and 4 persons in 1972-73, 1987-88 and 2001-02 respectively in Eastern India. In 1987-88, eight industries had employment per unit above the aggregate level; six industries had less than and one industry had the same as the aggregate level. *Basic metal products* had the highest with 15 persons and *repair & service* the lowest employment per unit with three persons. In 2001-02, eight industries had employment per unit above the aggregate level, three industries had less than the aggregate level and four industries had the same as the aggregate level. *A basic metal product had the highest employment per unit with eight persons and repair & services* the lowest with two persons.

Orissa: - Employment per unit at aggregate level was 10 persons, 8 persons and 7 persons in 1972-73, 1987-88 and 2001-02 respectively in Orissa. In 1987-88, five industries had employment per unit above the aggregate level; five industries had less than the aggregate level and the residual five industries had the same as at the aggregate level. *Beverages, tobacco & products and basic metal products* had the highest employment per unit with 22 persons whereas *repair & services* had the lowest with five persons. In 2001-02, seven industries had employment per unit above the aggregate level, seven industries had employment per unit less than the aggregate

level and one industry had the same as the aggregate level. *Basic metal products* had the highest employment per unit with 16 persons and leather & leather products the lowest with four persons.

Comparison: The employment per unit declined between 1987-88 and 2001-02 in all the industries except few a few industries in all the regions: All- India, Eastern India and Orissa.

In 1987-88, six industries in Orissa had employment per unit greater as compared to their counterparts in Eastern India and All-India: beverages, tobacco & products, hosiery & readymade garments, basic metal products, metal products, machinery & parts, wood products, leather & leather products and rubber & plastic products. Among these *beverages, tobacco & products, basic metal products and machinery & parts* had the highest employment per unit.

In 2001-02, eight industries in Orissa had the employment per unit greater as compared to their counterparts in the Eastern India and in All-India. Among these, the top two industries with the highest employment per unit were *basic metal products and rubber & plastic products*.

2.3.2 Production

The disaggregated level picture is presented in table-2.7.

All-India: The production per unit was Rs 1007 thousand, Rs 1296 thousand and Rs1024 thousand in 1972-73, 1987-88 and 2001-02 respectively in All-India. In 1972-73, seven industries had production per unit above the aggregate level and the residual eight industries had below the aggregate level. The top three industries with the highest production per unit were *basic metal products, electrical machinery & apparatus and chemical & chemical products*. In 1987-88, eight industries had production per unit above the aggregate level. The top three industries with the highest production per unit were *basic metal products, manufacturing of textiles and electrical machinery & apparatus*. In 2001-02, nine industries had production per unit above the aggregate level. Among these, the top three industries with the highest production per unit were *beverages, tobacco & products, basic metal products and chemical & chemical products*.

TABLE- 2.7, AVERAGE SIZE OF PRODUCTION IN INDUSTRIES (Rs. '000)

NIC-1970	Orissa			Eastern India			All-India		
	1972-73	1987-88	2001-02	1972-73	1987-88	2001-02	1972-73	1987-88	2001-02
20 & 21	831	1934	2516	764	1150	1022	1249	1715	1457
22		1439	1065	894	1023	11081	853	2261	5580
23+24									
+25		1256	1567		2520	1265		3818	1421
26	170	389	248	912	596	363	1248	975	389
33	7522	7079	9534	3978	4255	2958	3130	5273	5255
34	586	706	637	736	515	598	744	964	766
35	644	1434	1620	834	583	764	900	1065	1492
36	2776	2956	2504	1450	1809	855	1857	3715	2009
37	1095	561	583	1314	1145	1441	1203	1689	3011
27	455	717	408	470	403	255	454	606	376
28	742	468	843	782	516	470	819	908	915
29	339	586	226	600	478	967	948	750	930
30	592	1253	6092	856	1037	2355	1061	1729	2170
31	1237	2226	2883	1256	2566	1839	1581	3569	3241
97	208	182	329	179	100	80	186	96	158

Source: Cited in table I.1, Notes: rupees value is at 1993 price

Eastern India: Production per unit was Rs.938 thousand, Rs.801 thousand and Rs. 751 thousand in 1972-73, 1987-88 and 2001-02 respectively in the Eastern India. In 1972-73, four industries had production per unit above the national level. The top three industries with highest production per unit were *basic metal products, electrical machinery & apparatus and transport equipment & parts*. In 1987-88, eight industries had production per unit above the aggregate level. Among these, the top three industries with the highest production per unit were *basic metal products, chemical & chemical products and manufacturing of textiles*. In 2001-02, ten industries had production per unit above the aggregate level. Among these, the top three industries were *beverages, tobacco & products, basic metal products and rubber & plastic products*.

Orissa: Production per unit at the aggregate level was Rs 668 thousand, Rs 1393 thousand and Rs.1818 thousand in 1972-73, 1987-88 and 2001-02 respectively in Orissa. In 1972- 73, five industries had production per unit above the aggregate level and the residual 10 industries had production per unit below the aggregate level. The top three industries having production per unit above the aggregate level were *basic metal products, electrical machinery & apparatus and chemical & chemical products*. In 1987-88, six industries had production per unit above the aggregate level. Among these, the top three industries were *basic metal products, electrical machinery &*

apparatus and chemical & chemical products. In 2001-02 too, six industries had production per unit above the aggregate level and among these the top three best performing industries were *basic metal products, rubber & plastic products and chemical & chemical products.*

Comparison: There is no definite trend over the years with regard to production per unit, neither in any industry nor in any region. For some industry, it was increasing and for others, it was declining. For some, it increased in 1987-88 as compared to 1972-73 and declined in 2001-02 as compared to 1987-88.

In 1972-73, two industries in Orissa had production per unit higher as compared to their counterpart in the Eastern India and All-India: basic metal products and electrical machinery & apparatus.

In 1987-88, four industries in Orissa had production per unit greater as compared to their counterpart in the Eastern India and All-India: food products, basic metal products, wood products and repair & services. As compared to the Eastern India, five more industries in Orissa had greater production per unit. Among these, the top three industries were electrical machinery & apparatus, chemical & chemical products and beverages, tobacco & products.

In 2001-02, eight industries in Orissa had production per unit greater as compared to their counterpart in the Eastern India and All-India. Among these top three industries were basic metal products, rubber & plastic products and chemical & chemical products.

2.3.3 Fixed Asset

The disaggregated level picture is presented in table-2.8.

All-India: The fixed asset per unit was Rs 408 thousand, Rs 280 thousand and Rs 463 thousands in 1972-74, 1987-88 and 2001-02 respectively at the aggregated level. In 1987-88, basic metal products had the highest fixed asset per unit and repair & services the lowest- Rs 753 thousand and Rs 90 thousand respectively. Nine industries had fixed asset per unit above the aggregate level. The industries in top are *basic metal products electrical machinery & apparatus, chemical & chemical products and manufacturing of textiles.*

TABLE-2.8, AVERAGE SIZE OF FIXED ASSET IN INDUSTRIES(Rs. '000)

NIC-1970	Orissa		Eastern India		All-India	
	1987-88	2001-02	1987-88	2001-02	1987-88	2001-02
20 & 21	222	539	183	317	245	511
22	427	300	146	618	342	849
23+24+25	282	490	279	255	594	595
26	178	48	85	47	154	138
33	1094	1731	553	653	753	1538
34	269	307	124	204	236	445
35	505	506	217	222	348	714
36	801	747	340	209	644	821
37	269	147	224	311	439	1115
27	184	184	105	93	139	223
28	347	432	228	218	339	569
29	267	160	82	131	107	288
30	521	1373	282	679	492	1129
31	672	1677	353	544	596	1311
97	196	265	74	44	90	108

Source: Cited in table I.1, Note: rupees value is at 1993 price

In 2001-02, basic metal products had the highest fixed asset per unit and repair & service the lowest-Rs 1538 thousand and Rs108 thousand respectively. Ten industries had fixed asset per unit above the aggregate level. Top three industries with the highest fixed asset per unit were *basic metal industry, chemical & chemical products and transport equipment & parts*.

Eastern India: - The fixed asset per unit was Rs. 341 thousands, Rs 181 thousands and Rs 198 thousands in 1972-73, 1987-88 and 2001-02 respectively at the aggregate level.

In 1987-88, basic metal products had the highest fixed asset per unit and repair & service the lowest- Rs 553 thousand and Rs 74 thousand respectively. Nine industries had fixed asset per unit above the aggregate level. The top three industries were *basic metal products, chemical & chemical products and electrical machinery & apparatus*. *In 2001-02* also, rubber & plastic products had the highest fixed asset per unit and repair & service the lowest- Rs 679 thousand and Rs 44 thousand respectively. Eleven industries had the fixed asset per unit above the aggregate level and the top three industries are *rubber & plastic products, basic metal products and beverages, tobacco & products*.

Orissa: - Fixed asset per unit was Rs 264 thousand, Rs 332 thousand and Rs 494 thousand in 1972-73, 1987-88 and 2001-02 respectively at the aggregate level.

In 1987-88, basic metal products had the highest fixed asset per unit and hosiery and readymade garments the lowest- Rs 1094 thousand and Rs 196 thousand respectively. Seven industries had fixed asset per unit above the aggregate level and the top three industries were *basic metal products, electrical machinery & apparatus and chemical & chemical products*.

In 2001-02, basic metal products had the highest fixed asset per unit and hosiery and readymade garments the lowest- Rs 1731 thousand and Rs 48 thousand respectively. Six industries had the fixed asset per unit above the aggregate level and the top three industries were *basic metal products, chemical & chemical products and rubber & plastic products*.

Comparison: In most of the industries, fixed asset per unit had declined in 2001-02 as compared to 1987-88 in all the regions- Orissa, Eastern India and All-India.

In 1987-88, 12 industries in Orissa had fixed asset per unit higher as compared to their counterpart in the Eastern India and All-India. Among these, *basic metal products* had the highest fixed asset per unit.

In 2001-02, five industries in Orissa had fixed asset per unit higher as compared to their counterparts in the Eastern India and All-India. Among these, *basic metal products* had the highest average size. Compared to the Eastern India, seven more industries in Orissa had the higher fixed asset per unit.

2.3.4 Export

The disaggregated level picture is presented in table-2.9

All-India: Export per unit in All-India was Rs 58 thousand, Rs 75 thousand and Rs 62 thousand in 1972-73, 1987-88 and 2001-02 respectively. In 1987-88, leather & leather products had the highest export per unit and repair & services the lowest- Rs 329 thousands and Rs 3 thousands respectively. Six industries had export per unit above the aggregate level. The top three industries were leather & leather products, hosiery & readymade garments and chemical & chemical products. In 2001-02, beverages, tobacco & products had the highest export per unit and paper & paper products the lowest-Rs 281 thousands and Rs.9 thousands respectively. Eight industries had export per unit above the aggregate level. The top three industries were beverages, tobacco & products, rubber & plastic products and manufacturing of textiles.

TABLE- 2.9, AVERAGE SIZE OF EXPORT IN INDUSTRIES (Rs.'000)

NIC-1970	Orissa		Eastern India		All-India	
	1987-88	2001-02	1987-88	2001-02	1987-88	2001-02
20 & 21	37	265	22	60	98	72
22	49	281
23+24+25	187	28	119	184
26	..	124	25	98	320	121
33	140	400	27	120	105	104
34	35	8	34	42
35	12	..	8	23	28	27
36	..	3	40	11	38	62
37	5	6	28	88
27	..	1	3	4	12	31
28	..	1	1	6	12	9
29	206	500	329	222
30	..	981	1	150	24	39
31	..	4	59	86	135	113
97	3	..

Source: Cited in table 1.1, Note: rupees value is at 1993 price

Eastern India: - Export per unit was Rs 22 thousands, Rs 27 thousands and Rs 48 thousands in 1972-73, 1987-88 and 2001-02 respectively at the aggregate level.

In 1987-88, leather & leather products had the highest export per unit, paper & paper products, and rubber & plastic products the lowest- Rs. 206 thousands and Rs 1 thousands respectively. Five industries had export per unit above the aggregate level. The top three industries were leather & leather products, manufacturing of textiles and chemical & chemical products.

In 2001-02, leather & leather products had the highest export per unit and wood products the lowest- Rs 500 thousands and Rs 4 thousands respectively. Six industries had export per unit greater than the aggregate level. The top three industries are leather & leather products, rubber & plastic products and basic metal products.

Orissa: - Export per unit was Rs 7 thousands, Rs 17 thousands and Rs 161 thousands in 1972-73, 1987-88 and 2001-02 respectively at the aggregate level.

At the disaggregated level, the data for export for all the industries is not available. For the time point 1987-88, data for only three industries was available. These are food products, basic metal products and machinery & parts. Among these, basic metal products and food products had the export per unit greater than the aggregate level.

In 2001-02, rubber & plastic products had the highest average and wood products the lowest- Rs. 981 thousands and Rs 1 thousands respectively. Four industries had export per unit above the aggregate level: rubber & plastic products, basic metal products, food products and hosiery & readymade garments. Rubber & plastic

products, basic metal products and food products were the top three industries in descending order with the highest export per unit.

Comparison: No definite trend can be inferred from the table-2.9. For some industries, export per unit had increased whereas for others, it had declined. In 1987-88, *basic metal products* had higher export per unit in Orissa compared its counterparts in the Eastern India and All-India. In 2001-02, four industries had higher export per unit compared to their counterparts in Eastern India and all-India: food industries, hosiery & readymade garments, basic metal products and rubber & plastic products. Among these, *rubber & plastic products* had the highest export per unit.

2.3.5

To sum up, Employment per unit declined between 1987-88 and 2001-02 in all the industries except few industries in all the regions: All- India, Eastern India and Orissa.

All-India: *Basic metal products*- this industry has highest production per unit in 1972-73 and 1987-88, at the same time it has highest fixed asset per unit in 1987-88 and 2001-02. *Beverages, tobacco & products*- this industry has the highest employment per unit in 1987-88, the highest employment per unit, production per unit and export per unit in 2001-02. *A leather & leather product* has the highest export per unit in 1987-88. *Repair & services*- this industry has the lowest production per unit in 1972-73, the lowest employment per unit, production per unit, fixed asset per unit and export per unit in 1987-88, the lowest employment per unit, production per unit and fixed asset per unit in 2001-02. Paper & paper products has the lowest export per unit in 2001-02.

Eastern India: *Basic metal products*- this industry has highest production per unit in 1972-73, the highest employment per unit, production per unit, fixed asset per unit in 1987-88 and the highest employment per unit in 2001-02. *Beverages, tobacco & products*- this industry has the highest production per unit in 2001-02. *Rubber & plastic products*- this industry has the highest fixed asset per unit in 2001-02. *Leather & leather products*- this industry has the highest export per unit in 2001-02. *Repair & services*- this industry has the lowest production per unit in 1972-73, the lowest in employment per unit, production per unit, fixed asset per unit in both 1987-88 and

2001-02, *Rubber & plastic product* has the lowest export per unit in 1987-88. *Wood products* has the lowest export per unit in 2001-02.

Orissa: *Basic metal products*- this industry has the highest production per unit in 1972-73, the highest employment per unit, production per unit, fixed asset per unit and export per unit in 1987-88 and the highest employment per unit, production per unit and fixed asset per unit in 2001-02. *Rubber & plastic product* has the highest export per unit in 2001-02. *Repair & services*- this industry has the lowest employment per unit and production per unit in 1987-88. *Hosiery & readymade garments*- this industry has the lowest production per unit in 1972-73, the lowest fixed asset per unit in 1987-88 and in 2001-02. *Leather & leather products*- this industry has the lowest employment per unit and production per unit in 2001-02.

The industries those are growing at higher rate in Orissa as compared to their counterparts in the Eastern India and all-India: *Basic metal products*- this industry has the highest production per unit in 1972-73 both in the state and as compared to their counterparts in the eastern India and all- India. It has enjoyed the same status in employment per unit, production per unit, fixed asset per unit and export per unit in 1987-88. The industry has enjoyed the same status in terms of employment per unit, production per unit, fixed asset per unit in 2001-02 too. *Rubber & plastic product* has the highest export per unit in 2001-02.

SECTION-II

2.4 Structural Change

This is studied by analysing the distribution of units by categories (SMALL-SCALE/ANC/SSE), industrial structure of Orissa by looking at percentage share of each industry in the total of Orissa, industrial base & diversification in Orissa, select ratios by industry-wise in Orissa as follows,

2.4.1 Distribution of units by categories

This is being presented in table-2.10.

All-India: It has been found that 96.2 per cent were SSI type, 0.5 per cent of them were ancillary units and the remaining 3.2 per cent were small service establishments (SSE) in 1987-88. However, in 2001-02, the percentage of SSI has declined to 62.2

**TABLE- 2.10, DISTRIBUTION OF UNITS BY CATEGORIES
(SMALL-SCALE/ANC/SSE)**

Categories	Small scale		Ancillary		Service estt	
	1987-88	2001-02	1987-88	2001-02	1987-88	2001-02
Orissa	8176 (98.7)	9614 (77.7)	36 (0.4)	137 (1.1)	75 (0.9)	2615 (21.1)
Bihar	33993 (97.6)	47914 (68.0)	126 (0.4)	1000 (1.4)	703 (2.0)	21515 (30.5)
WB	45530 (99.1)	34468 (81.8)	135 (0.3)	1146 (2.7)	289 (0.6)	6535 (15.5)
Eastern India	87699 (98.5)	91996 (73.6)	297 (0.3)	2283 (1.8)	1067 (1.2)	30665 (24.5)
Maharashtra	28944 (96.9)	71633 (86.2)	209 (0.7)	5908 (7.1)	703 (2.4)	5557 (6.7)
Gujarat	31614 (91.8)	78461 (57.1)	259 (0.8)	10128 (7.4)	2580 (7.5)	48938 (35.6)
All-India	560470 (96.2)	855494 (62.2)	3029 (0.5)	45,797 (3.3)	18869 (3.2)	473683 (34.5)

Source: Cited in table 1.1, Note: figures in parentheses indicate the percentage.

Per cent, that of ANC and of SSSBE has increased to 3.3 per cent and 34.5 per cent respectively.

Eastern India: Here too, the percentage of SSI has declined and that percentage of ANC and that of SSE has increased in 2001-02 as compared to 1987-88.

Orissa: The trend is also same here. A decline proportion of SSI, an increasing proportion in ANC and a very high increasing proportion in Service establishment are concerned.

Broadly, proportion of SSI is declining, that of ANC is increasing and that of service establishment has become very high.

It can be said that there has been significant change in the structure of the sector as far as the SSSBEs (small scale service and business enterprises) are concerned. The proportion SSSBEs increased in every state, in Eastern India and All-India in 2001-02. The reasons for universal increase include the change in the definition and upper ceiling limit in respect of SSSEBs in 1991. The very fast growth in service sector can also be a cause.

2.4.2 Industry Structure of Orissa

The industry structure has been analysed by relative position of variables like number of working units, employment, production, fixed asset and export in terms of their

proportionate contribution to total by industry in 2-digit product group for the years 1972-73, 1987-88 and 2001-02.

Percentage Share: The pattern of distribution in term of percentage shares of each industry group in the total in Orissa in 1972-73, 1987-88 and 2001-02 is presented in table-2.11 (annex to Ch-II). This is done with respect to Orissa only.

1. **Number of working units:** More than one-half (73%) of the total number of working units in 1972-73 is shared by food product, wood product, metal product, chemical & chemical products, paper product and rubber product. Product group like food product, wood product, metal product and repair & services shares around 70 per cent of units in 1987-88. Product group like food products, basic metal products, metal products, wood products, shares around 60 per cent of units in 2001-02. The top two product group that share highest number of working units were **metal products, food products** in 1972-73. Their shares were 25 per cent and 9.2 per cent. However, the highest share shifted to **food products** and the second highest was by **metal product** in 1987-88. Their position remained the same in 2001-02. The share of food product increased and that of metal product and of wood product declined in 2001-02 as compared to 1987-88.
2. **Employment:**89 percent of total employment is shared by food product, basic metal products, metal products, wood products, paper products and repair and services in 1987-88. In 2001-02, these product groups shared most of the employment generated by the small industries in Orissa. The top three product groups that shared the maximum share in total employment are **food product, metal product and wood product** in descending order. The share of food products increased and that of metal products and wood products declined in 2001-02 as compared to 1987-88.
3. **Production:** In 1972-73, product groups like food products, basic metal product, metal products, wood products, paper and paper products and chemical and chemical products produced around 76 per cent of total output. Food products, basic metal products, metal products and chemical and chemical products share 78 per cent of total output in 1987-88. The product groups like food products, basic metal products, metal products, rubber and plastic products and chemical and chemical products have shared 87 per cent of total product in 2001-02. The top two product groups that

shared the maximum share in total production in 1972-73 are **basic metal products and chemical & chemical products**. However, this had been shifted to **food products and metal products** in descending order in both 1987-88 and 2001-02. The food product shared 50.6 per cent and 49.6 per cent in total production in 1987-88 and 2001-02 respectively. This is very high share. The share of food products and basic metal products increased and that of metal products and of chemical and chemical products decreased in 2001-02 as compared to 1987-88.

4. Fixed Asset: More than one-half (86%) of total fixed asset shared by food product, basic metal products, metal products, wood products, paper and paper products, rubber and plastic product, chemical and chemical products and repair and services in 1987-88. Around 79 per cent of total fixed asset shared in 2001-02 by food products, basic metal products, metal products, paper and paper product, rubber and plastic products and chemical and chemical products. The top three product groups that share the maximum share are **food products, basic metal products and metal products** in 1987-88. The first position is held by food product over the period. The second and third position have been shifted to basic metal product and chemical and chemical products respectively in 2001-02. The share of food products, basic metal products and chemical & chemical products has increased in 2001-02 as compared to 1987-88 but that of metal product declined.
5. Export: Food products and basic metal products did most of the export in 1987-88. However, product groups like food products, basic metal products and rubber & plastic products shared 96 per cent of export in 2001-02. The top two product groups are **food products and basic metal products** in 1987-88 but in 2001-02 **food products and rubber and plastic products** enjoyed the status. However, the share of food products and basic metal products declined in 2001-02 as compared to 1987-88.

The highest proportions of number of working units are with industries- metal product and food product. Industries food product, metal product and wood products generate the maximum employment. Food products, metal products, basic metal products and chemical & chemical products produce most of the output. The industries that occupied the maximum share of fixed asset are food products, basic metal products and metal products chemical and chemical products. Food product,

Table-2.12, Best Performing Industries in Orissa, 1987-88 and 2001-02

Indicators	1987-88	2001-02
No. of working units	metal products, food products	food products, metal product
Employment	food product, metal product, wood product	food product, metal product, wood product
Production	basic metal products, chemical & chemical products	food products, metal products
Fixed asset	food products, basic metal products, metal products	food product, basic metal product, chemical & chemical products
Export	food products, basic metal products	food products, rubber and plastic products

basic metal products and rubber & plastic products do most of the export. **Food product, metal product, basic metal product** are the dominant industries in small-scale industry of Orissa in all time-points i.e., 1972-73, 1987-88, 2001-02. Therefore, industrial structure of small industry in Orissa is highly concentrated in 1972-73, more or less the similar scenario continued in 1987-88 and 2001-02.

It is worthwhile to mention that wood product, paper & paper product and rubber & plastic product did play a significant role in terms of employment and production better compared to other industry but not as good as the above mentioned industries.

2.4.3 Industrial Base and Diversification in Orissa

Industrial base and diversification can be studied with some tools like the location quotient (LQ) and the specialisation quotient (SQ).

The LQ technique is the most commonly utilized economic base analysis method. This technique compares the local economy to a reference economy, in the process attempting to identify specializations in the local economy. The location quotient technique is based upon a calculated ratio between the local economy and the economy of some reference unit. The LQ is the ratio of a region's percentage share of a particular activity to its percentage share of some basic aggregate, the aggregate in the present context relating to that of the whole of the India. The LQ could be used as a measure of relative regional concentration of a given industry compared to total national magnitude.

Interpretation of the LQ:

a. $LQ < 1$: the region is producing less than what is expected. That means it is not able to meet the local demand.

b. $LQ = 1$: the region is producing exactly what is needed in the local economy.

c. $LQ > 1$: the region is producing more than what is needed in the local economy.

Therefore, there is extra production. This extra could be for non-local market.

A region would tend to specialise in those industries for which it would have some comparative advantage. Hence, the industries with high location quotient ($LQ > 1$) could constitute the industrial base of the region.

A more precise idea about the extent of industrial diversification to the national level can be obtained by working out the SQ. It measured the extent to which a region is diversified as compared to all-India. The SQ measure essentially compares the percentage distribution by region in the given industry with the percentage distribution by corresponding region of a base magnitude, e.g., national total. The limit to the value of coefficient are zero and one, the higher the value, the greater the localisation (spatial concentration) of the location of the industry. SQ nearer the zero, the more diversified the region and vice versa.

Some reasons for high coefficient of localisation are the presence of marked economies of scale and the need to exploit a rich deposit of a raw material, which is highly localised. Some factors leading to low coefficients of localisation are the use of significant quantities of ubiquitous raw materials and heavy transport costs on finished product.

Let us first discuss the industrial base and diversification of Orissa's small scale industries with the help of LQ and SQ using production data. It appears from table-2.13, that the industrial base of small-scale industry in Orissa is constituted by a few block of industries like **food product, metal product, paper and paper product, chemical and chemical product and repair services** in 1972-73. However, the industrial base in 1987-88 is very narrow with only **food product and basic metal product** and that more or less same concentrated pattern consist with **food product, basic metal product and rubber and plastic product** continued to be in 2001-02.

TABLE-2.13, DISTRIBUTION OF OUTPUT AND LOCATION QUOTIENT BY PRODUCT GROUP IN ORISSA

NIC-(1970)	1972-73		1987-88		2001-02		LOCATIONAL QUOTIENT		
	Total Output	Per Cent Share	Total Output	Per Cent Share	Total Output	Per Cent Share	1972-73	1987-88	2001-02
20 & 21	234	11.3	31217	50.8	136693	50.1	1.79	2.12	2.01
22	..		680	1.1	615	0.2		0.92	0.17
26	33	1.6	592	1.0	1713	0.6	0.25	0.17	0.12
33	209	10.1	9393	15.3	45949	16.8	0.83	1.34	1.51
34	457	22.1	4125	6.7	14887	5.5	1.14	0.73	0.55
35	74	3.6	1454	2.4	5167	1.9	0.41	0.38	0.29
36	108	5.2	1953	3.2	6576	2.4	0.83	0.48	0.57
37	71	3.4	374	0.6	143	0.1	0.61	0.22	0.04
27	235	11.3	2902	4.7	5746	2.1	2.67	0.98	0.41
28	132	6.4	1482	2.4	9803	3.6	1.22	0.55	0.75
29	22	1.1	187	0.3	140	0.1	0.29	0.12	0.02
30	114	5.5	2855	4.6	28306	10.4	0.88	0.72	1.27
31	307	14.8	3715	6.0	15307	5.6	1.03	0.45	0.48
97	76	3.7	541	0.9	1991	0.7	3.57	0.78	0.25
Specialisation coefficient(SQ)							0.18	0.31	0.33

Source: Cited in table 1.1, Notes: Rupees value are at current price.

The picture emerges are those, *firstly*, industrial base in Orissa is narrow, with whatever industrial base exists, is of raw material based and with low share of modern engineering industries in all the three-time point, *secondly*, there is no significant level of diversification in Orissa over the period that is under study. The estimated coefficient of specialisation (SQ) for 1972-73, 1987-88 and 2001-02 are 0.18, 0.31 and 0.33 respectively. Over time, SQ is increasing. That means the degree of industrial diversification in Orissa is becoming lower and lower with time. Moreover, the industrial diversification is far lower than at the national level.

The industrial base and diversification with the help of LQ and SQ using employment data is discussed as follows: it appears from table-2.14(annex to Ch-II), the industrial base of Orissa is constituted by a few block of industries like **food product, beverages, tobacco and products, basic metal products, metal products, wood products and rubber and plastic products** in 1987-88. This same industrial base continued to be still persisting even in 2001-02 with paper and paper products getting its importance and with wood product losing its importance. The industrial base is narrow. The SQ is increasing from 0.22 to 0.24, meaning thereby that the degree of

diversification in industrial production in Orissa is becoming less as compared to the national level.

2.4.4 Select Ratios by industry-wise in Orissa

The productivity of capital and the productivity of labour are represented by ratio of production to fixed investment and ratio of production to employment respectively. Capital intensity is represented by ratio of fixed investment to employment. These ratios with respect to Orissa have been presented in table-2.14.

TABLE-2.15, SELECT RATIOS BY INDUSTRYWISE IN ORISSA

NIC-1970	Emp per 1 lakh FI		FI/Emp Rs.lakh		Capital Productivity		Labour Productivity Rs.lakh	
	1987-88	2001-02	1987-88	2001-02	1987-88	2001-02	1987-88	2001-02
20 & 21	2.1	1.0	0.5	1.0	8.7	4.7	4.1	4.6
22	5.1	4.3	0.2	0.2	3.4	3.6	0.7	0.8
23+24								
+25	2.9	1.9	0.3	0.5	4.5	3.2	1.5	1.7
26	4.0	9.3	0.2	0.1	2.2	5.1	0.5	0.6
33	2.0	0.9	0.5	1.1	6.5	5.5	3.2	6.0
34	2.9	1.7	0.3	0.6	2.6	2.1	0.9	1.2
35	2.0	1.6	0.5	0.6	2.8	3.2	1.4	2.0
36	1.4	0.9	0.7	1.1	3.7	3.4	2.6	3.7
37	2.7	3.7	0.4	0.3	2.1	4.0	0.8	1.1
27	4.3	3.2	0.2	0.3	3.9	2.2	0.9	0.7
28	1.7	1.2	0.6	0.8	1.3	2.0	0.8	1.6
29	2.9	2.3	0.3	0.4	2.2	1.4	0.7	0.6
30	1.5	0.8	0.7	1.3	2.4	4.4	1.6	5.8
31	1.4	0.6	0.7	1.7	3.3	1.7	2.3	2.8
97	2.4	2.9	0.4	0.3	0.9	1.2	0.4	0.4

Source: Cited in table 1.1 Note: rupees value is at 1993 price

Capital productivity: The production/fixed investment ratio was 4.2 and 3.7 in 1987-88 and 2001-02 respectively at the aggregate level in Orissa i.e., the productivity of capital has declined at the aggregate level. Three industries (food products, manufacture of textile, basic metal products) out of 15 industries had production-fixed investment ratio greater than Orissa's aggregate level in 1987-88. In 2001-02, again three industries such as food products, hosiery and readymade garments and basic metal products had capital productivity higher than the aggregate level of Orissa. For some industries, the capital productivity is declining whereas for others it is increasing in 2001-02 as compared to 1987-88. For eight industries, it increased and for remaining seven industries, it declined.

The top three industries with highest capital productivity were **food product, basic metal product, manufacture of textiles** in 1987-88. In 2001-02, they were **basic metal products, hosiery & readymade garments and food products**. The productivity of capital is declining in food products, basic metal products and manufacturing of textiles except hosiery & readymade garments.

Labour Productivity: The employment-production ratio was 1.7 and 2.8 in 1987-88 and 2001-02 respectively at the aggregate level in Orissa. The productivity of labour has increased at the aggregate level. Four industries (food product, basic metal product, electrical machinery & apparatus and chemical & chemical products) had higher production-employment ratio than aggregate level in Orissa in 1987-88. Whereas in 2001-02, it is the food product, basic metal products, electrical machinery & apparatus and rubber & plastic products had the labour productivity higher than the aggregate level. Chemical & chemical products had the exactly the same level of labour productivity as the aggregate level. The labour productivity increased in almost all industries in 2001-02 as compared to 1987-88.

The industries with highest labour productivity in 1987-88 were **food products, basic metal products and electrical machinery & apparatus**. In 2001-02, the industries with highest labour productivity were **basic metal products, rubber & plastic products and food products**.

Capital intensity: In Orissa, at aggregate level the capital intensity was 0.4 and 0.8 in 1987-88 and 2001-02 respectively. In seven industries, capital intensity was higher than the aggregate level 1987-88 whereas in 2001-02, five industries had capital intensity higher than the aggregate level. The capital intensity increased in almost all industries in 2001-02 as compared to the 1987-88. The industries with highest capital intensity in 1987-88 were **electrical machinery & apparatus, rubber & plastic products and transport equipment & parts**. In 2001-02, **transport equipment & parts, rubber & plastic products, basic metal products and electrical machinery & apparatus** were the industries with highest capital intensity.

Employment per 1 lakh rupees fixed investment: One lakh rupees investment in fixed asset generated 2.5 employments in 1987-88 and 1.3 employments in 2001-02 at the aggregate level in Orissa. Therefore, Employment per rupee one lakh of fixed

investment declined in 2001-02 as compared to 1987-88 at the aggregate level. In seven industries, the employment generating capacity of per one lakh rupees investment in fixed asset was higher than the aggregate level in 1987-88. However, in nine industries the ratio of employment to fixed investment was higher than the aggregate level in 2001-02. **The employment generating capacity is declined in every industry in 2001-02 as compared to 1987-88 except hosiery & readymade garments, transport equipment & parts and repair & services.** The industries, where one lakh investment in fixed asset that generate the maximum employment, were **beverages, tobacco & products, wood products and hosiery & readymade garments** in 1987-88. In 2001-02, they were **hosiery & readymade garments, beverages, tobacco & products and transport equipment & parts.**

Table-2.16, Best performing industries in select ratios in Orissa, 1987-88 and 2001-02

Ratios	1987-88	2001-02
Capital productivity	food product, basic metal product, manufacture of textiles	basic metal products, hosiery & readymade garments, food products
Labour Productivity	food products, basic metal products, electrical machinery & apparatus	basic metal products, rubber & plastic products, Food products.
Capital Intensity	electrical machinery & apparatus, rubber & plastic products, transport equipment & parts	transport equipment & parts, rubber & plastic products, basic metal products, electrical machinery & apparatus
Emp per 1 lakh fixed asset	beverages, tobacco & products, wood products, hosiery & readymade garments	hosiery & readymade garments, beverages, tobacco & products, transport equipment & parts

To sum up, if period 1987-88 and 2001-02 (second period) is considered, then the productivity of capital is declining at the aggregate level in Orissa. At the disaggregated level, no definite trend is available. For some it is increasing and for others it is declining. The productivity of labour and capital intensity have increased at the aggregated level and this is true at the disaggregated level too. The employment generating capacity is declined at the aggregated level. This is also true in disaggregated level in 2001-02 as compared to 1987-88 except hosiery & readymade garments, transport equipment & parts and repair & services.

Food products and basic metal products- these were among the industries where the capital and labour are most productive in both 1987-88 and 2001-02. The latter was one of the most capital intensive in 2001-02.

Manufacturing of textiles had the highest capital productivity in 1987-88.

Hosiery & readymade garments was one of the industries with capital being most productive in 2001-02, with capital intensity declining in 2001-02 and with distinction of being one of the top industries in generating employment per 1 lakh of fixed investment both in 1987-88 and in 2001-02.

Electrical machinery & apparatus was one of the industries with highest productivity of in 1987-88 with being most capital intensive in both 1987-88 and 2001-02.

Rubber & plastic products was one of the industries with highest productivity of in 2001-02 with being most capital intensive in both 1987-88 and 2001-02.

Chemical and chemical products was one of the most capital-intensive industries in both the years and being the industry with highest no. of employment per one lakh of fixed investment.

Beverages, tobacco & products, wood products and transport equipment & parts were the industries with generating the highest no. of employment in 1987-88, 2001-02.

2.5 Conclusion

At the disaggregated level too, in different industries, **growth performance** is poor in second period compared to the first period in number of working units and production in all the eastern Indian states, eastern India and all-India. The industry, *transport equipment & parts* did very poor with respect to number of units, employment, production, fixed asset during the second period. It did very poor in Orissa compared to its counterpart in Eastern India and All-India. Its declining growth rate is in two digits in Orissa.

During the first period, the growth rates of *food products and beverages, tobacco & products* are higher in both **number of working units and production** compared to other industries in Orissa, Eastern India and all-India. However, during the second period, the *manufacturing of textiles* that has grown at higher rate in all indicators (number of working units, employment, production, fixed asset and export) in all-

India and Orissa; it is growing at the highest rate in number of working units, in generating employment and in fixed asset in the Eastern India.

The industries, those are growing at higher rate in Orissa in different variables as compared to their counterparts in The Eastern India and all-India, are *food products, beverages, tobacco & products, basic metal products, paper & paper products and electrical machinery & apparatus with beverages, tobacco & products hosiery & readymade garments, machinery & apparatus and rubber & plastic products* .

The **employment per units** declined between 1987-88 and 2001-02 at the industry level too except few in all the regions: All- India, Eastern India and Orissa.

Basic metal products, Beverages, tobacco & products, Leather & leather products, Rubber & plastic products are the industries with higher average size in different variables in all-India, Eastern India and Orissa. *Repair & services* has the lowest average size in different indicators in different periods in all-India, Eastern India and Orissa.

The industries those have higher average sizes (employment per unit, output per unit, fixed asset per unit, export per unit) in Orissa as compared to their counterparts in the Eastern India and all-India are *Basic metal products and Rubber & plastic product*.

There has been significant change in the **structure of the sector** as far as the SSSBEs are concerned. The proportion of SSSBEs increased in every state, in Eastern India and All-India in 2001-02. The reasons for this increase include the change in the definition and upper ceiling limit in respect of SSSBEs in 1991. The very first growth in service sector can also be a cause.

In Orissa, the highest proportions of number of working units are with industries-metal product and food product. Industries food product, metal product and wood products generate the maximum employment. Food products, metal products, basic metal products and chemical & chemical products produce most of the output. The industries that have the maximum share of fixed asset are food products, basic metal products, metal products and chemical and chemical products. Food product, basic metal products and rubber & plastic products account for most of the export. Therefore, **food product, metal product, basic metal product** are the dominant

industries in small-scale industry in Orissa's in all time-points i.e., 1972-73, 1987-88, 2001-02. Hence, industrial structure of small industry in Orissa's is highly concentrated in 1972-73, more or less the same continued in 1987-88 and 2001-02.

The **industrial base** of Orissa's is constituted by a few block of industries like **food product, beverages, tobacco and products, basic metal products, metal products, wood products and rubber and plastic products** in 1987-88. This same industrial base continued to exist even in 2001-02 with paper and paper products getting its importance and with wood product losing its importance. The industrial base is narrow. *The degree of diversification in industrial production in Orissa is declining compared to the national level.* There is lack of industrial diversification in SSIs.

The **productivity** of capital is declining at the aggregate level in Orissa, if period, 1987-88 and 2001-02 (second period) is considered. At the disaggregated level, no definite trend is available. For some it is increasing and for others it is declining. The productivity of labour and capital intensity has increased at the aggregated level and this is true at the disaggregated level too. The employment generating capacity of fixed investment declined at the aggregated level. This is also true in disaggregated level in 2001-02 as compared to 1987-88 except hosiery & readymade garments, transport equipment & parts and repair & services in Orissa.

From the above undertaken detail analysis of performance of small scale of industries in variables like number working units, employment, production, fixed asset and export, the poor performance small scale industries has been observed in the second period both at the aggregate level and-the disaggregate level as compared to the first period. How is the sector performing in the current time? This has been dealt with in the next chapter.

3.1 Introduction

The growth pattern and structural change of small-scale industry in Orissa and all-India has been discussed in the previous chapters. Questions are how is it performing at the current time? Is it facing any kind problems? Answer to these questions will help in better appreciation of the present performance of one of the crucial sector of the economy.

The chapter has been divided into three sections. The first section makes analysis of current status of small-scale industry in Orissa, All-India and tries to compare the current status of Orissa with other relevant states. The second section discusses problems (dispersal, closure and sickness) of small-scale industry in Orissa, All-India. The third section presents the conclusion.

Analysis of current status has been done by placing the position of the small scale industry in both registered and unregistered sector of Orissa in terms of all-India and relevant states in 2001-02.(The third census of small scale industry apart from giving data on registered units presents data on unregistered units on sample survey basis.)

Comparison has been undertaken by analysing-

- distribution of units in terms general characteristics by category, activity, organisation, ownership, location etc;
- percentage share in gross output, export, fixed investment and employment; average size of the units in terms of employment, output, fixed asset, export; and
- Efficiency of the units by per worker productivity (ratio of output per employment), output capital ratio (output per capital) and capital- labour ratio (capital per worker).

This comparison has been done in general with respect to all the relevant states and all-India, in particular to Orissa, industry wise analysis in Orissa and all-India and in terms of size distribution of SSIs.

Problems have been analysed by dispersal of units over time and over location in terms of percentages distribution in 1972-73, 1987-88 and 2001-02. Closure has been discussed in terms of closed units as percentage to total in the three time points, closed units as percentage to working units in the three time points, distribution of closed units by location wise in 1987-88 and 2001-02 and reasons for closure in 1987-88. Sickness in 2001-02 has been analysed in the registered and unregistered sector and the reasons for sickness both in registered and unregistered sector.

In the third CSSI, the sickness has been defined by three criteria. The following **criteria** were adapted to identify sick/ incipient sick units in the third census, **a)** continuous decline in gross output compared to the previous two financial years, **b)** delay in repayment of institutional loan, for more than 12 months; and **c)** erosion in the worth of 50 percent of the net worth during the previous accounting years. A unit under criteria (a) is called *incipient sick unit*; a unit under criteria (b) and/or criteria (c) is called *sick unit*.

SECTION-I

3.2 Current – Status

The current-status of small-scale industry will be analysed here. It has been undertaken by comparing the position SSIs in registered sectors and unregistered sector in general at all-India level, in particular in Orissa, by industry wise analysis and by size distribution analysis.

Registered Sector: In 2001-02, there were 12,366 *registered units* in Orissa's SSEs engaged in production of 967 as against corresponding figures of 13,74,974 registered units and 5983 no. of products respectively at all India(table-3.1(b), in annex to Chapter- III). They are producing Rs. 224,835 lakhs, generating employment of 80,888 and exporting of Rs. 28,691 lakhs in Orissa as against Rs 140, 85,559 lakhs of gross output, 61, 63,479 number of employment and Rs852, 963 lakhs of export at all India (table-3.3, in annex to Chapter- III).

Units in Orissa are organised relatively more as proprietary units (90.3%), located more in rural area (48.1%), engaged relatively more in manufacturing (78.1%), mostly as small scale units as compared to all-India(table-3.1(a)). However, they are organised relatively more as proprietary units, located relatively more in rural area, engaged relatively less in manufacturing activity and relatively less as small scale

Table- 3.1(a), Small Scale Industry (Registered) in 2001-02 (in percentage)

No of Units	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Census frame	100	100	100	100	100	100
Closed units (data tabulated)	44.0	39.7	38.2	39.5	22.0	39.2
Working units (data tabulated)	56.0	81.5	61.8	60.5	78.0	60.8
Category						
Small scale	77.7	68.0	81.8	86.2	56.6	62.2
Ancillary	1.1	1.4	2.7	7.1	7.3	3.3
SSSBs	21.1	30.5	15.5	6.7	35.3	34.5
Activity						
Mfgr/Ass/Proc	78.1	66.0	83.1	91.3	62.09	63.5
Repair&maintenance	0.8	3.4	1.4	2.0	2.32	2.1
Services	21.1	30.5	15.5	6.7	35.58	34.5
Organisation						
Proprietary	90.3	96.4	84.5	71.7	82.2	88.9
Partnership	4.8	1.9	10.2	17.6	13.5	7.2
Limited company	4.1	0.5	4.6	0.5	2.2	2.4
Co-operative	0.5	0.1	0.3	8.4	0.6	0.3
Ownership						
SC	2.9	1.1	6.8	1.9	4.6	7.8
ST	1.6	9.2	0.5	2.7	8.2	3.5
Women	7.0	5.1	3.6	5.4	2.7	8.3
Location						
Rural	48.1	40.5	39.3	21.0	30.3	44.3
Urban	51.9	59.5	60.7	79.0	69.7	55.7
Exporting Units	0.3	0.1	0.6	1.4	0.3	0.5
No of products	967	1490	2528	3986	3586	5983

Source: Final Result of Third Census of Small Scale Industries, 2001-02 for All-India, Orissa, Bihar, Jharkhand, WB, Gujarat and Maharastra, 2004, DCSSI, New Delhi

Notes: No. under the column Bihar is sum of relevant statistics of Bihar And Jharkhand, but the bold no. under it belong only to Bihar.

units as compared to WB and Maharastra. Relatively, repair & maintenance is lesser in Orissa reflecting lack of engineering industries in the industrial base and relatively less units in ancillary reflecting lack of linkages of small units with large and medium sectors. Relatively, lesser units are engaged in export in Orissa as compared to relevant states and all India average.

The **ownership pattern in Orissa** was marked by relatively less involvement of scheduled caste compared to WB, Gujarat and India, relatively less involvement of schedule tribe compared to relevant states except WB and India and relatively less involvement of women entrepreneurs compared to India.

Relatively less number of total products are produced in Orissa. It is also marked by relatively lower percentage of working units and higher percentage of closed units.

Another feature of Orissa's registered small industry is lower requirement of capital per unit of employment (in comparison to India)¹.

Unregistered Sector:

Table- 3.2 (a), Small Scale Industry (*Unregistered*) in 2001-02, (in percentage)

<i>No of Units</i>	Orissa	Bihar	WB	Maharashtra	Gujarat	All-India
Working units (data tabulated)	100	100	100	100	100	100
Category						
Small scale	61.77	55.92	56.29	30.00	22.17	37.81
Ancillary	0.86	0.86	0.81	1.66	2.40	0.95
SSSBs	37.37	43.22	42.90	68.34	75.43	61.25
Activity						
Mfgr/Ass/Proc	60.85	54.12	55.63	28.12	21.67	36.12
Repair&maintenance	9.38	21.54	16.86	11.15	29.08	18.51
Services	29.77	24.33	27.51	60.73	49.26	45.38
Organisation						
Proprietary	99.22	98.82	98.08	95.35	96.69	96.90
Partnership	0.51	0.65	1.23	1.02	0.47	1.13
Limited company	0.12	0.004	0.13	0.18	0.69	0.42
Co-operative	0.06	0.06	0.04	1.40	0.10	0.11
Ownership						
SC	25.73	7.27	14.57	9.38	14.21	10.32
ST	11.99	0.91	1.23	2.59	12.59	5.19
Women	8.62	7.55	9.65	10.57	13.16	9.63
Location						
Rural	83.00	77.47	56.54	47.61	47.52	56.84
Urban	17.00	22.53	43.46	52.39	52.48	43.16
Exporting Units	0.45	0.34	0.35	0.22	0.03	0.47
<i>No of products</i>	288	307	730	748	269	2680

Source: cited in 3.1(a), Note: cited in table-3.1(a)

In *unregistered sectors*, there were 3,75,911 units engaged in production of 288 no. of products as against corresponding figure of 91, 46,216 units, 2680 products respectively at all-India level(table-3.2 (b), in annex to Chapter- III). They were producing Rs.1,39,902 lakhs, generating employment of 8,42,288 and exporting Rs.352 lakhs in Orissa as against Rs54,75,770 lakhs of gross output, 187,69,284 number of employment and Rs.1,31,067 lakhs of export at all India(table-3.3, in annex to Chapter- III).

¹ (Table-3.7(a) in annex to Chapter-III)

Units in unregistered sector of Orissa were organised relatively more as proprietary units(99.22%), located more in rural area, engaged more in manufacturing activity (60.85%), mostly as small-scale units (61.77%) as compared to the relevant states and India (Table-3.2(a)). They were relatively more as SSSBEs in Maharashtra, Gujarat and all-India. Relatively, repair & maintenance units are less in Orissa reflecting lack of engineering industries in the industrial base even in unorganised sector and relatively less units in ancillary reflecting lack of linkages of small units with large and medium sectors. Lesser units were engaged in exporting in Orissa. (Refer to Table-3.2(a))

The **ownership pattern** was marked by relatively more involvement of scheduled caste and tribe and less women entrepreneur in Orissa. Relatively less number of total products is produced in Orissa (Refer to Table-3.2(a)). Another feature of Orissa's unregistered small industry is lower requirement of capital per unit of employment.²

3.2.1 Comparison of Registered and Unregistered, In general

- Of the registered units, *small-scale units* dominate. Of the unregistered units, it is the *SSSBEs* dominate. Therefore, the percentage units engaged in manufacturing is more in registered units whereas units are more engaged in services in unregistered units. This is true for Maharashtra, Gujarat and all-India. But, the small-scale units dominate both in registered units and in unregistered units in the Eastern Indian states. The units are mostly engaged in manufacturing. However, the percentage of SSSBEs is higher in unregistered units compared to registered units. [Refer to table-3.1(a) and table – 3.2(a)]
- Percentage of *ancillary units* is higher in registered units than that among the unregistered units. However, this percentage is lower in the eastern India compared to all-India and industrially developed states. It reflects lack of linkages of small units with large and medium sectors in eastern India. [Refer to table-3.1(a) and table – 3.2(a)]

² (Table-3.7(b) in annex to Chapter-III)

- Of the *types of ownership*, proprietorship is more dominant both in the registered and in the unregistered units. However, the percentage of proprietorship is higher in unregistered units. This is true for all the relevant states and all India. Compared to all the relevant states, this percentage was highest in Orissa (99.22%). [Refer to table-3.1(a) and table – 3.2(a)]
- Percentage of enterprise *managed by women* was higher in unregistered units than that in the registered units. [Refer to table-3.1(a) and table – 3.2(a)]
- The *ownership pattern* in unregistered units was marked by relatively more percentage of schedule caste and tribe than that in registered units. This is also the highest in Orissa compared to others. [Refer to table-3.1(a) and table – 3.2(a)]
- Unregistered units are relatively more in *rural location* compared to the registered units while the registered units were relatively more in urban location. This is true in Orissa, Bihar, WB and all-India. However, for Gujarat and Maharashtra, units were relatively more located in urban areas irrespective of whether they were registered or unregistered units. [Refer to table-3.1(a) and table – 3.2(a)]
- The percentage share of *exporting units* was less in unregistered units in all the relevant states and all-India except Orissa. [Refer to table-3.1(a) and table – 3.2(a)]
- *Numbers of products* produced by unregistered units were less than that by the registered units and this was lowest in Orissa.
- The percentage share of *number working of units* (size of the sector) in unregistered sector was higher than that of registered sector. This was the highest in Orissa and therefore the percentage share of registered units was the lowest and much more less than the half of all-India percentage of registered units.³
- The *percentage share of gross output and export* of unregistered units was less than that of the registered units. This is true for all the relevant states and all-India. In these two indicators, Orissa has lower percentage in its total in registered sectors compared to the neighbouring states but it has the highest

³ [Refer to Table-3.6 (a) and Table- 3.6 (b) in Annex to chapter-III]

percentage in it's total in unregistered sectors compared to the neighbouring states.⁴

- The *share of fixed investment* of unregistered units is higher compared to the registered units. This is true for the Eastern India. But, in Maharashtra, Gujarat and all-India it was higher in registered units.⁵
- The unregistered units have the higher *percentage of employment* than that of the registered units.⁶
- *Employment per unit, gross output per unit, fixed asset per unit, export per unit* etc is lower in unregistered units than that of the registered units.⁷
- *Fixed investment per employment* is lower in unregistered units. To put in other words, employment per one lakh of fixed investment is higher in unregistered units than that of the registered units.⁸
- Output per fixed investment (productivity of capital) and output per employment (productivity of labour) was lower in unregistered units than that in the registered units.⁹

The following characteristics present more in the **unregistered sector** than the registered units. These are type of ownership- proprietorship, the percentage share of SSSBEs, units managed by women, ownership pattern by social group, units in rural location, working numbers of units, percentage of employment and employment generation per one lakh of fixed investment.

However, in the **registered sector** the following characteristics have presented more than the unregistered sector. These are the share of small scale units, the share of ancillary units, units in urban location, hare of exporting units, in number of products, percentage share of gross output and export, employment per unit, gross output per unit, fixed asset per unit, export per unit, output per fixed investment (productivity of capital) ,output per employment (productivity of labour)

⁴ [Refer to Table-3.6 (a) and Table- 3.6 (b) in Annex to chapter-III]

⁵ [Refer to Table-3.6 (a) and Table- 3.6 (b) in Annex to chapter-III]

⁶ [Refer to Table-3.6 (a) and Table- 3.6 (b) in Annex to chapter-III]

⁷ [Refer to Table-3.5 (a) and Table- 3.5 (b) in Annex to chapter-III]

⁸ [Refer to Table-3.7 (a) and Table- 3.7 (b) in Annex to chapter-III]

⁹ [Refer to Table-3.7 (a) and Table- 3.7 (b) in Annex to chapter -III]

3.2.2 Comparison of Registered and Unregistered, In Particular, Orissa

SSEs in Orissa are mostly engaged in manufacturing activity and not in services in unregistered sector unlike other states and all-India. This reflects service is not getting its importance in SSEs of Orissa.

Contribution to the Total: The size of the unregistered sector is bigger. The unregistered sector generates most of the employment. However, most of the output, most of the export is from the registered sector in the total. Unlike all-India, fixed investment is higher in unregistered sector.¹⁰

In the registered sectors, Orissa's size is small (or size of neighbouring states' and all-India' is bigger relatively), contribute higher (or lower) percentage share of output to it's total, has high(or low) percentage share of fixed investment, exports higher (or higher) percentage share. However, percentage share of employment of Orissa's registered sector is very less compared to the relevant states and all-India.¹¹

In the unregistered sector, Orissa's size is bigger (or relatively neighbouring states' and all-India' size is small), contribute lower (higher) percentage share of output in its total, has low (high) percentage share of fixed investment, exports lower percentage share. However, percentage share of employment of Orissa's unregistered units is very high compared to the relevant states and all-India.¹²

Average sizes: Employment per unit, gross output per unit, fixed asset per unit and export per unit in registered sector is higher than that of unregistered units in Orissa. Employment per unit, gross output per unit, fixed asset per unit and export per unit in registered sector is higher in Orissa compared to counterpart in registered sector in neighbouring states and all-India. However, employment per unit, gross output per unit, fixed asset per unit and export per unit in unregistered sectors is less than it's counterpart in unregistered sector in relevant states and all-India average except few exception.¹³

¹⁰ [Refer to Table-3.6 (a) and Table- 3.6 (b) in Annex to chapter -III]

¹¹ [Refer to Table-3.6 (a) and Table- 3.6 (b) in Annex to chapter -III]

¹² [Refer to Table-3.6 (a) and Table- 3.6 (b) in Annex to chapter -III]

¹³ [Refer to Table-3.5(a) and Table- 3.5(b) in Annex to chapter -III]

Ratios: Output per fixed investment and output per employment is higher in registered units compared to unregistered units in Orissa. However, employment per one lakh of fixed investment is higher in unregistered units.¹⁴ This is reflecting that both capital and labour are more productive in registered sector whereas employment generating capacity of capital is higher in unregistered sector.

Registered units: Output per employment is higher in Orissa as compared to the neighbouring states and all-India. Output per fixed investment in Orissa is less than WB but higher than other relevant states and all-India. Employment per one lakh of fixed investment is lower in Orissa than that of neighbouring states and all-India.

Unregistered units: Output per employment in Orissa is the lowest compared to the relevant states and all-India. Output per fixed investment in Orissa is less than WB but higher than other relevant states and all-India. Employment per one lakh of fixed investment is the highest in Orissa compared to all the relevant states and all-India.

3.2.3 Industry-wise comparison

The different characteristics of registered and unregistered sector in percentage terms of Orissa and all-India by industry wise (disaggregate level) have been presented in table-3.8 to table-3.15. In these tables, the industries in NIC 2-digit classification are categorised in four groups and corresponding to these four groups the characteristics are presented. This has been undertaken because a very detailed product-group wise analysis could have the danger of missing the wood for the trees. The industries under each group are presented in table- C in Annexure to Introduction.

No. of working units

In India, food and textiles has the highest share of working units and metal and electricals has the lowest share of working units both in registered and unregistered sector. In Orissa, food and textiles occupies the position with the highest share of

¹⁴ [Refer to Table-3.7 (a) and Table- 3.7 (b) in Annex to chapter -III]

Table-3.8, Percentage Share of No. of working units in the total

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	35.6	30.2	30.4	38.1
Metal and Electricals	19.9	3.8	19.2	7.1
Other manufacturing	29.5	44.4	29.8	17.3
Services	13.8	21.1	19.7	35.0
Total	100	100	100	100

Source: cited in 3.1(a)

Table-3.8(a), Summary table of Percentage Share of No. of working units in the total

Region	Orissa		All-India	
Sector	Registered	Unregistered	Registered	Unregistered
Highest	Food & textiles	Other mfgr	Food & textiles	Food & textiles
Lowest	Services	Metal & electricals	Metal & electricals	Metal & electricals

working units in registered sector whereas in unregistered sector, other manufacturing has this distinction. Services has the lowest share in registered sectors whereas metal and electrical has the lowest share in unregistered sectors.

Employment

Table- 3.9, Percentage share of Employment in the total

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	29.9	29.5	28.9	38.1
Metal and Electricals	22.1	3.9	23.0	8.1
Other manufacturing	39.0	48.7	36.5	22.3
Services	7.7	17.6	10.1	29.0
Total	100	100	100	100

Source: cited in 3.1(a)

Table-3.9(a), Summary table of Percentage Share of Employment units in the total

Region	Orissa		All-India	
Sector	Registered	Unregistered	Registered	Unregistered
Highest	Other mfgr	Other mfgr	Other mfgr	Food & textiles
Lowest	Services	Metal & electricals	Services	Metal & electricals

In India, other manufacturing in registered sector and food and textiles in unregistered sectors have the highest percentage share of employment. However, services in registered and metal & electrical in unregistered sector have the lowest share of employment.

In Orissa, other manufacturing has the highest share of employment both in registered and unregistered sector, but compared to unregistered it has lower share in registered

sector. Services and metal & electrical have the lowest share of employment in registered sector and unregistered sector respectively.

Gross Output

Table-3.10, Percentage share of Gross Output in the total

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	43.7	33.1	32.5	37.4
Metal and Electricals	23.5	5.0	28.9	14.3
Other manufacturing	24.6	32.8	31.8	18.2
Services	3.6	28.8	4.4	27.7
Total	100	100	100	100

Source: cited in 3.1(a)

Table-3.10(a), Summary table of Percentage Share of Gross output units in the total

Region	Orissa		All-India	
Sector	Registered	Unregistered	Registered	Unregistered
Highest	Food & textiles	Food & textiles	Food & textiles	Food & textiles
Lowest	Services	Metal & electricals	Services	Metal & electricals

In all-India, food & textiles contribute highest proportion of output both in registered and in unregistered sector. However, relatively the contribution of food & textile is higher in unregistered sector compared to that in registered sector. Services and metal & electricals have the lowest share of gross output in registered and unregistered sectors respectively.

In Orissa, also food & textiles have the highest share output both in registered (43.7%) and in unregistered sector (33.1%). However, the contribution of food & textiles is higher in registered sector compared to unregistered sector. Services (3.6%) and metal & electricals (5%) have the lowest share in registered and unregistered sector respectively.

Fixed Asset

Table-3.11, Percentage share of Fixed Asset in the total

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	34.8	37.9	25.8	31.8
Metal and Electricals	22.6	3.6	27.9	10.7
Other manufacturing	35.6	25.6	36.4	17.3
Services	6.5	32.8	7.4	37.5
Total	100	100	100	100

Source: cited in 3.1(a)

Table-3.11(a), Summary table of Percentage Share of Fixed Asset units in the total

Region	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Highest	Food & textiles	Food & textiles	Other mfg	Services
Lowest	Services	Metal & electricals	Services	Metal & electricals

In India, Other manufacturing has the highest share in fixed asset (36.4%) and services the lowest share in fixed investment (4.8%) in registered sector. Services has the highest share in fixed asset (36.4%) and metal & electricals the lowest share in fixed asset (10.7 %) respectively in unregistered sector.

In Orissa, food & textiles has the highest share of fixed asset both in registered (34.8%) and in unregistered (37.9%) sector respectively. However, its share in unregistered sector is higher. Services with 6.5% and metal & electricals with 3.6% have the lowest share in fixed asset in registered and unregistered sector respectively.

Export

In India, food & textiles has done maximum of export with 53.1% and 95.7% in registered and unregistered sectors respectively. Services with 4.8% and metal & electricals with 0.9% have the lowest proportion of export in registered and unregistered sector respectively.

Table-3.12, Percentage share of Export in the total

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	53.1	42.2	53.1	95.7
Metal and Electricals	6.8	0.0	15.3	0.9
Other manufacturing	19.9	14.6	25.3	1.9
Services	20.2	42.9	4.8	1.5
Total	100	100	100	100

Source: cited in 3.1(a)

Table-3.12(a), Summary table of Percentage Share of Export units in the total

Region	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Highest	Food & textiles	Food & textiles Services	Food & textiles	Food & textiles
Lowest	Metal & electricals	Other mfg	Services	Metal & electricals

In Orissa, food & textiles has the highest of export with 53.1% and metal & electricals the lowest share of export 6.8% respectively in registered sector. In unregistered sector, food & textiles and services have done the maximum of export with 42.2% and

42.9% respectively. Other manufacturing has done the lowest export with 14.6% in unregistered sector.

Productivity of Labour

Output per employment presents the productivity of labour. Output per employment of different industry group is presented in table- 3.13.

Table- 3.13, Output per employment (in Rs. Lakhs)

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	4.06	0.19	2.56	0.29
Metal and Electricals	2.96	0.21	2.87	0.52
Other manufacturing	1.75	0.11	1.99	0.24
Services	1.31	0.27	0.99	0.28
Total	2.78	0.17	2.29	0.29

Source: cited in 3.1(a)

Table-3.13(a), Summary table of industry with highest Productivity of Labour

Orissa		All-India	
Registered	Unregistered	Registered	Unregistered
Food & textiles	Food & textiles	Food & textiles	Food & textiles
Metal & electricals	Metal & electrical	Metal & electricals	Metal & electricals
	Services		

In all-India, food & textiles and metal & electrical have higher productivity of labour compared to the aggregate level both in registered sector and the unregistered sector. It is the highest in metal & electrical both in registered sector and in unregistered sector. But, *the productivity of labour is very high in registered sector in each industry group.*

In Orissa too, food & textiles and metal & electrical have higher productivity of labour compared to the aggregate level both in registered sector and the unregistered sector. Apart from this, services has also higher productivity compared to the aggregate level in unregistered sector. Productivity of labour is highest in food & textiles in registered sector and in metal & electricals in unregistered sectors. Here too, *the productivity of labour is very high in registered sector in each industry group.*

Productivity of Capital

Output per fixed investment presents productivity of capital. Output per fixed investment is being presented in table-3.14.

Table-3.14, Output per fixed investment

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	4.63	1.71	2.79	1.49
Metal and Electricals	3.83	2.73	2.29	1.69
Other manufacturing	2.54	2.51	1.93	1.32
Services	2.06	1.72	1.31	0.93
Total	3.68	1.96	2.21	1.26

Source: cited in 3.1(a)

Table-3.14(a), Summary table of industry with highest Productivity of Capital

Orissa		All-India	
Registered	Unregistered	Registered	Unregistered
Food & textiles	Metal & electrical	Food & textiles	Food & textiles
Metal & electricals	Other mfg	Metal & electricals	Metal & electricals
			Other mfg

Productivity of capital is higher in each industry group in registered sector compared to its counterpart in unregistered sector. This is true in both in Orissa and all-India.

In all-India, food & textiles and metal & electricals have higher productivity of capital both in registered and in unregistered sector compared to the aggregate level. Apart from this, other manufacturing has higher productivity compared to the aggregate level in unregistered sector.

In Orissa, food & textiles and metal & electricals have higher productivity of capital compared to the aggregate level in registered sector. However, apart from metal & electricals, other manufacturing has also higher productivity compared to the aggregate level in unregistered sector.

Employment per one lakh of fixed investment

Employment per one lakh of fixed investment represents generation of employment per one lakh of fixed investment. It is being presented in table- 3.15.

Table-3.15, Employment per one lakh of fixed investment

	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Food and Textiles	1.14	9.18	1.09	5.19
Metal and Electricals	1.29	12.92	0.80	3.27
Other manufacturing	1.45	22.47	0.97	5.58
Services	1.57	6.34	1.32	3.34
Total	1.33	11.81	0.97	4.33

Source: cited in 3.1(a)

Table-3.15(a), Summary table of industry with highest Employment per one lakh of fixed investment

Orissa		All-India	
Registered	Unregistered	Registered	Unregistered
Other mfg Services	Metal & electrical Other mfg	Food & textiles Metal & electricals Services	Food & textiles Other mfg

Employment per one lakh of fixed investment is higher in each industry group in unregistered sector compared to its counterpart in registered sector both in Orissa and all-India.

In all-India, all industry group are generating either higher employment or same as at the aggregate level in registered sector. In the unregistered sector, food & textiles and other manufacturing are generating higher employment compared to the aggregate level.

In Orissa, other manufacturing and services are generating employment higher than the aggregate in the registered sector. However, apart from other manufacturing, metal and electricals also produces higher employment compared to the aggregate level in the unregistered sector.

3.2.4 Size and distribution of SSEs

The small units in terms of number of labour employment is defined as the units with employment less than or equal to seven employees. In terms of gross output, it is defined as the unit with gross output less than or equal to Rs 20 lakh. In terms of fixed investment, it is defined as the unit with fixed investment less than equal to 10 lakhs. Based on these three definitions of small units, the following analysis has been undertaken.

In of number of working units and employment, it is the small units dominate in both registered sector and unregistered sector. This is true both in All-India and in Orissa irrespective of the definition of size distribution of small-scale industries in terms of gross output, employment and fixed capital. This has been presented in Table- 3.16(a) to Table- 3.21 (b) (in annexure to chapter III).

All-India: The share of registered sector (or unregistered sector) with gross output value of less than or equal to Rs 20 lakh is 92.80 % and 68.54 % (or 99.78% and 98.81 %) respectively in no. of units and employment [table-3.16(a) or table- 3.16(b)]. The share of registered sector (or unregistered sector) with less than or equal to seven

employees is 88.44% and 51.92% (or 98.72% and 91.23%) respectively in no. of units and employment [table-3.17(a), table-3.17(b)]. The share of registered sector (or unregistered sector) with fixed investment less than equal to 10 lakhs is 85.03% and 56.36% (or 99.67% and 98.57%) respectively in no. of units and employment [table-3.18(a), table-3.18(b)].

Orissa: The share of registered sector (or unregistered sector) with gross output value of less than or equal to Rs 20 lakh is 89.24 % and 65.57 % (or 99.85% and 99.59%) respectively in no. of units and employment[table-3.19(a) or table- 3.19(b)]. The share of registered sector (or unregistered sector) with less than or equal to seven employees is 79.2% and 40.85% (or 98.87% and 93.88%) respectively in no. of units and employment [table-3.20(a), table-3.20(b)]. The share of registered sector (or unregistered sector) with fixed investment less than equal to 10 lakhs is 84.5% and 69.69% (or 99.95% and 99.82%) respectively in no. of units and employment [table-3.21 (a), table-3.21(b)].

In terms of gross output, fixed capital and export, however, it is the large units dominate only in registered sector. This is true both in All-India and in Orissa irrespective of the definition of size distribution small-scale industries in terms of gross output, employment and fixed capital. But, in unregistered sector, the situation is different in both Orissa and all-India. The small units dominate in gross output, fixed capital and export in size distribution of small-scale industries in Orissa. This is more or less true in case of All-India too.

All-India: It is the large units dominate in the registered sector. The share of registered sector with gross output value of greater than or equal to Rs 20 lakh is 60.92%, 86.66% and 99.35% respectively in fixed capital, gross output and export [table-3.16 (a)]. The share of registered sector with fixed investment greater than equal to 10 lakhs is 77.76%,76.24% and 93.36% respectively in fixed capital, gross output and export [table-3.18(a)].The share of registered sector with greater than seven employees is 65.87%, 77.77% and 94.55% respectively in fixed capital, gross output and export [table-3.17 (a)].

However, it is the small units dominate in the unregistered sector. The share of unregistered sector with gross output value of less than or equal to Rs 20 lakh is

95.77% and 72.98% respectively in fixed capital and gross output [table-3.16 (b)]. The share of unregistered sector with less than seven employees is 91.29% and 82.11% respectively in fixed capital and gross output [table-3.17(b)]. The share of unregistered sector with fixed investment greater than equal to 10 lakhs is 83.46%, 89.41% and 99.28% respectively in fixed capital, gross output and export [table-3.18(b)].

Orissa: It is the large units dominate in the registered sector. The share of registered sector with gross output value of greater than or equal to Rs 20 lakh is 63.78%, 90.45% and 99.9% respectively in fixed capital, gross output and export [table-3.19 (a)]. The share of registered sector with greater than seven employees is 74.73%, 87.47% and 99.93% respectively in fixed capital, gross output and export [table-3.20 (a)]. The share of registered sector with fixed investment greater than equal to 10 lakhs is 76.15%, 74.67% and 94.71% respectively in fixed capital, gross output and export [table-3.21 (a)].

However, it is the small units dominate in the unregistered sector. The share of unregistered sector with gross output value of less than or equal to Rest 20 lakh is 91.85%, 90.05% and 100% respectively in fixed capital, gross output and export [table-3.19(b)]. The share of unregistered sector with less than seven employees is 88.9%, 91.1% and 100% respectively in fixed capital, gross output and export [table-3.20(b)]. The share of unregistered sector with fixed investment greater than equal to 10 lakhs is 93.05%, 95.89% and 100% respectively in fixed capital, gross output and export [table-3.21(b)].

SECTION-II

Problems

Problems are analysed by looking at the dispersal of units, closure and sickness of SSIs.

3.3 Dispersal of units

One of the important objectives of small industry development is to encourage dispersal of small manufacturing establishments to rural areas. It is viewed because it helps in the mobilisation of rural savings, encourages the growth of rural entrepreneurship, provides gainful employment, reduces migration to urban areas and hence helps in reduction of the growth of slums in the urban areas.

Table- 3.22, Distribution of units in backward and Non-backward areas, 1972-73 & 1987-88

Area of location		Backward	Non-Backward	total
Orissa	1972-73	620	1179	1799
		(34)	(66)	(100)
	1987-88	3252	5035	8287
		39	61	100
Bihar	1972-73	2517	2743	5260
		48	52	100
	1987-88	13773	21049	34822
		40	60	100
WB	1972-73	5388	8543	13931
		39	61	100
	1987-88	26274	19680	45954
		57	43	100
Maharashtra	1972-73	2181	13177	15358
		14	86	100
	1987-88	13443	16413	29856
		45	55	100
Gujarat	1972-73	2459	7445	9904
		25	75	100
	1987-88	11588	22865	34453
		34	66	100
All-India	1972-73	49349	90228	139577
		35	65	100
	1987-88	362174	220194	582368
		62	38	100

Source: Report on Census of Small Scale Industrial Units, I, 1977; Report on Census of Small Scale Industrial Units for All-India, Orissa, Bihar, WB, Gujarat and Maharashtra.

Several districts/areas in the country have been declared as industrially backward areas – some by the Central Government and others by the State Governments – and incentives are provided for setting up small-scale industrial units in these areas. The distribution of units located in backward and non- backward areas is presented in Table- 3.22.

At **all- India** level, in 1972-73, 35 percent were located in backward areas out of 1.4 lakh working units. The percentage of units located in backward areas had increased to 62 percent out of 5.8 lakh working units in 1987-88. There had been 27 percent increase in working units in backward area.

In Orissa, 34 percent were located in backward area in 1972-73 out of 0.018 lakh of working units. In 1987-88, it increased to 39 percent in 1987-88 out of .083 lakh of working units. Over the period, the percentage units in backward areas had no doubt increased in Orissa but only by 5 percent (only marginally). Moreover, in both the

period, the presence of percentage of units in backward areas of Orissa was less than all-India average and the neighbouring states. However, in comparison to industrially developed states (Maharashtra and Gujarat), its percentages were higher in both the periods.

Over all, there has been dispersal of small-scale units in rural areas in 1987-88 compared to 1972-73 in almost all the relevant states except all-India and Bihar.

The third census of small-scale industries 2001-02 does not provide data on percentage of units in backward and non-backward areas. But, it does provide data on

Table-3.23, Distribution of units in rural and Urban location, 1987-88 & 2001-02

Area of location		Rural	Urban	Metropolitan	Total
Orissa	1987-88	4004	4283		8287
		48	52		100
	2001-02	5949	6417		12366
		48	52		100
Bihar	1987-88	14536	20286		34822
		42	58		100
	2001-02	28497	41932		70429
		40	60		100
WB	1987-88	20558	16519	8877	45954
		45	36	19	100
	2001-02	16574	25574		42148
		39	61		100
Maharashtra	1987-88	6070	12308	11478	29856
		20	41	38	100
	2001-02	17434	65664		83098
		21	79		100
Gujarat	1987-88	7248	20105	7100	34453
		21	58	21	100
	2001-02	42000	96537		138537
		30	70		100
All-India	1987-88	245573	279359	57436	582368
		42	48	10	100
	2001-02	609537	765437		1374974
		44	56		100

Source: Report on second Census of Small Scale Industrial Units for All-India, Orissa, Bihar, WB, Gujarat and Maharashtra; Final Results: Third All India Census of Small Scale Industries 2001-02, for All-India, Orissa, Bihar, WB, Gujarat and Maharashtra, DCSSI, GOI, New Delhi.

number working units in rural areas and urban areas. Apart from data on backward area and non-backward area, the second census of small-scale industries 1987-88 also provided data on number of units in rural and urban location.

Since most of backward areas are rural areas, the percentage units spread over in rural area can give indication of dispersal of small-scale units to some extent. Table- 3.23 presents the distribution of units in rural and urban area in 1987-88 and 2001-02.

At **All-India** level, 42 percent units were located in rural areas out of 5.8 lakh units in 1987-88. In 2001-02, it has increased to 44 percent out of 13.7 lakh units in 2001-02, representing increase by 2 percent only over the period.

In **Orissa**, there was no increase in percentage of units in rural area over the period. It was 48 percent 1987-88 and it continued to be 48 percent in 2001-02. However, in the neighbouring states the percentage of units in rural areas had declined in 2001-02 compared to 1987-88. It is from 42 percent to 40 percent in Bihar and from 45 percent to 39 percent in WB over the period 1987-88 to 2001-02.

However, in industrially developed states, the percentage of units in rural areas had increased over the period 1987-88 to 2001-02. It is from 20 to 21 in Maharashtra and 21 to 30 percent in Gujarat.

Therefore, more or less there is limited dispersal of small-scale industries in rural areas in 2001-02 compared to 1987-88 in Orissa, Bihar and WB. In all-India, dispersal of units is there but it is very marginal.

3.4 Problems and Sickness

Sickness is one of most important problems that small scale industries face. It is manifestation of many problems. The first census did not provide any statistics on sickness. But, it gave statistics on closed units as a percentage of census frame for different states.

Similarly, the second census did not provide any detail on sickness of units. However, it provided very details on the closed units along with the reasons for closure of units. The closure of units depicts some notion of sickness of units. A unit closes because it is sick. The data on closure can be used to reflect the sickness of units.

“If a small-scale units included in the frame of units registered up to 31.3.1988, has been found closed at the time of visit of enumerator and enquiries made by him revealed that the unit had remained closed continuously for a period of one year or

more, such a unit has been treated as closed”.¹⁵The statistics has the following limitation- the units for which the owner was not available; the information about them was collected from the knowledgeable neighbours. The data is subject to limitation as the neighbour could give the statistics to the extent of his awareness. It should be used taking into consideration of this limitation.

The third census, however, gives statistics on both closure and sickness. The statistics on closure is not detail. It is on distribution of closed units, state wise & location wise. However, the statistics on sickness is more detail. Along with distribution of sickness of units by different criteria, it also gives statistics on reason for sickness.

Analysis of sickness of small-scale units will be done by using statistics on closure of units for the three period and statistics on sickness for 2001-02. **First**, the data on closure will be analysed- the distribution of closed units as percentage of working units and as percentage of total tabulated units across the relevant states, distribution of close units by location wise in 1987-88 and 2001-02. **Second**, the statistics on sickness for 2001-02 will be analysed. **Third**, the reason for closure in 1987-88 and 2001-02 and reason for sickness in 2001-02 will be analysed.

3.4.1 Incidence of closure

1. Closed units as percentage to total: The distributions of closed units as percentage to the total units across states are being presented in table-3.24. This percentage has increased in 1987-88 compared to 1972-73 and it still increased in 2001-02 except WB and Gujarat. In 1972-73, percentage of closed units was less in

Table- 3.24, Closed units as % to Total

Years	1972-73	1987-88	2001-02
Orissa	18.6	30.3	44.0
Bihar	27.3	29.8	32.8
WB	29.5	44.3	38.2
Maharastra	24.6	26.8	39.5
Gujarat	29.3	35.5	22.0
All-India	32.4	34.1	39.2

Source: cited in table-1.1

all the relevant states compared to the all-India. It was the lowest in Orissa (18.6%).

¹⁵ Report on the second all-India census of small-scale industrial units, 1992

In 1987-88, WB and Gujarat had higher percentage compared to all-India. The percentage of closed units in Orissa was higher as compared to Bihar. In 2001-02, Orissa had a very high percentage of closed units (44 %), higher than the all-India and all the relevant states.

2. Closed units as percentage to working units: The distribution of closed units as percentage to working units is being presented in table – 3.25. This percentage can be

Table-3.25, Closed as % of working units

Years	1972-73	1987-88	2001-02
Orissa	22.9	43.5	78.5
Bihar	37.5	42.5	48.8
WB	41.9	79.6	61.9
Maharastra	32.7	36.6	65.3
Gujarat	41.5	55.1	28.3
All-India	48.0	51.8	64.5

Source: cited in table-1.1

used as proxy for industrial sickness. *It kept on increasing consistently in all the relevant states except WB and Gujarat.* This decline in these two states is noticed in 2001-02 as compared to 1987-88. In 1972-73, it was 48 % at all-India level. Among the relevant states, it was higher in WB and Gujarat (industrially developed states). It was lower in Orissa and Bihar, among which Orissa had the lowest (22.9%) which was less than half of all-India. This percentage of closed units is more in industrially developed states. In 1987-88, close units as the percentage of working units was 52 percent at all-India level. It was of lower magnitude in Orissa (43.5%) as compared to all-India but higher than that of the Bihar and Maharastra. In 2001-02, this percentage at all-India level was 64.5 percent whereas in Orissa, it was of very high magnitude(78.5%). It was very high even as compared to the relevant industrially developed states. *It shows that sickness in small-scale units is very high.* It draws policy attention.

Location wise distribution of closed units: Table-3.26 shows the distribution of closed units by location. The percentage of closed units in urban area is higher compared to the rural area both in 1987-88 and in 2001-02 in all the relevant states and all-India except Orissa in 1987-88. In 2001-02, the percentage of closed units in rural location had increased as compared to the 1987-88 in all the relevant states and all-India except in Orissa and WB. In urban location, it has decreased except in Orissa

Table- 3.26, Distribution of closed units by location wise

States	Years	Rural	Urban	Total
Orissa	1987-88	56.3	43.7	100
	2001-02	36.4	63.6	100
Bihar	1987-88	33.0	67.0	100
	2001-02	40.6	59.4	100
WB	1987-88	36.3	63.7	100
	2001-02	32.5	67.5	100
Eastern India	1987-88	36.7	63.3	100
	2001-02	37.0	63.0	100
Maharastra	1987-88	17.5	82.5	100
	2001-02	18.9	81.1	100
Gujarat	1987-88	16.7	83.3	100
	2001-02	19.5	80.5	100
All-India	1987-88	35.7	64.3	100
	2001-02	37.9	62.1	100

Source: cited in table-3.23

and WB. The percentage of closed units is of higher magnitude in rural location of Orissa (56%) as compared to that of all India (36%) in 1987-88. This was the highest compared to any other relevant location. *The incidence of sickness (percentage of closed units) was very high in rural location and lower in urban area of Orissa compared to the all India and relevant states in 1987-88.*

In 2001-02, the percentage of closed units in rural area of Orissa was lower than all India and Bihar but higher than other relevant states. In urban area, magnitude of closed units in Orissa was higher than all India and Bihar but lower than other relevant states. These other relevant states are industrially developed states. Because of this, incidence of sickness (magnitude of closed units) could be higher there.

Sickness in 2001-02: By any criteria, 'a', 'b' or 'c' and 'a' or 'b' or 'c', the percentage of sick units in registered sector is higher than that in the unregistered sector in Orissa, Bihar and Maharastra. However, in WB, Gujarat and all-India, the cases are different for different criteria. By criteria 'b' or 'c' and 'a' or 'b' or 'c', the percentage of sick units in registered sector is higher than that in the unregistered sector in all-India. By any criteria, the percentage of sick units in unregistered sector is higher than that in registered sector of Gujarat. In terms of criteria 'a', the percentages of sick units in unregistered sector are higher compared to the registered sector in WB, Gujarat and all-India.

Table-3.27, Sick units in Register sector as % to the total Registered sector

Criteria	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
a	8.06	6.12	5.03	11.59	2.7	3.38
b or c	9.22	2.33	2.05	6.29	1.45	11.5
a or b or c	15.77	8.08	17.72	16.42	4	13.98

Notes: a) continuous decline in gross output compared to the previous two financial years, b) delay in repayment of institutional loan, for more 12 months; and c) erosion in the worth of 50 percent of the net worth during the previous accounting years.

Source: cited in table-3.1(a)

In registered units - The percentage of sick units by criteria 'a' in Orissa (8.06%) is higher as compared to all-India (3.38%), neighbouring states and Gujarat. The percentage of sick units by criteria 'b' or 'c' in Orissa (9.22%) is higher compared to all the relevant states but less than all-India (11.5%) [Table-3.27]. The percentage of sick units by criteria 'a' or 'b' or 'c' in Orissa is higher compared to Bihar, Gujarat and all-India.

In registered sector, the percentage of incipient sick units in Orissa is higher than that of all-India and the relevant states except Maharastra. The percentage of sick units in Orissa is higher compared to all the relevant states but less than all-India.

In unregistered units – The percentage of sick units in Orissa by criteria 'a' (0.59%) is

Table-3.28, Sick units in Unregistered sector as % to the total Unregistered sector

Criteria	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
a	0.59	3.34	14.57	5.56	9.04	6.48
b or c	0.84	0.15	4.19	1.27	9.04	0.64
a or b or c	4.78	3.5	6.79	6.46	9.04	6.89

Notes: under table-3.27, Source: cited in table-3.1(a)

much less than the relevant states and all-India. The percentage of sick units in Orissa by 'a' or 'b' (0.84%) is higher than Bihar (0.15%) and all-India (0.64%) but less than other relevant states [Table-3.28]. The percentage of sick units in Orissa by criteria 'a', 'b', or 'c' is higher than Bihar but less than other relevant states and all-India. *The percentage of incipient sick units in Orissa is lesser but that of sick units in Orissa is higher than the Bihar and all-India but less than other relevant states.*

3.4.2 Analysis of Reasons sickness and closure

Reasons for Closure: Question is why the closure of small-scale units. What kind of problems becomes so problematic for small-scale industries that they had to close their units?

Table-3.29, Reasons for Closure, Second Census (1987-88)

Reasons	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Labour problems	1.8	1.6	3.6	6.4	2.2	2.2
Dispute among owners	3.3	4.0	3.8	6.2	8.1	3.7
Raw material problem	10.3	5.9	4.2	3.9	3.6	5.6
Finance problem	30.6	42.3	54.1	19.2	26.2	34.7
Marketing problem	14.4	13.8	7.7	11.3	11.4	14.4
Natural calamity	2.3	3.9	3.2	3.1	1.7	3.4
Combined reasons	22.1	14.0	12.6	14.3	33.6	16.5
Others	15.2	14.6	10.8	35.5	13.2	19.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Report on second Census of Small Scale Industrial Units for All-India, Orissa, Bihar, WB, Gujarat and Maharastra, 1992, DCSSI, GOI, New Delhi

In 1987-88: The reason for closure in 1987-88 has been presented in table- 3.29. It is the *financial problems*, which caused most of the closure across all the relevant states and all-India. Closure due to financial problems is 31 percent in Orissa. This is lower than that of all-India (35%). Closure due to financial problems in Bihar (42%) and WB (54%) was much higher compared to that of the all-India. Maharastra and Gujarat had very less percentage of closer due to financial problems compared to all-India. Another important reason for closure was *marketing problems*. Orissa had high percentage closure (14.4%) because of this reason compared to the neighbouring states and the industrially developed states. *Raw material problem* has caused 10.3 percent of closure in Orissa. However, this reason was less responsible for the death of units in other relevant states and all-India. *Combined reasons and Others* taken together caused 37.3 percent closure of units in Orissa. This was also higher compared to the neighbouring states and all-India (36%). This had also caused closure of units between 45 to 50 percent in Maharastra and Gujarat.

In 2001-02: The reasons for closure were not elicited in the census. However, this question was canvassed in the sample survey of Registered SSIs conducted during

2000-01. It was found in this survey that the main reasons for closure were *marketing problems, finance problems* and '*could not survive competition*'. These reasons would apply to the closed units identified in the Third Census as well.¹⁶

Reasons for Sickness (2001-02): *Lack of demand, shortage of working capital and marketing problems* are the major reasons for sickness both in registered and unregistered sector with different magnitudes. At the all-India level, it is the lack of demand causing the highest percentage of sickness in both the sectors. At the state level, however, the shortage of working capital caused the highest percentage of sickness in the registered sector. In the unregistered sector, both lack of demand and shortage of working capital are most important reasons of sickness.

In Register Sector – At all-India level, *lack of demand* is the most important reason for sickness among the registered units. Sickness due to lack of demand is 58 percent in all-India. Other important reasons for sickness are shortage of working capital (57%) and marketing problems (37%) at the all-India level.

Table-3.30, Reasons for sickness *, Third Census (2001-02), registered sector

Reasons	Orissa	Bihar	WB	Maharashtra	Gujarat	All-India
Lack of Demand	39.09	26.80	52.54	68	21	58
Shortage of working capital	50.56	83.69	60.41	33	83.87	57
Non-availability of raw material	11.37	15.53	7.58	9	12.24	12
Power shortage	13.63	21.04	4.19	20	26.46	17
Labour Problems	5.38	8.64	4.39	4	20.61	6
Marketing Problems	45.08	33.24	38.88	48	12.3	37
Equipment problems	9.17	18.00	6.04	11	12.71	9
Management problems	15.57	4.61	3.88	3	9.44	5

Notes:* The total in each column will exceed 100%, as some units have reported more than one reason.

Source: cited in table-3.1

However, at the state level, *shortage of working capital* is the most important reason for sickness. The other important reasons are marketing problems, lack of demand, power shortage, non-availability of raw material etc. The percentage for sickness because of shortage of working capital is the highest in Bihar and Maharashtra with 84% each. The percentage of sickness because of this reason in Orissa is less compared to the neighbouring states. Sickness due to *marketing problems* is highest in Orissa (45%) compared to the neighbouring states and all- India (37%). Third major reason

¹⁶ Final results: third all India census of small-scale industries 2001-2002, august 2004.

for sickness in Orissa is *lack of demand* with 39 percent. The percentage of sickness because of this reason in Orissa is less than that of all-India level but higher than the Bihar and Gujarat. Lack of demand is the most important reason for sickness in Maharashtra (68%). *Management problems and non-availability of raw material* are the other reasons causing good amount of sickness in Orissa.

In Unregistered Sector – At all-India level, *lack of demand* is the most important reason for sickness among the unregistered units too. It accounted for 69 percent of sickness. Shortage of working capital (43%), marketing problems (36%) are the other important reasons for sickness of small-scale industries at all-India level. However, at the state level, unlike in the register sector, it is the *lack of demand* causing the highest percentage of sickness for some states (WB, Maharashtra, and Gujarat) and for others

Table-3.31, Reasons for sickness *, Third Census (2001-02), unregistered sector

Reasons	Orissa	Bihar	WB	Maharashtra	Gujarat	All-India
Lack of Demand	50.24	20.53	47.15	72	96.77	69
Shortage of working capital	61.34	89.4	45.19	28	0.36	43
Non-availability of raw material	27.43	1.95	3.84	8	0.29	12
Power shortage	7.46	21.07	3.97	17	0	12
Labour Problems	3.54	3.74	5.67	3	0.62	4
Marketing Problems	40.75	31.56	49.61	49	0	36
Equipment problems	25.44	17.57	8.02	12	0.31	12
Management problems	4.87	1.07	7.95	3	1.65	3

Notes:* The total in each column will exceed 100%, as some units have reported more than one reason.

Source: cited in table-3.1

relevant states (Orissa and Bihar) it is the *shortage of working capital* in the unregistered sector. Around 97 percent of sickness is due to lack of demand in Gujarat. Shortage of working capital has caused very high percentage of sickness in Orissa (61.34%) compared to all-India level and the relevant states except Bihar. Lack of demand has caused sickness of 50.24% in Orissa higher than the percentage of neighbouring states but less than the aggregate level. *Marketing problems* is another reason causing significant percentage of sickness in the relevant states. The highest percentage of sickness due to this reason is in WB and Maharashtra. Sickness due to this in Orissa (40.75%) is much higher than the all-India level.

Non-availability of raw material and Equipment problems are the other reasons causing significant percentage of sickness in Orissa. The percentage of sickness

because of this reason is much higher than the relevant states and all-India level. It is 27.43 percent due to non-availability of raw material and 25.44 percent due to equipment problems in Orissa.

A unit closes because it is sick. So, the reason for closure can be proxy for the reason for sickness. In 1987-88, *financial problems and marketing problems* were the important reason for closure of units at all-India level. Along with these reasons, Raw material problem, Combined reasons and Others had caused most of the closure of units in Orissa. In 2001-02, marketing problems, finance problems and 'could not survive competition' would apply to the closed units identified in the Third Census as well.¹⁷

For sickness of units in 2001-02, lack of demand, shortage of working capital and marketing problems were the prominent reasons at all-India level in both the registered and unregistered sector. Along with these reasons, *Management problems & non-availability of raw material* and *Equipment problems* are the other reasons of sickness in registered and unregistered sector respectively in Orissa.

Shortage of working capital can be mostly because of financial problems. A part of marketing problems can be because of lack of demand. Therefore, broadly the same problems (*financial problems and marketing problems*) continued to exist and are the reasons for sickness of small-scale units over the period (1987-88 to 2001-02) at all-India level. This is also true for Orissa. Apart from these reasons, other reasons, that causing sickness in Orissa, are *raw material problems, management problems and equipment problems*.

SECTION- III

3.5 Conclusion

The small-scale units dominate the registered units whereas the SSSBEs dominate the unregistered units. Therefore, the percentage units engaged in manufacturing is more in registered units whereas units are more engaged in services in unregistered units. However, *in the Eastern Indian states, the small-scale units dominate both in*

¹⁷ Final results: third all India census of small-scale industries 2001-2002, August 2004.

registered units and in unregistered units. The units are mostly engaged in manufacturing. This is also true in Orissa.

In **unregistered sector**, the following characteristics are found more compare to the unregistered sector- units by type of ownership-proprietorship, units managed by women, in ownership pattern by social groups, units located in rural location, in numbers of units. In **registered sector**, the characteristics those are found more compared to the unregistered sector are the share of small-scale units, the share of ancillary units, units located in urban location, share of exporting units, in number of products.

The percentage of ancillary units is lower in the eastern India compared to all-India and industrially developed states. *It reflects lack of linkages of small units with large and medium sectors in eastern India. This is also true in Orissa.*

The unregistered units have higher percentage of employment and generate higher employment per one lakh of fixed investment. However, the registered units have higher share of fixed investment, higher percentage share of gross output and export. Employment per unit, gross output per unit, fixed asset per unit, and export per unit is also higher in registered sector. Moreover, capital and labour are more productive in registered sector. It is the case in Orissa too except that, *fixed investment is higher in unregistered sector.*

Across States: Compared to the neighbouring states and all-India, Orissa's small scale sector in registered units (or in unregistered units) is small (or bigger) in size, contribute higher (or lower) percentage share of output to it's total, have higher (or lower) percentage share of fixed investment, export higher (or lower) percentage share but have less (or higher) percentage share of employment.

Employment per unit, gross output per unit, fixed asset per unit and export per unit in registered sector (or in unregistered sector) is higher (or lower) in Orissa compared to counterpart in neighbouring states and all-India.

Productivity of labour in registered sector (or in unregistered sector) is higher (or the lowest) and productivity of capital in registered sector (or in unregistered sector) lower (or higher) in Orissa compared to counterpart in neighbouring states and all-

India. Fixed investment is generating lower (or the highest) employment in registered (or in unregistered sector) in Orissa compared to counterpart in neighbouring states and all-India.

Across Industry: At the disaggregate level, *food & textiles* has the highest share of number of working units both in Orissa and all-India in registered sector whereas in unregistered sector, those are *other manufacturing and food & textiles* in Orissa and all-India respectively.

In registered sector, *Other manufacturing* has the highest share of employment in both Orissa and all-India whereas in unregistered sector, those are *other manufacturing and food & textiles* in Orissa and all-India respectively.

Food & textiles has the highest share of gross output and export both in Orissa and all-India and that too in both registered sector and unregistered sector.

Food & textiles and Other manufacturing has the highest share of fixed asset both in Orissa and all-India in registered sector whereas in unregistered sector, those are *food & textiles and Services* in Orissa and all-India respectively.

At the disaggregate level too, the productivity of labour and the productivity of capital is higher in registered sector. However, Employment per one lakh of fixed investment is higher in unregistered sector.

Food & textiles and metal & electricals have the highest productivity of labour in registered sector in Orissa and all-India respectively, whereas in unregistered sector, *Metal & electricals* has the highest productivity of labour in both Orissa and all-India.

Food & textiles has the highest productivity of capital in registered sector whereas in unregistered sector, it is *metal & electricals* in both Orissa and all-India.

Other manufacturing and *Food & textiles* have generated the highest number of employment per one lakh of fixed investment in registered sector in Orissa and all-India respectively. *Other manufacturing* has generated the highest number of employment per one lakh of fixed investment in unregistered sector in both Orissa and all-India.

Size Distribution: *In terms of number of units and employment, it is the small units dominate in both registered sector and unregistered sector both in All- India and in Orissa. In terms of gross output, fixed capital and export, however, it is the large units dominate only in registered sector both in All-India and in Orissa whereas in unregistered sector, small units dominate in Orissa.*

Dispersal: Having known the position of SSIs, question is has the SSIs dispersed over the backward and rural area of the country?

Over all, there has been dispersal of small-scale units in rural areas in 1987-88 compared to 1972-73 in almost all the relevant states except and all-India Bihar. However, the dispersal of SSIs in Orissa was less than all-India average and the neighbouring states in both the period whereas compared to industrially developed states (Maharashtra and Gujarat); its percentages were higher in both the periods.

More or less, there is little dispersal of small-scale industries in rural areas in 2001-02 compared to 1987-88 in Orissa, Bihar and WB. In all-India, The industrial units have dispersed in rural area in case of all-India but it is very marginal.

Sickness is another problem that SSIs is facing. The incidence of sickness by closed units as percentage to total had increased in 1987-88 compared to 1972-73 and continued to increase in 2001-02 in both Orissa and all-India. In 2001-02, Orissa had a very high percentage of closed units (44 %), higher than the all-India total and all the relevant states.

The incidence of sickness by closed units as percentage to working units kept on increasing consistently in both Orissa and all-India. In Orissa, it was of very high magnitude (78.5%). It shows that sickness in small-scale units is very high in Orissa.

Closed units are more located in urban area than in the rural area in both 1987-88 and 2001-02. However, in 1987-88 the percentage of closed units was higher in rural location than in the urban location in Orissa. During 2001-02 compared to 1987-88, the closed units have increased in rural area whereas the opposite is true in urban area. However, in Orissa, exactly opposite has happened. The closed units have decreased in rural area whereas closed units have increased urban area.

Compared to all India, the incidence of sickness (percentage of closed units) was very high in rural location and lower in urban area of Orissa in 1987-88. However, in 2001-02, the percentage of closed units in rural area of Orissa was lower and in urban area, magnitude of closed units was higher compared to all India.

The statistics on sickness reveals that in 2001-02, the percentage of incipient sick units in Orissa is higher than that of all-India but the percentage of sick units in Orissa is less than all-India. This is the case in registered sector. However, in unregistered sector, the percentage of incipient sick units in Orissa is less but that of sick units in Orissa is higher than all-India.

Shortage of working capital can be mostly because of financial problems. A part of marketing problems can be because of lack of demand. Therefore, broadly the same problems (*financial problems, lack of demand, marketing problems*) continued to exist and are the reasons for sickness of small-scale units over the period (1987-88 to 2001-02) at the aggregate level. This is also true for Orissa. Other reasons that are causing sickness in Orissa are *raw material problems, management problems and equipment problems*.

Lack of demand, shortage of working capital and marketing problems are the important problems that the small-scale industry is facing over the years. The SSIs are getting special support through different policies of the government to make it more viable and vibrant, so that the sector is able to face imperfection of markets and other problems. How far are they successful? This issue has been addressed in the next chapter.

**POLICY SUPPORT AND RESERVATION OF
PRODUCTS FOR SMALL SCALE INDUSTRY**

4.1 Introduction

Since the inception of planning, small-scale industry has received special importance because of its developmental role - poverty eradication and the removal of regional imbalance. This has been manifested through different policy measures and incentives to provide special support and protect the small-scale industries through the

- Administrative mechanism and
- Various policy measures.

The administrative mechanism includes the institutions and organisations to deal with different aspects of SSI such as technology, marketing, raw materials, finance and entrepreneurship – aim at providing conducive environment for SSI. Various policy measures includes **incentives** (financial incentives, fiscal incentives, general incentives in backward areas)¹ provided by the governments as support measure and **reservation of products** to be produced by small units. Reservation is mostly to protect the small-scale industries.

Financial Incentives: SIDBI directly assists for specialised marketing agencies, industrial estates, acquisition of machinery, bills rediscounting and direct discounting scheme etc. State and local government is also providing financial subsidies.² *Fiscal incentives* mostly comprise tax holidays, tax concessions by central government. Apart from the central government, the state and local governments also provide fiscal incentives (exemption from electricity tariffs). *General incentives* are reservation of items for exclusive purchases from SSI, price preference over medium and large-scale units. *Special incentives* in backward areas include concession in finance, transport subsidy and income tax incentives. The objective of all these promotional measure is to increase the productive efficiency and competitiveness of SSI. These cover all those industrial units that are coming under SSI sector.

¹ Bala Subrahmanya (1995)

² Like interest rate, capital subsidies and water and electricity subsidies and subsidies for the acquisition of land.

Most of the developing countries in the world have various kind of administrative mechanism and provide different incentives for small enterprises. However, the reservation policy provides India a unique position because such protective measure is not prevalent in any other country. This is for only those units of SSI sector those produce the reserved items.

4.2 Small Scale Industry and Reservation Policy

The of reservation policy is one of the measures of policy support for promoting small-scale industries those are economically viable and technically feasible items for exclusive manufacture in the small-scale sector. The rationality of this policy were

- Firstly, the advantages of the small scale industries – generation of high employment, industrialisation of rural and backward areas,
- Secondly, to make SSI products competitive with those of the large scale by offsetting the disadvantage of mass scale production, economies of scale, wider marketing network, better credit availability and publicity through mass media and advertisements.³

The features of reservation policy:

1. The Central Government formulates the reservation policy. It is uniformly applicable to all over the country. A statutory Advisory Committee on Reservation is established to recommends the addition or deletion of products on reservation and changes in nomenclature of products from time to time.
2. It is restricted to manufacturing sector only and not applicable to service sector.
3. Medium or large-scale sector are not allowed to produce the reserved items. However, the medium or large units that were producing the item at the time of reservation are allowed to continue its production. They are not allowed to create new capacity.
4. Creation of new capacity is allowed only in case units with objective of exporting a minimum of 75 percent of their production.⁴

³ Rakesh Mohan (2002)

⁴ Rakesh Mohan (2002)

The policy of reservation of industries for exclusive manufacture in the small scale sector in areas which are highly suitable both economically and technically for further development has been in existence for well over a long period of time. It is continuing. However, the list of reserved item has reduced in the recent years. With 47 items in the list, the reservation policy began in 1967. In 1978, decision was taken to recast the reserved list by assigning NIC codes to items. This results in expansion of list of reserved items from 504 to 807 items in 1978. As 1988, 846 items are reserved for exclusive manufacture in the small-scale sector. It is 836 in 1988-89. This number of reserved items in the list continued until 1996-97. However, the number of reserved items declined under the WTO regime. It declines from 836 in 1996-97 to 674 in 2003-04.⁵This is presented in table - 4.1.

Table-4.1, No. of reserved products at All-India level: 1967-68 to 2003-04

<u>Year(1)</u>	<u>cumulative no. of reserved items(2)</u>
1967-68	47
1977-78	504
1987-88	843
1988-89	836
1996-97	836
1998-99	821
1999-00	812
2000-01	812
2001-02	799
2002-03	749
2003-04	674

*Source: Compiled from (1) GOI, [1997] and (2) www.laghu-udyog.com;
Reproduced from Narayana (2003), table 13.*

The policy of reservation was introduced as a protective measure for SSI vis-à-vis large-scale sector. “The policy is expected to provide conducive environment for unhindered and competition free growth of units engaged in the manufacturing of reserved items.”⁶ It is still continuing as a major policy measure in one way or other in providing special treatment to the SSIs. Here, *it is expected that the small-scale industrial units, that are producing the reserved item, are performing better than their counterpart that are not producing the reserved items.* A comparison of performance of both type of units can be very much indicative here.

⁵ *M R Narayana (2003)*

⁶ *Bala Subrahmanya (1995)*

Statistics from census of small-scale industrial units gives some information about this. The second census provides statistics on number of items, production and capacity utilisation of both the reserved units and unreserved units separately. However, the statistics should be appreciated by taking into account the following- a unit producing items that belong to two or more industry groups has been counted in each industry group separately. If it produced reserved as well as unreserved items in an industry group, it has been counted twice in that industry group - under reserved and unreserved categories separately.⁷ Using the statistics from the census, performance of both reserved and unreserved sector has been analysed - by comparing capacity utilisation at 1987-88, comparing annual compound growth rate of production over 1987-88 to 2001-02 and comparing proportionate contribution of reserved and unreserved sector in 2001-02.

4.2.1 Comparison of capacity utilisation in 1987-88

Table- 4.2 presents the capacity utilisation of both reserved and unreserved sector in Orissa and all-India in 1987-88. Table- 4.3 presents the capacity utilisation in Bihar, WB, Maharashtra and Gujarat in 1987-88.

All-India: At the aggregate level, the capacity utilisation was 47.7 percent in reserved sector and that in unreserved sector 50.5 percent in 1987-88. Therefore, at the aggregate level, the unreserved sector utilises more of its capacity. However, at the disaggregate level, out of 15 industry groups; eight had higher capacity utilisation in unreserved sector compared to their counterparts.

Orissa: At the aggregate level, the capacity utilisation was 29.8 percent and 27.8 percent in reserved and unreserved sector respectively. At the disaggregate level, six out of 15 industry groups had utilised higher capacity in reserved sector than that in the unreserved sector. The reserved units utilised more of its capacity than the unreserved units did.

Bihar: At the aggregate level, the capacity utilisation was 40 percent and 34.3 percent in reserved and unreserved sector respectively in 1987-88. However, seven out of 15 product groups had higher capacity utilisation in the unreserved sector than that in

⁷ Report on the Second census of small-scale industrial units, 1992.

Table- 4.3, Capacity Utilisation in Bihar, WB, Maharashtra and Gujarat in 1987-88⁸

NIC- 1970 20 & 21	Product Group	Bihar		WB		Maharashtra		Gujarat	
		reserved	unreserved	reserved	unreserved	reserved	unreserved	reserved	unreserved
		CU	CU	CU	CU	CU	CU	CU	CU
	food products	45.2	23.5	60.2	47.5	70.7	69.2	25.3	42.2
22	Beverages,tobacco and products		33.6	53.1	82.8	70.4	70.5	200.0	19.8
26	hosiery and garments	46.2	50.8	66.0	61.9	79.0	78.8	57.1	67.5
27	wood products	46.6	44.0	60.3	53.0	72.0	71.5	60.6	61.0
28	paper products & printing	19.5	59.0	55.7	61.6	76.4	77.1	67.2	70.8
29	leather products	36.5	25.1	22.7	55.8	80.2	77.1	48.5	63.4
30	rubber & plastic products	44.7	39.5	55.5	59.3	73.0	77.5	53.4	38.4
31	chemical & chemical products	45.0	40.6	65.8	51.6	77.3	74.3	28.1	59.6
32	Non-metallic mineral product	43.5	44.8	51.5	60.4	69.0	70.2	65.4	54.2
33	basic metal industries	28.9	40.0	67.5	36.6	79.3	74.7	68.7	35.3
34	metal products	48.6	45.1	54.8	42.7	71.1	74.7	47.7	40.9
35	machinery & parts except elect	36.8	44.8	52.4	48.6	73.8	78.0	67.6	55.4
36	electrical machinery & parts	42.8	25.3	65.2	47.4	77.9	78.7	10.4	56.7
37	Transport Equipment & parts	30.7	45.2	58.9	58.4	79.4	79.5	79.1	64.8
38	miscellaneous mfrg industries	42.9	45.9	267.0	56.4	75.6	78.0	4.7	59.7
	AGGREGATE LEVEL	40.0	34.3	57.3	47.3	75.3	75.0	29.8	49.9

⁸ Source: Report on the second census of small-scale industrial units (1992) for Bihar, WB, Maharashtra and Gujarat, DCSSI, GOI, New Delhi.

Table- 4.2, Capacity Utilisation in Orissa and All- India 1987-88.

NIC- 1970		ORISSA		ALL-INDIA	
		reserved	unreserved	reserved	unreserved
		CU	CU	CU	CU
20 & 21	food products	27.1	59.4	42.7	52.4
22	Beverages,tobacco and products			74.2	59.7
26	hosiery and garments	19.6	25.6	67.9	70.8
27	wood products	44.0	50.3	45.2	50.2
28	paper products & printing	37.6	46.0	57.5	61.6
29	leather products	46.1	51.3	57.9	70.1
30	rubber & plastic products	40.7	27.4	59.8	52.4
31	chemical & chemical products	22.6	17.3	62.1	49.9
32	Non-metallic mineral product	49.5	29.6	57.1	47.9
33	basic metal industries	45.5	15.7	56.5	41.9
34	metal products	37.4	35.9	32.2	51.4
35	machinery & parts except elect	50.0	41.1	66.1	61.7
36	electrical machinery & parts	24.5	14.5	41.0	43.4
37	Transport Equipment & parts	20.2	38.3	60.5	59.1
38	miscellaneous mfrg industries	28.7	13.2	29.8	63.8
AGGREGATE LEVEL		29.8	27.8	47.7	50.5

Source: Report on the second census of small scale industrial units (1992) for orissa and All-India, DCSSI, GOI, New Delhi.

reserved sector in 1987-88. Here too, the reserved units utilised more of its capacity than the unreserved units did.

WB: At the aggregate level, the capacity utilisation was 57.3 percent and 47.3 percent in reserved and unreserved sector respectively in 1987-88. Five out of 15 industry group used more of their capacity in unreserved units than that in the reserved units and the reversed is true in the other 10 industry groups at the disaggregate level.

In Orissa, Bihar and WB, the reserved units had utilised more of their capacity compared to their counterparts in the unreserved sector in 1987-88.

Maharastra: Here, the capacity utilisation in unreserved sector was more or less same as that in the reserved sector at the aggregate level in 1987-88. The level of capacity utilisation was 75.3 percent in the reserved sector. It was 75 percent that in unreserved sector. However, at the disaggregate level, nine out of 15 industries had higher capacity utilisation in unreserved sector than that in reserved sector.

Gujarat: In 1987-88, the capacity utilisation in unreserved sector was higher than that in the reserved sector at the aggregate level. It was 29.8 percent and 49.9 percent in reserved and unreserved sector respectively. In eight out of 15-industry group, the unreserved units had higher capacity utilisation than that in the reserved sector.

Aggregate Level: If capacity utilisation is taken as indicator, then unreserved sector had performed better than the reserved sector in SSIs in all-India in 1987-88. However, at the state level, in Orissa, Bihar and WB the reserved units had performed better than their counterpart in unreserved sector had. More or less, it can be said that in the eastern India, the reserved sector had performed better than the unreserved sector of SSIs in 1987-88. However, in Maharashtra, both the sector was performing alike. In Gujarat, the case is same like at all-India.

Disaggregate Level: In some industries, the reserved sector is performing better than the unreserved sector in some states whereas in the same industries, the unreserved sector is performing better than the reserved sector but in other states. In all-India and Orissa, the unreserved sector had performed better than the reserved sector in food products, hosiery & garments, wood products and paper & printing. However, the reverse was true in rubber & plastic products, chemical & chemical products, non-metallic mineral products and machinery & parts in All-India and Orissa.

4.2.2 Comparison of Growth Rate over 1987-88 to 2001-02

Comparison of growth rate of production of reserved and unreserved sector can provide insight into their performance over the period 1987-88 and 2001-02. Table-4.4 presents average compound growth rate of reserved and unreserved sector. In the tables, the industries in NIC 2-digit classification are categorised in three groups and corresponding to these three groups, the characteristics are presented. This is done because a very detailed product-group wise analysis could have the danger of missing the wood for the trees. The industries under each group are presented in Table-B in Annexure to Introduction.

All-India: At the aggregate level, the unreserved sector had grown much faster level than that of the unreserved sector. The reserved sector had grown at 6 percent rate whereas the reserved sector had declined at 1 percent rate. At the disaggregate level

Table- 4.4, Average Compound Growth Rate of production in reserved and unreserved sector between 1987-88 and 2001-02. (in percentage)

	Orissa		Bihar		ALL-INDIA	
	reserved	unreserved	reserved	unreserved	reserved	unreserved
Food and Textiles	-17	9	-10	3	-6	12
Metal and						
Electricals	0	4	-6	-2	2	16
Other						
manufacturing	4	7	-3	-3	1	11
Total	-5	7	-5	-1	-1	6
	WB		Maharashtra		Gujarat	
	reserved	unreserved	reserved	unreserved	reserved	Unreserved
Food and Textiles	-8	11	-6	9	-10	7
Metal and						
Electricals	-6	1	4	3	2	-2
Other manufacturing	-2	5	4	4	3	-1
Total	-5	5	1	5	1	0

Source: Report on Census of Small Scale Industrial Units for All-India, Orissa, Bihar, , DCSSI, 1992; S & D, Ministry of SSI GOI, New Delhi.

too, the units in same industry were performing better in unreserved sector than that in the reserved sector. This is true in almost all industry groups.

Orissa: The unreserved sector had grown at the rate 7 percent whereas the reserved sector had declined at the rate 5 percent. Here too, the unreserved sector had grown at much higher rate than that of the reserved sector. This is also true at the disaggregate level in all the industry groups.

Bihar: Here, the unreserved sector had declined at 1 percent rate whereas the reserved sector had declined by 5 percent rate over 1987-88 and 2001-02 at the aggregate level. Both the sectors had performed badly. The poor performance in reserved sector was higher than that in the unreserved sector. At the disaggregate level too, the reserved sector performed badly than that in the reserved sector in all industry group.

WB: The unreserved sector had grown at 5 percent whereas the reserved sector had declined at the rate of 5 percent. Here too, the unreserved sector had performed better than that in the reserved sector at the aggregate level. This is also true at the disaggregate level.

Maharashtra: Same is the case here too. The unreserved sector had grown at 5 percent whereas the reserved sector had grown at only 1 percent implying that the reserved sector had performed badly compared to the unreserved sector at the aggregate level. This is also true at the disaggregate level too.

Gujarat: Here the case is somewhat different. At aggregate level, the reserved sector (1%) had performed better than the unreserved sector (0%). However, at the disaggregate level, the reserved units performed better than the unreserved units in metal & electricals and other manufacturing industries. However, in food & textiles industries, the unreserved sector had grown at the rate of 7 percent whereas in the unreserved sector had declined by the rate 10 percent. This implies that the reserved sector did well than the reserved sector in food & textile industry.

Thus, in terms of growth rate of production over the period 1987-88 to 2001-02 too, the performance of the units that produced the reserved items is comparatively poor than the units that produced the unreserved items. This is true both at the aggregate level and at the disaggregate level in all the relevant states and all-India level except Gujarat and few cases at the disaggregate level.

4.2.3 Comparison of proportions to total in 2001-02

This will throw light on the relative position of reserved sector and unreserved sector in the SSIs as a whole. Comparison will be with respect to time point 2001-02. Table-4.5 to Table-4.10 present contribution of reserved sector and unreserved sector to the total at all-India level in variables like number of working units, fixed asset, employment, gross output and export.

All-India: Irrespective of all the indicators, the unreserved sector had higher contribution to the total compared to the reserved sector both at aggregate and disaggregate level. In food & textiles, the unreserved sector had the higher contribution in all the indicators compared to its counterpart in reserved sector. In the reserved sector, other manufacturing had relatively more contribution compared to other industries in the sector. (Refer to table-4.5)

Orissa: The contribution of unreserved sector had proportionately very high in all indicators than that of the reserved sector in food and textiles industry. The

**Table- 4.5, Contribution of reserved and unreserved sector to total of SSIs
in All-India, 2001-02. (in percentage)**

RESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	6.8	7.0	7.8	8.1	6.5
Metal and Electricals	20.1	14.5	18.7	14.4	12.8
Other manufacturing	37.2	22.9	33.9	22.2	19.2
Total	19.8	14.7	18.8	14.2	2.2
UNRESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	93.2	93.0	92.2	91.9	93.5
Metal and Electricals	79.9	85.5	81.3	85.6	87.2
Other manufacturing	62.8	77.1	66.1	77.8	80.8
Total	80.2	85.3	81.2	85.8	18.9

Source: S & D, Ministry of SSI, GOI, New Delhi.

contribution of reserved sector in other manufacturing to the total of the industry had proportionately more compare to reserved sector in other industries. It can be said that whatever export is done by SSIs in Orissa, it is from the unreserved sector. Thus, the performance of reserved sector is very poor compared to the unreserved sector. (Refer to table-4.6)

**Table- 4.6, Contribution of reserved and unreserved sector to total of SSIs
in Orissa, 2001-02. (in percentage)**

RESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	4.0	2.8	5.5	2.0	0.0
Metal and Electricals	24.1	11.8	20.2	9.0	0.1
Other manufacturing	26.2	19.2	20.3	25.3	0.4
Total	16.5	11.3	15.4	10.0	0.1
UNRESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	96.0	97.2	94.5	98.0	100.0
Metal and Electricals	75.9	88.2	79.8	91.0	99.9
Other manufacturing	73.8	80.8	79.7	74.7	99.6
Total	83.5	88.7	84.6	90.0	99.9

Source: S & D, Ministry of SSI, GOI, New Delhi.

Bihar: Here too, the unreserved sector contributed higher proportion to the total in all indicators compared to the reserved sector both at the aggregate level and disaggregate level. Only in other manufacturing and that too in number of working units, the unreserved sector had contributed higher proportion compared to the

Table- 4.7, Contribution of reserved and unreserved sector to total of SSIs in Bihar, 2001-02. (in percentage)

RESERVED	No. of		Employment	Gross	
	working units	fixed asset		output	Export
Food and Textiles	14.5	14.5	14.4	11.5	0.0
Metal and Electricals	23.4	8.3	22.3	12.9	32.8
Other manufacturing	51.4	21.9	37.2	20.0	0.5
Total	33.0	15.1	28.0	16.6	8.8
UNRESERVED	No. of		Employment	Gross	
	working units	fixed asset		output	Export
Food and Textiles	85.5	85.5	85.6	88.5	100.0
Metal and Electricals	76.6	91.7	77.7	87.1	67.2
Other manufacturing	48.6	78.1	62.8	80.0	99.5
Total	67.0	84.9	72.0	83.4	91.2

Source: S & D, Ministry of SSI, GOI, New Delhi.:

unreserved sector. Most of the export was from the unreserved sector. Food and textile industry had done the highest contribution compared to other industries in the unreserved sector in all variables. Other manufacturing sector had contributed more than the other industries in the reserved sector. (Refer to table-4.7)

WB: here too the case is same like in Orissa and Bihar. This can be observed from the table-4.8.

Gujarat and Maharashtra: The unreserved sector contributes higher proportion to the total in all variables compared to the reserved sector both at the aggregate level and disaggregates level. (Refer to Table-4.9 and Table-4.10)

In terms of their contribution to the total, the unreserved sector performed better than the reserved sector both at aggregate level and the disaggregate level in all the relevant states and all-India in 2001-02.

Table- 4.8, Contribution of reserved and unreserved sector to total of SSIs in WB, 2001-02. (in percentage)

RESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	16.0	12.0	15.6	10.5	2.5
Metal and Electricals	26.8	11.6	22.5	7.6	13.4
Other manufacturing	36.1	18.1	22.5	25.4	36.5
Total	27.3	14.5	21.0	14.7	25.4
UNRESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	84.0	88.0	84.4	89.5	97.5
Metal and Electricals	73.2	88.4	77.5	92.4	86.6
Other manufacturing	63.9	81.9	77.5	74.6	63.5
Total	72.7	85.5	79.0	85.3	74.6

Source: S & D, Ministry of SSI, GOI, New Delhi.

Table- 4.9, Contribution of reserved and unreserved sector to total of SSIs in Gujarat, 2001-02. (In percentage)

RESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	2.3	3.7	2.6	3.3	0.0
Metal and Electricals	19.2	20.6	20.4	20.9	19.3
Other manufacturing	33.0	24.2	25.7	27.5	35.1
Total	18.8	18.7	17.8	19.6	23.2
UNRESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	97.7	96.3	97.4	96.7	100.0
Metal and Electricals	80.8	79.4	79.6	79.1	80.7
Other manufacturing	86.3	75.8	74.3	72.5	64.9
Total	87.6	81.3	82.2	80.4	76.8

Source: S & D, Ministry of SSI GOI, New Delhi. |

**Table- 4.10, Contribution of reserved and unreserved sector to total of SSIs
in Maharashtra, 2001-02. (In percentage)**

RESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	7.7	6.0	8.2	4.5	0.1
Metal and Electricals	14.5	10.9	13.4	12.1	6.6
Other manufacturing	20.9	16.7	18.2	14.4	11.5
Total	16.0	12.5	14.3	10.9	7.7
UNRESERVED	No. of		Employment	Gross output	Export
	working units	fixed asset			
Food and Textiles	92.3	94.0	91.8	95.5	99.9
Metal and Electricals	85.5	89.1	86.6	87.9	93.4
Other manufacturing	79.1	83.3	81.8	85.6	88.5
Total	84.0	87.5	85.7	89.1	92.3

Source: S & D, Ministry of SSI, GOI, New Delhi.

4.3 Conclusion

Therefore,

- From analysis of capacity utilisation in 1987-88: In 1987-88, at the aggregate level, unreserved sector had performed better than the reserved sector in all-India and in Gujarat. However, in eastern India, the reserved sector had performed better than the unreserved sector. At the disaggregate level, reserved sector performing better in some industries whereas in other industries, the unreserved sector performing better.
- From analysis of annual compound growth rate of production: Over the period 1987-88 to 2001-02, the performance of reserved sector is comparatively poor than the unreserved sector both at the aggregate level and the disaggregate level. This is true in all the relevant states and all-India except Gujarat.
- From the analysis of contribution to the total: In 2001-02, the unreserved sector performed better than the reserved sector both at the aggregate level and disaggregate level in all the relevant states and all-India.

Thus, the available evidence does not provide any picture of better performance of reserved sector compared to the unreserved sector.

Hence, the results are quite opposite to the expectation. Question is - why this has happened. Is this because of the reservation policy itself? Alternatively, is this because

of the de-reservation of some items from the year 1997 onwards that were previously in the reservation list? Alternatively, is this because of opening of Indian economy to the world market?

The reserved sector could not be able to emerge as a dominant sector of SSIs, which it was supposed to be. Rather the unreserved sector has always performed better than the reserved sector whether it is at 1987-88 or over the period 1987-88 to 2001-02 or at 2001-02. It can be said that the unreserved sector is more competitive compared to the reserved sector. Here is an apprehension that it can be because of reservation and other policy instruments like fiscal incentives and financial incentives. These policy instruments indirectly encouraged the units to be uneconomic. If the units grow beyond the prescribed limit, there is loss of various incentives those are provided to small-scale units. Reservation policy freezes the capacity expansion of the units that are producing the reserved items. The units cannot transform themselves to reap economies of scale and upgrade technology. This has dampened the entrepreneurial growth, manufacturing production and employment growth. To that extent, it can be said that, it has probably acted as a negative factor and hamper the competitiveness of the reserved sector.⁹ This is going against the developmental roles of small-scale industry.

Which are the items being reserved for the SSI? These are items those can be economically and technically suitable for small-scale manufacturing. However, question is, if this is the case, is there any necessity for reservation of these items or 'blanket protection'.¹⁰

To some extent, de-reservation of some items from the reservation list probably may be responsible for the poor performance of reserved sector. Because of de-reservation, the sector has less number of products to produce now. If it is the case, reserved sector would have performed better at least in 1987-88 since de-reservation has started from 1997 onwards (refer table- 4.1). However, it could have some influence on the performance of the sector in terms competition posed by other firms who are producing those items now in the market.

⁹ Bala Subrahmanya (1995) page M-54 & Rakesh Mohan (2002) page 221-222

¹⁰ Bala Subrahmanya (1995) page M-54

With WTO regime and opening of Indian market, there is removal of quantitative restrictions (QRs). Items are being put on the Open General License (OGL). As results, most of the items reserved for the SSI is coming under the OGL (refer table-4.11). Items under OGL can be importable to the home market. Thus, most of the items reserved for the SSI can be imported even if manufactured by large foreign

Table-4.11, Number of Reserved items on OGL at All-India: 1998-99 to 2000-01

Year	Items Reserved For SSI(2)	Items on OGL(3)	%age of (3) to (2)
1998-99	821	478	58.22
1999-00	812	576	70.94
2000-01	812	643	79.19

Source: Compiled from various issues of Economic Survey, GOI; reproduced from Narayana (2003), table 20.

enterprises. However, in the domestic market the large firms are not allowed to produce the items. In this situation, the units those are producing the reserved items will face sever competition from foreign firms in terms of cost and quality. To that extent, this can be another explanation for poor performance of reserved sector in the recent years.

On the one hand, protective policy is hampering the competitiveness of the reserved sector. On the other hand, liberalisation of Indian Economy has created highly competitive environment posing question on the very survival of the reserved sector without improvement of cost and quality of the products.

Therefore, now, it is very important that Government policy should create environment that helps small-scale industrial units to upgrade technology, improve productivity, remain competitive, and thereby help them to adapt this highly competitive economic environment.

From the analysis undertaken in the last chapters, some of the major conclusions and their best possible explanation are as follows –

Performance in terms of growth rate:

- Growth performance is slower in the second period (1987-88 to 2001-02) in almost all the variables. This is true in all-India, Eastern India, Orissa, Bihar and WB with few exceptions. However, fixed investment has grown at higher rate in the all-India and Orissa in the second period. At the disaggregated level too, in different industries, growth performance is poor in the second period compared to the first period in number of working units and production in all the eastern Indian states, eastern India and all-India.

The small industry in India has been confronted with an increasing competitive environment due to liberalisation of the investment regime in the 1990's, the formation of the WTO in 1995 and domestic economic reforms. It may be because of all these changes in economic environment that the growth performance of the sector is slower in the second period. One of the possibilities - small-scale industries is increasing their capital base to withstand the competition. This has led to higher growth of fixed investment in the second period.

Over the second period, Orissa's growth performance is better as compared to Eastern India. However, as compared to all-India, Orissa's growth performance is poor. Orissa's proportionate share in eastern India and all-India is very less compared to its neighbouring states, Maharashtra and Gujarat in the relevant time periods (1972-73, 1987-88 and 2001-02). Therefore, it shows proportionately poor contribution of small-scale industry of Orissa in income, employment, production etc to small scale Industry at the eastern India level and all-India level.

Employment: Employment has grown at the lowest rate over the second and the entire period in all the relevant states and the Eastern India and all-India. The employment per unit is declining in all-India, the Eastern India and Orissa. The employment per unit declined in the second period at the industry level too in all the regions: All- India, Eastern India and Orissa except few.

The conclusion mentioned if studied in relation with next two paragraphs, the question comes out that, is small-scale industry failing in its role of generating employment.

Productivity change: Capital productivity declined in the second period compared to the first period but labour productivity and capital intensity kept on increasing over the entire period. This is true in Orissa, Eastern India, and All-India. Compared to all-India, the eastern India and the neighbouring states, productivity of labour is higher in Orissa. Compared to all-India and Bihar, the productivity of capital in Orissa is higher. However, the process is becoming more capital intensive in Orissa compared to the neighbouring states.

The technique of production is becoming capital intensive and because of that, fixed capital per labour is increasing. The increase in capital intensity can be a cause for the increase in productivity of the labour. One of the aims of the above-mentioned policies is to promote efficiency- based growth. It can be said that this has led to higher growth of capital, labour productivity and capital intensity of small-scale industry in the second period. Low capital productivity presents with high capital intensity. This can be because of backward technology, inadequacy of skilled manpower, lack of uninterrupted electricity.

- In Orissa, the **productivity** of capital is declining at the aggregate level in second period. At the disaggregated level, no definite trend is available. The productivity of labour and capital intensity has increased at the aggregated level and this is true at the disaggregated level too. The employment generating capacity of fixed investment declined at the aggregated level. This is also true in disaggregated level in 2001-02 as compared to 1987-88 except hosiery & readymade garments, transport equipment & parts and repair & services in Orissa.

Structural Change:

- Broadly, proportion of small-scale is declining, that of Ancillary is increasing and that of service establishment has become very high in all-India, Eastern India. This implies that manufacturing activity is declining; linkages of small

units with large and medium sectors are increasing (as proportion of ancillary is increasing).

- There has been significant change in the **structure of the sector** as far as the SSSBEs are concerned. The proportion of SSSBEs increased in every state, in Eastern India and All-India in 2001-02 compared to the 1987-88. The reasons for this increase include the change in the definition and upper ceiling limit in respect of SSSBEs in 1991. The very first growth in service sector can also be a cause.
- In the first period, the growth rates of *food products and beverages, tobacco & products* are higher in both number working units and production compared to other industries in Orissa, Eastern India and all-India. However, in the second period, the *manufacturing of textiles* has grown at higher rate in all indicators (number of working units, employment, production, fixed asset and export) in all-India and Orissa; it is growing at the highest rate in number of working units, in generating employment and in fixed asset in the Eastern India. Economies of scale and increase in market can be an explanation for high growth of manufacturing of textiles. The economies of scale are not substantial in food products and beverages, may be because of that it is loosing its importance.
- If the percentage share of each industry in the total in Orissa in terms of all variables is taken into account, *food product, metal product, and basic metal product* are the dominant industries in small-scale industry in Orissa. The *industrial base* of Orissa is constituted by a few blocks of industries like *food product, beverages, tobacco and products, basic metal products, metal products, wood products and rubber and plastic products*.

The picture emerges are those, firstly, industrial base in Orissa is narrow, with whatever industrial base exists, is of raw material based and with low share of modern engineering industries in all the three-time point, secondly, and there is no significant level of diversification in Orissa over the entire period.

The **current features** of small-scale industry are -

- The small-scale units dominate the registered units whereas the SSSBEs dominate the unregistered units. However, in Orissa, the small-scale (mostly

engaged in manufacturing activity) dominate in both registered and unregistered sector. The percentage share of service units is increasing in both the sector in Orissa.

- There is a great difference between the registered and unregistered sector in different features. In the **registered sector**, the following characteristics have presented more than the unregistered sector. These are the share of small-scale units, the share of ancillary units, units in urban location, hare of exporting units, in number of products. However, in the **unregistered sector**, the following characteristics present more than the registered sector. These are type of ownership - proprietorship, the percentage share of SSSBEs, units managed by women, ownership pattern by social group, units in rural location, numbers working of units.
- The percentage of ancillary units is lower in the eastern India compared to all-India and industrially developed states. *It reflects lack of linkages of small units with large and medium sectors in eastern India. This is also true in Orissa.*
- The unregistered units have higher percentage of employment and generate higher employment per one lakh of fixed investment. However, the registered units have higher share of fixed investment, higher percentage share of gross output and export. Employment per unit, gross output per unit, fixed asset per unit, and export per unit is also higher in registered sector. Moreover, capital and labour are more productive in registered sector. It is the case in Orissa too except that, fixed investment is higher in unregistered sector.
- Employment per unit, gross output per unit, fixed asset per unit and export per unit in registered sector (or in unregistered sector) is higher (or lower) in Orissa compared to counterpart in neighbouring states and all-India.
- Productivity of labour in registered sector (or in unregistered sector) is higher (or the lowest) and productivity of capital in registered sector (or in unregistered sector) lower (or higher) in Orissa compared to counterpart in neighbouring states and all-India. Fixed investment is generating lower (or the highest) in registered (or in unregistered sector) in Orissa compared to counterpart in neighbouring states and all-India.

- **Size Distribution:** *In terms of No. of units and employment, it is the small units dominate in both registered sector and unregistered sector both in All-India and in Orissa. In terms of gross output, fixed capital and export, however, it is the large units dominate only in registered sector both in All-India and in Orissa in the registered sector whereas in unregistered sector, it is the small units dominate in Orissa.*

Dispersal: Over all, there has been dispersal of small-scale units in rural areas in 1987-88 compared to 1972-73 in almost all the relevant states except Bihar and all-India. *More or less there is limited dispersal of small-scale industries in rural areas in 2001-02 compared to 1987-88 in Orissa, Bihar and WB. In all-India, dispersal of units is there but it is very marginal.*

However, the dispersal of SSIs in Orissa was less than all-India average and the neighbouring states in both the period (1972-73 and 1987-88).

The small-scale industries are facing the problem of dispersing them over rural areas in the second period. This problem is high in case of Orissa. It can be because of infrastructural problems and raw material problems in rural area.

Sickness is one of the most important problems that SSIs is facing.

- Closed units as percentage to total and closed units as percentage to working units keep on increasing in both Orissa and all-India. It can be said that the incidence of sickness has increased in the small-scale industry. In 2001-02, both the indicators are very high in Orissa showing high level of sickness. During 2001-02 compared to 1987-88, the closed units have increased in rural area whereas the closed units have decreased in urban area. However, in Orissa, exactly opposite has happened. The closed units have decreased in rural area whereas closed units have increased urban area.
- In registered sector, the percentage of incipient sick units in Orissa is higher than that of all-India. In unregistered sector, the percentage of sick units in Orissa is higher than that of all-India.
- *Shortage of working capital* can be mostly because of financial problems. A part of marketing problems can be because of lack of demand. Therefore, broadly the same problems (*financial problems, lack of demand, marketing*

problems) continued to exist and are the reasons for sickness of small-scale units over the period (1987-88 to 2001-02) at the aggregate level. This is also true for Orissa. Other reasons, that are causing sickness in Orissa, are *raw material problems, management problems and equipment problems*.

Reservation: It is provided to small-scale industry as a protective measure vis-à-vis large-scale industry catering to the same market. It is expected that the small-scale industrial units, that are producing the reserved item, are performing at better than their counterpart that are not producing the reserved items. However, the available evidences do not provide any picture of better performance of reserved sector. (Refer to chapter – IV).

It is found that, on the one hand, protective policy is hampering the competitiveness of the reserved sector. On the other hand, liberalisation of Indian Economy has created highly competitive environment posing question on the very survival of the reserved sector without improvement of cost and quality of the products.

Therefore, it will be very helpful if Government policy can create environment that helps small-scale industrial units to upgrade technology, improve productivity, remain efficient, and thereby help them to adapt this highly competitive economic environment.

To conclude, the review of growth performance, structural change, current status and problems has highlighted some of the major problems that small industry in Orissa is facing –

- poor growth performance,
- very low contribution Orissa's small scale industry in income, employment, production etc to small scale Industry both at the eastern India level and all-India level,
- slow growth of employment.
- narrow and concentrated industrial base over the years,
- very high closure of industrial units,
- severe sickness due to *financial problems, marketing problems, raw material problems, management problems and equipment problems*.

Overall, there are severe problems in the small-scale sector of Orissa. It has more to do with the structural factors. Orissa economy is mostly agricultural based. Industry has not yet come with the better performance the way it should be. The thrust of both central and state government in their strategies is to promote small-scale industry by protective and promotional measures. These measures are mostly based on the logic of large vs. small argument. Moreover, these measures are being implemented through elaborate but cumbersome system of institutional structures. Most of the cases, measures are ineffective because of lack of infrastructure.

The performance of Small-scale industry will depend upon how isolated, dependent, or inter-dependent that the small-scale industry is with agriculture and large industry. The small-scale industry will do better, if it is closely inter related with rest of the economy. In that way, small should be more complementary to large rather than competitive to each other. It should be two-way relationship. Similarly, small-scale industry should have backward linkage with the agriculture. These relationships can be influenced by appropriate government policies like influencing the organisational forms through establishing relationship of inter-firm, inter-scale and inter-product dependencies. This helps in reaping economies by division of labour.¹ Need of the hour, for better performance of Orissa's small-scale industry sector can be these kind strategies that help in promoting sub-contracting, ancillarisation, clusters etc. With better infrastructure, efficient institutions, positive bureaucratic attitude and good delivery mechanism, these strategies can be more effective in reaching its goals.

¹ *Subrahmanian and Pillai (1994)*

Table- A, Industries with same nomenclature

NIC-1970	NIC(1998)	Product Groups
20 & 21	15	food products
22	16	Beverages, tobacco and products
23+24+25	17	mfrg of textiles
26	18	hosiery and readymade garments
33	27	basic metal products
34	28	metal products
35	29	machinery and parts
36	31	electrical machinery and apparatus
37	35	transport equipment and parts
27	20+36	wood products
28	21+22	paper and paper products
29	19	leather and leather products
30	25	rubber and plastic products
31	24	chemical and chemical products
97	50+52	repair & services

Table-B, Industries under different industries groups, 1987-88, 2001-02

	Second Census 1987-88 NIC-code(1970)		Third Census 2001-02 NIC-code(1998)	
	Food and Textiles	20 & 21	food products	15
22		Beverages,tobacco and products	16	mfrg of tobacco products
23		cotton textiles	17	mfrg of textiles
24		wool,silk & synth. Fibre textiles	18	mfrg of ewarinf apparel;dressing and dying of fur
25		jute,hemp and mesta textiles		
26		hosiery and garments		
Metal and Electricals	33	basic metal industries	27	mfrg of basic metals
	34	metal products	28	mfrg of fabricated metal products, except machinery and equipments
	35	machinery & parts except elect	29	mfrg of machinery and equipment n.e.c.
	36	electrical machinery & parts	31	mfrg of electrical machinery and apparatus n.e.c.
	37	Transport Equipment & parts	35	mfrg of other transport equipments
Other manufac- turing	27	wood products	20	mfrg of wood and products of wood and cork, except furniture; mfrg of articles of straw and planting materials
	28	paper products & printing	36	mfrg of furnitures; manufacturing n.e.c.
	29	leather products	21	mfrg of paper and paper products
	30	rubber & plastic products	22	publishing, printing and reproduction of recorded media
	31	chemical & chemical products	19	tanning and dressing of leather;mfrg of luggage,handbags saddlery,harness and footwear
			25	mfrg of rubber and plastic products
Repair Services	97	repair services	50	sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
			52	retail trade, except of motor vehicles and motorcycles;repair of personal and household goods

Source: Second Census of Small Scale Industries: 1987-88, 2004, DCSSI, New Delhi
Statistics and Data Division of Ministry of SSI, New Delhi

Table-C, Industries under different industries groups, 2001-02

	2001-02	Third Census
Food and		
1 Textiles		15 mfrg of food products and beverages 16 mfrg of tobacco products 17 mfrg of textiles 18 mfrg of ewarinf apparel;dressing and dying of fur
Metal and		
2 Electricals		27 mfrg of basic metals mfrg of fabricated metal products, except machinery and 28 equipments 29 mfrg of machinery and equipment n.e.c. 31 mfrg of electrical machinery and apparatus n.e.c. mfrg of radio, television and communication equipment and 32 apparatus mfrg of medical,precision an optical instruments, watches and 33 clocks 34 mfrg of motor vechicles, trailers and semi-trailers 35 mfrg of other transport equipments
Other		
3 manufacturing		tanning and dressing of leather;mfrg of luggage,handbags 19 saddlery,harness and footwear mfrg of wood and products of wood and cork, except furniture; 20 mfrg of articles of straw and planting materials 21 mfrg of paper and paper products 22 publishing, printing and reproduction of recorded media 23 mfrg of coke,refined petroleum products and nuclear fuel 24 mfrg of chemicals and chemical products 25 mfrg of rubber and plastic products 26 mfrg of other non-mineral products 36 mfrg of furnitures; manufacturing n.e.c.
4 Total		

Source: Statistics and Data Division of Ministry of SSI, New Delhi.

TABLE-D, SMALL SCALE INDUSTRY, 1972-72, 1987-88 AND 2001-02

Indicators	Years	Eastern						All-India
		Orissa	Bihar	WB	India	Maharashtra	Gujarat	
No of units in census frame(lakhs)	1972-73	0.03 (1.2)	0.10 (3.8)	0.27 (10.3)	0.40 (15.3)	0.28 (10.8)	0.17 (6.6)	2.58 (100)
	1987-88	0.14 (1.4)	0.54 (5.4)	0.94 (9.6)	1.62 (16.4)	0.51 (5.1)	0.58 (5.9)	9.87 (100)
	2001-02	0.22 (1.0)	0.86 (3.8)	0.68 (3.0)	1.77 (7.8)	1.37 (6.1)	1.78 (7.9)	22.62 (100)
No. of working units for which data collected(lakhs)	1972-73	0.02 (1.4)	0.06 (4.0)	0.17 (10.6)	0.25 (16.0)	0.17 (10.9)	0.12 (7.3)	1.59 (100)
	1987-88	0.08 (1.4)	0.35 (6.0)	0.47 (7.9)	0.90 (15.2)	0.30 (5.0)	0.35 (5.9)	5.94 (100)
	2001-02	0.12 (0.9)	0.70 (5.1)	0.42 (3.1)	1.25 (9.1)	0.83 (6.00)	1.39 (10.1)	13.75 (100)
Working units for which data is tabulated(lakhs)	1972-73	0.02 (1.3)	0.05 (3.8)	0.14 (10.0)	0.21 (15.0)	0.15 (11.0)	0.10 (7.1)	1.40 (100)
	1987-88	0.08 (1.4)	0.35 (6.0)	0.46 (7.9)	0.89 (15.3)	0.30 (5.1)	0.34 (5.9)	5.82 (100)
	2001-02	0.12 (0.9)	0.70 (5.1)	0.42 (3.1)	1.25 (9.1)	0.83 (6.0)	1.39 (10.1)	13.75 (100)
Employment (no lakhs)	1972-73	0.19 (1.1)	0.61 (3.7)	1.76 (10.7)	2.56 (15.5)	0.60 (3.6)	1.15 (6.9)	16.53 (100)
	1987-88	0.69 (1.9)	1.82 (5.0)	3.12 (8.5)	5.63 (15.4)	3.56 (9.7)	2.77 (7.6)	36.66 (100)
	2001-02	0.81 (1.3)	2.08 (3.4)	2.55 (4.1)	5.44 (8.8)	6.31 (10.2)	5.79 (9.4)	61.63 (100)
Production (Rs crore,1993- 94 prices)	1972-73	120.2 (0.9)	388.9 (2.8)	1458.8 (10.4)	1967.9 (14.0)	2858.4 (20.3)	1126.3 (8.0)	14051.4 (100)
	1987-88	1154.3 (1.5)	1541.4 (2.0)	4442.7 (5.9)	7138.3 (9.5)	13190.4 (17.5)	6297.3 (8.3)	75457.1 (100)
	2001-02	2248.4 (1.6)	1235.4 (0.9)	5894.8 (4.2)	9378.6 (6.7)	23989.7 (17.0)	7222.9 (5.1)	140855.6 (100)
Fixed Asset (Rs crore,1993- 94 prices)	1972-73	47.5 (0.8)	171.6 (3.0)	496.1 (8.7)	715.2 (12.6)	1223.7 (21.5)	518.5 (9.1)	5693.9 (100)
	1987-88	274.8 (1.7)	585.4 (3.6)	753.7 (4.6)	1613.9 (9.9)	2212.9 (13.6)	1558.3 (9.5)	16323.4 (100)
	2001-02	610.4 (1.0)	395.1 (0.6)	1473.7 (2.3)	2479.1 (3.9)	12924.7 (20.3)	5549.2 (8.7)	63612.0 (100)
Export(Rs. Crore,1993-94 prices)	1972-73	1.2 (0.1)	21.1 (2.6)	24.1 (3.0)	46.4 (5.7)	27.5 (3.4)	94.3 (11.6)	812.4 (100)
	1987-88	13.9 (0.3)	37.6 (0.9)	191.9 (4.4)	243.3 (5.5)	536.9 (12.2)	185.9 (4.2)	4388.2 (100)
	2001-02	198.8 (2.3)	16.6 (0.2)	390.4 (4.6)	605.9 (7.1)	896.4 (10.5)	13.4 (0.2)	8529.6 (100)

Source: cited in Table- I.1

Note: Figures in parentheses indicate the percentage share of state in All-India

**TABLE-E, SMALL SCALE INDUSTRY IN EASTERN INDIA, 1971-72, 1987-88
AND 2001-02**

Indicators	Years	Orissa	Bihar	WB	Eastern India
No of units in census frame(lakhs)	1972-73	0.03 (8.0)	0.10 (25.0)	0.27 (67.0)	0.40 (100)
	1987-88	0.14 (8.6)	0.54 (33.1)	0.94 (58.3)	1.62 (100)
	2001-02	0.22 (12.5)	0.86 (48.9)	0.68 (38.6)	1.77 (100)
No. of working units (lakhs)(data collected)	1972-73	0.02 (8.5)	0.06 (25.0)	0.17 (66.5)	0.25 (100)
	1987-88	0.08 (9.2)	0.35 (39.1)	0.47 (51.7)	0.90 (100)
	2001-02	0.12 (9.9)	0.70 (56.4)	0.42 (33.7)	1.25 (100)
Working units for which data is tabulated	1972-73	0.02 (8.6)	0.05 (25.1)	0.14 (66.4)	0.21 (100)
	1987-88	0.08 (9.3)	0.35 (39.1)	0.46 (51.6)	0.89 (100)
	2001-02	0.12 (9.9)	0.70 (56.4)	0.42 (33.7)	1.25 (100)
Employment(no lakhs)	1972-73	0.19 (7.3)	0.61 (24.0)	1.76 (68.8)	2.56 (100)
	1987-88	0.69 (12.3)	1.82 (32.3)	3.12 (55.4)	5.63 (100)
	2001-02	0.81 (14.9)	2.08 (38.3)	2.55 (46.9)	5.44 (100)
Production(Rs crore, 1993-94 prices)	1972-73	120.2 (6.1)	388.9 (19.8)	1458.8 (74.1)	1967.9 (100)
	1987-88	1154.3 (16.2)	1541.4 (21.6)	4442.7 (62.2)	7138.3 (100)
	2001-02	2248.4 (24.0)	1235.4 (13.2)	5894.8 (62.9)	9378.6 (100)
Fixed Asset(Rs crore, 1993-94 prices)	1972-73	47.5 (6.6)	171.6 (24.0)	496.1 (69.4)	715.2 (100)
	1987-88	274.8 (17.0)	585.4 (36.3)	753.7 (46.7)	1613.9 (100)
	2001-02	610.4 (24.6)	395.1 (15.9)	1473.7 (59.4)	2479.1 (100)
Export(Rs. Crore, 1993-94 prices)	1972-73	1.2 (2.6)	21.1 (45.4)	(24.1) (52.0)	46.4 (100)
	1987-88	13.9 (5.7)	37.6 (15.4)	191.9 (78.8)	243.3 (100)
	2001-02	198.8 (32.8)	16.6 (2.7)	390.4 (64.4)	605.9 (100)

Source: cited in Table- I.1

Note: Figures in parentheses indicate the percentage share of state in Eastern India

TABLE- 2.14, DISTRIBUTION OF EMPLOYMENT AND LOCATION QUOTIENT BY PRODUCT GROUP IN ORISSA

NIC(1970)	NIC(1998)	1987-88		2001-02		LOCATIONAL QUOTIENT	
		Total Employment	Per Cent	Total Employment	Per Cent	1987-88	2001-02
20 & 21	15	13511	25.7	20404	33.0	1.65	2.04
22	16	1810	3.4	519	0.8	1.45	1.09
23+24+25=17	17	271	0.5	1141	1.8	0.40	0.22
26	18	1900	3.6	2157	3.5	0.56	0.41
33	27	5212	9.9	5278	8.5	1.51	2.05
34	28	7943	15.1	8690	14.1	1.25	1.09
35	29	1807	3.4	1793	2.9	0.38	0.56
36	31	1321	2.5	1234	2.0	0.57	0.75
37	35	852	1.6	92	0.1	0.50	0.19
27	27=20+36	5634	10.7	5733	9.3	1.45	0.88
28	28=21+22	3353	6.4	4253	6.9	0.99	1.23
29	19	440	0.8	155	0.3	0.32	0.09
30	25	3197	6.1	3375	5.5	1.00	1.02
31	24	2826	5.4	3725	6.0	0.53	0.81
97	97=50+52	2460	4.7	3224	5.2	0.75	0.60
Specialisation coefficient(SQ)						0.22	0.24

Source: Cited in table 1.1

TABLE-2.11, DISTRIBUTION OF CHARACTERISTICS OF SSI IN ORISSA BY PRODUCT GROUP

NIC-1970	No. of working units(No.s)			Employment(No.s)		Production(Rs.'000)*			Fixed Asset(Rs.'000)*		Export(Rs.'000)*	
	1972-73	1987-88	2001-02	1987-88	2001-02	1972-73	1987-88	2001-02	1987-88	2001-02	1987-88	2001-02
20 & 21	152 (9.2)	2835 (38.2)	3765 (38.8)	13511 (25.7)	20404 (33.0)	126329 (11.3)	5481570 (50.6)	9472834 (49.6)	630037 (27.2)	2028274 (39.3)	59100 (74.8)	1438500 (66.0)
22	1 (0.1)	83 (1.1)	40 (0.4)	1810 (3.4)	519 (0.8)		119405 (1.1)	42620 (0.2)	35470 (1.5)	11989 (0.2)
23+24+25		33 (0.4)	123 (1.3)	271 (0.5)	1141 (1.8)		41441 (0.4)	192723 (1.0)	9307 (0.4)	60291 (1.2)
26	105 (6.3)	267 (3.6)	479 (4.9)	1900 (3.6)	2157 (3.5)	17816 (1.6)	103953 (1.0)	118711 (0.6)	47411 (2.0)	23216 (0.5)	..	85900 (3.9)
33	15 (0.9)	233 (3.1)	334 (3.4)	5212 (9.9)	5278 (8.5)	112832 (10.1)	1649370 (15.2)	3184269 (16.7)	254965 (11.0)	578101 (11.2)	18600 (23.5)	192800 (8.8)
34	421 (25.4)	1026 (13.8)	1620 (16.7)	7943 (15.1)	8690 (14.1)	246720 (22.1)	724332 (6.7)	1031670 (5.4)	276388 (11.9)	497713 (9.7)	..	1100 (0.1)
35	62 (3.7)	178 (2.4)	221 (2.3)	1807 (3.4)	1793 (2.9)	39950 (3.6)	255316 (2.4)	358073 (1.9)	89905 (3.9)	111920 (2.2)	1200 (1.5)	..
36	21 (1.3)	116 (1.6)	182 (1.9)	1321 (2.5)	1234 (2.0)	58306 (5.2)	342938 (3.2)	455717 (2.4)	92890 (4.0)	135967 (2.6)	..	800 (0.1)
37	35 (2.1)	117 (1.6)	17 (0.2)	852 (1.6)	92 (0.1)	38331 (3.4)	65673 (0.6)	9910 (0.1)	31432 (1.4)	2495 (0.0)
27	279 (16.8)	711 (9.6)	976 (10.0)	5634 (10.7)	5733 (9.3)	126869 (11.3)	509579 (4.7)	398198 (2.1)	131170 (5.7)	179626 (3.5)	100 (0.1)	1900 (0.1)
28	96 (5.8)	556 (7.5)	806 (8.3)	3353 (6.4)	4253 (6.9)	71263 (6.4)	260233 (2.4)	679349 (3.6)	192980 (8.3)	348164 (6.8)	..	1500 (0.1)
29	35 (2.1)	56 (0.8)	43 (0.4)	440 (0.8)	155 (0.3)	11877 (1.1)	32836 (0.3)	9702 (0.1)	14926 (0.6)	6861 (0.1)	..	0.0
30	104 (6.3)	400 (5.4)	322 (3.3)	3197 (6.1)	3375 (5.5)	61545 (5.5)	501326 (4.6)	1961608 (10.3)	208432 (9.0)	442134 (8.6)	..	455600 (20.9)
31	134 (8.1)	293 (3.9)	368 (3.8)	2826 (5.4)	3725 (6.0)	165740 (14.8)	652338 (6.0)	1060776 (5.5)	196843 (8.5)	617186 (12.0)	..	2100 (0.1)
97	197 (1.9)	523 (7.0)	419 (4.3)	2460 (4.7)	3224 (5.2)	41030 (3.7)	94997 (0.9)	137976 (0.7)	102372 (4.4)	111157 (2.2)

Source: Cited in table 1.1 Notes: '**' value at 1993-94 prices

Table- 3.1(b), Small Scale Industry (Registered) in 2001-02 (in absolute No.)

No of Units	Orissa	Bihar	WB	Maharashtra	Gujarat	All-India
Census frame	22,074	86,454	68228	137341	177696	2262401
Closed units (data tabulated)	9708	34347	26080	54243	39159	887427
Working units (data tabulated)	12366	70429	42148	83098	138537	1374974
Category Nos						
Small scale	9614	47914	34468	71633	78461	855494
Ancillary	137	1000	1146	5908	10128	45,797
Service estt	2615	21515	6535	5557	48938	473683
Activity Nos						
Mfgr/Ass/Proc	9654	46510	35025	75861	62.09	872449
Repair & maintenance	97	2404	588	1679	2.32	28843
Services	2615	21515	6535	5558	35.58	473682
Organisation Nos						
Proprietary	11161	67909	35635	59578	113931	1221702
Partnership	592	1311	4299	14631	18764	99190
Limited company	501	370	1951	430	3049	33284
Co-operative	58	67	114	7001	769	4,715
Ownership Nos						
SC	353	751	2850	1612	6369	107934
ST	196	6473	204	2280	11402	48560
Women	860	3581	1501	4515	3778	114361
Location Nos						
Rural	5949	28497	16574	17434	42000	609537
Urban	6417	41932	25574	65664	96537	765437
Exporting Units	43	80	265	1138	400	7344
No of products	967	1490	2528	3986	3586	5983

Source: cited in 3.1(a), Note: cited in table-3.1(a)

Table- 3.2 (b), Small Scale Industry (Unregistered) in 2001-02, in absolute No.

No of Units	Orissa	Bihar	WB	Maharashtra	Gujarat	All-India
Working units (data tabulated)	375911	581368	729240	720470	391775	9146216
Category Nos						
Small scale	232208	288640	410487	216118	86860	3458061
Ancillary	3220	47397	5907	11959	9403	86516
SSSBEs	140483	201942	312845	492393	295513	5601639
Activity Nos						
Mfgr/Ass/Proc	228755	252895	405658	202566	84886	3303366
Repair & maintenance	35256	100661	122985	80363	113911	1692663
Services	111900	113688	200598	437541	192980	4150187
Organisation Nos						
Proprietary	372993	461716	715235	686933	378824	8862548
Partnership	1919	3019	8991	7381	1851	103662
Limited company	463	20	923	1283	2705	38153
Co-operative	212	301	328	10115	388	9854
Ownership Nos						
SC	96720	33954	106260	67578	55652	943969
ST	45054	4245	8944	18686	49336	474271
Women	32414	41860	70346	76147	51546	880780
Location Nos						
Rural	312020	446933	412298	343044	186191	5198822
Urban	63891	134435	316942	377426	205584	3947394
Exporting Units	1680	1596	2542	1605	99	43262
No of products	288	307	730	748	269	2680
No of reserved products	34	34	127	119	20	382

Source: cited in 3.1(a), Note: cited in table-3.1(a)

Table-3.3, Key Parameters of Small Industry in 2001-02

Indicators	Orissa		All-India	
	Registered	Unregistered	Registered	Unregistered
Size of The sector	12366	375911	1374974	9146216
Gross Output(Rs. Lakhs)	224835	139902	14085559	5475770
Fixed Investment(Rs. Lakhs)	61036	71340	6361197	4335177
Export(Rs. Lakhs)	19883	352	852963	131067
Employment	80888	842288	6163479	18769284

Note: rupees value is in constant price (1993-94)

Source: Final Result of Third Census of Small Scale Industries, 2001-02 for All-India, Orissa, 2004, DCSSI, New Delhi

Table- 3.4 (a) , Registered Small Scale Sector, 2001-02

Characteristics	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Size of The sector	12366	70429	42148	83098	138537	1374974
Gross Output(Rs. Lakhs)	224835	123544	589477	2398971	722295	14085559
Fixed Investment(Rs. Lakhs)	61036	71407	147366	1292471	554922	6361197
Export(Rs. Lakhs)	19883	1663	39042	89641	1337	852963
Employment	80888	207984	254811	630570	574555	6163479

Source: cited in 3.1(a) , Notes: cited in table-3.1(a), rupees value is in constant price (1993-94)

Table- 3.4 (b), Unregistered Small Scale Sector, 2001-02

Characteristics	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Size of The sector	375911	581368	729240	720470	391775	9146216
Gross Output(Rs. Lakhs)	139902	221036	629655	443708.2	189763	5475770
Fixed Investment(Rs. Lakhs)	71340	158252	234706	646672	206126	4335177
Export(Rs. Lakhs)	352	528	642	801	22	131067
Employment	842288	1150770	1914295	1420924	687912	18769284

Source: cited in 3.1(a) , Notes: cited in table-3.1(a), rupees value is in constant price (1993-94)

Table- 3.5 (a), Average size in Registered Small Scale Sectors, 2001-02

Ratios	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Employment per unit*	6.5	3.0	6.05	7.59	4.15	4.48
Gross output per unit*	18.2	1.8	13.99	28.87	5.21	10.24
Fixed asset per unit*	4.9	1.0	3.50	15.55	4.01	4.63
Export per unit*	1.6	0.02	0.93	1.08	0.01	0.62

Source: cited in 3.1(a) , Notes: cited in table-3.1(a), rupees value is in constant price (1993-94)

* in Rs. lakhs

Table- 3.5(b), Average size in Unregistered Small Scale Sectors, 2001-02

Ratios	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Employment per unit*	2.2	2.0	2.63	1.97	1.76	2.05
Gross output per unit*	0.4	0.4	0.86	0.62	0.48	0.60
Fixed asset per unit*	0.2	0.3	0.32	0.90	0.53	0.47
Export per unit*	0.001	0.001	0.001	0.001	0.0001	0.01

Source: cited in 3.1(a) , Notes: cited in table-3.1(a), rupees value is in constant price (1993-94)

* in Rs. lakhs

Table- 3.6 (a), Percentage in Registered Small Scale Sectors, 2001-02

Characteristics	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Size of The sector	3.18	11	5	10	26	13
Gross Output	62	36	48	84	79	72
Fixed Investment	46	31	39	67	73	59
Export	98	76	98	99	98	87
Employment	8.76	15	12	31	46	25

Source: cited in 3.1(a) , Notes: cited in table-3.1(a)

Table- 3.6 (b), Percentage in Unregistered Small Scale Sectors, 2001-02

Characteristics	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Size of The sector	96.81	89	95	90	74	87
Gross Output	38	64	52	16	21	28
Fixed Investment	54	69	61	33	27	41
Export	2	24	2	1	2	13
Employment	91.24	85	88	69	54	75

Source: cited in 3.1(a), Notes: cited in table-3.1(a)

Table- 3.7 (a), Ratios in Registered Small Scale Sectors, 2001-02

Ratios	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Emp/FI (no.s)	1.33	2.91	1.73	0.49	1.04	0.97
FI/Emp (Rs.lakh)	0.75	0.34	0.58	2.05	0.97	1.03
Output/FI (Rs.lakh)	3.68	1.73	4.00	1.86	1.30	2.21
Output/Emp (Rs.lakh)	2.78	0.59	2.31	3.80	1.26	2.29

Source: cited in 3.1(a), Notes: cited in table-3.1(a), rupees value is in constant price (1993-94)

Table- 3.7 (b), Ratios in Unregistered Small Scale Sectors, 2001-02

Ratios	Orissa	Bihar	WB	Maharastra	Gujarat	All-India
Emp/FI(no.s)	11.81	7.27	8.16	2.20	3.34	4.33
FI/Emp (Rs.lakh)	0.08	0.14	0.12	0.46	0.30	0.23
Output/FI (Rs.lakh)	1.96	1.40	2.68	0.69	0.92	1.26
Output/Emp (Rs.lakh)	0.17	0.19	0.33	0.31	0.28	0.29

Source: cited in 3.1(a), Notes: cited in table-3.1(a), rupees value is in constant price (1993-94)

Table-3.16(a), Percentage Distribution of principal characteristics by gross output slabs in Registered Sector, All-India

Gross output slabs(Rs. Lakhs)	No of units	Employment	fixed capital	Gross Output	Export
0 to 10	88.75	61.65	30.77	9.18	0.36
10 to 20	4.05	7.89	8.32	4.16	0.3
20 to 70	4.46	12.2	17.48	11.44	2.07
70 to 200	1.67	7.31	14.29	12.72	5.87
Above 200	1.07	10.96	29.15	62.5	91.41
Total	100	100	100	100	100

Source: Final Result of Third Census of Small Scale Industries, 2001-02 for All-India, 2004, DCSSI, New Delhi

Table-3.16(b), Percentage Distribution of principal characteristics by gross output slabs in unregistered Sector, All-India.

Gross output slabs(Rs. Lakhs)	No of units	Employment	fixed capital	Gross Output	Export
0 to 10	99.56	97.63	93.7	69.15	6.92
10 to 20	0.22	1.18	2.07	3.83	0.86
20 to 70	0.16	1.01	2.4	7.25	2.35
70 to 200	0.03	0.11	0.68	3.52	0.03
Above 200	0.02	0.08	1.15	16.27	89.83
Total	100	100	100	100	100

Source: cited in table-3.16(a)

Table-3.17(a), Percentage Distribution of principal characteristics by Employment slabs in Registered Sector, All-India

Emp. Slabs	No of units	Employment	fixed capital	Gross Output	Export
1	23.61	5.27	2.95	1.73	1.09
2 to 7	64.83	46.65	31.18	20.49	4.35
8 to 10	5.71	11.23	15.02	12.87	4.64
11 to 20	3.84	12.64	19.12	19.65	11.48
21 to 50	1.5	10.56	16.46	21.52	22.81
51 and above	0.5	13.66	15.27	23.73	55.62
Total	100	100	100	100	100

Source: cited in table-3.16(a)

Table-3.17 (b), Percentage Distribution of principal characteristics by Employment slabs in unregistered Sector, All-India.

Emp. Slabs	No of units	Employment	fixed capital	Gross Output	Export
1	42.59	20.75	25.68	21.41	1.05
2 to 7	56.13	70.48	65.61	60.7	6.39
8 to 10	0.79	3.42	4.07	6.32	2.13
11 to 20	0.34	2.41	2.55	7.01	89.92
21 to 50	0.12	1.78	1.43	4.07	0.46
51 and above	0.03	1.16	0.66	0.49	0.05
Total	100	100	100	100	100

Source: cited in table-3.16(a)

Table-3.18 (a), Percentage Distribution of principal characteristics by fixed capital slabs in Registered Sector, All-India.

Fixed Capital slabs(Rs. Lakhs)	No of units	Employment	fixed capital	Gross Output	Export
0 to 2	75.31	44.41	8.96	10.31	2.55
2 to 5	9.72	11.95	5.94	6.09	1.45
5 to 10	6.12	10.33	7.36	7.36	2.64
10 to 25	4.87	11.88	12.41	14.22	8.87
Above 25	3.98	21.43	65.35	62.02	84.49
Total	100	100	100	100	100

Source: cited in table-3.16(a)

Table-3.18 (b), Percentage Distribution of principal characteristics by fixed capital slabs in unregistered Sector, All-India.

Fixed capital slabs(Rs. lakhs)	No of units	Empoyment	fixed capital	Gross Output	Export
0 to 2	96.63	92.57	61.54	77.63	96.96
2 to 5	2.24	3.92	12.9	7.47	1.03
5 to 10	0.8	2.08	9.02	4.31	1.29
10 to 25	0.24	0.81	5.54	2.64	0.05
Above 25	0.08	0.63	11.01	7.94	0.67
total	100	100	100	100	100

Source: cited in table-3.16(a)

Table-3.19(a),Percentage Distribution of principal characteristics by gross output slabs in Registered Sector, Orissa.

Gross output Slabs (Rs. Lakhs)	No of units	Empoyment	fixed capital	Gross Output	Export
0 to 10	84.04	57.01	28.76	6.54	0.11
10 to 20	5.2	8.56	7.47	3.01	0
20 to 70	6.14	13.36	21.26	9.05	0.38
70 to 200	2.28	7.2	10.94	9.91	0.55
Above 200	2.36	13.88	31.58	71.49	98.97
Total	100	100	100	100	100

Source: Final Result of Third Census of Small Scale Industries, 2001-02 for Orissa, 2004, DCSSI, New Delhi

Table- 3.19(b),Percentage Distribution of principal characteristics by gross output slabs in Unregistered Sector, Orissa.

Gross output slabs(Rs. Lakhs)	No of units	Empoyment	fixed capital	Gross Output	Export
0 to 10	99.79	99.25	91.35	88.34	100
10 to 20	0.06	0.34	0.5	1.71	0
20 to 70	0.15	0.41	8.16	9.14	0
70 to 200	0	0	0	0.81	0
Above 200	0	0	0	0	0
Total	100	100	100	100	100

Source: cited in table-3.19(a)

Table-3.20(a),,Percentage Distribution of principal characteristics by Employment slabs in Registered Sector, Orissa.

Emp. Slabs	No of units	Empoyment	fixed capital	Gross Output	Export
1	5.59	0.85	1.01	0.26	0
2 to 7	73.61	40	24.25	12.28	0.06
8 to 10	9.67	12.97	18.7	10.83	5.25
11 to 20	6.63	14.79	19.28	19.98	0.18
21 to 50	3.7	17.98	22.35	32.8	23.35
51 and above	0.89	13.4	14.4	23.86	71.15
Total	100	100	100	100	100

Source: cited in table-3.19 (a)

Table-3.20(b),, Percentage Distribution of principal characteristics by Employment slabs Unregistered Sector, Orissa.

Emp. Slabs	No of units	Empoyment	fixed capital	Gross Output	Export
1	29.34	13.09	18.86	14.97	21.31
2 to 7	69.53	80.79	70.04	76.13	78.69
8 to 10	0.84	3.2	10.17	6.95	0
11 to 20	0.21	1.33	0.43	1.06	0
21 to 50	0.06	0.96	0.3	0.48	0
51 and above	0.02	0.62	0.21	0.41	0
Total	100	100	100	100	100

Source: cited in table-3.19(a)

Table-3.21(a),Percentage Distribution of principal characteristics by fixed capital slabs in Registered Sector, Orissa.

Fixed capital slabs(Rs. lakhs)	No of units	Employment	fixed capital	Gross Output	Export
0 to 2	73.35	45.13	9.72	10.57	3.87
2 to 5	10.15	12.78	5.86	5.77	0.01
5 to 10	7.24	11.78	8.27	9	1.41
10 to 25	4.71	10.3	10.91	14.68	19.24
Above 25	4.56	20.02	65.24	59.99	75.47
total	100	100	100	100	100

Source: cited in table-3.19(a)

Table-3.21(b), Percentage Distribution of principal characteristics by fixed capital slabs Unregistered Sector, Orissa.

Fixed capital slabs(Rs. lakhs)	No of units	Employment	fixed capital	Gross Output	Export
0 to 2	99.4	98.14	84.34	86.94	100
2 to 5	0.48	1.5	6.64	7.39	0
5 to 10	0.07	0.18	2.07	1.56	0
10 to 25	0.02	0.04	0.76	0.77	0
Above 25	0.03	0.14	6.18	3.34	0
total	100	100	100	100	100

Source: cited in table-3.19(a)

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